



For sustainable production & consumption

# ECO-PRODUCTS DIRECTORY 2012

Featuring products and services in the Asia-Pacific region  
designed to contribute to the mitigation of global warming



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# Foreword

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Last year, the APO celebrated its 50th anniversary since establishment in 1961. The year was a milestone for the organization, not only in recognizing the five decades of a meaningful history in serving its member countries in the Asia-Pacific but also in taking a moment to reflect on what we have done, where we are now, and our direction in the years ahead. When the concept of Green Productivity (GP) was first introduced by the APO in 1994, the idea of a more sustainable way of enhancing productivity and development was too new a concept for many member countries. At a time when the region was in the midst of thriving social and economic development, the notion of taking environmental considerations into account in business and organizational activities was regarded as more of a burden than an opportunity for many emerging Asia-Pacific industries. But as the impacts of global warming and the effects of climate change became increasingly evident, it became clear that environmental preservation alongside efforts for the enhancement of productivity was necessary to sustain the development of the region as well as to enhance its competitiveness in the global arena.

The APO continues active promotion of the concept of GP through its programs to create a shared understanding within the region that productivity enhancement can and must be compatible with the protection of the environment. Today, we face more challenges posed by various environmental issues, and designing a more sustainable way of social and economic life through harmonization with the surrounding environment has never seemed more important.

As one of the projects under its GP Program since 2004, the APO has published the *APO Eco-products Directory*, a comprehensive listing of environmentally friendly products and services offered by companies and organizations within the Asia-Pacific region. It is with great pleasure that we launch the 2012 edition as a tangible representation of the continued concerted efforts of the Asia-Pacific region to contribute to more sustainable development by promoting the concept of green production and consumption.

The APO is thankful for the guidance and support provided by the industry representatives of the Committee on the Eco-products Database under the leadership of its Chairperson, University of Tokyo Emeritus Professor Ryoichi Yamamoto; the Eco-products Database Working Group; and other regional partners. Their cooperation continues to be invaluable in the APO's work to assist its member countries in GP-related areas.

Ryuichiro Yamazaki

Secretary-General

April 2012

## Dear Readers

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The Earth Summit, held in the Brazilian city of Rio de Janeiro 20 years ago, was a momentous event not only for its magnitude as an environmental conference but also for its radical attempt to revisit conventional practices of global economic development in the face of growing environmental crisis. Since then, the global community has taken many steps toward building a more sustainable, more environmentally friendly society. Especially in recent years, we have seen a surge in various environmental initiatives taken by countries in the Asia-Pacific, indicating the energy and commitment of the region to play its role in contributing to the fight against climate change. A green economy is one of the main themes of the Rio+20 summit this year.

In Malaysia, following the establishment of the Ministry of Energy, Green Technology and Water earlier that year, the National Green Technology Policy was introduced in October 2009 as a government-driven initiative to place green technology at the forefront for accelerating national economic growth and promoting sustainable development. The success of the annual International Greentech and Eco Products Exhibition and Conference Malaysia since 2010 continues to represent the strong commitment of the country to balancing environmental preservation and vibrant economic development. There have also been important developments in the Philippines in terms of nationwide approaches to adapting to and minimizing the impacts of climate change. At the Green Productivity, Green Purchasing Towards Green Philippines Conference held in August 2011, prospects for the new National Climate Change Action Plan and the need to build national capacities to drive green public procurement were among the various strategies highlighted for creating a greener nation. In the Republic of China, the establishment of the Green Trade Project Office by the Ministry of Economic Affairs in March 2011 to promote green technologies in its industry and replace all of its exported goods with eco-products in the next three years are examples of the significant actions taken as national efforts to combine economic development and protection of the environment.

We seem to have come a long way in terms of building momentum for environmental protection alongside conventional business practices and ways of life, and yet various challenges are still ahead as the headlines tell us every day of hardships and constraints in the lives of people and other inhabitants of the earth as a result of environmental change. The urgent need to reduce carbon emissions drastically, seek greater efficiency in the use of resources, and create a more sustainable planet calls for bolder measures and the concerted efforts of the entire global community. This is not simply about altering or adjusting daily practices but about reshaping moral principles and fundamental values related to cohabitation with nature and the

environment. This can only be achieved from a greater arena of expertise, comprising not only the scientific and political viewpoints we have been guided by so far but also a wider spectrum including philosophical, religious, and ethical standpoints. In the end, the creation of an “eco-culture” will help us to identify more comprehensive solutions for a sustainable society.

Since the first edition in 2004, the APO *Eco-products Directory* has not only been a regional tool for showcasing the range of green products and services in the Asia-Pacific region but also for spreading a common consciousness within the region for addressing environmental concerns in each stage of our daily lives. It is hoped that the newest edition will reach the hands of as many individuals as possible within the Asia-Pacific as well as abroad as, regardless of whether the reader is a government official, a corporate officer, a consumer, or a student. Greening individual minds is crucial to the fundamental changes demanded.

**Ryoichi Yamamoto**

Emeritus Professor, University of Tokyo

Chairperson of the Committee on the Eco-products Database, APO

Vice Chairperson of the Green Productivity Advisory Committee, APO

# 1

## Green Purchasing that Underpins Sustainable Consumption and Production

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Rio+20, the United Nations Conference on Sustainable Development, will be held in Rio de Janeiro, Brazil, in June 2012 to mark the 20th anniversary of the 1992 United Nations Conference on Environment and Development held in the same city. One of the conference themes is a green economy in the context of sustainable development. So far, the development and manufacture of products by industries with superior environmental performance have been discussed, and new green markets would be expected through the development of renewable energy devices such as solar panels and energy-saving products such as fuel-efficient cars. For this purpose, governments have been supporting producers of environmentally friendly products with policy initiatives and encouraging consumers to buy such products through subsidies such as point systems and other incentives. However, a society where businesses cannot be green without policy support cannot truly be called a sustainable green economy. A shift in consumer's behavior so that individuals choose environmentally friendly products on their own initiative is necessary. This will encourage the development and manufacture of green products to meet consumer's demand, which will lead in turn to the self-sustaining spread of eco-products throughout society and to greater economic growth. This is the true essence of a green economy.

In Japan, establishing a new energy system became a major social issue as a result of the Great Eastern Japan Earthquake in March 2011. In addition to energy saving actions, many consumers have taken voluntary actions such as replacing incandescent light bulbs with LED lighting and wearing cooler clothing in summer and warmer clothing in winter as personal contributions to energy conservation. Sales of fuel-efficient cars and well-insulated housing have also surged, though governmental support exists. This has catalyzed the development of green technologies and green products that are competitive in the market. This change to a greener economy occurred because consumers themselves became more aware of the importance of green purchasing and shifted their lifestyles accordingly.

In response to these changes, more manufacturers are emphasizing the environmental performance of their products to appeal to consumers instead of simply highlighting advanced functionality or low price. Automakers are competing in terms of fuel economy and related technologies. Advertisements for consumer electronic appliances with energy-saving functions, food and daily commodities in smaller, more compact packaging, and detergents that require less water are becoming increasingly common. Until recently, Japanese beverage makers were reluctant to use the advanced technology available to recycle used PET bottles for fear of consumer's backlash. Today, those companies are proudly publicizing their use of recycled PET bottles as a sign of social responsibility.

In addition, there is growing interest in a new form of green business called “servicizing.” One example is car sharing, in which people pay only for the function of travel itself rather than purchasing and maintaining private vehicles. Older, more common examples include the leasing of copying machines with high recovery rates of parts and materials for recycling, and the sales of used but refurbished equipment. A shift from producing goods to providing services will gain further momentum due to its reduction of both economic burden and environmental impacts.

To encourage consumers to buy green products and thus contribute to the establishment of a green economy, good communication between industry and consumers is indispensable. This requires easy access to comprehensive information on products and their environmental performance. Products with eco-labels indicating quantitative environmental information such as the carbon footprint have increased, as have products labeled according to international forestry and fishery certification systems with their sustainability certified by authorized third parties. The Eco Mark Program, a well-known 20-year-old certified type I eco-label in Japan, is introducing new initiatives to enable consumers to incorporate environmental consciousness into their daily lives such as introducing new criteria for retail stores and for automotive insurance. Eco Mark is also currently developing certification criteria for other service industries such as car sharing and hotels/inns. The Green Purchasing Network database allows consumers online access to environmental information on products declared by their manufacturers and provides guidelines on environmentally friendly purchasing behavior by product type.

This *Eco-products Directory* published by the Asian Productivity Organization also serves as an invaluable reference on environmentally friendly products and services available in the Asia-Pacific region. It is hoped that all stakeholders worldwide will practice sustainable consumption and production, leading to the creation of a truly green economy.

Masahiko Hirao  
The University of Tokyo

# 2

## Public Sector-Led Green Purchasing: A Growing Trend in Asia

### Introduction

“Green purchasing” as defined by the International Green Purchasing Network (IGPN) means “the purchase of any product and service that results in a lesser environmental impact while performing a similar function, and while demonstrating social responsibility and ethics, at its comparable price.” By this definition, green purchasing practices are able to contribute more to the cause of sustainable development through people’s production and consumption activities. It is one of the reasons why, although Asian economies have suffered greatly from the global recession since 2009, green purchasing activities in Asia, particularly those in the public sector, have still flourished and become more widespread than in other economies.

In many Asian economies, especially those in East Asia, the public sector has been providing the major incentive for promoting green purchasing, often in the form of green purchasing legislation of a mandatory or semimandatory nature. (“Semimandatory” means that even though some legislation requires government agencies to practice green purchasing, there is either no noncompliance penalty clause in place or it is not strictly enforced.) This (semi)mandatory green purchasing approach probably places more administrative burdens on government agencies but may also be more effective in achieving results when compared with the less-explicit or voluntary approaches adopted by many developed economies in the West. The legislative approach to green purchasing and the resulting effects of public sector-led green purchasing activities in Asia are discussed briefly below.

### Green Purchasing Legislation and Implementation in Asia

In 1998, the Republic of China led Asia in introducing the first mandatory green purchasing approach through the adoption of a green procurement article (Article 96) in its Government Procurement Act, which allows preferential procurement of designated green products. The government then promulgated the Action Plan for Implementing Green Procurement by Government Agencies in 2001 and now stipulates designated product categories and annual procurement goals. The ROC government’s green purchasing program is mandatory for all levels of government agencies, institutions, and state enterprises. At present, there are 43 designated green product categories that may enjoy preferential purchasing treatment by government agencies, and over 93% of purchased products in these categories are considered green. Green Mark eco-labeled products are considered the most important of the three types of eco-products designated for green purchasing practices.


Japan subsequently introduced the first dedicated Asian green purchasing legislation in 2000 with the Law on Promoting Green Purchasing. The law requires the central government to develop a green procurement policy and implementation plan and to set up a competent authority to publish guidelines and product criteria. Since 2001, the government has designated over 250 green procurement products in 19 product categories. Eco Mark criteria and labeled products are widely adopted in the governmental green purchasing program. Through implementing this law since 2007, all central government ministries, 47 prefectural governments, 12 designated cities, and 68% of 700 local governments and cities have been practicing green purchasing. Collectively, more than 95% of products purchased in the designated product categories can be considered green.

In the Republic of Korea, the government also passed the Green Purchasing Law in 2004. The law requires the Ministry of the Environment to issue purchasing guidelines on eco-products annually and ensure that public agencies announce purchasing plans and practices as well as report their results annually. When conducting green purchasing, government agencies must preferentially purchase green products in the designated product categories. The Eco-Label Mark and Good Recycle Mark are used as the criteria for identifying green products. The Green Purchasing Law came into effect in 2005 and has resulted in a tremendous increase in the amount of governmental green purchase spending by the Korean public sector. The total amount of green purchasing including green supply chain management in 2007 was US\$18.7 billion; the amount spent on Eco-Labeled Mark and Good Recycle Mark products was US\$17.4 billion in the same year.

In addition to the economies mentioned above, APO members India, Malaysia, the Philippines, Singapore, Thailand, and Vietnam are all actively promoting governmental green purchasing. In addition to adopting green purchasing policies and programs, the approach most commonly employed by these economies is national eco-labeling schemes, although this short article cannot go into detail.

### **Private-Sector Green Purchasing Activities**

As described above, when governments adopt and enforce green purchasing legislation, the results tend to be apparent and effective, as government agencies are required to follow those rules in their purchasing practices. However, the same legislative approach is unlikely to be applied successfully to the private sector, as consumers cannot be forced to buy only green products and forego all other products meeting relevant government regulations. Thus, private-sector green purchasing results often do not correspond well with governmental practices.



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To expand on successful governmental green purchasing results, many innovative approaches have been adopted by Asian governments, for example, promotion of green purchasing alliances or networks, green stores, provision of green product information (through websites, directories, etc.), and other promotional campaigns. For the provision of information on green purchasing alternatives, the annual *Eco-products Directory* published by the APO can serve as an important resource for business-to-business communication purposes as well as offer ideas for both the public and private sectors on locating innovative eco-products. In addition, governments also seek to establish green product economies of scale and expand their market shares through green purchasing activities so that they can compete with conventional products not only in functional performance but also in manufacturing costs and product prices.

Apart from government actions, private-sector green purchasing may also be initiated by alliances and environmental movements/initiatives, so that consumers' environmental awareness can create pressure for product manufacturers to green their supply chains. In this case, the creation of synergies between governmental and private-sector green purchasing initiatives is worth pursuing.

### **The Way Forward**

Since 2000, the successful implementation of multiple green purchasing laws in many Asian economies by the public sector has been remarkable, and a great part of that success can be attributed to linking governmental green purchasing with national eco-labeling schemes. However, the experiences and results have been less successful in inducing similar results in the private sector of those economies. In this period of economic recession, private-sector green purchasing may suffer due to financial constraints; however, government-initiated green purchasing activities may still increase when those practices are integrated into routine purchasing by government agencies, at energy/resource-saving promotional events, or in stimulus packages for the private sector.



The important point is that governments' green purchasing promotion efforts should not be deterred by current financial hardships. Governments should make use of the current global low interest-rate environment to invest in and develop the infrastructure for low-carbon, low-impact products and services to ensure a smooth transition to a future low-carbon economy, as well as educate consumers about the benefits of green products and services. In this case, the manufacturing bases for green products and services established by current governmental green purchasing practices can and will provide a stable foundation for such efforts.

Ning Yu, PhD

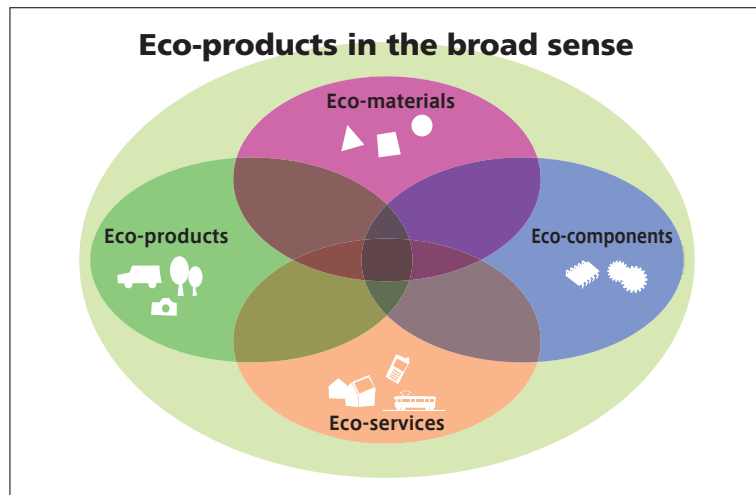
President, Environment and Development Foundation

# 3

## Products and services listed in the *Eco-products Directory 2012*

### About "eco-products"

"Eco-products" generally refer to environmentally friendly products, but there is no universal definition. In the *Eco-products Directory 2012*, they are defined as "products and services that have reduced environmental impacts compared with conventional versions with similar functions and are environment friendly, reflecting the voluntary efforts of the manufacturers to care for the environment." Eco-products include not only industrial products but also goods and services in the areas of agriculture, tourism, and finance as well as those aimed directly at environmental impact reduction (i.e., eco-businesses, such as the production of pollution control devices, waste disposal/recycling, and consulting). The *Eco-products Directory 2012* is comprised of four main categories: materials; components; products; and services.



### Eco-products listed in this directory

Many eco-products come with environmental labels (including text) that seek to communicate environmental information to consumers and other businesses. They certify that items are environmentally friendly according to standards or criteria independently set by countries, regions, organizations, or providers. The International Organization for Standardization (ISO) classifies environmental labels into Type I, Type II, and Type III and environmental labels are then given based on compliance certification, producers' self-declaration of commitment to environmental preservation, and the verification and disclosure of quantitative environmental impact data. Additional environmental labels are awarded under the standards and criteria of other bodies.

In addition to environmental labels, other initiatives are undertaken to raise consumers' environmental awareness, including the creation of databases where self-assessed products may be registered. Those are individual initiatives and thus differ.

## ISO environmental labels

**Type I** (ISO 14020, ISO 14024): Seal of approval/compliance approval

Description: Type I labels are managed in accordance with the standards and principles of the ISO. This system ensures that the use of the label is accepted by a third party based on an independent, multifaceted standard. The standard covers the entire product life (resource extraction, manufacturing, distribution, use, disposal, recycling). The submitted products are assessed for approval and if successful are awarded the Type I label.

Examples:



**Type II** (ISO 14021): Producers' self-declaration of commitment to the environment

Description: Product providers independently declare environment-related improvements in their products based on their own independently set criteria. There is no requirement for intervention by any third party.

Examples:



### Type III

(ISO14025): Report card verification and disclosure of quantitative environmental impact data

Description: The type III label is managed in accordance with ISO 14025 (environmental declarations). They use the life cycle assessment method to show environmental information on products quantitatively from resource extraction to manufacturing/assembly, distribution, use, and discarding/recycling. Only the reliability of disclosed data is verified, and product evaluation is left to consumers.

Example:



Eco Leaf  
(Japan)

The **TYPE I** , **TYPE II** and **TYPE III** notations under the respective labels are intended to clarify their label types and are not included in the label design.

### Other environmental labels

Various environmental labels have been created in many areas including the consumer electronics industry and automotive industry.



## Products listed in the *Eco-products Directory 2012*



The Singapore Green Building Council



Thinned Wood Mark



Uniform Energy Saving Label



water conservation certification



Water Conservation Label

### Other initiatives to raise environmental awareness

Apart from the promotion of environmental labels, the Green Purchasing Network (GPN) in Japan formulated guidelines for purchasing environment-friendly products, together with important points to consider, in 17 categories including printing and communication paper, stationery and office products, and vehicles. In line with the guidelines, the GPN Database provides the public with environmental information on products. The information contained in the database is based on judgments by registrants, and in no way represents an endorsement of the listed products by the GPN. The database is intended to catalogue products that comply with the GPN's Purchasing Guidelines and the Law on Promoting Green Purchasing and to provide environmental data on those products to enable consumers to compare environmental information when making purchasing decisions.



Registered in  
the GPN Database

The products and services in the *Eco-products Directory 2012* are listed if a third party certification body or the audit team of the Eco-products Directory 2012 Working Group has accepted them as eco-products that meet certain standards to help reduce environmental impacts associated with the product life cycle. For products and services holding third-party certifications (e.g., those with the Type I Environmental Label), the criteria for which they have been screened must be deemed adequate and open to the public. For products and services holding third-party certifications for which the criteria are not published, and those regarded as eco-products but have not been certified by a third party (e.g., those with the Type II Environmental Label), submission of the criteria or standards used to determine environmental impact is required, followed by a further audit and approval by the Eco-products Directory 2012 Working Group for inclusion in this directory. Products and services that are not certified as eco-products (e.g., those with the Type III Environmental Label or registered in the GPN Database) must be audited based on their environmental performance information and approved as eco-products by the Eco-products Directory 2012 Working Group for inclusion in this directory.

Please note that decisions by the Eco-products Directory 2012 Working Group are based solely on the environmental performance of products for the purpose of its inclusion in this directory and are in no way intended to represent a guarantee of their functions and safety.

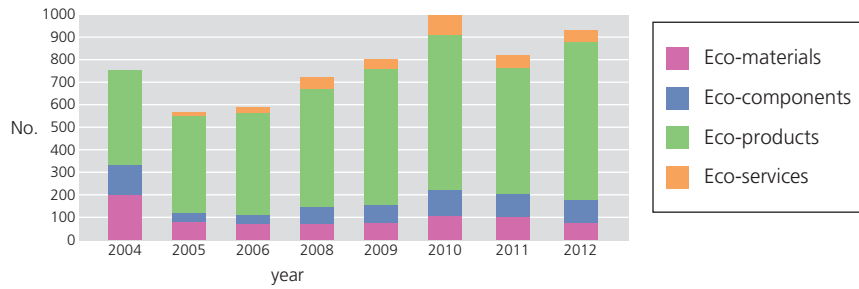
# 4

## Properties of listed products and services during 2004-2012

### 1. Number of listed products and services in this Directory

	2004	2005	2006	2008	2009	2010	2011	2012
Eco-materials	199	80	71	70	73	105	101	69
Eco-components	134	39	39	73	83	131	105	107
Eco-products	421	432	453	526	604	670	557	699
Eco-services	N/A	16	28	56	44	94	55	52
Total	754	567	591	725	804	1,000	818	927

Figure 1. Number of listed products and services

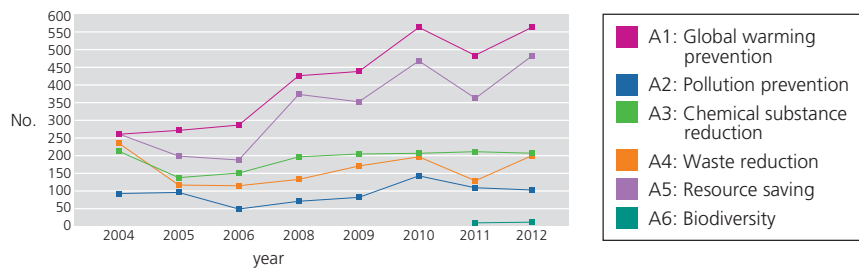


### 2. Number of listed products and services by category

Which environmental issues does the product or service intend to address?

	2004	2005	2006	2008	2009	2010	2011	2012
A1: Global warming prevention	263	274	289	429	441	566	488	563
A2: Pollution prevention	95	98	51	73	84	145	110	103
A3: Chemical substance reduction	215	140	153	199	207	209	214	207
A4: Waste reduction	238	119	117	135	173	199	128	200
A5: Resource saving	264	201	190	376	355	471	361	482
A6: Biodiversity	N/A	N/A	N/A	N/A	N/A	N/A	7	12

Figure 2. Number of products and services categorized as A1-5

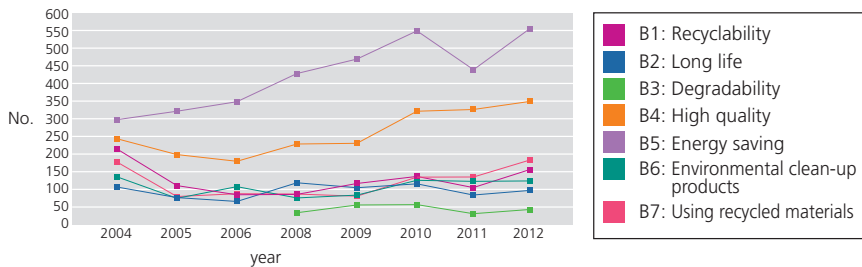


## Properties of listed products and services during 2004-2012

### How does the product or service address environmental issues?

	2004	2005	2006	2008	2009	2010	2011	2012
B1: Recyclability	214	110	84	85	116	136	110	156
B2: Long life	106	76	65	118	104	115	82	97
B3: Degradability	N/A	N/A	N/A	33	55	56	28	43
B4: High quality	243	198	179	228	230	321	330	349
B5: Energy saving	297	321	348	428	469	549	444	555
B6: Environmental clean-up products	135	74	107	75	83	125	123	125
B7: Using recycled materials	177	79	87	86	80	134	112	183

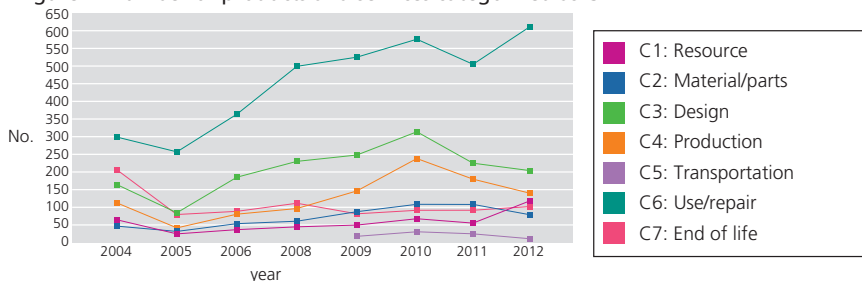
Figure 3. Number of products and services categorized as B1-7



### When and where in the product lifecycle does the product or service address environmental issues?

	2004	2005	2006	2008	2009	2010	2011	2012
C1: Resource	63	23	35	43	48	66	55	118
C2: Material/parts	45	30	52	59	86	107	105	79
C3: Design	163	83	184	229	247	313	229	204
C4: Production	111	40	79	95	145	237	186	140
C5: Transportation	N/A	N/A	N/A	N/A	16	29	22	11
C6: Use/repair	298	256	363	499	525	576	509	611
C7: End of life	205	78	87	110	80	90	92	102

Figure 4. Number of products and services categorized as C1-7



# 5

## Understanding the listed products and services

To ensure an accurate understanding of the listed products and services, the following three categories were developed for the *Eco-products Directory 2012*:

### Which

#### A: Which environmental issues does the product or service intend to address?

This category helps consumers understand which environmental issues are addressed by the listed products and services. The focus is on global warming and resource consumption. Issues related to pollution and contamination (air, water, and soil), which are serious problems in developing economies, and waste disposal, are also included. A total of five issues are therefore listed:



#### Global warming prevention

Helps reduce emissions of greenhouse gases such as carbon dioxide. This initiative includes the direct reduction of greenhouse gas emissions as well as energy saving and the reduction of deforestation.



#### Air/water/soil pollution prevention

Helps reduce emissions of substances in to the air, water, and soil, such as photochemical oxidants (e.g., nitrogen oxides) and suspended particulate matter (e.g., sulfur oxides), which are substances restricted by environmental standards including air pollution control laws. This includes products that contribute to preventing ozone depletion and product oxidation. The cleanup of air/water/soil pollutants is also included.



#### Chemical substance reduction

Helps reduce and clean up eco-toxic chemical substances harmful to humans and the environment. These chemicals include substances specified by laws that identify the environmental impact created by emissions of specific chemical substances and that promote better management of such substances. This includes the reduction and purification of hazardous substances by recycling and reuse as well as products containing low levels of or no hazardous substances.



#### Waste reduction

Helps reduce the final disposal volumes by changing products, manufacturing processes, and packaging. This includes waste weight/volume reduction within the circulation system.



#### Resource saving

Helps reduce the consumption of resources, such as mineral, forest, and water resources. This includes resource saving by reuse and recycling as well as resource saving in products and the manufacturing process.



#### Biodiversity

The product/service contributes to the conservation of biological diversity through a sustainable use of the components in the eco-system and promotes the fair and equitable sharing of benefits arising from the utilization of genetic resources.



# How **B: How does the product or service address environmental issues?**

This category explains how the listed products and services support environmental impact reduction in response to the five issues listed in A. The category is subdivided to provide comprehensive support for various environmental measures presently in place. This clarifies whether resource saving is achieved through enhanced product performance, longer product life, or improved product recyclability.



### **Recyclability/reusability/refillability**

Raw materials can be recovered, processed, and recycled for reuse. Alternatively, they can be recycled efficiently by using designs that are easily disassembled. Reusable and refillable designs may be used in packaging and products.



### **Long life**

With long-life designs, enhanced durability, and continued performance with repairs and maintenance, product life can be prolonged, leading to the reduction of raw materials and waste.



### **Degradability/compostability**

Products, packaging, and their components can be biodegradable and produce substances that are relatively homogeneous and stable. They can also be degraded to a degree under certain conditions within a predetermined period of time.



### **High quality/performance**

Product quality and performance improvements enable environmental impact reduction, subsequently leading to material and waste reduction.



### **Energy saving**

Efficient process designs and product weight reduction enable energy saving. This initiative includes the use of energy recovered instead of disposed of.



### **Environmental cleanup products**

The use of hazardous chemical substances in product manufacturing is reduced through the development of alternative materials or the use of the product helps clean up hazardous substances.



### **Using recycled materials**

Recyclable materials (pre- and postconsumer) are recovered and used in the manufacturing process, either entirely or in high volumes.

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# When, Where

## C: When and where in the product life cycle does the product or service address environmental issues?

This category helps determine when and where within the life cycle of the product or service environmental initiatives are reflected. The product life cycle is broken down into seven steps: material extraction; material and component production; design; manufacturing; transportation; product use; and disposal.



### Extraction of materials (resources)

In this step, resources needed for product manufacturing are collected. Some equipment is used for environmental impact reduction in this stage.



### Material and component production (materials/parts)

This is a stage where interim products including materials and components are manufactured. Such interim products and their designs are intended for environmental impact reduction.



### Design and material selection (design)

In this step, designs and materials are carefully selected for product manufacturing, including environmentally compatible designs.



### Product manufacturing (production)

Products are manufactured in this step using materials and components. This step includes products that help reduce environmental impact during the manufacturing process.



### Transportation

In this step, materials, parts, and products are carefully transported to result in a low environmental burden. This step includes products for which modes of transportation have been changed and those with unique packaging.



### Product use, maintenance, and repair (use/repair)

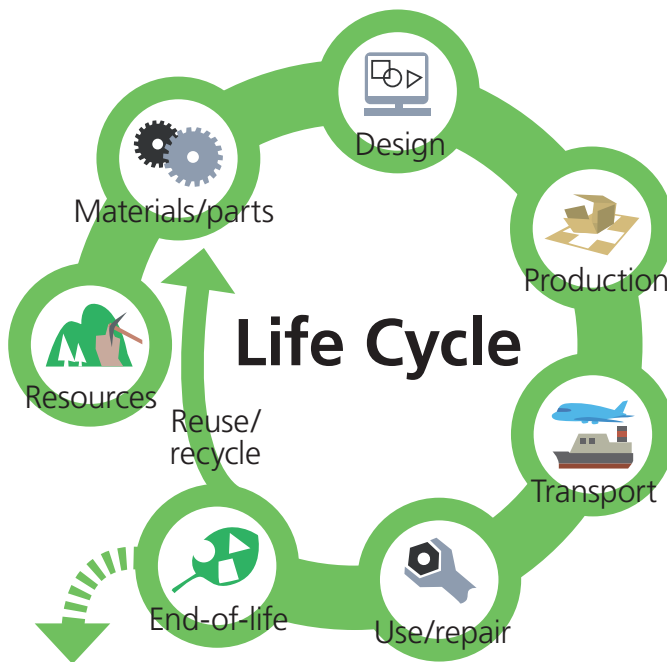
In this step, products are used by consumers and maintenance and repairs are carried out. This step includes consideration of energy saving and environmental cleanup as well as prolonging product life by repairs and product life improvement.



### End-of-life

In this step, products are disposed of and recycled. Included in this step are products that contribute to the reduction of final disposal volumes and can be disassembled, are easily reusable, easily recyclable, and compatible with well-established recycling systems.

Product life cycle stage: Schematic diagram



# 6

## Product data display in the *Eco-products Directory 2012*

To make it simple and easy to understand for all readers, the product data are sorted and arranged in the directory as shown below.

- ① Product ID number
- ② Title (product name and features)
- ③ Product description (environmental performance and product performance)
- ④ Company information
- ⑤ Sales area
- ⑥ Common product name
- ⑦ Categories
- ⑧ Environmental labels and other information
- ⑨ Product photo
- ⑩ Photo description

### ① Product ID number

All product ID numbers are displayed as shown below:

# EP-3-010

Classification 1 Classification 2 Product item no.

### (1) Classification 1

In the *Eco-products Directory 2012*, the information on each eco-product is provided in four categories: 1. Materials, 2. Components, 3. Products, and 4. Services. These categories are also distinguished by frames of different colors (1. pink, 2. blue, 3. green, and 4. orange).

**Eco-materials**    **Eco-components**  
**Eco-products**    **Eco-services**

## (2) Classification 2

Each main category is divided into subcategories as shown below:

### EM

- 1 Metals
- 2 Polymers
- 3 Natural materials
- 4 Foam
- 5 Ceramics and glass
- 6 Composites
- 7 Others

### EC

- 1 Construction components
- 2 Electrical and electronic components
- 3 Semiconductor-related devices and components
- 4 Machine parts
- 5 Automobile parts
- 6 Packaging
- 7 Others

### EP

- 1 Home electric appliances/lighting
- 2 Carriers/automobiles
- 3 OA/IT equipment
- 4 Office supplies/furniture
- 5 Apparel/textiles
- 6 Household goods and equipment
- 7 Building and civil engineering equipment
- 8 Machines and equipment
- 9 Others

### ES

- 1 Product-related services  
(maintenance, upgrading, repair/reform)
- 2 Reuse and recycling services  
(collection, etc.)
- 3 Outsourcing services  
(waste disposal, control of hazardous items, chemical treatment, facility management)
- 4 Management-related services  
(consulting, accreditation, analysis, evaluation, etc.)
- 5 Others  
(e-commerce, eco-tourism, hotels, information transfer, etc.)

These subcategories are shown the right side of the bar as follows:

**Eco-materials // Metals**

EM-1-001

Metals

**Eco-components // Construction components**

EC-1-001

Construction

**Eco-products // Home electric appliances/lighting**

EP-1-001

Home electric appliances/lighting

**Eco-services // Product-related services (maintenance, upgrading, repair/reform)**

ES-1-001

Product-related



---

### **(3) Product item number**

Each subcategory lists product items in numerical order in accordance with the Japan Statistical Standard Industry Classification, the Standard Industrial Classification for Japan, and the Commodity Classification for Census of Manufactures for Japan.

#### **② Title (product name and features)**

Brief description of how the product or service has been improved to contribute to environmental impact reduction.

#### **③ Product description (environmental performance and product performance)**

Detailed description of how the product or service has been improved to contribute to environmental impact reduction.

#### **④ Company information**

The contact details of the providers of the product or service, including URLs for the websites of providers, the listed product, and provider's corporate social responsibility report.

#### **⑤ Sales area**

The region or country where the product or service is available. (Sales areas are not always stated as this is an optional section.)

#### **⑥ Common product name**

The common name of the product or service (e.g., camera, pencil, desk, etc.).

#### **⑦ Categories**

How the product or service reflects certain environmental initiatives, indicated graphically under the following three categories:

**A: Which environmental issues does the product or service intend to address?**

**B: How does the product or service address environmental issues?**

**C: When and where in the product life cycle does the product or service address environmental issues?**

The icons indicate items (maximum of two each) selected from Categories A (which) and B (how).

<Icons>

**A: "Which"**



Global warming



Air/Water/Soil



Chemical substances



Waste



Resource



Biodiversity

**B: "How"**



Recyclable



Long life



Degradable



High quality



Energy saving



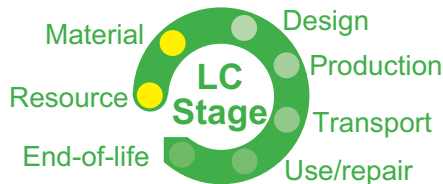
Purification



Recycled materials

**C: "When" and "Where"**

The yellow dots indicate items (maximum of two) selected from the LC Stage



**⑧ Environmental labels and other information**

Up to four environmental labels or other certification granted to the product or service are displayed based on applications from providers. For information on the types and names of these eco-labels, please refer to page 12-15 in 3. Products listed in the *Eco-products Directory 2012*.

We asked providers to specify greenhouse gas (GHG) emissions per product (if available) and indicate respective CO<sub>2</sub> equivalents below the illustration of the environmental labels. Where such values are indicated, we also specify the scope of the life cycle stages included in the calculation of GHG emissions (i.e., resource extraction, production of materials/parts, product manufacturing, transportation, use, and disposal). As a further measure, we indicate whether such values were inspected by a third-party organization.

**⑨ Product photo**

One photo or a related image is inserted for each product.

**⑩ Photo description**

The caption provides a brief description, e.g., model name, of each product photo.

With the APO Eco-products Database, users can have web-based, easy access to the environmentally friendly products and services listed in the *Eco-products Directory*. The database can become an even more useful tool by using the convenient web search function, which allows users to narrow the search by indicating specific keywords or criteria.



## Searching for products or services with predefined keywords and criteria

Users are able to search through the entire database by indicating the requested predefined keywords or criteria in a check box.

If no specific keywords or criteria are checked, the system will perform a search of the database for the particular area. For example: If none of the boxes in the Labels area is checked, the system displays all information corresponding to all three label types.

## Using the free-word search function

Users are also able to search the database using a specific keyword or phrase with the free-word function.

To do so, enter the specific keyword in the “Freeword search” box and click “Search.” To search the database using more than one keyword, separate each word with a space. For example: If “eco” and “products” are entered, only entries containing both keywords are shown.



# Eco-materials

- 1 Metals**
- 2 Polymers**
- 3 Natural materials**
- 4 Foam**
- 5 Ceramics and glass**
- 6 Composites**
- 7 Others**

In the *Eco-products Directory 2012*, “eco-materials” refer to “materials (or material technologies) that possess excellent characteristics with good performance, which can be manufactured, used, and recycled or disposed of, while having only a low impact on the environment as well as being kind to humans.” Environment-friendly eco-materials come in a diverse range and include recyclable materials, materials free from hazardous substances, materials manufactured with low energy consumption and in clean conditions, materials that purify contaminated water and air, materials that are very efficient and resource-saving while still offering high performance, and much more.

Carefully assessing the impact on the environment within the life cycle from resource collection to the disposal stage is important in choosing eco-materials. Once this has been clarified, eco-materials can be used to create eco-products with a good balance between function and eco-efficiency. Based on this concept, eco-materials must meet the following six criteria:

- (1) They do not use scarce resources.
- (2) They have functions to clean and conserve the environment.
- (3) They create only low environmental impact when manufactured.
- (4) They do not contain any hazardous substances.
- (5) They provide high performance when used.
- (6) They are easy to recycle.



EM-1-001

Metals

alloy materials

Pure titanium sheet for aircraft / Titanium alloy rods for aircraft engines

Environmental performance

Titanium is being increasingly used in larger aircraft as a means of reducing weight in order to lower CO<sub>2</sub> emissions and reduce noise.

Product performance

Sumitomo Metals has been highly praised for its advanced quality management and delivery management, and is the exclusive supplier to Airbus of the pure titanium sheet used in the pylons that connect the wings and engines and in the piping. In addition, the titanium alloy rods produced by Sumitomo Metals were the first such Japanese products to be certified by Rolls Royce, and will be used in aircraft engine wing components and other parts. The titanium products of the Sumitomo Metals Group have been certified by Nadcap, the global aerospace standard inspection and certification program, and are approved for use by the airline industry around the world.

Sumitomo Metal Industries, Ltd.

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 Tel +81-3-4416-6183 Fax +81-3-4416-6793  
 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Airbus A380

Eco-materials // Metals  
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EM-1-002

Metals

aluminum and aluminum alloy die castings

Chromium-free new surface treatment technique

Environmental performance

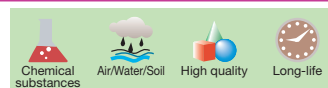
Chromium-free new surface treatment technique ("Super-Ecoat"<sup>TM</sup>) is an environment-friendly surface treatment for aluminum, since it contains no chromium and other poisonous substance.

Product performance

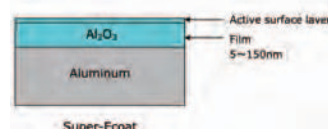
In this newly developed surface treatment product, non-porous, dense and thin aluminum oxide film with active surface layer is formed on aluminum. Corrosion resistance, adhesion and bonding strength more than equal to that of conventional chromate treatment are obtained. It is now widely used in home electric appliances, electronic parts, beverage and food containers, etc.

Mitsubishi Aluminum Co., Ltd.

2-3-3. Shiba, Minato-ku, Tokyo, 105-8546, Japan  
 Tel +81-3-3769-0111 Fax +81-3-3769-0180  
 URL <http://www.malco.co.jp/english/index.html>



[Feature and film composition of Super-Ecoat ]  
 ① Aluminum oxide film (High safety)  
 ② Non-porous and dense film (corrosion resistance)  
 ③ Chemical bond by active surface layer (Adhesion and bonding strength)  
 ④ It forms with anodic oxidation treatment (High-speed processing and uniformity)



EM-1-003

Metals

building materials

Lead-Free Galvanized Steel Plate T. 6mm-16mm, etc.

**Environmental performance**

Incorporating the lead-free galvanization process, and does not generate heavy metals, such as lead, cadmium, chromium and the like, the waste derived from the process can be recycled and reused, and products with surface treatment are relatively free of black spots with a relatively thicker galvanized layer and a rustproof ratio higher than the conventional nickel plating, helping to extend the product's life cycle, and also reduce the subsequent maintenance and repair cost.

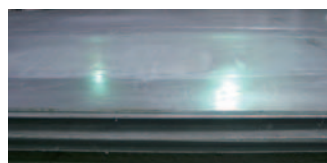
**Product performance**

For use in outdoor weatherproof environment, it can be used as floor base plate, and can also be reprocessed into other products.



**Shine Metal Hot-Galvanization Enterprise Co., Ltd.**

No.119-86, Sanhe Rd. , Ligang Township, Pingtung County, Taiwan, 905, Republic of China  
Tel +886-7-555-9377-105 Fax +886-7-555-9251  
E-mail kingstar616@gmail.com  
URL <http://www.smg.com.tw/>



Available in: Taiwan (Rep. of China)

EM-1-004

Metals

building materials

Lead-Free Galvanized Steel Angles L50\*50\*6t, etc.

**Environmental performance**

Incorporating the lead-free galvanization process, and does not generate heavy metals, such as lead, cadmium, chromium and the like, the waste derived from the process can be recycled and reused, and products with surface treatment are relatively free of black spots with a relatively thicker galvanized layer and a rustproof ratio higher than the conventional nickel plating, helping to extend the product's life cycle, and also reduce the subsequent maintenance and repair cost.

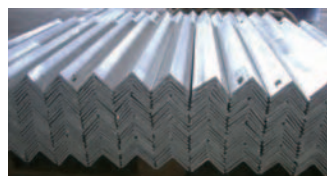
**Product performance**

Parts and components used in plant structures, bridges, power transmission towers and for general structures.



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URL <http://www.smg.com.tw/>



Available in: Taiwan (Rep. of China)

EM-1-005

Metals

building materials

Lead-Free Galvanized Grating FB25\*4. 5t, etc.

Environmental performance

Incorporating the lead-free galvanization process, and does not generate heavy metals, such as lead, cadmium, chromium and the like, the waste derived from the process can be recycled and reused, and products with surface treatment are relatively free of black spots with a relatively thicker galvanized layer and a rustproof ratio higher than the conventional nickel plating, helping to extend the product's life cycle, and also reduce the subsequent maintenance and repair cost.

Product performance

It is used in various plants and buildings' floor insulation layers. There are steel structure platforms and passageways, staircase steps, cement products' reinforcement material, roadway ditch cover plate, storage racks, grills, temporary cover plates for a variety of working holes, and post-modern architectural design materials.

Shine Metal Hot-Galvanization Enterprise Co., Ltd.

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 E-mail kingstar616@gmail.com  
 URL <http://www.smg.com.tw/>

Available in: Taiwan (Rep. of China)



Eco-materials // Metals

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EM-1-006

Metals

building materials

Lead-Free Galvanized Steel Structure 150\*150\*75, etc.

Environmental performance

Incorporating the lead-free galvanization process, and does not generate heavy metals, such as lead, cadmium, chromium and the like, the waste derived from the process can be recycled and reused, and products with surface treatment are relatively free of black spots with a relatively thicker galvanized layer and a rustproof ratio higher than the conventional nickel plating, helping to extend the product's life cycle, and also reduce the subsequent maintenance and repair cost.

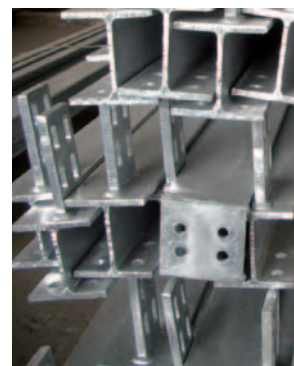
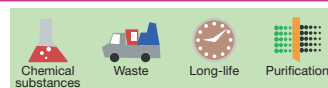
Product performance

It is suitable as general building structural material or facilitating material for factories, warehouses, offices, schools, sports stadiums, agricultural greenhouses, prefabricated residential units, car canopies, car park equipment and the like.

Shine Metal Hot-Galvanization Enterprise Co., Ltd.

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 E-mail kingstar616@gmail.com  
 URL <http://www.smg.com.tw/>

Available in: Taiwan (Rep. of China)



EM-1-007

Metals

building materials

**Lead-Free Galvanized Expanded Metal XG11, XG12, XG13, etc.****Environmental performance**

Incorporating the lead-free galvanization process, and does not generate heavy metals, such as lead, cadmium, chromium and the like, the waste derived from the process can be recycled and reused, and products with surface treatment are relatively free of black spots with a relatively thicker galvanized layer and a rustproof ratio higher than the conventional nickel plating, helping to extend the product's life cycle, and also reduce the subsequent maintenance and repair cost.

**Product performance**

It is used as factory, building, ship staircase's step plates, corridor and platform flooring, and can be used as fence walls, partitions, railings, reinforcement material and for producing electrical appliances and household electrical products.

**Shine Metal Hot-Galvanization Enterprise Co., Ltd.**

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URL <http://www.smg.com.tw/>

Available in: Taiwan (Rep. of China)



EM-1-008

Metals

regenerated pig copper and copper alloys

**ECO BRASS ( High-Performance Lead-free Copper Alloy )****Environmental performance**

ECO BRASS is a lead-free and environmentally friendly brass material. Instead of using heavy metal harmful to the human body, a precipitating metallic compound in the metal structure realizes good machinability.

Key Features:

- 1) Lead-free
- 2) High strength equivalent to stainless steel
- 3) Good machinability nearly equal to brass rod containing 1% lead
- 4) Excellent machined surface, de-zincification corrosion resistance, stress corrosion cracking resistance, warm brittleness cracking resistance, and hot forgeability
- 5) Easily accepts soldering and brazing
- 6) Good castability

Applications:

- 1) Water supply devices such as faucets, valves, fittings, etc.
- 2) Precision parts as a substitute for stainless steel such as shafts, screws, bearings
- 3) Electrical parts and connectors
- 4) Automobile parts: lead-free requirements
- 5) Medical devices

**Mitsubishi Shindoh Co., LTD**

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Tel +81-72-233-1161 Fax +81-72-227-6590  
URL <http://www.mitsubishi-shindoh.com/global/index.html>  
URL <http://www.ecobrass.com/>



Machined products using ECO BRASS rods

EM-1-009

Metals

shape steel

**SMart BEAM™ lightweight welded H-beam****Environmental performance**

Sumitomo Metals is developing technologies that will allow the SMart BEAM™ H-beam, which is produced continuously by welding of a hot-rolled coil, to be used for a range of applications. It helps conserve natural resources, and is 20-30% lighter than a conventional rolled H-beam with the same performance, and is being used in industrialized home-building and other construction.

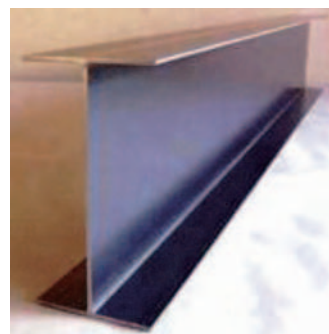
**Product performance**

Reducing the weight of construction materials is an important issue not only for cutting costs, but also for helping conserve natural resources. It can also be used as beams in wooden houses in order to reduce warpage of the floor and improve durability.

**Sumitomo Metal Industries, Ltd.**

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Smart BEAM

EM-1-010

Metals

sheet steel

**Amorphous soft magnetic alloy "Metglas® 2605SA1, 2605HB1M"****Environmental performance**

No load loss of distribution transformers using amorphous soft magnetic alloy "Metglas®" can be reduced about 1/3 compared to that using CRGO (Cold Rolled Grain Oriented Electrical Steel), thereby significantly contributing to the prevention of global warming. Newly developed alloy "Metglas® 2605HB1M" which has about 5 % higher saturation induction and higher squareness of B-H hysteresis loop compared to those of "Metglas® 2605SA1" can reduce the volume, weight and audible noise of amorphous distribution transformers.

**Product performance**

Metglas® has the following features compared to CRGO.

- 1) Coercivity is less than 1/2, thereby hysteresis loss is lower.
- 2) Thickness is about 1/10 (25 μm) and electric resistivity is more than 2 times (1.2 μΩ·m), thereby eddy current loss is lower.

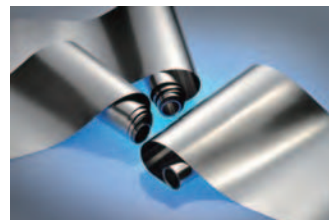
**Hitachi Metals, Ltd.**

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
Tel +81-3-5765-4202  
E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
URL <http://www.hitachi-metals.co.jp/index.html>  
URL <http://www.metglas.com/>  
URL [http://www.hitachi-metals.co.jp/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)



TYPE II



Amorphous soft magnetic alloy "Metglas™"



EM-1-011

Metals

sheet steel

## High Tensile Steel

## Environmental performance

Demand for high tensile steel sheets (HITEN) is growing as a material that enables both automobile body weight reduction and collision safety. Recently, demand has increased for higher tensile strength steel sheets (Ultra HITEN). The cold rolled 1180MPa, created with our proprietary WQ (Water Quenching) continuous annealing process, was employed for integrally molded door impact beams made with conventional press forming.



## JFE Steel Corporation

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URL <http://www.jfe-steel.co.jp/>



EM-1-012

Metals

sheet steel

## Chromate-free coated steel sheet

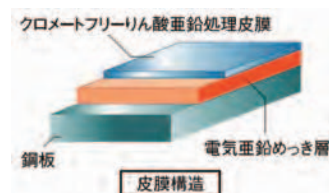
## Environmental performance

Chromate-free coated steel sheet is an environment-friendly product, since it contains no chrome (VI). A uniquely designed composite film consisting of a special organic resin and inorganic substance secures as much corrosion resistance as conventional products. It is now used in internal panels of home electric appliances and vending machines, internal components of OA equipment, chassis of audiovisual equipment, and other parts.



## JFE Steel Corporation

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URL <http://www.jfe-steel.co.jp/>





EM-1-013

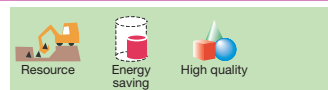
Metals

sheet steel

**all-purpose stainless steel JFE443CT**

**Environmental performance**

JFE443CT is all-purpose stainless steel which does not contain such rare resources as nickel or molybdenum but ensures high corrosion resistance equivalent to SUS304. When applied to cooking pans for induction heating (IH), it leads to substantial energy saving because of its properties of excellent heat transmission and magnetism.



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 URL <http://www.jfe-steel.co.jp/>



Eco-materials // Metals

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EM-1-014

Metals

sheet steel

**Highly Lubricant GA Steel Sheet: "JAZ (JFE Advanced Zinc)"**

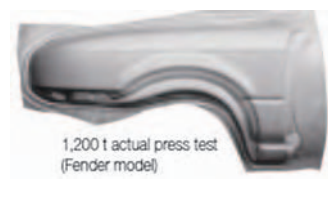
**Environmental performance**

As an environment-friendly product, "JAZ" does not contain phosphate or heavy metal elements which used to be contained in conventional lubricated GA steel sheets. In this unique product, a surface reforming layer with nano-level thickness is formed on a zinc coated layer. JAZ has been adopted in automotive outer panels or inner panels which are otherwise difficult to form. More specifically, it is used in side panels, fenders, doors, and wheelhouses, etc.



**JFE Steel Corporation**

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan  
 Tel +81-3-3597-3111 Fax +81-3-3597-4860  
 URL <http://www.jfe-steel.co.jp/>



EM-1-015

Metals

sheet steel

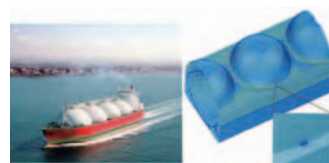
## FCA-W steel plate, high-tensile-strength plate for improving the fatigue of welded joints

## Environmental performance

FCA-W steel plate achieved weight reductions through the development of the innovative high-tensile-strength with preventing fatigue cracks from occurring at welded joints. It contributes to reducing CO<sub>2</sub> emission.

## Product performance

By using this product, which not only controls the propagation of fatigue cracks, but also prevents fatigue cracks from occurring at welded joints in the first place, designers get free from design steps such as increasing plate thickness or adding reinforcement materials were used to prevent fatigue fracture of welded joints in steel structures.



Natural gas carrier ship and the parts where FCA-W is used (from a calculation model used for hull evaluation by Nippon Kaiji Kyokai)

## Sumitomo Metal Industries, Ltd.

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-016

Metals

sheet steel

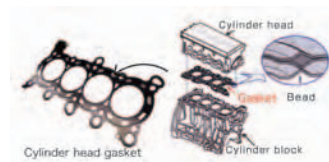
## NAR-301L HS1 stainless steel plate for cylinder head gaskets

## Environmental performance

NAR-301 HS1 is that Sumitomo Metals has applied its original component design and manufacturing conditions to develop an ultra-fine structure steel plate. This product is used for the cylinder head gasket, and contributing to technology aimed at reducing fuel consumption.

## Product performance

The cylinder head gasket is a component that supports technology used to improve the combustion efficiency of an automobile engine and to improve fuel economy. It is important that this component have spring performance that can keep gaps closed while adapting to vibration and heat, as well as good fatigue-resistance characteristics. This product has more than 30% better fatigue-resistance characteristics, and has been very highly evaluated.



## Sumitomo Metal Industries, Ltd.

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

Gasket structure

EM-1-017

Metals

sheet steel

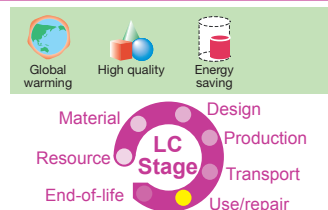
**Non-oriented electromagnetic steel sheet for high-efficiency motors**

**Environmental performance**

This product is non-oriented electromagnetic steel sheet used in hybrid vehicle drive motors and air conditioner compressors, an iron core with superior magnetic characteristics is needed to achieve lighter weight, smaller size, and higher performance in the high-efficiency motors.

**Product performance**

We have applied its original component design and heat treatment technologies to control the crystal orientation and develop a non-oriented electromagnetic steel sheet with lower electrical loss and improved electromagnetic characteristics. This product has been praised as a revolutionary new technology from many directions.



Example of high-efficiency motors using non-oriented electromagnetic steel sheet

**Sumitomo Metal Industries, Ltd.**

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-018

Metals

sheet steel

**NAR-AH-4 high heat-resistance stainless steel**

**Environmental performance**

NAR-AH-4 contributes to the conservation of resources by using less than half of the amount of the valuable resource nickel than conventional products. At the same time, this product retains the same or better high-temperature strength and excellent high-temperature oxidation resistance.

**Product performance**

NAR-AH-4 retains excellent high-temperature strength and high-temperature oxidation resistance. This product is used in automobile exhaust manifolds and other applications.



Application of NAR-AH-4 to exhaust manifold

**Sumitomo Metal Industries, Ltd.**

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Tel +81-3-4416-6183 Fax +81-3-4416-6793  
E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-019

Metals

sheet steel

## Chrome-free treated zinc-coated steel sheet

### Environmental performance

Previously chrome compounds were used for the surface treatment of zinc-coated steel sheet to prevent corrosion. Sumitomo Metals is developing surface-treated steel sheet that uses no chrome compounds at all, designed for specific applications. And some kinds of these products do not require cleaning the surface with organic solvents-substances that have a large impact on the environment.

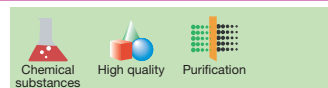
### Product performance

Our products for use as motor covers are known for their excellent corrosion resistance, high resistance to surface peeling under harsh forming conditions, and the fact that they do not require cleaning with organic solvents-substances that have a large impact on the environment. For fuel tank applications, we are developing a material that can be used with highly corrosive bio-ethanol fuels.

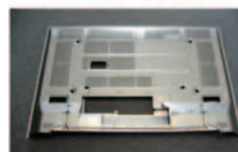
### Sumitomo Metal Industries, Ltd.

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 Tel +81-3-4416-6183 Fax +81-3-4416-6793  
 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Chrome-free thin steel sheet is used in these parts.  
 Example of use (motor cover)



Example of use (back panel for plasma TV)

EM-1-020

Metals

sheet steel

## Stainless steel foil for bipolar plates of polymer electrolyte fuel cell

### Environmental performance

This product, which was developed by Sumitomo Metals, is the stainless steel foil with high conductivity and highly corrosion resistant for bipolar plates of polymer electrolyte fuel cell. The bipolar plates are also called separators. The separator is one of main parts of fuel cells, which are expected to be the next-generation, eco-friendly, highly-efficient electrical power supply source, for practical application in automobiles and other diverse fields. It is a foil thicknesses of 0.2mm or less thin, achieved the separator of lightweight and high performance. For reducing CO<sub>2</sub>, we expect this technology to make a large contribution for the fuel cell society.

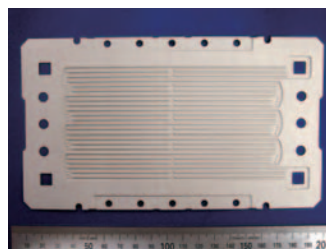
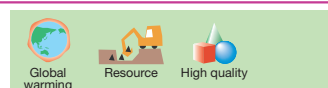
### Product performance

This product is high electrically conductive and highly corrosion resistant stainless foil for fuel cell separator by making electrically conductive metallic inclusions in stainless steel. The developed material is highly suitable for mass production and features excellent formability, and makes possible low-cost production of fuel cell separators.

### Sumitomo Metal Industries, Ltd.

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 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Separator

EM-1-021

Metals

steel materials

**Smigreen CS™ low carbon lead-free free-cutting steel**

**Environmental performance**

Previously, lead was used to improve the cutting performance of free-cutting steel. Smigreen CS™, low carbon steel that utilizes no lead at all thanks to an increase in the amount of sulfur compounds added, maintains good cutting machinability without including lead that have a large impact on the environment.

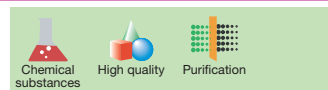
**Product performance**

Smigreen CS™ is low carbon steel that maintains good cutting machinability without including lead that have a large impact on the environment. This product has been adopted for use as printer shafts by a major office automation (OA) equipment manufacturer.

**Sumitomo Metal Industries, Ltd.**

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 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Example of use (printer shafts)

Eco-materials // Metals  
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EM-1-022

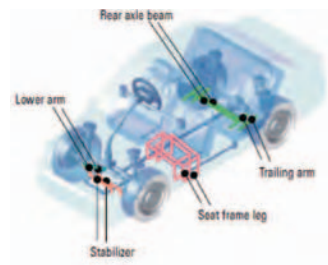
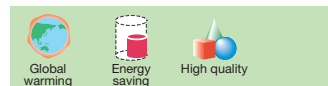
Metals

steel pipes

**Automotive Steel Tubes**

**Environmental performance**

High performance electric resistance welded steel tubes known as "HISTORY (high speed tube welding and optimum reducing technology) steel tubes" contribute to automotive weight reduction by realizing hollow tubes and properties of high strength and high formability.



**JFE Steel Corporation**

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan  
 Tel +81-3-3597-3111 Fax +81-3-3597-4860  
 URL <http://www.jfe-steel.co.jp/>

EM-1-023

Metals

steel pipes

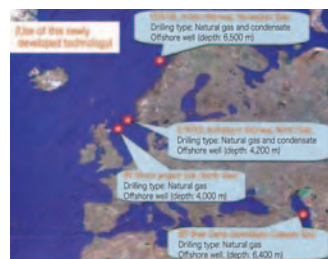
SM125S super high-strength corrosion-resistant steel OCTG(oil country tubular goods)

Environmental performance

SM125S are steel tubes with high strength and high corrosion resistance to extract natural gas, much of it exists in environments at great depths where highly corrosive hydrogen sulfide is present.

Product performance

SM125S create high strength (125 ksi) and high corrosion-resistant by applying a technology that envelops impurities in the steel with another impurity. This has made possible the previously impossible development of gas wells at depths of 4,000-6,000 meters or more.



Natural gas development projects made possible by this product

Sumitomo Metal Industries, Ltd.

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 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-024

Metals

steel pipes

X-80 large-diameter welded steel pipe for gas pipelines

Environmental performance

X-80, large-diameter welded steel pipe, is applied to extremely high pressure natural gas pipe lines. This improves the efficiency of the transportation and also contributes to the spread of natural gas which helps to reduce CO<sub>2</sub>.

Product performance

The integral technology, such as original design of chemical composition, TMCP and pipe forming-welding technique, is considered during the manufacture of X-80 large-diameter welded steel pipe. This is good for the economy and helps in achieving excellent safety in harsh environments. This product has high strain resistance to earthquake or landslide is becoming more popular in the field of natural gas transportation.



Line pipe

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan  
 Tel +81-3-4416-6183 Fax +81-3-4416-6793  
 E-mail chikyu-kan@sumitomometals.co.jp  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



EM-1-025

Metals

steel pipes

**Stainless steel boiler tubes for ultra supercritical coal-fired thermal power generation**

**Environmental performance**

At coal-fired power plants,improving power-generating efficiency by increasing the temperature and pressure ( to the ultra supercritical state ) of the steam generated by the boiler is a key issue for saving energy and reducing CO<sub>2</sub> emissions. By applying stainless steel boiler tubes for ultra supercritical coal-fired thermal power generation, the efficiency improved by 2% ( up to 43% ), CO<sub>2</sub> emissions decreased by 5% compared with conventional condition ( supercritical state ) .

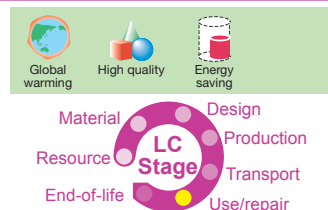
**Product performance**

This product has the excellent high-temperature strength,and high resistance to steam oxidation corrosion and high-temperature corrosion,that are needed for use in ultra supercritical applications. We developed the world's strongest 18% chrome steel for use as steel tubes, by working with 18% chrome steel and applying technology for creating smaller crystal grain using niobium( Nb ) carbide,and by also applying copper supplementation. For use with high sulfur-content coal,we have also developed the world's first 25% chrome steel for use as boiler tubes.

**Sumitomo Metal Industries, Ltd.**

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 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Boiler tubes

Eco-materials // Metals

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EM-1-026

Metals

steel pipes

**Super 13Cr steel pipe for pipelines**

**Environmental performance**

Natural gas pipelines must be able to withstand harsh corrosive environments. This product is Super 13Cr pipeline steel with superior corrosion resistance. It is making a contribution to use of natural gas reducing CO<sub>2</sub>.

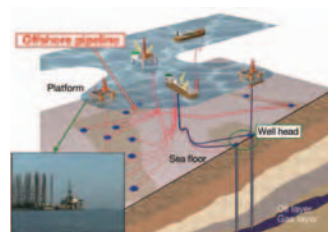
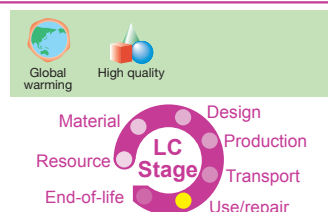
**Product performance**

This product is Super 13Cr steel pipe for natural gas pipelines. It has the superior corrosion resistance for withstanding harsh corrosive environments.

**Sumitomo Metal Industries, Ltd.**

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 Tel +81-3-4416-6183 Fax +81-3-4416-6793  
 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Model Diagram of Offshore Oil Well and Gas Well Development

EM-1-027

Metals

tool steel

## Advanced Plastic Mold Steel For General Purposes, "HPM-MAGIC™"

**Environmental performance**

Because "HPM-MAGIC™" has high toughness, breakage and chipping would be reduced, and we would expect longer die life. Furthermore, because of superior machinability, we can expect longer tool life and shorter working time in mold processing. Therefore "HPM-MAGIC™" can provide opportunities to save resource and energy.



TYPE II

**Hitachi Metals, Ltd.**

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
 Tel +81-3-5765-4410  
 E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
 URL <http://www.hitachi-metals.co.jp/e/index.html>  
 URL [http://www.hitachi-metals.co.jp/e/prod/prod19/p19\\_03.html](http://www.hitachi-metals.co.jp/e/prod/prod19/p19_03.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)



HPM-MAGIC™

Available in: Worldwide (Except for Iran)

EM-1-028

Metals

tool steel

## High Performance Cold Working Tool Steel "SLD-MAGIC™"

**Environmental performance**

SLD-MAGIC™, Cold Working Die Steel, is showing superior reputation for wear resistance and machinability along with achieving excellent characteristics of lower heat treatment distortion, versatilities for surface treatments, toughness and weldability.

"SLD-MAGIC™" can also improve the lifespan and fabricability of die molds compared to currently used die materials. Therefore, "SLD-MAGIC™" can provide opportunities to reduce energy and resources to be used and fabrication time for making various molds for automobile industries, and other industrial fields where molds are necessary.



TYPE II

**Hitachi Metals, Ltd.**

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
 Tel +81-3-5765-4410  
 E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
 URL <http://www.hitachi-metals.co.jp/e/index.html>  
 URL [http://www.hitachi-metals.co.jp/e/prod/prod19/p19\\_01.html](http://www.hitachi-metals.co.jp/e/prod/prod19/p19_01.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)



SLD-MAGIC™

Available in: Worldwide (Except for Iran)



EM-1-029

Metals

tool steel

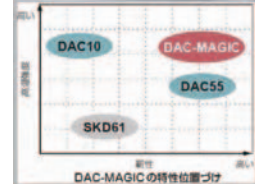
High-Performance Steel for Diecasting die, "DAC-MAGIC™"

**Environmental performance**

Because steel for Diecasting die, "DAC-MAGIC™", has improved strength at high temperature and toughness, it has higher heat crack resistance than that of conventional steel. Furthermore, "DAC-MAGIC™" has excellent resistance to stress corrosion cracking, we would expect longer die life and save resource.



TYPE II



DAC-MAGIC™

**Hitachi Metals, Ltd.**

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
 Tel +81-3-5765-4410  
 E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
 URL <http://www.hitachi-metals.co.jp/e/index.html>  
 URL [http://www.hitachi-metals.co.jp/e/prod/prod19/p19\\_04.html](http://www.hitachi-metals.co.jp/e/prod/prod19/p19_04.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)

EM-2-001

Polymers

bio-material

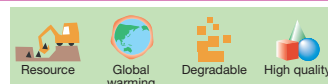
Origo Corn-Based Bio-Plastic

Environmental performance

Origo corn-based bio-plastic is a revolutionary material set to replace disposable plastics. 100% biodegradable and carbon-neutral, it is made of up to 75% corn, reducing the reliance on fossil fuels and cutting down on toxic/green house gases released when incinerated. Certified ISO-14001 ISO-14855, ASTM-6400, ASTM-6866, EN-13432.

Product performance

Origo bio-plastic can be made into a variety of products from flower pots to poster boards. It is durable, water-proof and printable. Certified ISO-9001, FDA approved.



TYPE I



Origo Bio-Plastic Pellet Resin

Olive Green Marketing Pte Ltd

2 Toh Tuck Link #05-03, 596225, Singapore  
Tel 65 67671301  
URL <http://www.olivegreen.com.sg>

Available in: Worldwide

EM-2-002

Polymers

bio-material

Biomass-based polyester fiber : ECOCIRCLE™ Plantfiber

Environmental performance

PLANTPET™ is 30% bio-based PET fiber, with EG, one of the components of PET, derived from biomass. Its bio-content can be verified by using "Radiocarbon dating".

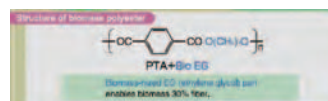
Product performance

\*Characteristics are the same as the oil-based PET.  
\*Functionality and sensitivity can be given to PLANTPET™.



Teijin Fibers Limited

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan  
Tel 0088-22-0175  
E-mail [tfj0604@teijin.co.jp](mailto:tfj0604@teijin.co.jp)  
URL <http://www.teijinfiber.com/>



EM-2-003

Polymers

plastic

100% Biodegradable & Compostable Plastic Resin (Film Grade) GB200, GB100, GB090

Environmental performance

- \* Produced using natural cornstarch, making the source of raw material dependable.
- \* Fully biodegradable through microbes, returning to nature in the form of carbon, water, bio-matter and such in a matter of a few months.

Product performance

- \* Does not generate toxic gas when burned, and the heat energy released is only one-half of conventional plastic materials, such as polyethylene.
- \* The product conforms to EN 13432 and ASTM D 6400 international compost standard, and it can be processed into industrial compost with kitchen scraps and leaves without requiring any additional processing. It can be completely broken down without leaving any toxic matter in three months.
- \* The processing method is the same as the general low-density LDPE, and can be processed on LDPE injection molding machines without having to modify the equipment.



Grabio Greentech Corporation

No. 91, Guangfu N. Rd., Hsinchu Industrial Park, Hukou Township, Hsinchu County, Taiwan, 30351, Republic of China  
 Tel +886-3-598-6496 Fax +886-3-598-6491  
 E-mail tony@grace-bio.com.tw  
 URL http://www.grabio.com.tw

Available in: Europe, North America, South America

Eco-materials // Polymers  
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EM-2-004

Polymers

plastic

100% Biodegradable & Compostable Plastic Film GB200, GB100, GB090

Environmental performance

- \* Produced using natural cornstarch, making the source of raw material dependable.
- \* Fully biodegradable through microbes, returning to nature in the form of carbon, water, bio-matter and such in a matter of a few months.

Product performance

- \* Does not generate toxic gas when burned, and the heat energy released is only one-half of conventional plastic materials, such as polyethylene.
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- \* The processing method is the same as the general low-density LDPE, and can be processed on LDPE injection molding machines without having to modify the equipment.



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 Tel +886-3-598-6496 Fax +886-3-598-6491  
 E-mail tony@grace-bio.com.tw  
 URL http://www.grabio.com.tw

Available in: Europe, North America, South America

EM-2-005

Polymers

plastic

ECOLA

**Environmental performance**

Kao has integrated the quality of ECOLA, its polylactic acid resin product, to save cycle time within the production process which contributes to the reduction of environmental burden.

1. Has realized injection molding that saves time to nearly the same extent as molding widely-used resin.

Conventional molding condition : 110°C X 10min.  
New molding condition (with ECOLA) : 80°C X 30sec at most.

2. Has realized extrusion molding of transparent and soft materials such as sheet-shaped products.

**Product performance**

Kao contributes to a more easier use of eco-friendly biomass-based polymer. In addition to the plasticity control technology that has improved the softness of molded products, our unique nano-crystal control technology has realized the products' transparency. These technologies have made it possible to expand the wide use of polylactic acid resin to plastic products.

Extrusion-molding-targeted ECOLA enables molding of sheet-shaped or film-shaped products such as transparent folders, which resemble products made of PP.

On the other hand, injection-molding-targeted ECOLA saves the molding time to nearly the same extent as molding such commonly-used resins as ABS or PP without losing the impact resistance or heat resistance after molding.

**Kao Corporation**

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan  
URL <http://chemical.kao.com/global/>  
URL <http://chemical.kao.com/jp/products/productname/c040115.html>  
URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan,China



ECOLA

EM-2-006

Polymers

chemicals and allied products

"Eco-Friendly Biodegradable Resin (EcolGreen Bio-Polymer)"

**Environmental performance**

Our company manufactures biodegradable material that is environmentally friendly.

As a biodegradable material and the complete biodegradability test Detecting whether the test substances have also been certified by completing the green mark.

For more information, our company's website ([www.ecolgreen.com](http://www.ecolgreen.com)) to Please visit

**Product performance**

Our company's products are environmentally friendly biodegradable material. The level of synthetic resin material is a substitute. Heat-resistant, synthetic resin, the level of intensity and complement existing Was.

For more information, our company's website ([www.ecolgreen.com](http://www.ecolgreen.com)) to Please visit

**ROK EcolBioTech.Co.,Ltd**

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E-mail [jcs1323@naver.com](mailto:jcs1323@naver.com)  
URL <http://www.ecolgreen.com>



EM-2-007

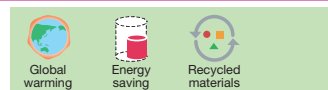
Polymers

recycled fibers

Recycled Polyester Fibers : ECOCIRCLE™ FIBERS, ECOPEL™

Environmental performance

The recycled polyester fiber made from the used polyester products is developed.



Teijin Fibers Limited

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan  
 Tel 0088-22-0175  
 E-mail tfj0604@teijin.co.jp  
 URL <http://www.teijinfiber.com/>

ECOCIRCLE™ and ECOPEL™ are the trademarks of Teijin Fiber Ltd.

EM-2-008

Polymers

recycled fibers

R3plas Bio-mass pellet

Environmental performance

Rice husk, Wheat husk and Coconut Husk is world most easily available and renewable source and ideal for alternative wood. It is natural and carbon natural and thereby helps mitigation of global warming. It help prevent deforestation in Asia and help to save wildlife.

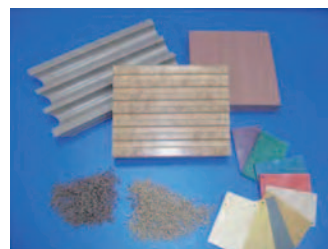
Product performance

- Better waste resistant than wood
- Termite and fungus proof
- Compositable
- Recyclability
- Sustainable manufacturing
- Easy coloring
- Eco-friendly
- Cost competitive
- Eco-function in design



WINRIGO (S) PTE LTD

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 Tel +6598715058 Fax +6565154557  
 E-mail [salewin@singnet.com.sg](mailto:salewin@singnet.com.sg)  
 URL <http://www.winrigo.com.sg>



Available in: Worldwide

EM-2-009

Polymers

zero-plastic polymer

**PLANT BASED FILM/BAG. CONTAINS ZERO-PLASTIC**

**Environmental performance**

- USES SUSTAINABLE PLANT BASED RESOURCES INCLUDING STARCH FROM TAPIOCA PLANT
- REDUCE DEPENDENCY ON PETROLUEM-BASED RAW MATERIAL
- ZERO-PLASTIC FILM/BAG WHICH DO NOT USE PE/PP/PS/PET COMMONLY FOUND
- BIODEGRADABLE, COMPOSTABLE AND WATER SOLUBLE REDUCING POLLUTION IN ENVIRONMENT & OCEAN

**Product performance**

GREENVIRONMENT, a division of Starchtech International Pte Ltd based in Singapore, is the producer of a new generation of eco-friendly zero-plastic polymer and bag. The zero-plastic film and bags uses sustainable plant based resources including starch from tapioca plant. The eco-friendly bags contain no petroleum-based raw material or polymer like polypropylene, polystyrene, polyethylene etc traditionally found in plastic bags.

The zero-plastic film is applicable as biodegradable dog poop bag, kitchen bin-liner, trash bag, garden and leaf bag, shopping bag, soluble laundry bag and others.

Greenenvironment is the OEM supplier for "GreenBio Flushable Dog Poo Bag."

**GREENVIRONMENT**

60 BAYSHORE ROAD 1605, 469982, Singapore  
 Tel (65) 91174041  
 E-mail PHILONG7@SINGNET.COM.SG  
 URL <http://www.starchtechnology.com>



Available in: Worldwide

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Eco-materials // Polymers

EM-3-001

Natural materials  
common plywood

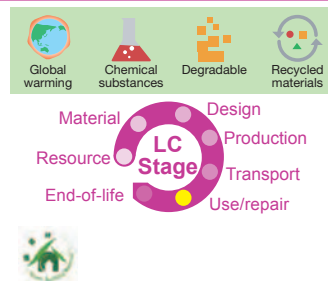
F1 PLYWOOD MF1PW18(F1)

**Environmental performance**

100% made from farmed radiata pine in New Zealand and Australia. Helps reduce deforestation of tropical rainforests and alleviate global warming.

**Product performance**

Ever-New Plywood (Ever-New Square Lumber) is made from farmed conifers in New Zealand by an integrated process of rotary cutting, drying, gluing and hot-pressing. The F1 glue used in the manufacturing process conforms to the free formaldehyde release standards of Europe, USA, and Japan.



**Prime Fortune CO., LTD.**

No. 452, Chia-Shin Rd., Kangshan District, Kaohsiung City, Taiwan, 820, Republic of China  
Tel +886-7-6223181 Fax +886-7-6225531  
E-mail sumiao@pftc.com.tw  
URL <http://www.pftc.com.tw>

Available in: Taiwan (Rep. of China)

EM-3-002

Natural materials  
common plywood

KIKORIN-PLYWOOD:An environmentally sound plywood

**Environmental performance**

KIKORIN-PLYWOOD offers not only high quality as plywood, but also a comprehensive approach to environmental sensitivity. KIKORIN-PLYWOOD is plywood containing at least 50% timber harvested from forests certified by FSC<sup>1</sup> or PEFC<sup>2</sup>, or from plantation forests that are sustainably managed. A portion of the revenues from KIKORIN-PLYWOOD is invested in plantation forestry operations. In this fiscal year, investments were made in plantation forestry operations in Indonesia, where Sumitomo Forestry is endeavoring to revitalize degraded forests and bring back the forests.

\*1...FSC is a third-party organization that provides a global forest certification system.

\*2...PEFC is a forest certification program that promotes sustainable forest management by offering certification from third parties independent of stakeholders.



**SUMITOMO FORESTRY CO.,LTD.**

Keidanren Kaikan, 1-3-2 OTEMACHI, CHIYODA-KU, TOKYO, 100-8270,  
Tel +81-3-3214-2220  
URL <http://sfc.jp/english/>

Available in: Japan

KIKORIN-PLYWOOD



EM-3-003

Natural materials

heat-resistant polylactic acid

**BIOFRONT® , heat resistant polylactic acid**

**Environmental performance**

BIOFRONT® offers significantly higher heat-resistance and crystallization rate than conventional bioplastics.

**Product performance**

BIOFRONT® is a stereocomplex PLA that has a melting point of 210°C , or 40°C higher than conventional PLA. Teijin has successfully upgraded BIOFRONT® with substantially improved hydrolytic resistance. These meet practical requirements in industrial markets such as automotive, office equipment and electronics.

**\*Stereocomplex PLA**

The unique crystal structure composed of L-molecule and its optical isomer D-molecule are behind the new physical properties that include high heat-resistant characteristics

**Teijin Limited**

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan  
Tel +81-3-3506-4096  
E-mail biofront@teijin.co.jp  
URL <http://www.teijin.co.jp/english/index.html>



EM-3-004

Natural materials

laminated veneer lumber

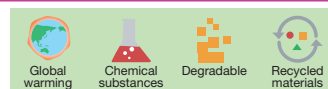
**F1 LVL LVL60(F1)**

**Environmental performance**

100% made from farmed radiata pine in New Zealand and Australia. Helps reduce deforestation of tropical rainforests and alleviate global warming.

**Product performance**

Ever-New Plywood (Ever-New Square Lumber) is made from farmed conifers in New Zealand by an integrated process of rotary cutting, drying, gluing and hot-pressing. The F1 glue used in the manufacturing process conforms to the free formaldehyde release standards of Europe, USA, and Japan.



**Prime Fortune CO., LTD.**

No. 452, Chia-Shin Rd., Kangshan District, Kaohsiung City, Taiwan, 820, Republic of China  
Tel +886-7-6223181 Fax +886-7-6225531  
E-mail sumiao@pftc.com.tw  
URL <http://www.pftc.com.tw>



Available in: Taiwan (Rep. of China)



EM-3-005

Natural materials

**laminated veneer lumber**

**Laminated Veneer Lumber LVL590-23, LVL280-11, LVL270-11 LVL270-11F1, LVL270-09F1**

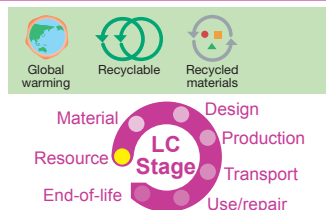
**Environmental performance**

The wood is derived from the artificial forestry developed and managed by the Forest Stewardship Council's principles and standards, and is a form of renewable natural resources.

**Product performance**

The construction wood product is assembled by a multiple number of thin, single sheets. Better strength, straightness and homogeneity when compared with wood. Suitable for support beam, main structure of doors/windows, and use as construction material.

\* FSC™ Certified



**Wand Tsai Industrial Co., Ltd.**

No.55, Hudi, Dalin Township, Chiayi County, Taiwan, 622, Republic of China  
 Tel +886-5-2651181 Fax +886-5-2657169  
 E-mail wand.tsai@msa.hinet.net  
 URL <http://www.wts-ply.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)

EM-3-006

Natural materials

**mixed spun wool yarn**

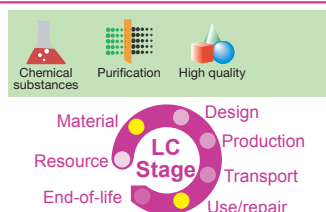
**"OZONE WOOL": Eco-friendly shrink-resistant wool**

**Environmental performance**

Conventional chlorination treatment applied for shrink-proofing of wool fiber causes environmental contamination. This is because residual chlorine in industrial waste water drained into rivers reacts with organic matter and turns into a carcinogen (AOX=Absorbable Halogens), a harmful substance to humans and the environment. In OZONE WOOL's case, ozone is used instead of chlorine, which is non-AOX and greatly reduces the burden of contamination to the environment, and further, it has much less damaging effects to wool fiber than done by the conventional chlorine treatment for shrink-proofing.

**Product performance**

OZONE WOOL is the world first shrink-resistant wool by ozone treatment.  
 - Smooth and neat surface look, fluffless  
 - Natural stretchability  
 - Excellent shrink-resistance  
 - Water repellency is retained  
 (together with moisture releasing property of wool makes OZONE WOOL comfortable)



**KURABO INDUSTRIES LTD.**

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan  
 Tel +81-6-6266-5408 Fax +81-6-6266-5119  
 E-mail takaharu\_nakayama@kurabo.co.jp  
 URL <http://www.kurabo.co.jp/english>

Available in: Worldwide

Water Repellent Test of Various Wool Fibers

Eco-materials // Natural materials

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EM-3-007

Natural materials

mixed yarn, including yarn waste

"BREVANO ECO": Anti-flaming, antistatic fabric of ecology-specs

Environmental performance

Fabric made from blending of excellent flameproof acrylic fiber and unused cotton generated during spinning process accounting for 10% of total material.  
- Designated "Eco-Mark certified product", Japan's environmental label.

Product performance

- Having excellent anti-flaming property coupled with self-extinguishing property. LOI\* (limited oxygen index) 29 to 32.
- Excellent in non-fusibility, compared with 100% general synthetic fibers. Safe as it would not stick to skin.
- Having superior antistatic property. (complying with JIS T 8118:friction static electrical charge less than  $7 \mu C/m^2$ )
- Refreshing and easy-to wear, due to their excellent sweat absorption.
- Will not pill.
- Good coloring, good color fastness.

\*Note: LOI is a measure to show the degree of flammability. The less flammable, the higher the figure is. Generally, anti-flammable materials show the figure of 26 or higher.

KURABO INDUSTRIES LTD.

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan  
Tel +81-6-6266-5295 Fax +81-6-6266-5539  
E-mail uniform\_sect@kurabo.co.jp  
URL <http://www.kurabo.co.jp/english>

Available in: Worldwide



TYPE I



EM-3-008

Natural materials

mixed yarn, including yarn waste

"BioNature": Eco-oriented soil-returnable fabric

Environmental performance

Bionature is a fabric made from natural fiber and eco-friendly polyester of DUPONT™.

Bionature collapses in the compost with which environment was ready. The reduction of its weight and the loss of its molecular weight show the decomposition of Bionature in the compost.

Safety is identified from the composts obtained in the decomposition process that have no impact on the earthworm reproduction and plants growth.

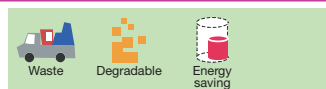
Product performance

The physical properties are strengthened without spoiling the biodegradation of natural materials, such as cotton and wool.

KURABO INDUSTRIES LTD.

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan  
Tel +81-6-6266-5295 Fax +81-6-6266-5539  
E-mail uniform\_sect@kurabo.co.jp  
URL <http://www.kurabo.co.jp/english>

Available in: Worldwide



Fabrics buried in the ground for 10 months

EM-3-009

Natural materials

mixed yarn, including yarn waste

"Return Cotton": An eco-friendly material for a sound recycling society

**Environmental performance**

Return Cotton is produced using our unique technology by recycling various unused fibers such as waste cotton generated in the cotton-spinning process accounting for 10% or more of total material. This is an eco-friendly material aimed at helping to achieve a sound recycling society.

- Designated "Eco Mark certified product", Japan's environment label.



**KURABO INDUSTRIES LTD.**

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan  
 Tel +81-6-6266-5295 Fax +81-6-6266-5539  
 E-mail uniform\_sect@kurabo.co.jp  
 URL <http://www.kurabo.co.jp/english>



Available in: Worldwide

EM-3-010

Natural materials

mixed yarn, including yarn waste

"EARTH DENIM": New feel denim born from our Eco-oriented research.

**Environmental performance**

EARTH DENIM makes effective reuse of waste from each stage of production.

- EARTH DENIM is made by recycling denim production waste.
- A pair of jeans made of EARTH DENIM reduces CO<sub>2</sub> in a quantity equivalent to the quantity absorbed by about 180 four-leafed-clovers a year.

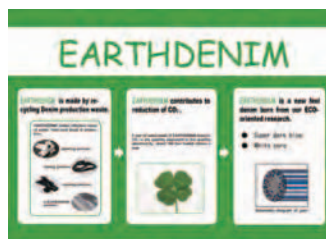
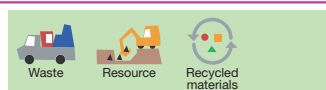
**Product performance**

It makes possible a super dark blue color as unmatched by normal dyeing. And it contributes to reduction of CO<sub>2</sub>.

- Super dark blue and White core

**KURABO INDUSTRIES LTD.**

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan  
 Tel +81-6-6266-5324 Fax +81-6-6266-5204  
 E-mail casual\_sect@kurabo.co.jp  
 URL <http://www.kurabo.co.jp/english>



Available in: Worldwide

Eco-materials // Natural materials

EM-3-011

Natural materials

particle board

Labeling Particle Board Products with Carbon Footprint Mark

Environmental performance

In October 2009, P.T. Rimba Partikel Indonesia (RPI), an Indonesian affiliate of Sumitomo Forestry Co., Ltd. engaged in the manufacture and sale of wood building materials, began labeling its particle board (PB) products with a carbon footprint (CFP) mark and became the first Indonesian firm to use CFP labeling.

The PB manufactured by RPI are eco-friendly in that they effectively utilize wood leftover from logging and sawdust together with timber from company-owned plantations. P.R.I adopted wood biomass power generation technologies in 2008. That shift enabled it to begin producing its PB through manufacturing processes using clean energy with low CO<sub>2</sub>-emission.

Although the labeling practice is voluntary, the company plans to devote study to the idea of utilizing the CFP framework now being advocated for future market entrants.

※The number of CFP explains its CO<sub>2</sub> emissions per · of PB.

PT. Rimba Partikel Indonesia

P.O.Box. 127 KENDAL Desa. Mororejo, Kaliwungu, Kendal, Jawa Tengah, 51372, Indonesia  
 Tel +62-248662990 Fax +62-248662988  
 URL <http://www.rpi.co.id/>  
 URL <http://sfc.jp/english/pdf/20090929.pdf>

Available in: Indonesia,China



176.4kg-CO<sub>2</sub> not Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



2010 Carbon Footprint Mark for RPI PB Products

EM-3-012

Natural materials

plywood

Plywood UA240-11, UA210-11, UA180-09, UA150-09, UA120-09, UA090-07, etc.

Environmental performance

The wood is derived from the artificial forestry developed and managed by the Forest Stewardship Council's principles and standards, and is a form of renewable natural resources.

Product performance

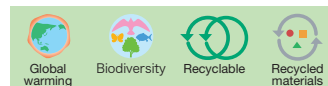
The paneling material produced from bonding thin, single timber sheets is characterized by tearing, contraction, warp resistance and high strength. It is applied in:

- \* Flooring, walls and ceilings.
- \* Decorating.
- \* Packaging.
- \* Building construction.
- \* FSC™ Certified

Wand Tsai Industrial Co., Ltd.

No.55, Hudi, Dalin Township, Chiayi County, Taiwan, 622, Republic of China  
 Tel +886-5-2651181 Fax +886-5-2657169  
 E-mail [wand.tsai@msa.hinet.net](mailto:wand.tsai@msa.hinet.net)  
 URL <http://www.wts-ply.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)



Eco-materials // Natural materials

EM-3-013

Natural materials

straw-mats and mat bases

"Kanryoso" stronger skin rush

**Environmental performance**

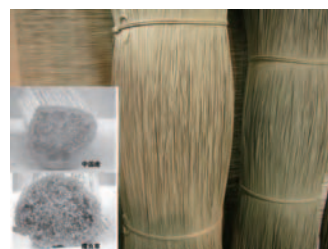
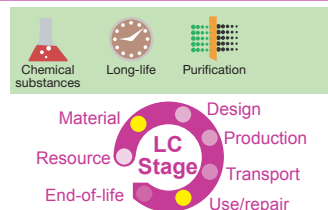
Rush is widely known as a material of "tatami" in Japanese housing. The features of "tatami" are not only the fragrance and strength, but also humidity control. In addition, it has been lately found that rush has a function of adsorbing chemical substances and of deodorizing. (Ex. NH<sub>3</sub> 99.3% CH<sub>3</sub>COOH 95.6%) The "Kanryoso®" rush has stronger skin compared with the previous rush, (ref., the photograph of electron-microscopy). This is a result of cultivation in which the intrinsic activity of rush has been fully leveraged. Every piece of the rush is thick and uniform.

**Product performance**

Because of its strength the life of products made from "Kanryoso®" is long. Rush is a plant that grows by taking CO<sub>2</sub> into its body. Namely, the long-life "Kanryoso®" product fixes CO<sub>2</sub> for a longer period than conventional products. We are therefore contributing to the fixation of CO<sub>2</sub> by raising young rushes.

**IKEHIKO CORPORATION Co.,Ltd.**

1052 Miyamatsu, Ooki-machi, Mizuma-gun, Fukuoka, 830-0424, Japan  
 Tel +81-944-32-1203 Fax +81-944-33-1059  
 URL <http://www.ikehiko.com>



Available in: Japan

KANRYOUSO

Eco-materials // Natural materials

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EM-5-001

Ceramics and glass

reflective insulating glass

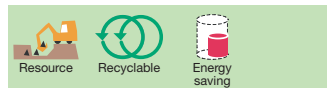
TG Insulating Glass TG-IL (F.GR-TLE62#2+CL) (6+12AS+6) mm

**Environmental performance**

It has a high light transmittance ratio, low refractive ratio, high heat insulation, and is environmentally friendly and energy-saving.

**Product performance**

With a high transmittance ratio on visible light spectrum of 380nm to 780nm, it helps to reduce the use of interior lighting to save on energy. With a higher refraction ratio on infrared ray (at wave lengths between 780~3000nm), particularly in completely refracting the infrared ray with a longer wavelength (at wave lengths over 3000nm), it cut off the entry of voluminous heat, making the interior feels cooler to achieve winter warmth and summer cooling effect.



**Taiwan Glass Ind. Corp.**

Taiwan Glass Building 11F., No.261, Sec.3, Nanjing E Road, Taipei City, Taiwan, 105, Republic of China  
Tel +886- 4-26390333-4321 Fax +886- 4-26390332  
E-mail [tf@taiwanglass.com](mailto:tf@taiwanglass.com)  
URL <http://www.taiwanglass.com>



Available in: Japan,Asia,Oceania,Europe,North America,Southeast Asia,Middle and Near East,U.S.A.,Republic of Korea,Taiwan (Rep. of China),China,South Africa

EM-5-002

Ceramics and glass

reflective insulating glass

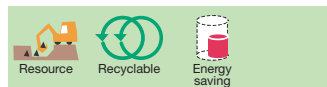
TG Insulating Glass TG-IL (F.GR-TLE72#2+CL) (10+12AS+10) mm

**Environmental performance**

It has a high light transmittance ratio, low refractive ratio, high heat insulation, and is environmentally friendly and energy-saving.

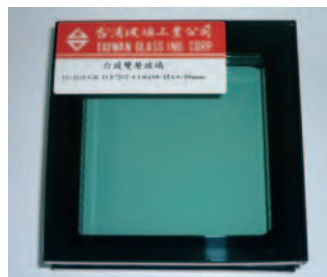
**Product performance**

With a high transmittance ratio on visible light spectrum of 380nm to 780nm, it helps to reduce the use of interior lighting to save on energy. With a higher refraction ratio on infrared ray (at wave lengths between 780~3000nm), particularly in completely refracting the infrared ray with a longer wavelength (at wave lengths over 3000nm), it cut off the entry of voluminous heat, making the interior feels cooler to achieve winter warmth and summer cooling effect.



**Taiwan Glass Ind. Corp.**

Taiwan Glass Building 11F., No.261, Sec.3, Nanjing E Road, Taipei City, Taiwan, 105, Republic of Korea  
Tel +886-4-26390333-4321 Fax +886-4-26390332  
E-mail [tf@taiwanglass.com](mailto:tf@taiwanglass.com)  
URL <http://www.taiwanglass.com>



Available in: Japan,Asia,Oceania,Europe,North America,Southeast Asia,Middle and Near East,Republic of Korea,Taiwan (Rep. of China),China,South Africa



EM-5-003

Ceramics and glass

glass and its products

Lead and arsenic-free optical glass (Eco-glass)

Environmental performance

There are more than 100 types of optical glass, and in the past, generally, lead and arsenic have been used in most of them as constituents. However these two elements have high risks to cause the environment pollution. So, Nikon has developed nearly full types of optical glass not containing these two elements, and has applied them to Nikon's optical products wholly.

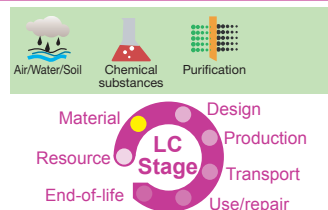
Product performance

Optical glass has, in general, high transmission, high homogeneity and optical constants, and is used for lenses or prisms of various types of optical products, for example, cameras, microscopes, etc. In Nikon, optical glasses have been developed under cooperation with optical design division, and Nikon has established production technologies and mass-production structure based on Nikon's own glass production equipments. And, high quality of optical glasses produced by them have contributed to high performances of Nikon's products.

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
Tel +81-3-3214-5311  
URL <http://www.nikon.com/>  
URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Lenses and prisms made of Eco-glass

EM-5-004

Ceramics and glass

glass decorative building material

Glasstone Green Building Material

Environmental performance

Using scrapped glass for recycled and regenerative manufacturing.

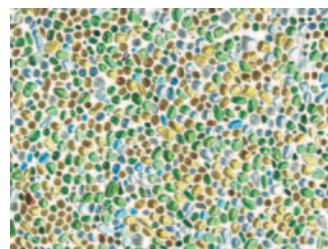
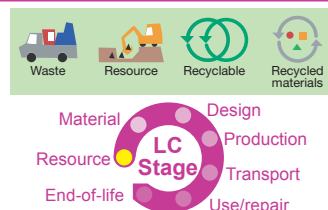
Product performance

A surface refurbishing material, it enriches the building surface with diversity, including rich colors, the glass's translucent texture and the like.

Taibao Glass Industrial Co., Ltd.

No. 97, Sec.2, Yen-Ping Road, Hsin-Chu City, Taiwan, 300, Republic of China  
Tel +886-3-540-2851 Fax +886-3-540-2858  
E-mail [taibaog@ms69.hinet.net](mailto:taibaog@ms69.hinet.net)  
URL <http://www.taibao.com.tw>

Available in: Worldwide



EM-5-005

Ceramics and glass

ground granulated blastfurnace slag

VCEM brand, ground granulated blastfurnace slag (GGBS)

**Environmental performance**

GGBS's raw material is a by product of the iron-making industry derived from iron blast furnaces. The manufacture of GGBS reduces landfill problems and cuts gas emissions at steel plants. Every ton of GGBS reduces almost 1 ton of CO<sub>2</sub> by replacing Ordinary Portland Cement, a material normally used in concrete. Every ton of GGBS produced consumes only 10% of the energy required to produce 1 ton of OPC.

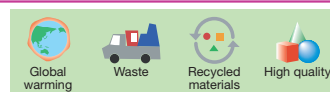
**Product performance**

Using GGBS in concrete improves workability, high compressive and flexural strengths, and resistance to damaging / aggressive chemicals. GGBS lowers permeability in concrete, therefore reducing the potential for reinforcing steel to corrode when exposed to chlorides. GGBS reduces the risk of thermal cracking in large concrete pours. GGBS's off-white color reduces the "urban heat island" effect by making lighter-color concrete, enabling it to reflect more light and cooling structures and pavements with exposed concrete.

**EnGro Corporation Ltd**

29 International Business Park, #08-05/06 Acer Building Tower B, 609923, Singapore  
 Tel 65-6561 7978 Fax 65-6561 9770  
 E-mail [vincent.loh@engro-global.com](mailto:vincent.loh@engro-global.com)  
 URL <http://www.engro-global.com>  
 URL <http://www.vcem-global.com>

Available in: Worldwide



<b>TYPE I</b>	
<b>70kg-CO<sub>2</sub></b>	Resource/Materials/ Production/Transfer/Use/ End-of-Life
Inspection	



VCEM ground granulated blastfurnace slag

EM-5-006

Ceramics and glass

scientific and industrial fine ceramics

Long Life, High Reliability and Anticorrosion Minimize Environmental Impacts

**Environmental performance**

- Mitigation of climate change: Reduction in the rotational energy loss of ball bearings.
- Efficient use of resources: Resource saving as a result of longer ball bearing life (5 times longer compared to steel bearing). Reduction in the waste of worn-out bearings because our ceramic bearings do not require frequent replacement.
- Management of chemicals: Environmentally beneficial reduction in the amount of bearing grease required.

**Product performance**

- Maintenance saving: Easy maintenance thanks to a highly durable and reliable generator bearing system which is substantially free from electric corrosion because of its ceramic balls' good insulation property.

**Toshiba Materials Co., Ltd.**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-4875 Fax +81-3-5444-9235  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-tmat.co.jp/tmat/corp/env.htm>



Ceramic balls for windmill power generator bearings

Eco-materials // Ceramics and glass



EM-5-007

Ceramics and glass

steel materials

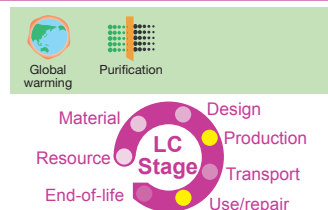
### Marine Block

#### Environmental performance

JFE has been developing restoration technologies for marine environments by utilizing steel slag, which is a byproduct of manufacturing. Porous Marine Block, which is JFE's block product made from steel slag and CO<sub>2</sub> through a solidification reaction, has been adopted for coral reef restoration works in Sekisaishoko on a trial basis. So far, good results have been observed. Marine Block has also been used in rejuvenation experiments for seaweed reefs close to Japan because of its excellent performance as an implantation base for seaweed.

#### JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan  
 Tel +81-3-3597-3111 Fax +81-3-3597-4860  
 URL <http://www.jfe-steel.co.jp/>



EM-6-001

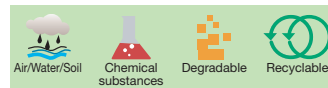
Composites

adhesives

## Water-based emulsion adhesive products with various foams "AH sheet"

## Environmental performance

Ever-light AH sheet is a kind of product combined with flexible urethane foam technique and the latest adhesion technique. It is a flexible high performance polyurethane sheet with adhesive on it. By using this sheet, it becomes easier to adhere requested foam with other substances. Conventional organic solvent product may cause air pollution and result in sickhouse syndrome. Instead of organic solvent, water is used to make AH sheet a water-based emulsion adhesive which is unharmed. Removable Ever-light AH sheet for industrial use has been developed as well for the purpose of reuse of parts and release or separate of unnecessary parts.



## Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan  
 Tel +81-3-5202-6830 Fax +81-3-5202-6833  
 URL <http://www.bridgestone.com>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Water-based Emulsion adhesive products with various foams "AH sheet"

EM-6-002

Composites

printing on non-paper

## Recycled wood (Toppan Material Wood)

## Environmental performance

Toppan Material Wood is a recycled industrial material made entirely from waste and waste plastic. This industrial material can be re-crushed and recycled time and time again with no change in its original form and function.

## Product performance

High processability.  
 Steady strength.  
 High strength.  
 Anti-bacillus corrosion.  
 Water-proofing, weather resistant.  
 "TOPPAN MATERIAL WOOD" is a product sold by Toppan Cosmo, Inc. that employs ECO-M-WOOD, a product for which ECOWOOD Co. Ltd. has acquired an Ecomark authorization number.

## TOPPAN COSMO, INC.

Toppan Shibaura Building, 26-19-3, Shibaura, Minato-ku, Tokyo, 108-8536, Japan  
 Tel +81-3-5418-3616 Fax +81-3-5418-3674  
 E-mail [eco@toppan.co.jp](mailto:eco@toppan.co.jp)  
 URL <http://www.toppan.co.jp/english/csr/csreport.html>



Toppan Material Wood has high processability because it is made by extrusion.

EM-6-003

Composites

rubber-reforming material

**Sulfron® improves fuel consumption and enhances the durability of tires**

**Environmental performance**

Sulfron® contributes to automobiles CO<sub>2</sub> reduction by a 5% improvement in fuel consumption.

**Product performance**

Sulfron®, a modified aramid derived from Twaron®, is a unique rubber ingredient that has been chemically processed from cut fiber. When absorbed by the tread of a tire, it disperses inside the rubber and as it conforms to the rubber, the tire becomes more durable. It also reduces rolling resistance, which improves fuel efficiency.

Performance of Sulfron:

- 1.Improves fuel consumption by 5%
- 2.Increases tire durability by suppressing heating while moving
- 3.Prevents tire tread cracking



**Sulfron®**

**Teijin Aramid BV**

Westervoortsedijk 73 P.O.Box 9600 6800 TC Arnhem, The Netherlands, 100-8585, Japan  
 Tel +31-26-366-4396 Fax +31-26-366-4110  
 E-mail [t.ii@teijin.co.jp](mailto:t.ii@teijin.co.jp)  
 URL <http://www.teijinaramid.com/>

Eco-materials // Composites

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6  
7

EM-6-004

Composites

tile adhesive

**5rainbow Tile Adhesive 5368**

**Environmental performance**

Compliant with seven major heavy metal waste standards.

**Product performance**

Suitable as a super high-rise buildings' interior and exterior refurbishing building material, such as mineral fiber boards, plaster boards and related paneling surface layer bonded with a variety of refurbishing materials, such as ceramic tiles, stone materials and so forth, with excellent workability, dynamic surface adhesion, high shock resistance, and with water-resistant property.



**Wan Jin Trading Co., Ltd.**

1F., No. 9, Alley 7, Lane 252, Sec. 3, Zhongyang N. Rd., Beitou Dist., Taipei City, Taiwan, 11257, Republic of China  
 Tel +886-2-2891-6338 Fax +886-2-2896-3203  
 E-mail [support@5rainbow.com.tw](mailto:support@5rainbow.com.tw)  
 URL <http://www.5rainbow.com.tw>



Available in: Taiwan (Rep. of China)

EM-7-001

Others

deco wall panels

ENiTo Deco Panels

**Environmental performance**

Made from recycled Coconut Shells, bamboo, cinnamon, and banana bark

**Product performance**

Applications

- Wall decorations
- Counter/Table tops
- Furniture components
- Head boards
- Lift lobby



ENiTo Flooring Pte Ltd

56 Serangoon North Ave 4 #06-04, 555851, Singapore  
 Tel 64884595 Fax 65 6257 6591  
 E-mail info@enitoflooring.com  
 URL http://www.enitoflooring.com  
 URL http://www.enitoflooring.com/en/deco-panels/enito-deco  
 URL http://www.enitoflooring.com/en/sustainability/sustainability



Available in: Worldwide

ENiTo Deco Panels

EM-7-002

Others

hardwood flooring

Coconut Palm Wood Flooring

**Environmental performance**

ENiTo Coconut Palm Wood Flooring is made from 100% recycled solid Coconut Timber.

ENiTo use Coconut Palm Wood from senile coconut trees in well managed plantations. Unlike composite wood products ENiTo Coconut Palm Wood Flooring are reusable and 100% biodegradable.

- Prefinished/Unfinished
- Solid timber strips
- No toxic-emissions (EN 14823 approved)
- No content and/or transmission of hazardous materials (N71-3)
- ECO approved coating systems
- No formaldehyde
- No VOC emission

**Product performance**

Applications

- Commercial
- Residential
- Ceilings
- Wall Panelling

Prefinished Coating

- Wear & Impact resistance
- Scratch & Stain resistance
- Water & Slip resistance



ENiTo Flooring Pte Ltd

56 Serangoon North Ave 4 #06-04, 555851, Singapore  
 Tel 64884595 Fax 65 6257 6591  
 E-mail info@enitoflooring.com  
 URL http://www.enitoflooring.com  
 URL http://www.enitoflooring.com/en/flooring/enito-flooring  
 URL http://www.enitoflooring.com/en/sustainability/sustainability



Available in: Worldwide

ENiTo Coconut Palm Wood Flooring

EM-7-003

Others

non-ferrous metals by primary smelting and refining

**Polycrystalline Silicon (Materials for solar power systems)****Environmental performance**

Global warming is an urgent issue not only for human beings but also any lives on the globe now. We are contributing to preservation and restoration of the natural environment on the earth by supplying polycrystalline silicon.

**Product performance**

We are producing polycrystalline silicon for semiconductor and solar cell from metallurgical silicon by siemens process.

The polycrystalline silicon for solar cells is a major raw material for photovoltaic industry and the energy generated from solar cells is clean without any generation of CO<sub>2</sub>.

**Mitsubishi Materials Corporation (Yokkaichi Plant)**

5 Mita-cho, Yokkaichi, Mie, 510-0841, Japan  
Tel +81-59-345-5191 Fax +81-59-346-5815  
E-mail toishii@mmc.co.jp

URL <http://www.mmc.co.jp/corporate/en/index.html>

URL <http://www.mmc.co.jp/corporate/en/product/electronics/1001.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



Available in: Japan,Asia,Europe,Southeast Asia,U.S.A,China

Polycrystalline silicon

EM-7-004

Others

ores, slag and ash

**Reclaimed Graded Materials for Road Engineering (E-Aggregate)****Environmental performance**

The e-grade materials have the "three-e" benefits, in which "three-e" stands for environment, engineering and economy, as explained below:

1. Environment:
  - (1) Lower the demands of landfill sites and prevent wasteful use of land.
  - (2) Reduce the excavation of river sand and land sand.
  - (3) Avoid secondary pollution.
2. Engineering:
  - (1) Minimize wasteful use of resources.
  - (2) Allow clean production processes and reduce CO<sub>2</sub> emissions.
  - (3) Meet the Green Construction policy and are economically efficient.
3. Economy:
  - (1) Valuable substances are recycled.
  - (2) Resources are used sustainably.

**Product performance**

Particle size analysis shows that e-grade reclaimed construction materials are well-graded sandy soil-SW (USCS) or A-1-b (AASHTO), which has good permeability, shear strength, compressibility and workability, and is suitable for use as the material of structure foundations or road bases. They are also good for use as a controlled low-strength material and can be mixed with non-reinforced concrete, asphalt concrete, and brick materials.

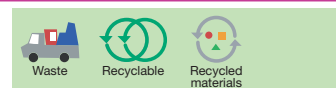
**Run-Long Construction Co., Ltd.**

No.220, Dechang St., Yingge Dist., New Taipei City, Taiwan, 239, Republic of China

Tel +886-2-2678-0666-305 Fax +886-2-2670-6406

E-mail [fank@runlong.com.tw](mailto:fank@runlong.com.tw)

URL <http://www.runlong.com.tw/>



TYPE I



Available in: Worldwide

EM-7-005

Others

R3plas eco-label recycled plastic products (turn-key projects)

## R3plas Eco-label recycled Plastic Products (Turn-Key Projects)

## Environmental performance

R3plas Recycled resin closed loop system, R3plas Oxo-Biodegradable Packaging, R3plas Spectacle box and R3plas Eye wear made from post closed loop recycling system from post industrial waste and consumer waste.

## Product performance

International Design Awards  
Green Label Awards  
Meet ASTM standards  
Support ISO14000 and Green purchasing requirement



## WINRIGO (S) PTE LTD

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre, 608609, Singapore  
Tel +6598715058 Fax +6565154557  
E-mail [salewin@singnet.com.sg](mailto:salewin@singnet.com.sg)  
URL <http://www.winrigo.com.sg>



Available in: Worldwide

EM-7-006

Others

regenerated non-ferrous pig metals and non-ferrous alloys

## Columnar-crystal large-diameter silicon for solar cell and silicon parts

## Environmental performance

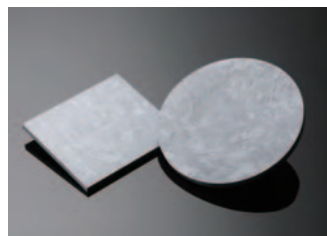
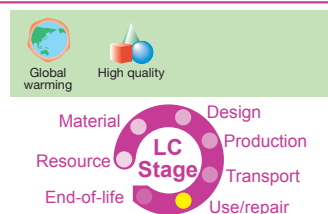
From the view-point of the global environmental problems, the product contributes to energy saving and CO<sub>2</sub> emission reduction as solar cells. Our product is superior in the efficiency of component manufacturing owing to its large diameter (square type: 1050 × 1050mm, circular type: Φ 1050). This reveals an environmentally low-load manufacturing process.

## Product performance

The product is excellent in machining characteristics, mechanical strength, and chemical resistance, compared with the poly-crystal products prepared by other methods. Moreover, it has the performance at almost the same level as that of single crystal. It is therefore expected as a substitute in the field where the single crystal has been used. Since a large-diameter product can be made, the demand for columnar silicon crystal is rapidly increasing in fields where SiC, quartz and carbon have been used.

## Mitsubishi Materials Electronic Chemicals Co.,Ltd.

3-1-6 Barajima, Akita City, Akita, 010-8585, Japan  
Tel +81-18-864-6011 Fax +81-18-864-4002  
URL <http://www.mmc.co.jp/corporate/en/product/electronics/1012.html>



Available in: Worldwide

Columnar Crystal Silicon of plate type

EM-7-007

Others  
timber

**Coconut Palm Wood Timber**

**Environmental performance**

- 100% Solid Coconut Timber
- 100% Biodegradable
- 100% Recycled Material
- High density

**Product performance**

- Applications
- Fencing
  - Benches
  - Window/Door Frames

**ENiTo Flooring Pte Ltd**

56 Serangoon North Ave 4 #06-04, 555851, Singapore  
 Tel 64884595 Fax 65 6257 6591  
 E-mail [info@enitoflooring.com](mailto:info@enitoflooring.com)  
 URL <http://www.enitoflooring.com>  
 URL <http://www.enitoflooring.com/en/timber/coconut-palm-wood-timber>  
 URL <http://www.enitoflooring.com/en/sustainability/sustainability>

Available in: Worldwide

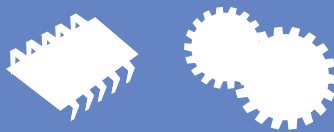


ENiTo Coconut Palm Wood Timber





# Eco-components



- 1 Construction components**
- 2 Electrical and electronic components**
- 3 Semiconductor-related devices and components**
- 4 Machine parts**
- 5 Automobile parts**
- 6 Packaging**
- 7 Others**

In the *Eco-products Directory 2012*, “eco-components” refer to “environment-friendly components and functional parts assembled using such components.” Eco-components include components that have only low environmental impact when manufactured and components that enable finished (assembled) products to help reduce environmental impact. For example, vacuum insulation materials can be used in refrigerators to achieve energy savings. Components are often called “half-finished products” relative to “finished products,” i.e., many are used in finished products.

Like eco-materials, environmental impact reduction throughout the life cycle is a key point for eco-components. Hence, the six criteria under the definition of eco-materials (see the page titled “Eco-materials” in the directory) also partly apply to eco-components. For example, when eco-components can provide “high performance when used,” they can increase the energy saved by finished products. The reuse of components as functional parts is a good example of “high recyclability.” It should be noted, however, that various requirements must be met prior to the reuse of used components, e.g., in terms of long life, quality, and reliability.



EC-1-001

Construction

double thermal barriers

Multi-functional solar control interlayer film for laminated glass "COOLSAFE"

Environmental performance

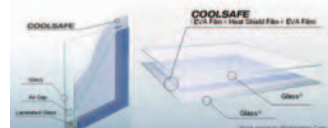
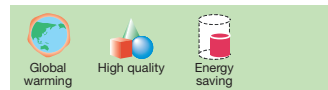
The COOLSAFE product combines heat shield film with coating technology with adhesive film for solar modules\*1 (EVA film\*2).

COOLSAFE helps effectively block solar heat maintain consistent room temperatures and enable the efficient use of air conditioning thereby conserving energy (reduce energy consumed for air-conditioning by up to 22%). COOLSAFE also features enhanced shatterproof and penetration resistance\*3 properties should the glass be broken.

\*1 These are adhesive films used to fasten solar cells to the glass bases of solar modules and protect the silicon cells.

\*2 EVA (Ethylene Vinyl Acetate) film has waterproof nature and strength against UV rays, used to fasten silicon cells to glass surfaces through heat-induced molecular binding.

\*3 Penetration resistance complies with the following specifications: JIS R3205 in Japan, EN12600 in Europe, and ANSI Z97.1 in the United States.



Bridgestone Corporation

6-6, Yaesu 1-chome, Chuo-ku, Tokyo, 103-0028, Japan  
 Tel +81-3-5202-6907 Fax +81-3-5202-6842  
 URL <http://www.bridgestone.com>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

Eco-components // Construction

EC-1-002

Construction

fiber materials

Shagari, eco-friendly material made of dope-dyed plastic-bottle-derived fibers

Environmental performance

\*Eco Mark certificate number 05104041 (95% Recycled PET Fiber)

\*100% recycled plastic bottle material

\*No formaldehyde

\*A 50m roll is comprised of 800 half-liter PET bottles

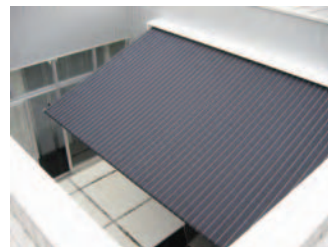
\*Excellent in energy conservation (Air-conditioning electricity bills are reduced by 70% with external sun-shading)

Product performance

\*Fireproof (authorized by the Japan Fire Retardant Association [JFRA] as Flame-retardant product): Flame retardant product

\*Excellent weather resistance (solution-dyeing fibers are used)

\*Waterproof property (resistance to 1000mm of water pressure)



N.I. TEIJIN SHOJI CO.,LTD.

Sumitomo Fudosan Shibadaimon Bldg, 5-5, Shibadaimon 2-chome, Minato-ku, Tokyo, Japan  
 Tel 03-6402-7013

E-mail [smatsumoto44541@ni-teijinshoji.co.jp](mailto:smatsumoto44541@ni-teijinshoji.co.jp)

URL <http://www2.ni-teijinshoji.co.jp>

URL <http://tent.teijin.co.jp>

URL <http://www.teijin.co.jp>

Available in: Japan

Shagari for awning

EC-1-003

Construction

heat-insulating films

Reftel<sup>®</sup>, Highly Transparent, Heat Insulating Film

Environmental performance

Reftel<sup>®</sup> contributes to the energy conservation of air conditioning by intercepting the heat rays entering indoors from windows.

Product performance

Reftel<sup>®</sup> is the world's first highly transparent and heat reflective insulating film developed by Teijin.

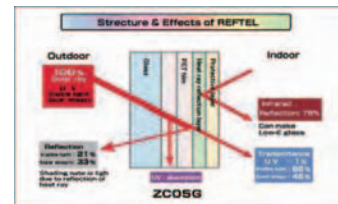
It is made by coating Teijin's polyester (PET) film with ultra thin metal layers using a sputtering method. It has a selective heat and light transmittance, and gives higher transparency, higher heat shielding and better durability compared with aluminum vapor deposited films, colored films or IR (Infrared) absorbing films. It is hardly noticeable when it is installed on a glass window because it has a 60 to 80% transmittance of visible light.

There are a variety of grades which have different solar energy transmittance to meet any requirement. It has high infrared reflectivity and thus yields high energy saving effectiveness.

\*Reftel<sup>®</sup> is a registered trademark of Teijin DuPont Films Japan Ltd.

N.I. TEIJIN SHOJI CO.,LTD.

Sumitomo Fudosan Shibadaimon Bldg, 5-5, Shibadaimon 2-chome, Minato-ku, Tokyo, 105-0012, Japan  
 Tel +81-3-6402-7006 Fax +81-3-6402-7071  
 E-mail ykandoh44605@ni-teijinshoji.co.jp  
 URL <http://www.teijin.co.jp/english/index.html>  
 URL <http://www.teijin.co.jp/english/about/reftel/default.htm>



Structure and effect of Reftel<sup>®</sup> (Type ZC05G)

EC-1-004

Construction

high damping laminated rubber

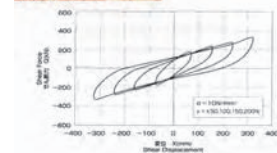
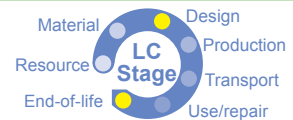
High-Damping Seismic Isolation Rubber Bearing

Environmental performance

High damping rubber bearing (H-RB), which is a type of seismic isolation bearings and provides damping characteristics by special rubber compound, is recognized as "low environmental impact" rubber bearings in terms of construction management because there is no need for using additional dampers, such as steel, or lead dampers. Bridgestone is committed to the development of H-RB from an early stage, has been providing products to the market in the past. Newly developed "H-RB (X0.6R)" has significantly reduced load-history dependency (change of properties by repeated loading cycles), and improved damping characteristics with minimized temperature dependency.

Bridgestone Corporation

6-6, Yaesu 1-chome, Chuo-ku, Tokyo, 103-0028, Japan  
 Tel +81-3-5202-6865 Fax +81-3-5202-6848  
 URL <http://www.bridgestone.com>  
 URL [http://www.bridgestone.com/products/diversified/antiseismic\\_rubber/product.html](http://www.bridgestone.com/products/diversified/antiseismic_rubber/product.html)  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Eco-components // Construction

EC-1-005

Construction

paints

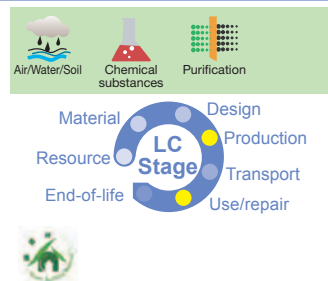
INTERIOR ACRYLIC EMULSION PAINT (FLAT) CP-35

Environmental performance

Low TVOC emission, low formaldehyde, low heavy metal content, no asbestos, no radioactive substance, harmless to human health, and in conformity with the standards of Green Building Material.

Product performance

This product is suitable for use as a protective or decorative paint for indoor walls, ceilings, partitions, etc.



HSIN MEI HUA PAINT FACTORY CO., LTD.

No. 39, Lianhua St., Bade City, Taoyuan County, Taiwan, 33452, Republic of China  
 Tel +886-3-3683266 Fax +886-3-3687840  
 E-mail star.coating@msa.hinet.net  
 URL <http://www.starcoating.com.tw>



Available in: Taiwan (Rep. of China)

Eco-components // Construction  
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EC-1-006

Construction

paints

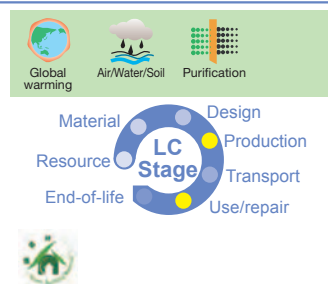
INTERIOR ACRYLIC EMULSION PAINT CP-44

Environmental performance

Low TVOC emission, low formaldehyde, low heavy metal content, no asbestos, no radioactive substance, harmless to human health, and in conformity with the standards of Green Building Material.

Product performance

This product is suitable for use as a protective or decorative paint for concrete walls of buildings.



HSIN MEI HUA PAINT FACTORY CO., LTD.

No. 39, Lianhua St., Bade City, Taoyuan County, Taiwan, 33452, Republic of China  
 Tel +886-3-3683266 Fax +886-3-3687840  
 E-mail star.coating@msa.hinet.net  
 URL <http://www.starcoating.com.tw>



Available in: Taiwan (Rep. of China)

EC-1-007

Construction

paints

## NANOMETER EMULSION COATING (WATER BASE) NE-01

**Environmental performance**

Low TVOC emission, low formaldehyde, low heavy metal content, no asbestos, no radioactive substance, harmless to human health, and in conformity with the standards of Green Building Material. Produces a photocatalytic effect when subjected to fluorescent or ultraviolet light. Has sterilizing and deodorizing functions. Achieves air purification and deodorization by decomposing organic matter and cigarette smell, with a deodorization rate of 75% or above. A nanoMark deodorizing product certified by the Industrial Development Bureau of the Ministry of Economic Affairs, Taiwan.

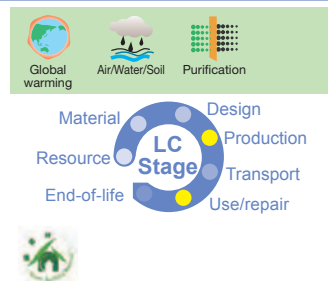
**Product performance**

This product is suitable for use as an eco-friendly nano-grade paint/final coating for concrete walls of residential houses, office buildings, hotels, hospitals, department stores, villas, etc. and for concrete products.

**HSIN MEI HUA PAINT FACTORY CO., LTD.**

No. 39, Lianhua St., Bade City, Taoyuan County, Taiwan, 33452, Republic of China  
Tel +886-3-3683266 Fax +886-3-3687840  
E-mail star.coating@msa.hinet.net  
URL <http://www.starcoating.com.tw>

Available in: Taiwan (Rep. of China)



EC-1-008

Construction

paints

## EPOXY COATING (WATER BASE) EP-59

**Environmental performance**

Low TVOC emission, low formaldehyde, low heavy metal content, no asbestos, no radioactive substance, harmless to human health, and in conformity with the standards of Green Building Material.

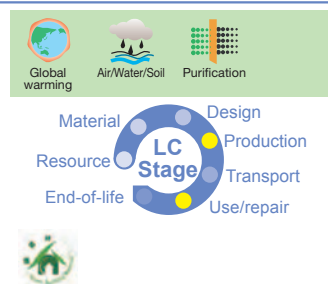
**Product performance**

Suitable for use as an epoxy primer or final coating for the maintenance or decoration of steel decks, concrete walls and asbestos plates in hospitals, electronic factories, etc.

**HSIN MEI HUA PAINT FACTORY CO., LTD.**

No. 39, Lianhua St., Bade City, Taoyuan County, Taiwan, 33452, Republic of China  
Tel +886-3-3683266 Fax +886-3-3687840  
E-mail star.coating@msa.hinet.net  
URL <http://www.starcoating.com.tw>

Available in: Taiwan (Rep. of China)



EC-1-009

Construction

paints

## INTERIOR ACRYLIC EMULSION PAINT CP-77

## Environmental performance

Low TVOC emission, low formaldehyde, low heavy metal content, no asbestos, no radioactive substance, harmless to human health, and in conformity with the standards of Green Building Material.

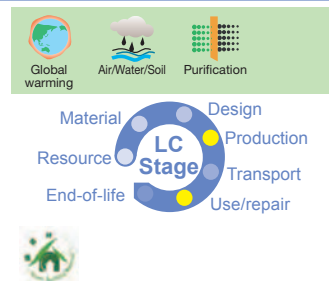
## Product performance

This product is suitable for use as a protective or decorative paint for concrete walls of buildings.

## HSIN MEI HUA PAINT FACTORY CO., LTD.

No. 39, Lianhua St., Bade City, Taoyuan County, Taiwan, 33452, Republic of China  
Tel +886-3-3683266 Fax +886-3-3687840  
E-mail star.coating@msa.hinet.net  
URL <http://www.starcoating.com.tw>

Available in: Taiwan (Rep. of China)



EC-1-010

Construction

paints

## Ching Yeh 1000 Flat Masonry Paint

## Environmental performance

\*Low Pollution:

Aromatic Hydrocarbon content <1% (weight)

\*Green Building Material:

Exposure assessment of HCHO: 0.002 mg / m<sup>2</sup> .hr

Exposure assessment of TVOC: 0.020 mg / m<sup>2</sup> .hr

## Product performance

1. Durable and washable.
2. Yellowing-resistant, no color fading, fungal resistant, anti-alkali.
3. Easy to apply.
4. Can make the painting surface fine and gentle.
5. Excellent cover with elegant color.

## SHAN YEH PAINT INDUSTRIAL CO., LTD.

No. 207-1, Hung-Tzuen Rd., Ping Jen City, Taoyuan County, Taiwan, 324, Republic of China  
Tel +886-3-4509121-305 Fax +886-3-4509161  
E-mail lisalin@chingyehpaint.com.tw  
URL <http://www.chingyehpaint.com.tw/Contact.htm>

Available in: China





EC-1-011

Construction

paints

## Ching Yeh 202 Flat Masonry Paint

## Environmental performance

\*Low Pollution:

Aromatic Hydrocarbon content &lt;1% (weight)

\*Green Building Material:

Exposure assessment of HCHO: 0.002 mg / m<sup>2</sup> .hrExposure assessment of TVOC: 0.085 mg / m<sup>2</sup> .hr

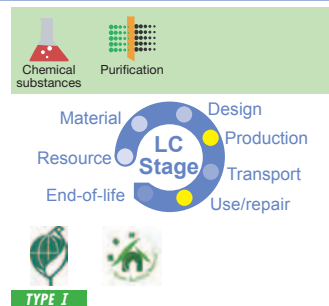
## Product performance

1. Durable and washable.
2. Yellowing-resistant, no color fading, fungal resistant, anti-alkali.
3. Easy to apply.
4. Can make the painting surface fine and gentle.
5. Excellent cover with elegant color.

## SHAN YEH PAINT INDUSTRIAL CO., LTD.

No. 207-1, Hung-Tzuen Rd., Ping Jen City, Taoyuan County, Taiwan, 324,  
Republic of China  
Tel +886-3-4509121-305 Fax +886-3-4509161  
E-mail lisalin@chingyehpaint.com.tw  
URL <http://www.chingyehpaint.com.tw/Contact.htm>

Available in: China



EC-1-012

Construction

paints

## Emulsion Paint

## Environmental performance

\*Low Pollution:

Aromatic Hydrocarbon content &lt;1% (weight)

\*Green Building Material:

Exposure assessment of HCHO: N.D.

Exposure assessment of TVOC: 0.081 mg / m<sup>2</sup> .hr

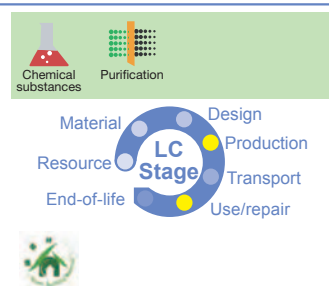
## Product performance

1. Durable and washable.
2. Yellowing-resistant, no color fading, fungal resistant, anti-alkali.
3. Easy to apply.
4. Can make the painting surface fine and gentle.
5. Excellent cover with elegant color.

## SHAN YEH PAINT INDUSTRIAL CO., LTD.

No. 207-1, Hung-Tzuen Rd., Ping Jen City, Taoyuan County, Taiwan, 324,  
Republic of China  
Tel +886-3-4509121-305 Fax +886-3-4509161  
E-mail lisalin@chingyehpaint.com.tw  
URL <http://www.chingyehpaint.com.tw/Contact.htm>

Available in: China





EC-1-013

Construction

coating

Excellent Insulation, High Radiant Reflectivity, Energy Saving, Prevents Condensation, Non-combustible Coating

Environmental performance

The product contains no carcinogens or volatile organic compounds. CCS100 is superior environmental barrier, it conforms directly to the surface of several type style substrates providing a weather barrier and eliminating places that could harbour bugs or rodents. Effectively reduces energy consumption that leads to minimizing carbon footprint.

The product is tested safe to human and the environment proved by many testing laboratories across the globe.

Product performance

It lowers the consumption of electricity while providing maximum thermal comfort by containing the heat and coldness of the temperature according to what is needed. It protects and prolongs the life of the surface by protecting against corrosion, condensation and ultraviolet rays.

Transvert Green Solutions Pte. Ltd.

48 Hillview Terrace 06-05 Hillview Building, 669269, Singapore  
 Tel 65-6863-9011 Fax 65-6765-5382  
 E-mail greensolutions@transvert.com.sg  
 URL <http://www.transvert.com.sg>  
 URL <http://www.transvert.com.sg/greensolutions>  
 URL [http://www.transvert.com.sg/greensolutions/index.php?option=com\\_content&view=article&id=87&Itemid=73](http://www.transvert.com.sg/greensolutions/index.php?option=com_content&view=article&id=87&Itemid=73)

Available in: Indonesia, Singapore, Thailand, Malaysia



Energy Saving Thermal Insulation Coating

Eco-components // Construction 1  
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EC-1-014

Construction

straw-mats and mat bases

"Air-nice," a Plastered Wall Material using Rush and Natural Materials

Environmental performance

Rush is used in Japanese housing as "tatami," which is known to help with humidity control. In general, until the completed "tatami" mat is woven up, one-third of the rush is emitted as waste. Recently, it has been proven that "tatami" adsorbs chemical substances such as NO<sub>2</sub> and HCHO. (Ex.NO<sub>2</sub>99.5% absorb) With this in mind, we pulverized the waste, of rush mixed with natural materials and made a plastered wall material as a commercial product. Completed was a wall material that gives a warm atmosphere which is not felt from usual plaster and diatomaceous earth.

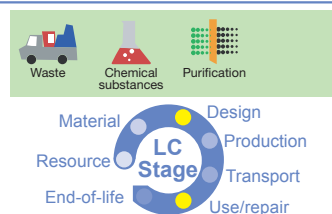
Product performance

The new product regulates the indoor environment by humidity control and adsorption, and restrains the emission of CO<sub>2</sub> by preventing the incineration of waste. As for air-tight houses, the influence of chemical substances on the human body is a serious matter. By using the rush wall-material, we can improve living conditions.

IKEHIKO CORPORATION Co.,Ltd.

1052 Miyamatsu, Ooki-machi, Mizuma-gun, Fukuoka, 830-0424, Japan  
 Tel +81-944-32-1203 Fax +81-944-33-1059  
 URL <http://www.ikehiko.com>

Available in: Japan



RushFiberWallMaterial "KUUKIYOI"

## EC-1-015

## Construction

## water-based wood coating

## EPnS Water-Based Clear Sealer EP-001 Type II

## Environmental performance

- \* Free of any of the eight major heavy metals, formaldehyde, benzene solvents, or other toxic substances. SGS tested to be in conformity with the highest level environmental protection standards such as the E0 Standard of the European Union and the F1 Standard of Japan.
- \* Will not produce any pungent odor or make any negative impact on the environment of the construction site during application.

## Product performance

- \* A liquid paint ready for use without need to add any thinner. Therefore, the effort and time otherwise required for adding a thinner on site is spared.
- \* Easy to sand. Excellent gap-filling ability. High paint film fullness (good film build).
- \* Surface dries in ten minutes (at 25 °C and 50% relative humidity).
- \* Re-paintable or be sanded in one hour (at 25 °C and 50% relative humidity).
- \* No white fog phenomenon when applied on a rainy (high relative humidity) day; therefore, application efficiency will not be affected.



## Yon Chun Ho International Co., Ltd.

3F., No. 248-39, Sinsheng Road, Cianjhen District, Kaohsiung City, Taiwan,  
806, Republic of China  
Tel +886-7-8135995 Fax +886-7-8135677  
E-mail zoes@yctw.com  
URL <http://www.yctw.com>

Available in: Asia, Philippines, Malaysia, Taiwan (Rep. of China), China

## EC-1-016

## Construction

## water-based wood coating

## EPnS Water-Based Top Coating- Matting, Semi-Matting, Glossy EP-001 Type II

## Environmental performance

- \* Free of any of the eight major heavy metals, formaldehyde, benzene solvents, or other toxic substances. SGS tested to be in conformity with the highest level environmental protection standards such as the E0 Standard of the European Union and the F1 Standard of Japan.
- \* Will not produce any pungent odor or make any negative impact on the environment of the construction site during application.

## Product performance

- \* Free of toxic solvent. No pungent odor. Safe to the health of workers and users.
- \* Hardness up to 2H.
- \* Gloss level up to 98% gloss (suitable for mirror coating).
- \* High wear resistance. Providing a nice feel to the touch.
- \* Fast drying.



## Yon Chun Ho International Co., Ltd.

3F., No. 248-39, Sinsheng Road, Cianjhen District, Kaohsiung City, Taiwan,  
806, Republic of China  
Tel +886-7-8135995 Fax +886-7-8135677  
E-mail zoes@yctw.com  
URL <http://www.yctw.com>

Available in: Asia, Singapore, Malaysia, Taiwan (Rep. of China), China

1 Eco-components // Construction  
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EC-1-017

Construction

water-based wood coating

EPnS Water-Based Wood Coating- Stain EP-001 Type II

Environmental performance

- \* Free of any of the eight major heavy metals, formaldehyde, benzene solvents, or other toxic substances. SGS tested to be in conformity with the highest level environmental protection standards such as the E0 Standard of the European Union and the F1 Standard of Japan.
- \* Will not produce any pungent odor or make any negative impact on the environment of the construction site during application.

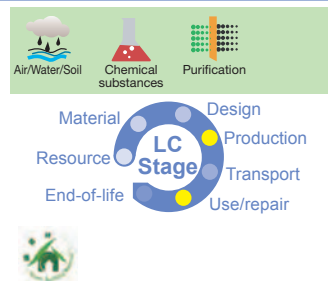
Product performance

- \* Free of toxic solvent. No pungent odor. Safe to the health of workers and users.
- \* Can reveal wood grain and is perfect for use on valuable wood varieties. It is a transparent stain that will not obscure but accentuate the beauty of wood grain, giving a wooden object a better texture.
- \* Can cover a wooden object completely so that the object becomes as reflective as a mirror. Suitable for use as a coating on loudspeakers and musical instruments.

Yon Chun Ho International Co., Ltd.

3F., No. 248-39, Sinsheng Road, Cianjhen District, Kaohsiung City, Taiwan, 806, Republic of China  
 Tel +886-7-8135995 Fax +886-7-8135677  
 E-mail zoes@yctw.com  
 URL <http://www.yctw.com>

Available in: Asia, Singapore, Malaysia, Taiwan (Rep. of China), China



Eco-components // Construction

EC-1-018

Construction

water-based wood coating

EPnS Water-Based Outdoor Coating EP-001 Type II

Environmental performance

- \* Free of any of the eight major heavy metals, formaldehyde, benzene solvents, or other toxic substances. SGS tested to be in conformity with the highest level environmental protection standards such as the E0 Standard of the European Union and the F1 Standard of Japan.
- \* Will not produce any pungent odor or make any negative impact on the environment of the construction site during application.

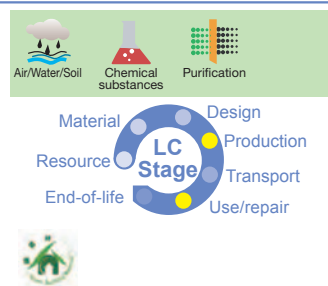
Product performance

- \* Free of toxic solvent. No pungent odor. Safe to the health of workers and users.
- \* In addition to the advantages of indoor paints, this product is proven by SGS report to be more weather-resistant and yellowing-resistant than other oil-based wood paints on the market. Besides, after-tack resistance is ensured, and paint adherence is higher than other outdoor wood paints.
- \* Proven by SGS ASTM G21-96 Fungal Resistance Test to achieve level 1 (highest level) fungal resistance.
- \* Dries fast to enhance work efficiency and minimize the impact of capricious weather conditions on outer application.

Yon Chun Ho International Co., Ltd.

3F., No. 248-39, Sinsheng Road, Cianjhen District, Kaohsiung City, Taiwan, 806, Republic of China  
 Tel +886-7-8135995 Fax +886-7-8135677  
 E-mail zoes@yctw.com  
 URL <http://www.yctw.com>

Available in: Asia, Singapore, Malaysia, Taiwan (Rep. of China), China



EC-2-001

Electrical and electronic

amplifier

## AC Servo Driver

## Environmental performance

The servo driver is used together with the servo motor.

Resource saving : We could design the heat sink and frames lighter than our previous model through the thermal analysis simulation and load inspection.

The weight of this product is 1.68kg. It is 7% lighter than our previous products (1.8kg).

Hazardous chemical substance : These products conform to EU RoHS Directive.

## Product performance

The improvement of the motor performance by the control algorithm and the reduction of energy consumption and thermal loss through the thermal analysis achieved the servo system with small size and high performance.

## Panasonic Corporation, Appliances Company

7-1-1 Morofuku, Daito City, Osaka, 574-0044, Japan

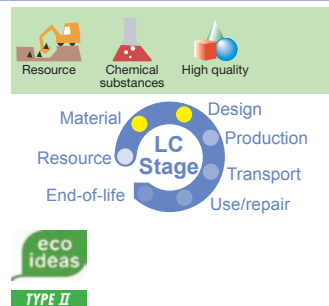
Tel +81-72-871-1212 Fax +81-72-870-3120

URL <http://panasonic.net/>

URL [http://industrial.panasonic.com/jp/i/25000/motor\\_fa/motor\\_fa.html](http://industrial.panasonic.com/jp/i/25000/motor_fa/motor_fa.html)

URL <http://panasonic.net/csr/>

Available in: Worldwide



EC-2-002

Electrical and electronic

angular rate sensor

## Angular Rate Sensor (Anti hand shaking)

## Environmental performance

With the main components in this product to be minutuarized and have less parts, this product achieves the smallest, the thinnest, and the lightest feature by comparing with the other companies' products with the same functions. This product achieves 87% in volume and 77% in mass compared with the second placed other company's product and also achieves the No.1 in resource recycling.

## Product performance

This Angular Rate Sensor for anti hand shaking which is used for DSC or cellular phones has various stable characteristics. Among those, the performances such as low frequency noise or start-up drift surpasses the other companies' performances and realizes a stable sensing performance.

## Panasonic Electronic Devices Co.,Ltd.

1006 Kadoma, Kadoma City, Osaka, 571-8506, Japan

Tel +81-6-6907-4781

URL <http://panasonic.net/ped/jp/>

URL <http://panasonic.net/ped/jp/environment/>

Available in: Japan, Republic of Korea, Taiwan (Rep. of China), China



EC-2-003

Electrical and electronic

cable

**ECOGREEN® Environment-conscious type**

**Environmental performance**

A recycling system of waste electric wires is established. There is no dioxin emission when incinerating and no harmful substance when buried underground. The amount of material used is reduced and the amount of waste is also small.  
 \* ECOGREEN® is registered trademark of Hitachi Cable, Ltd.

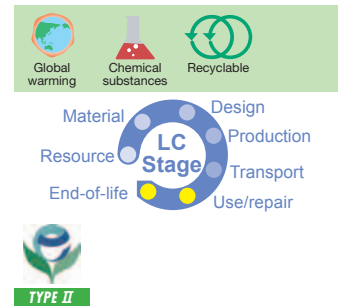
**Product performance**

Halogen gas is not generated and less smoking occurs in case of fire.

**Hitachi Cable, Ltd.**

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.co.jp/en/products/cable/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)



ECOGREEN® Environment-conscious type

EC-2-004

Electrical and electronic

capacitors

**Electric Double Layer Capacitor, DLCAP™**

**Environmental performance**

Nippon Chemi-Con's electric double layer capacitor, DLCAP™, is possible to charge-discharge large current, having longer cycle life compared to ordinary secondary batteries. It is expected to be used for vehicle hybrid system, regarding energy saving.

- Characteristics-
- With low degradation, multimillion cycles of charge-discharge is possible.
- With a high power density, rapid (high current) charge-discharge is possible.
- With a high charge-discharge efficiency, an output efficiency of over 95% at 1kW/kg is obtained.
- Environmentally friendly without using heavy metal for its structure material.
- High in safety during abnormal time, and no malfunction occurs due to short circulation.

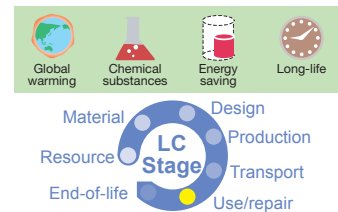
**Product performance**

- Capacitance: 350 to 3,200F
- Low Internal Resistance: from 0.8mOhm
- Temperature Performance : -25°C to 60°C
- \*-40°C to 85°C is under development

**Nippon Chemi-Con Corporation**

5-6-4, Osaki, Shinagawa-ku, Tokyo, 151-8604, Japan  
 Tel +81-3-5436-7836 Fax +81-3-5436-7613  
 URL <http://www.chemi-con.co.jp/e/index.html>  
 URL <http://www.chemi-con.co.jp/e/catalog/index.html>  
 URL <http://www.chemi-con.co.jp/e/env/index.html>

Available in: Worldwide



Electric Double Layer Capacitor, "DLCAP™"

Eco-components // Electrical and electronic

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EC-2-005

Electrical and electronic

communication related products

Environmentally Resistant Wide-Area Optical Ethernet Switch "MELNET-ES1100"

Environmental performance

----<< Material / Resource saving >>----

- A redesigned heat dissipation mechanism lowers the parts count and reduces weight by 30% compared with conventional models.

----<< Energy saving >>----

A low power consumption LSI has reduced power consumption by 14% compared with conventional models.

----<< Toxicity / Chemical substances reduction >>----

No lead used in surface treatment of boards and mounting solder.

Product performance

- MELNET-ES1100 is ideal for network configurations requiring environmental resistance and large capacity, such as onsite facility surveillance of roads, rivers, dams, erosion control hotspots, ports and harbors, railways, toll roads and other infrastructure, as well as CCTV video coverage equipment.
- Long-distance transmission up to 80 kilometers.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan,North America,China



TYPE III

764.3kg-CO<sub>2</sub>

Inspection

Resource/Materials/Production/  
Transfer/Use/End-of-Life



Environmentally Resistant Wide-Area Optical Ethernet Switch MELNET-ES1100

EC-2-006

Electrical and electronic

electronic equipment

Enterprise SSD with High Speed Data Access

Environmental performance

- Mitigation of climate change: Power efficiency (IOPS\*/wattage) of 13,800 IOPS/Watt is 360 times compared with the benchmark HDD model\*\*.
- Efficient use of resources: Weight of 152g is 30% lighter than the benchmark HDD model.
- Management of chemicals: Bromine-, chlorine- and antimony-free\*\*\* HDD.
  - \* IOPS (Input Output Per Second, random access speed)
  - \*\* Benchmark model: MBE2147RC
  - \*\*\* Self standard value
    - Chlorine : less than 900ppm
    - Bromine : less than 900ppm
    - Chlorine + Bromine : less than 1500ppm
    - Antimony : less than 1000ppm

Product performance

- The storage device uses the 32 nm single level cell (SLC) NAND flash memory manufactured by Toshiba and a 6Gb/sec Serial Attached SCSI (SAS) interface.
- The drives have been realized the performance, random access 90,000 IOPS and sequential access 510MB/sec.
- Low power consumption of only 6.5 watts in operation, and industry-leading power efficiency of 13,800 IOPS/Watt have been realized.

TOSHIBA CORPORATION Semiconductor & Storage Products Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www3.toshiba.co.jp/storage/index.htm>

URL <http://www.toshiba.co.jp/csr/en/index.htm>



2.5-type Enterprise SSD MK4001GRZB series

Eco-components // Electrical and electronic

EC-2-007

Electrical and electronic  
electronic equipment

Lightweight, Compact, Energy-saving CCD Camera System

Environmental performance

- Mitigation of climate change: Power consumption 9% lower than for the previous model.
- Efficient use of resources: Compact system thanks to about 50% reduction in weight and about 60% reduction in volume compared with the previous model.
- Management of chemicals: Compliant with regulations covering the use of specific hazardous substances.

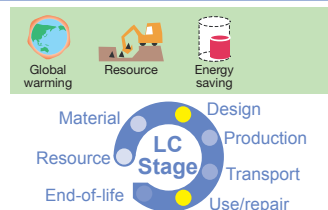
Product performance

"When CCD Camera combines with image intensifier,"

- High brightness: Advanced technology miniaturizes columnar crystals with optical fiber structure.
- Low noise: The high-contrast, high-brightness image is virtually defect-free. Newly developed processing technology greatly reduces structural noise.

Toshiba Electron Tubes & Devices Co.,Ltd

1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550, Japan  
Tel +81-287-26-6558 Fax +81-287-26-6059  
URL <http://www.toshiba.co.jp/index.htm>  
URL <http://www.toshiba-tetd.co.jp/tetd/eng/company/env.htm>



CCD camera system for X-ray image intensifier VP-34019

EC-2-008

Electrical and electronic  
electronic parts, devices and electronic circuit

Environment-friendly cadmium-free electric contact

Environmental performance

(Features)

This product is a high-reliability cadmium-free electric contact, which is excellent in welding resistance and consumption resistance. These electric contacts provide relays and switches with longer life and higher capacity, also making them much smaller in size. This product complies with the EU RoHS directive.

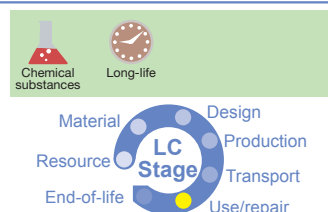
Product performance

(Uses)

They have been widely used in relays, switches, magnetic contactors, circuit breakers and circuit protectors in on-vehicle electrical components, home appliances, power distribution apparatus, switchboards and others. They are also widely adopted in hybrid cars making them suitable for high voltage power systems.

Mitsubishi Materials C.M.I. Corporation

46-1 Sempuku, Susono City, Shizuoka, 410-1116, Japan  
Tel +81-55-992-6111 Fax +81-55-992-6137  
URL <http://group.mmc.co.jp/cmi/en/index.html>  
URL <http://group.mmc.co.jp/cmi/en/0102.html>



Cadmium-free electric contacts

Eco-components // Electrical and electronic

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EC-2-009

Electrical and electronic  
industrial X-ray equipment

X-ray output power 4 times greater than that of a conventional tube. Reduced investigation time for X-ray fluorescent spectroscopy

Environmental performance

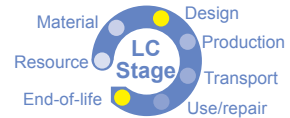
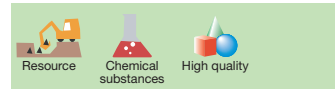
- Mitigation of climate change: 20.6 kg reduction in CO<sub>2</sub> emissions compared with a conventional X-ray tube as a result of the reduced use of materials.
- Efficient use of resources: 3.9 kg reduction in the product weight compared with a conventional X-ray tube as a result of the reduced use of materials.
- Management of chemicals: Reduced environmental risks during use and disposal because of the elimination of the use of insulation oil, which is not readily biodegradable.

Product performance

- Quick investigation: 4 times greater throughput thanks to enhanced X-ray output power.
- Compactness: As compact as a conventional unit despite high performance.

Toshiba Electron Tubes & Devices Co.,Ltd

1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550, Japan  
Tel +81-287-26-6558 Fax +81-287-26-6059  
URL [http://www.toshiba-tetd.co.jp/tetd/index\\_j.htm](http://www.toshiba-tetd.co.jp/tetd/index_j.htm)  
URL <http://www.toshiba-tetd.co.jp/tetd/eng/company/env.htm>



Oil-free X-ray Tube Assembly for Industrial Use AFX-200RA-Pd

EC-2-010

Electrical and electronic  
laser module, light source

COMPACT GREEN LASER MODULE "BEAM MATE®" <RoHS Compliant>

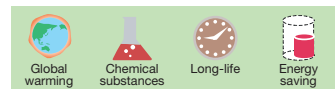
Environmental performance

Small green laser modules are now attracting more attention from industries as a light source for laser line markers and projectors. Shimadzu has developed the green laser module "BEAM MATE®" for built-in applications. It is compact in size and has low power consumption. "BEAM MATE®" is a compact green laser module that is competitively priced. Because it works with high accuracy over a wide operating temperature range, from -10°C to +50°C, it can be used outdoors.

- (1) High-quality beam characteristics thanks to our specially-designed microchip laser module technologies
- (2) Wide operating temperature range from -10°C to +50°C
- (3) Compact body with built-in control PCB in the laser head
- (4) High efficiency and Low power consumption
- (5) Low operating voltage of 2.4 V to 3.3 V
- (6) Polarization extinction ratio is 50 : 1 min.

SHIMADZU CORPORATION

1, Nishinokyo-Kuwaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
Tel +81-75-823-1113 Fax +81-75-823-2062  
URL <http://www.shimadzu.com/index.html>  
URL <http://www.shimadzu.com/products/opt/laser/index.html>  
URL <http://www.shimadzu.com/about/environmental/index.html>



Compact Green Laser Module [BEAM MATE]

Available in: Worldwide



EC-2-011

Electrical and electronic

laser module, light source

LUMICUBE FREQUENCY DOUBLED DIODE LASER (RoHS Compliant)

Environmental performance

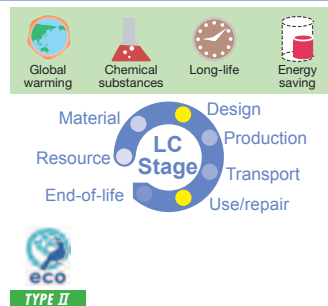
LUMICUBE is a frequency doubled diode laser for built-in applications that covers the 480 nm to 530 nm optical wavelength range of an argon ion laser. It incorporates Shimadzu's QPM component to offer high optical conversion efficiency and high reliability. Its compact size, single power-supply operation (+12 V DC), low power consumption, and low heat generation make LUMICUBE ideal for installation in products. Shimadzu's unique self-tuning and auto power control functions maintain excellent beam quality over a wide temperature range from 15 to 45 degrees.

- (1) Unique QPM (quasi-phase-matching) component achieves high beam quality.
- (2) Shimadzu digital control technology achieves superb power stability over a wide temperature range from 15 to 45 degrees.
- (3) Compact and highly reliable laser head
- (4) Low power consumption and low heat generation
- (5) Covers various wavelength ranges.

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
 Tel +81-75-823-1113 Fax +81-75-823-2062  
 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/products/opt/laser/index.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



Eco-components // Electrical and electronic

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EC-2-012

Electrical and electronic

magnetic parts

EMC Noise Reduction Products "FINEMET<sup>®</sup>"

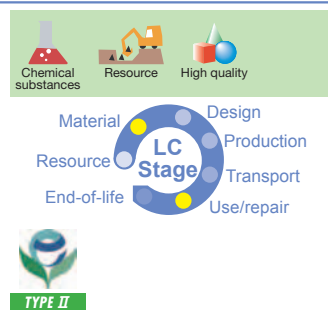
Environmental performance

While IT and electronics devices continue to become smaller and achieve greater performance as well as increased functionality, EMC (Electro-Magnetic Compatibility) regulations are becoming even more stringent. In this situation, electronics manufacturers require materials and components with high EMC noise suppression capabilities. Hitachi Metals offers its "FINEMET<sup>®</sup> series" of nanocrystalline soft magnetic materials for high-performance EMC noise reduction. These products are lead-free and RoHS compliant.

Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
 Tel +81-3-5765-4429  
 E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
 URL <http://www.hitachi-metals.co.jp/e/index.html>  
 URL [http://www.hitachi-metals.co.jp/e/prod/prod02/p02\\_22.html](http://www.hitachi-metals.co.jp/e/prod/prod02/p02_22.html)  
 URL <http://www.hitachi-metals.co.jp/e/corp/corp14.html>

Available in: Worldwide (Except for Iran)



EMC Noise Reduction Products "FINEMET<sup>®</sup>"

EC-2-013

Electrical and electronic

magnetic parts

## Ferrite Magnet "NMF-12 Series"

## Environmental performance

Hitachi Metals' new ferrite magnet "NMF-12 series" is greatly superior to its conventional product. Among ferrite magnets, it provides the industry best magnetic properties as mass production.

These products significantly contributing to the prevention of global warming by being used in motors for electrical components such as starters, anti-lock brake systems, electric power steering, engine cooling fans as well as in home appliances such as air-conditioner compressors, refrigerator compressors, and washing machines.

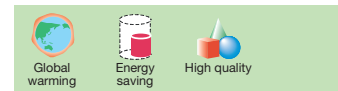
## Product performance

Temperature coefficient of intrinsic coercive force of NMF-12 is 0.13-0.16%/K. It is smaller than the normal Sr ferrite's one (0.3-0.4%/K). It means little demagnetization even at a low temperature and high resistance against temperature fluctuation.

## Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
Tel +81-3-5765-4202  
E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
URL <http://www.hitachi-metals.co.jp/e/index.html>  
URL [http://www.hitachi-metals.co.jp/e/prod/prod03/p03\\_10.html](http://www.hitachi-metals.co.jp/e/prod/prod03/p03_10.html)  
URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)



Ferrite Magnet "NMF-12 Series"

EC-2-014

Electrical and electronic

magnetic parts

Neodymium-Iron-Boron Sintered Magnets "NEOMAX<sup>®</sup>" Series

## Environmental performance

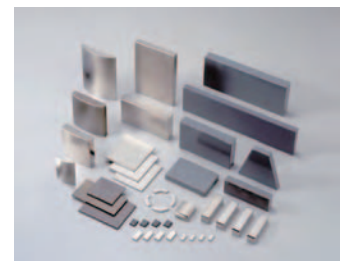
Nd-Fe-B sintered magnets (NEOMAX<sup>®</sup>), their strong magnetism allows motors to operate more efficiently and to be made smaller, helping to improve the fuel efficiency of hybrid and electric vehicles when used for such applications as drive motors, generators, electric power steering, and electric braking.

These magnets are used in a wide range of industries, including in appliances such as compressors for air conditioners and refrigerators, servo motors for machine tools, and medical devices. The improved energy efficiency of these devices helps to prevent global warming and lessen environmental loads.

## Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
Tel +81-3-5765-4202  
E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
URL <http://www.hitachi-metals.co.jp/e/index.html>  
URL [http://www.hitachi-metals.co.jp/e/prod/prod0/p0\\_7.html](http://www.hitachi-metals.co.jp/e/prod/prod0/p0_7.html)  
URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)

Nd-Fe-B sintered magnets NEOMAX<sup>®</sup> series

EC-2-015

Electrical and electronic

magnetic parts

## Amorphous Cut core for the Power Conditioner of Photovoltaic Generation Systems

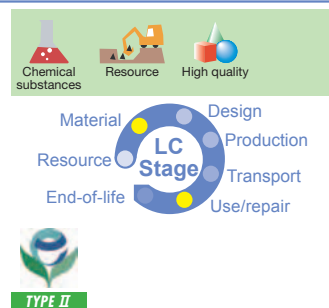
## Environmental performance

This is a cut core made from amorphous metal ribbon. Amorphous metal is an alloy with a non crystalline structure produced by ultra-rapid quenching (about 1 million °C per second) of molten alloy. The molten raw materials composed primarily of iron, silicon, and boron. The thing with amorphous cut core as ribbon of die thickness  $25\ \mu\text{m}$  can realize a low core loss (1.38W/kg Max at 16kHz, 0.037T) in frequency to 100kHz. Furthermore Amorphous cut core can attain the downsizing such as inductors for photovoltaic generation systems, wind power generation systems, besides, high frequency power transformer for X-rays CT equipments, electric reactors for up/down converters of a hybrid car and the fuel cell-powered vehicle. Therefore, amorphous cut cores make a major contribution to energy conservation and to ministry exploitation of resources.

## Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan  
Tel +81-3-5765-4429  
E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
URL <http://www.hitachi-metals.co.jp/e/index.html>  
URL [http://www.hitachi-metals.co.jp/e/prod/prod13/p13\\_08.html](http://www.hitachi-metals.co.jp/e/prod/prod13/p13_08.html)  
URL <http://www.hitachi-metals.co.jp/e/corp/corp14.html>

Available in: Worldwide (Except for Iran)



Appearance of Amorphous Cut core

EC-2-016

Electrical and electronic

magnetic parts

## Metal Powder Core for PFC Reactor

## Environmental performance

This is the metal powder core for PFC (Power Factor Correction) reactor that compression molding our original magnetic powdery "HIDUST" which pulverized amorphous metal materials composed primarily of iron, silicon. Because it has both low core loss and high saturation magnetic flux density, this metal powder core contribute to exploitation of resources-saving with small size and high performance.

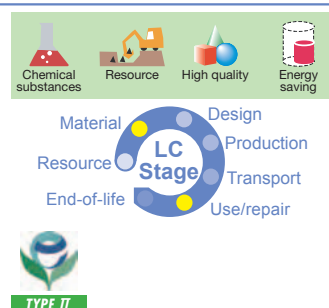
## Product performance

Downsizing, high performance are enabled with applying this metal powder core as an electric reactor for PFC such as an inverter airconditioner, a hybrid car and the electric vehicle and has a good dc excellence characteristic by high saturation magnetic flux density.

## Hitachi Metals, Ltd.

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Tel +81-3-5765-4429  
E-mail [hmcc@hitachi-metals.co.jp](mailto:hmcc@hitachi-metals.co.jp)  
URL <http://www.hitachi-metals.co.jp/e/index.html>  
URL [http://www.hitachi-metals.co.jp/e/prod/prod0/p0\\_9.html](http://www.hitachi-metals.co.jp/e/prod/prod0/p0_9.html)  
URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)



Appearance of PFC Reactor

EC-2-017

Electrical and electronic manufacturing products

Thin Film PV Module (Glass/Glass model,NS-F135G5)

Environmental performance

- (1) Resource saving  
Quantity of silicon is less than that of crystalline silicon.
- (2) Short Energy Payback Time  
Our Thin Film module was made by a shorter and simpler manufacturing process and uses no high temperature process.
- (3) Reduction of Environment load  
Our Thin Film module is made of silicon as main material, so it is free from any toxic material.

Product performance

- (1) High electric generating capacity is demonstrated under the high temperature of midsummer.
  - Thin Film Si module's performance is better than Crystalline Si module in warm region/season. Because of Thin Film module have superior temperature characteristics. Output degradation of Thin Film module is smaller than Crystalline Si module at the high temperature.
  - Our module performance is better than Crystalline Si module at low latitude region. Our module has high sensitivity to the short wavelength light richly contained in the sunlight of summer. (In theory, solar spectrum at low latitudes shorter wavelength light)
- (2) Laminated glass structure realizes high reliability, easy maintenance and various installation.
  - Glass is adopted as the both of front and back covers.
  - Full flat structure is realized by removing frame.
  - Vertical and horizontal installation are both possible.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Worldwide



NS-F135G5

EC-2-018

Electrical and electronic manufacturing products

BLACKSOLAR Technology Employing Novel Mono-Crystalline High Efficiency PV Module

Environmental performance

- Power generation using unlimited supply of sunlight
- (1) 11.7% increase in Pmax compared to our 170W Multi-Crystalline PV Module of the same size.
  - (2) PV module power output declines with an increase in ambient temperature. 20% decrease of power loss in high temperature conditions compared to traditional PV modules.
  - (3) Cell thickness is decreased by approximately 30% compared to traditional multi-crystalline cells; leading to reduction of silicon needed for production.

Product performance

We achieved high conversion efficiency through the development of BLACKSOLAR technology, which employs back-contact cell structure and sheet electrodes. Back-contact cell structure allows greater cell area for light absorption, and sheet electrodes decrease power transmission loss between cells. Moreover, we implemented the "Roofit II" module layout scheme, which utilizes two modules of different sizes (190W and 135W modules) and allows greater rooftop module coverage.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



PV Module NQ-190AA/NQ-135AA

Eco-components // Electrical and electronic

EC-2-019

Electrical and electronic

motor

### DC Brushless Fan Motor for Air-conditioning

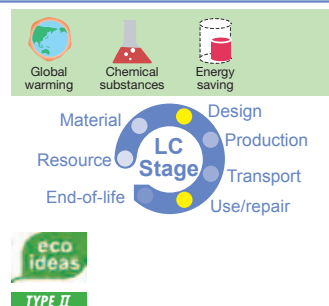
#### Environmental performance

Energy saving: Efficiency is 88% at the rated power of 40W, and 3 points upper than 85% of conventional motors.

Hazardous chemical substance : These products conform to EU RoHS Directive.

#### Product performance

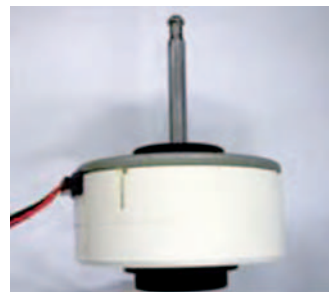
This product is a brushless motor for air conditioner units. High efficiency and low noise have been achieved at the same time by Neodymium magnet rotor and own designed drive IC.



### Panasonic Corporation, Appliances Company

7-1-1 Morofuku, Daito City, Osaka, 574-0044, Japan  
 Tel +81-72-871-1212  
 URL <http://panasonic.co.jp/>  
 URL <http://panasonic.co.jp/motor/>  
 URL <http://panasonic.co.jp/csr/>

Available in: Japan, China



Eco-components // Electrical and electronic

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EC-2-020

Electrical and electronic

motor

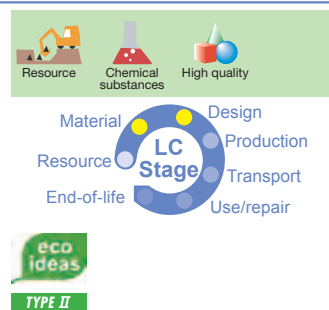
### AC Servo Motor

#### Environmental performance

The servo motor is used together with the servo driver. Resource saving : Adoption of high energy gained magnet and reduction of losses by the new MINAS method could lose weight of the motor. The weight of our new product is 4.11kg. It is 20% lighter than our previous product (5.12kg). Hazardous chemical substance : These products conform to EU RoHS Directive.

#### Product performance

The improvement of the motor performance by the control algorithm and the reduction of energy consumption and thermal loss through the thermal analysis achieved the servo system with small size and high performance.



### Panasonic Corporation, Appliances Company

7-1-1 Morofuku, Daito City, Osaka, 574-0044, Japan  
 Tel +81-72-871-1212 Fax +81-72-870-3120  
 URL <http://panasonic.net/>  
 URL [http://industrial.panasonic.com/jp/ii/25000/motor\\_fa/motor\\_fa.html](http://industrial.panasonic.com/jp/ii/25000/motor_fa/motor_fa.html)  
 URL <http://panasonic.net/csr/>

Available in: Worldwide





EC-2-021

Electrical and electronic

primary batteries

Zero Mercury and Zero Lead Added Silver Oxide Battery

Environmental performance

Zero mercury and zero lead added.  
 Conventional Silver Oxide batteries have a small but non-negligible amount of mercury and lead added to the anodal zinc to prevent emission of gasses.  
 Through the development of original zinc corrosion prevention technologies, Maxell has eliminated the use of mercury and lead. This initiative to reduce environmental impact has drawn enthusiastic acclaim from outside the company.

Product performance

Indemnified against leakage due to its Excellent Leakage Resistance.  
 Superior performance than LR Button Battery.

Hitachi Maxell Energy, Ltd.

5, Takumidai, Ono-shi, Hyogo, 675-1322, Japan  
 Tel +81-794-63-8054  
 URL <http://biz.maxell.com>  
 URL <http://biz.maxell.com/products/industrial/index.html>  
 URL <http://biz.maxell.com/corporate/csr/index.html>



Silver Oxide Battery SR626SW, SR521SW, SR44 etc.

EC-2-022

Electrical and electronic

secondary batteries

Innovative rechargeable battery with a long life of 4,000 charge-discharge cycles and rechargeable in 15 minutes, safety and durability.

Environmental performance

- Mitigation of climate change: Battery for eco products, such as electric bicycles, electric motor bikes, and EV (Electric Vehicle).
- Efficient use of resources: A long life of 4,000 charge-discharge cycles leads to a reduction of waste.

Product performance

- Safety and durability: Excellent safety thanks to a structure resistant to internal short circuiting and thermal runaway.
- Long life: Capacity loss after 4,000 charge-discharge cycles is less than 20% at cell level.
- Rapid charging: Rapid charging in 15 minutes (up to 80%) at cell level.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.scib.jp/en/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



SCiB™, 20Ah Battery cell

Available in: Japan

1 Eco-components // Electrical and electronic  
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EC-2-023

Electrical and electronic

wires

Self-lubrication enameled wire "KOMAKI®" for higher space factor

Environmental performance

"KOMAKI®Series" of enameled wires provide a coil with high space factor, and so meets the demand for high-efficiency compact motors while conserving energy.

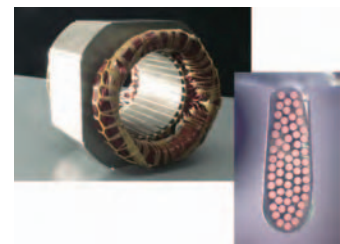
Product performance

"KOMAKI®Series" wires deliver much stronger bonding strength with impregnating vanish compared to existing self-lubricated enameled wires.  
 \* KOMAKI® is registered trademark of Hitachi Cable, Ltd. in Japan.

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.co.jp/en/products/cable/magnetwire/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)



Stator of high efficiency motor that used "KOMAKI®"

EC-2-024

Electrical and electronic

wires

Inverter surge resistant enameled wire "KMKED"

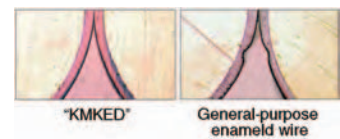
Environmental performance

- "KMKED" has an insulation film that is hardly eroded by inverter surges.
- "KMKED" also provides much higher mechanical strength than existing products.
- These features contributes to the longer life of motors.

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.com/products/cable/magnetwire/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)



Cross section of wire after voltage endurance test (1.1kVp-11.2h)

Eco-components // Electrical and electronic

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EC-2-025

Electrical and electronic

wires

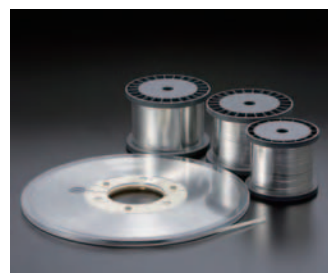
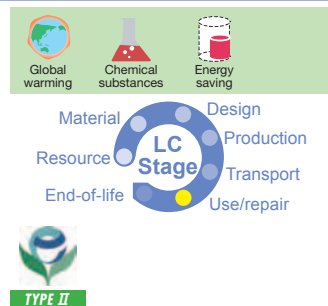
**Solder Coated Copper Wire for Solar Cells**

**Environmental performance**

- Lead Free and comply with RoHS\* directive.
- Contribution to energy conservation by offering various conductors specific to usages and needs.
- \* RoHS: Restriction of the use of certain hazardous substances

**Product performance**

- Stress caused by connection has been decreased using soft annealing copper wire that is suitable for thin type Si cells.



Solder coated copper wire for solar cells

**Hitachi Cable, Ltd.**

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)

EC-2-026

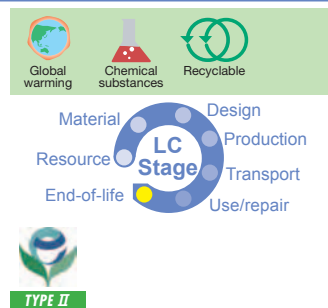
Electrical and electronic

wiring devices

**Modified II Tin Plating FFC (Flexible Flat Cable)**

**Environmental performance**

- Lead-free and complies with EU RoHS\* directive.  
 Mitigate Whisker (Crystallization of thin needles) from tin plated conductor surface without gold plating, which prevents resource depletion.
- \* RoHS: Restriction of the use of certain hazardous substances



Modified II tin plating FFC (Flexible Flat Cable)

**Hitachi Cable, Ltd.**

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)

1 Eco-components // Electrical and electronic  
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EC-2-027

Electrical and electronic  
capacitors

Resonance circuit for Power Supply Metallized Polypropylene Film Capacitors

**Environmental performance**

This product achieves resource saving by downsizing. It achieves 85% in volume and 47% in mass compared with our conventional product (0.28  $\mu$ F product). This product also reduces energy consumption in production processes to 56%.

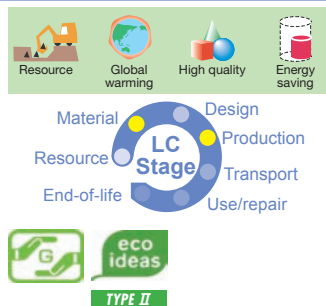
**Product performance**

This product does not only achieve small size and high current by new processes but also the high level of safety.

**Panasonic Electronic Devices Co.,Ltd.**

1006 Kadoma, Kadoma City, Osaka, 571-8506, Japan  
 Tel +81-6-6907-4781  
 URL <http://panasonic.net/ped/jp/>  
 URL [http://industrial.panasonic.com/www-ctlg/ctlgj/qABD0000\\_JP.html](http://industrial.panasonic.com/www-ctlg/ctlgj/qABD0000_JP.html)  
 URL <http://panasonic.net/ped/jp/environment/>

Available in: China



Eco-components // Electrical and electronic

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EC-3-001

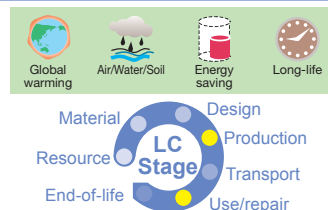
Semiconductor-related

electrical machinery, equipment and supplies

EVA film for a solar cell

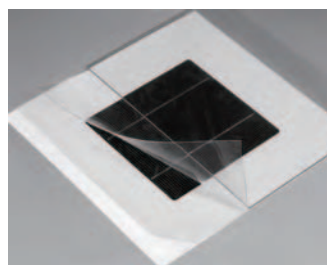
Environmental performance

A solar cell is a kind of clean system which does not emit CO<sub>2</sub> and other hazardous substances during use. It has become more and more important recent years by the viewpoint of earth environment protection. Bridgestone is manufacturing and selling EVA film of EVASKY brand which is used as a seal material for Silicon cell. EVASKY has been highly evaluated by customers due to its high efficiency, high productivity and high durability.



Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan  
 Tel +81-3-5202-6907 Fax +81-3-5202-6842  
 URL <http://www.bridgestone.com>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



EVA film for a solar cell

EC-3-002

Semiconductor-related

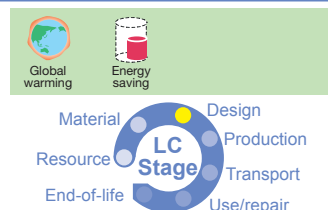
Ir receiver for 3D glass

Reduction of Idle current

Environmental performance

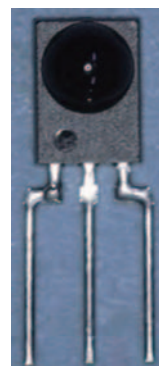
It is reduced Power Consumption than a previous model by 1/5.

	Measurement condition	PNJ4841M	Previous Model
Idle Current: I <sub>ccL</sub>	V <sub>cc</sub> =2.8v	60 (μA)	300 (μA)
On Current: I <sub>ccH</sub>	V <sub>cc</sub> =2.8v	90 (μA)	350 (μA)
Power Consumption: PC	V <sub>cc</sub> =2.8v Duty=1/10	0.18 (mW)	0.85 (mW)



Panasonic Corporation, Industrial devices Company

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 Tel +81-99-246-5221 Fax +81-099-246-5238  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>



1 Eco-components // Semiconductor-related  
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EC-3-003

Semiconductor-related

parts of semiconductor manufacturing equipment

PureBeta

Environmental performance

Along with strong research and development program, Bridgestone has produced a high-purity silicon carbide powder created through the combination of high-level polymer technology. It is manufactured on a very clean production line by sintering, processing and cleaning. Because of its excellent resistance against wet cleaning, those SiC sintering products can be used repeatably which is also good for the environment. Further, SiC single crystal wafer is one of the promising candidates for electronic devices used for hybrid vehicle, low loss invertors and LEDs which has high expectation on global energy saving and CO<sub>2</sub> emission reduction. This product has yielded an integrated production flow from the raw materials to the fabrication.



Bridgestone Corporation

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 E-mail [pbinfo@group.bridgestone.co.jp](mailto:pbinfo@group.bridgestone.co.jp)  
 URL <http://www.bridgestone.com>  
 URL <http://www.purebeta.com/global/>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Pure Beta

Eco-components // Semiconductor-related

EC-3-004

Semiconductor-related

rigid printed boards

High-reliability Al circuits substrate (DBA substrate) for motor-drive of eco-cars

Environmental performance

Al circuits substrate (DBA substrate) with high reliability for power modules have been mounted on the hybrid vehicles of above one million since the beginning of our mass-production. At present, AlN insulator is the main stream, but we promote also the practical use of various ceramics including silicon nitride and others for DBA substrates.

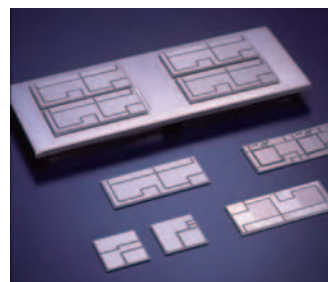
Product performance

As the parts for the automobile field, it is required that peeling-off and cracking at the junction portion do not occur by the thermal cycling test (-40 ~ 125°C, more than 3,000 cycles). Compared to the conventional substrates, our company's product satisfied such severe requirements, and has been used as an important part in the mobile application which needs high reliability. For example, it is used as a part of the inverter for motor drive of the eco-cars such as hybrid vehicles and electric automobiles.



Mitsubishi Materials Corporation (Sanda Plant Shizuoka DBA Center)

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 E-mail [suzukiss@mmc.co.jp](mailto:suzukiss@mmc.co.jp)  
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 URL <http://www.mmc.co.jp/corporate/en/product/auto/0602.html>  
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



DBA (Direct Brazed Aluminum) Substrates

Available in: Japan, Europe, U.S.A

EC-3-005

Semiconductor-related

semiconductor and IC measuring instruments

## Intelligent Power Module

## Environmental performance

Transfer mold IPM, a powerful component which is widely employed from white home appliances to industrial machinery for its outstanding performance in energy-saving and miniaturization.

----<< Material / Resource consumption reduction >>----

The thermal resistance, and there by the temperature rise of power chip junction is remarkably reduced by adopting high heat-dispersion insulation structure, in virtue of which the package of the module is miniaturized and the mounting area on the PWB is decreased by about 40% compared to conventional products.

----<< Energy saving >>----

Energy consumption reduction is achieved owing to adoption of the full-gate CSTBT, the chip size of which is shrunk by 40%.

\*CSTBT™ (Carrier Stored Trench Gate Bipolar Transistor) : New generation of IGBT originated at Mitsubishi, utilizing the carrier storage effect.

----<< Toxicity / Chemical substances elimination >>----

Lead-free soldering process for power chips. In addition to lead-free soldering tin of outer terminals, realizes fully lead-free products (RoHS compliant), while ensuring the reliability.

\*Awarded the 52<sup>nd</sup> Okochi Prize (Production award)

## Mitsubishi Electric Corporation

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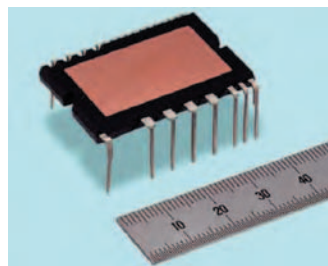
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



DIPIM™  
(Dual-in-line Package Intelligent Power Module)

EC-3-006

Semiconductor-related

single chip inverter IC

## Single Chip Inverter IC

## Environmental performance

The Single-chip inverter IC integrates various devices and circuits that are necessary for inverter control onto a single die. The inverter IC controls a motor at various speeds. The variable speed control improves the efficiency of motors. The inverter IC downsizes the control board of motors utilizing single chip structure, which allows the control board mounting the inverter IC to be embedded into a motor. The inverter IC, which is a lead-free (Pb-free) product conforming to JEITA Phase 3A, is environmentally-friendly.

## Product performance

The Single-chip inverter IC is an intelligent power IC, developed based on a unique dielectric separation technology. Because it's possible to design a latch-up-free structure, various IC formations are possible, even if high-voltage, large-current output circuits and logic circuits are mixed. Compared with conventional discrete substrate-based hybrid ICs, downsizing can be effected.

## Hitachi, Ltd. Power Systems Company

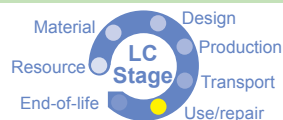
Akihabara Daibiru Building 18-13, Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Tel +81-3-3258-1111

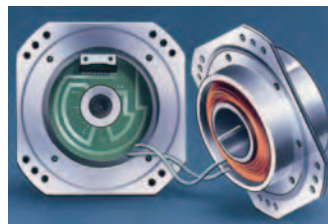
URL <http://www.hitachi.com/>

URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



TYPE II



Motor with built in Single-chip inverter IC

EC-4-001

Machine parts

optical elements

## High-Precision, High-Quality OFF-AXIS PARABOLIC MIRRORS SPA Series

## Environmental performance

Off-axis parabolic mirrors turn plane waves into spherical waves, and vice versa, at high precision. These aspherical mirrors are essential for spectrometers and interferometers that require high resolution.

RoHS Compliant product

## Product performance

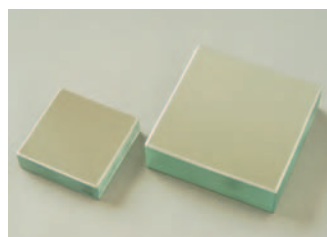
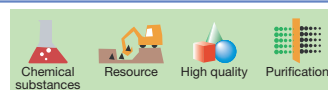
The Off-axis Parabolic Mirrors SPA Series has the following features:

- (1) Surface accuracy of  $\lambda/6$  has been achieved through the newly-developed precision replica technology (conventional Shimadzu product:  $\lambda/2$ ,  $\lambda = 632.8\text{nm}$ ).
- (2) Stable quality due to the production of a replica mirror using a high-precision master mirror.
- (3) Proven mass-production technology ensures a stable supply of large quantities.

## SHIMADZU CORPORATION

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 URL <http://www.shimadzu.com/products/opt/off/5iqj1d0000001k2i.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



Off-Axis Parabolic Mirror SPA Series

EC-4-002

Machine parts

optical elements

## Toroidal Mirror TR Series

## Environmental performance

A toroidal mirror is an aspheric mirror with a different curvature in the vertical and horizontal directions. As it can focus light diverging from a point source to approximately a single point under specific off-axis conditions, it can form an efficient optical system and reduce the size of optical component. The TR Series meets the requirements restricting the use of hazardous substances in EU Directive 2002/95/EC. These products can be used to configure highly energy-efficient and compact optical systems, making them suitable optical elements for ecoproducts.

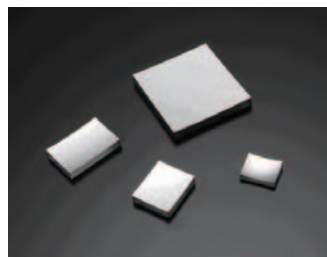
The Shimadzu toroidal mirrors TR Series offer the following features:

- (1) Precision-polish optical glass offers high surface accuracy and low surface roughness.
- (2) Shimadzu's unique aluminum coating technology offers high reflectance in the UV region
- (3) RoHS Compliant product

## SHIMADZU CORPORATION

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 URL <http://www.shimadzu.com/products/opt/off/5iqj1d0000002ws5.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



Shimadzu toroidal mirrors: TR Series

EC-4-003

Machine parts

optical elements

## Polka-Dot Beamsplitters

### Environmental performance

A polka-dot beamsplitter has a polka-dot pattern aluminum coated onto a glass substrate. Incident light is reflected from the coated areas but is transmitted through the uncoated areas. Unlike a conventional dielectric beamsplitter, the light split ratio is almost independent of the angle of incidence.

These polka-dot beamsplitters meet the requirements restricting the use of hazardous substances in EU Directive 2002/95/EC. As a single polka-dot beamsplitter covers a broad wavelength range, the number of optical elements in an optical component can be reduced to contribute to space-savings and more efficient use of resources.

The polka-dot beamsplitter offers the following features:

- (1) Wide wavelength range (UV to IR)
- (2) Low dependence on angle of incidence
- (3) Two models available: standard type (to 2200 nm) and high-grade type (to 3200 nm)
- (4) RoHS Compliant product

## SHIMADZU CORPORATION

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 URL <http://www.shimadzu.com/products/opt/polka/index.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



TYPE II



Polka-dot beamsplitters

EC-4-005

Machine parts

power transformers

Series Spindle Motors Striving for Energy saving and Resource conservation SJ-D

Environmental performance

----<< Material / Resource saving >>----

The SJ-D Series' revised electrical design cuts the use of copper wiring by 43%, while its optimized structure lowers the parts count.

----<< Energy saving >>----

The optimal electrical design facilitates a 25% reduction in motor power loss compared with conventional models, lowering power consumption.

----<< Toxicity / Chemical substances reduction >>----

Compliant with European RoHS Directive.

Product performance

Mitsubishi Electric continues to strive for energy savings and resource conservation in its products as part of its environmental countermeasures.

In a field where industrial equipment products have a lifespan in excess of 10 years, this series fuses functionality and design to become a product unaffected by prevalent trends. The SJ-D Series of spindle motor was awarded a Good Design Award (Best 15) in 2009.

Mitsubishi Electric Corporation

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URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



TYPE II



Spindle Motor SJ-D Series

Eco-components // Machine parts

- 1
- 2
- 3
- 4
- 5
- 6
- 7

EC-4-006

Machine parts

railway wheels

High-speed railway wheels and axles

Environmental performance

As a modal shift, high-speed railway lines are being planned all over the world. Sumitomo Metals controls a 100% share of the market for the wheels and axles that are used in the famous Japanese "bullet trains," and also control a 35% share of the world market for high-speed railway wheels. High-speed railway wheels and axles contribute to reducing CO<sub>2</sub> emissions that takes place in the transport sector.

Product performance

Sumitomo Metals controls a 100% share of the market for the wheels and axles that are used in the famous Japanese "bullet trains," as well as a high market share of the brake discs and driving systems. We also control a 35% share of the world market for high-speed railway wheels, and have earned a high level of trust. We have recently concluded a long-term, three-year contract for high-speed railway replacement wheels with the German railway company Deutsche Bundesbahn, and are meeting the growing demand from high-speed railways.

Sumitomo Metal Industries, Ltd.

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Wheels and axles



EC-4-007

Machine parts

tool

## Super Radius Mill ASR\* Multi-flutes type

### Environmental performance

Recently growing environmental awareness has resulted to change the type of cutting method along with other drastic modification. In effort to improve the method and life of cutting tools, Hitachi Tool Engineering developed " ASR Multi-flutes type with JX coating ". This tool with new small inserts geometry shows extremely high cutting performance under high feed operation. New indexable tool were made multi-flute with small inserts. In addition, JX coating make long tool life because of coating characteristics has greatly improved in their lubricant, hardness, heat-resistance and chipping resistance.

\*ASR=Alpha Super Radius Mill

### Product performance

Small inserts, breakage resistance has been greatly improved,so that use at the maximum feed rate of the latest machining equipment is recommended.

## Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan  
Tel +81-3-6858-2204 Fax +81-3-6858-2229  
URL <http://www.hitachi-tool.co.jp/e/index.html>  
URL [http://www.hitachi-tool.co.jp/j/products/indexable/index\\_e.html](http://www.hitachi-tool.co.jp/j/products/indexable/index_e.html)  
URL <http://www.hitachi-tool.co.jp/e/environment/index.html>

Available in: Worldwide (Except for Iran)



TYPE II



Products with ASR Multi-flutes type and JX coated inserts

EC-4-008

Machine parts

tool

## High-efficiency End Mill "Epoch Mirus" series

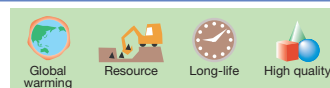
### Environmental performance

Recently, development of Eco-production tends to improve tool life, efficiency and cutting method. This is a revolutionary tool developed for improving efficiency, and made unprecedented high efficiency possible. There are two features of figures. One is Unequal phase to reduce cutting vibration. The other one is Double gash guarantees to remove thick chip smoothly. In addition, this tool is adopted new TH coating which further improved hardness and oxidation resistance. It will achieve stable cutting in a high cutting temperature, can dry cutting without coolant, shorten operating time of M/C, and save energy.

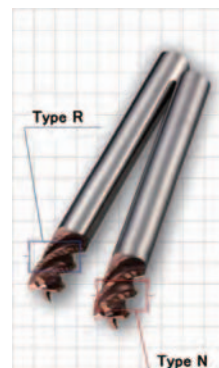
## Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan  
Tel +81-3-6858-2204 Fax +81-3-6858-2229  
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URL [http://www.hitachi-tool.co.jp/j/products/endmill/index\\_e.html](http://www.hitachi-tool.co.jp/j/products/endmill/index_e.html)  
URL <http://www.hitachi-tool.co.jp/e/environment/index.html>

Available in: Worldwide (Except for Iran)



TYPE II



High-efficiency End Mill "Epoch Mirus" series



EC-4-009

Machine parts

vacuum pumps

TURBO MORECULAR PUMP WITH INTEGRATED POWER SUPPLY: TMP-V1704/V2304/V2804/V3304LM SERIES

**Environmental performance**

- RoHS compliant products
- Category B5 (energy saving)
- Energy savings achieved by adopting improved power factor circuitry
- Miniaturization and weight savings achieved thanks to optimal rotor design

**Product performance**

The miniaturized TMP-V04LM series turbomolecular pumps were developed with a smaller flange, yet they provide better exhaust performance than conventional models. Integrating the separately positioned controller makes connection cables unnecessary, dramatically simplifying pump installation.

Model/ Flange size/	Gas throughput (N2) [L/s]	Height [mm]	Maximum powerConsumption [kVA]
TMP-V1704LM VG200	1400	411	1.2
TMP-V2304LM VG250	2100	376	1.2
TMP-V2804LM (F) VG250	2800	506	1.2
TMP-V3304LM (F) VG300	3200	462	1.2

**SHIMADZU CORPORATION**

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 URL <http://www.shimadzu.com/about/environmental/index.html>



TMP-V3304LM series

Eco-components // Machine parts

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EC-5-001

Automobile parts

auxiliary brake

Neotard Retarder

Environmental performance

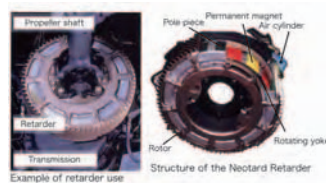
As many of these retarders are lightweight and compact, they contribute to consuming extremely little energy. Also by reducing the amount of hazardous substances such as brake lining wear particles, they make a large contribution to preserving the Earth's environment.

Product performance

This retarder is an auxiliary brake used in large trucks, buses, and similar vehicles. It is a product that reduces hazardous substances such as brake lining wear particles, and supports safety and riding comfort. The Sumitomo Metals retarder, Neotard Retarder, is a permanent magnet eddy current permanent magnet to generate braking force.

Sumitomo Metal Industries, Ltd.

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 URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Example of retarder use

EC-5-002

Automobile parts

cold rolled strips of specialty steel

Ring Material for CVT Belt

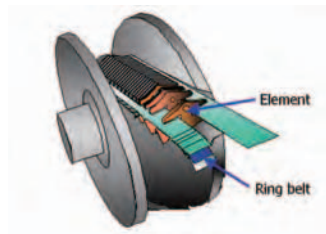
Environmental performance

CVT (Continuously Variable Transmission) which does not use gears, but can vary speed automatically and continuously, contributes to CO<sub>2</sub> reduction through its low fuel consumption performance. Hitachi Metals has developed the metal belt material with excellent fatigue strength. Excellent melting technology and cold rolling technology allow the detoxification of non-metallic inclusions and surface defects that might cause fractures.



Hitachi Metals, Ltd.

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 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)



Available in: Worldwide (Except for Iran)

Ring Material for CVT Belt

1 Eco-components // Automobile parts  
 2  
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EC-5-003

Automobile parts

HHybrid fuel system

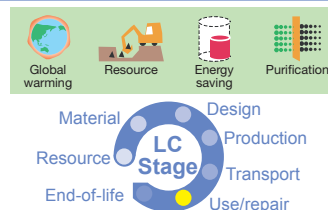
Epoch's HHybrid Fuel System EP-C100

Environmental performance

1. Environmentally friendly: Oxyhydrogen is a clean energy source free of pollution or toxicants and is effective in facilitating fuel combustion. According to ARTC test results, it reduces automobile exhaust emissions by 12%~29% and prevents carbon deposition on the engine.
2. Compact saving: It produces oxyhydrogen as auxiliary fuel to increase engine power and reduce fuel consumption. Driving test results show an average 14.4% cut in energy consumption.

Product performance

The "Hydrogen-Fuel Vehicle Power Unit" uses the electricity in a vehicle to transform "water" into hydrogen and oxygen by electrolysis. The hydrogen and oxygen are guided into the engine of the vehicle along with air and serve as an auxiliary fuel for reducing CO, HC, and black smoke emissions. As the mixture of fuel and the oxyhydrogen generated by the unit are completely burned, carbon deposition in the engine's combustion chamber is prevented, and vehicle power is increased at low fuel consumption. Besides, the combustion of oxyhydrogen only produces water vapor. Therefore, this product has outstanding energy-saving and carbon-reducing performances and is truly helpful in environmental protection.



EPOCH ENERGY TECHNOLOGY CORP.

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 E-mail jasmine@oxy-hydrogen.com  
 URL <http://www.oxy-hydrogen.com>



Available in: Europe,U.S.A.,Singapore,Thailand,Malaysia,Mexico,Taiwan (Rep. of China)

Eco-components // Automobile parts

EC-5-004

Automobile parts

motor and controller for vehicles

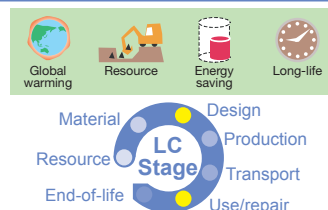
Energy Saving Electrical Power Steering (Motor and Controller)

Environmental performance

- << Material / Resource saving >>----  
 Compact size and High power Motor/Controller contributes to the design of light weight vehicles.
- << Energy saving >>----  
 Consumes energy only when the steering wheel is being turned, this improves a vehicle's fuel consumption efficiency.
- << Long life >>----  
 Maintainance free

Product performance

The electric power steering system assists the driver in steering only when the steering wheel is being turned; hence it serves to improve fuel economy by 3 to 5% compared with the conventional hydraulic power steering system. The compact yet high-power motor has realized system lineups for a full range from light motor vehicles up to oversized vehicles. It has its original control algorithm that creates excellent steering feeling and stability.



Mitsubishi Electric Corporation

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 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



Motor for Electrical Power Steering

EC-5-005

Automobile parts

parts for motor vehicles

High-efficiency crash box

Environmental performance

The crash box is a component located at the both end of front/rear bumper of an automobile that folds like an accordion to lessen the impact in the event of a collision. Our product is a lightweight and high-efficiency crash box with a structure that delivers more than twice the energy absorption capability of conventional products. This product is a contributes to reducing vehicle body weight and CO<sub>2</sub>.

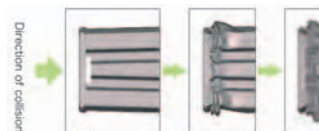
Product performance

A crash box is a component located at the both end of front/rear bumper of an automobile that folds like an accordion to lessen the impact in the event of a collision. Sumitomo Metals and Toyoda Iron Works have developed a lightweight crash box with a structure that delivers more than twice the energy absorption capability of conventional products. This product contributes to reducing vehicle body weight.

Sumitomo Metal Industries, Ltd.

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 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Crash box characteristics

EC-5-006

Automobile parts

parts of chassis and bodies

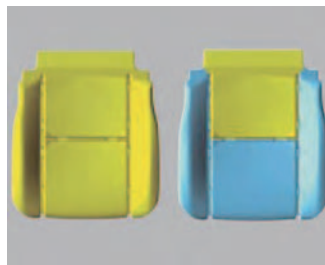
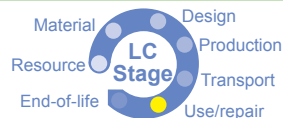
Seat Pad with Different Density but Usual Hardness

Environmental performance

We conventionally reduce the weight of seat pads with a lightweight formulation, but this sometimes reduces ride comfort and durability. Bridgestone has developed a seat with the usual hardness but less density with reduced weight without compromising ride comfort. This advantage is realized not only through high-performance formulation of the base parts that are important for ride comfort, but also through the adoption of a lightweight formulation for other parts, without reducing the weight of the whole seat pad.

Bridgestone Corporation

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 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



The same hardness and different density seat pad

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EC-5-007

Automobile parts

parts of chassis and bodies

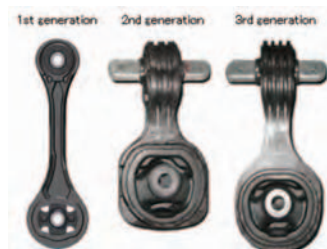
Lightweight Resin Anti-vibration Rubber

Environmental performance

Anti-vibration rubber is adopted in torque rod, engine mount and so on. This component suppresses acceleration-deceleration shocks, engine vibration and so on.

Light weight resin anti-vibration rubber contributes improvement of fuel efficiency by weight saving. Making full use of many types of analysis, we consult on resinifying of metal parts of anti-vibration rubber, and succeed in productization of torque rod, engine mount made by resin.

We continuously consult on developing products lighter and lighter, second and third generation.



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 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

Eco-components // Automobile parts

EC-5-008

Automobile parts

parts of chassis and bodies

Aluminum Casting

Environmental performance

Hitachi Metals produces aluminum castings to wide applications of parts including engine parts, chassis parts, and body parts. These are designed by our optimized design with the precision CAE (computer-aided engineering) for lighter weight parts than current parts.

Our technologies and products contribute to energy-saving and CO<sub>2</sub> reduction through vehicles' low fuel consumption.

Our aluminum castings are adopted for the battery case in the EV (Electric Vehicle).



Hitachi Metals, Ltd.

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 URL <http://www.hitachi-metals.co.jp/e/index.html>  
 URL [http://www.hitachi-metals.co.jp/e/prod/prod06/p06\\_02.html](http://www.hitachi-metals.co.jp/e/prod/prod06/p06_02.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

Available in: Worldwide (Except for Iran)

Aluminum Casting

EC-5-009

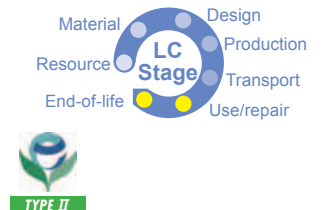
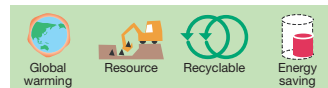
Automobile parts

parts of driving, transmission and operating units

**HIGH-TOUGHNESS DUCTILE CAST IRON HNM™ SERIES**

**Environmental performance**

Hitachi Metals produces high-strength & high-toughness ductile cast iron HNM™ series for automotive chassis parts. These are designed by our optimal design with the precision CAE (computer-aided engineering) for lighter weight parts than current parts. Our technologies and products contribute to energy-saving and CO<sub>2</sub> reduction through vehicles' low fuel consumption.



HIGH-TOUGHNESS DUCTILE CAST IRON HNM™ SERIES

**Hitachi Metals, Ltd.**

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 E-mail Automotive\_Components@hitachi-metals.co.jp  
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 URL [http://www.hitachi-metals.co.jp/e/prod/prod06/p06\\_03.html](http://www.hitachi-metals.co.jp/e/prod/prod06/p06_03.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)

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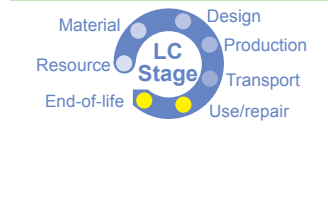
Automobile parts

parts of driving, transmission and operating units

**Rebuilt alternator**

**Environmental performance**

A remanufactured alternator is produced through the process of disassembling used units, cleaning and re-assembling after testing. Usable components from the first-made product will be used as many as possible, so it will minimize the use of new components. You can save a tremendous amount of raw materials and energy used for the production of new components by using a remanufactured alternator.



**SHIN ETSU DENSO CO., LTD.**

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 URL <http://www.shine-reman.com>

Available in: Worldwide

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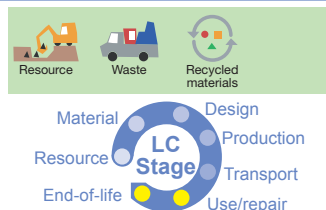
Automobile parts

parts of driving, transmission and operating units

Rebuilt starter

Environmental performance

A remanufactured starter is produced through the process of disassembling used units, cleaning and re-assembling after testing. Usable components from the first-made product will be used as many as possible, so it will minimize the use of new components. You can save a tremendous amount of raw materials and energy used for the production of new components by using a remanufactured starter.



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Available in: Worldwide

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EC-5-012

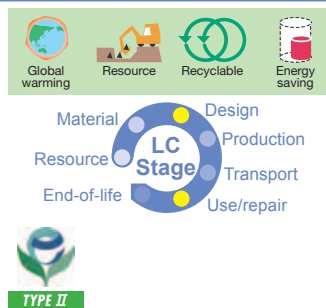
Automobile parts

parts of internal combustion engines for motor vehicles

Heat resisting casting components "HERCUNITE®" Series

Environmental performance

Hitachi Metals' HERCUNITE® series of heat-resistant cast-iron and steel components are resistant to the high-temperature combustion of engines and help to reduce fuel consumption and cleaner exhaust of gasoline engine vehicles. These series are mainly used of the exhaust manifolds, turbine housings, and other exhaust system components to withstand the extreme heat (Maximum temperature 1,050°C) generated by an internal combustion engine and contribute to improving a cars' environmental performance.



Hitachi Metals, Ltd.

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 URL [http://www.hitachi-metals.co.jp/e/prod/prod06/p06\\_01.html](http://www.hitachi-metals.co.jp/e/prod/prod06/p06_01.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)



Available in: Worldwide (Except for Iran)

Heat resisting casting components "HERCUNITE®" Series



EC-5-013

Automobile parts

power cable harnesses

Power cable Harness for Hybrid Vehicles

**Environmental performance**

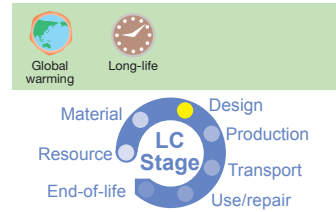
Heat and oil resistance has been greatly improved through the use of FLUONLEX®\* for the insulator.

\* FLUONLEX® is registered trademark of Hitachi Cable, Ltd.

**Product performance**

Sizes of cable and connection methods that are specific to individual vehicle systems and spaces are offered.

Safety for high voltage, noise reduction, and easier installation into the car are considered.



Power cable Harness for Hybrid Vehicles

**Hitachi Cable, Ltd.**

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
 Tel +81-294-25-3835 Fax +81-294-43-3852  
 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.co.jp/en/products/vehicle/eco/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)

EC-5-014

Automobile parts

rubber hoses

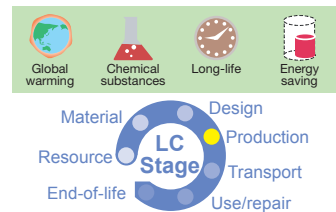
Brake Hose

**Environmental performance**

Long life is achieved by developing new materials and re-designing the structure.

A new forged manufacturing method of metal fittings is developed which eliminates material loss and reduces energy consumption.

Adoption of new surface treatment that doesn't use hexavalent chromium.



Brake hose

**Hitachi Cable, Ltd.**

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 319-1414, Japan  
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 E-mail [taketani.noriaki@hitachi-cable.co.jp](mailto:taketani.noriaki@hitachi-cable.co.jp)  
 URL <http://www.hitachi-cable.com/index.html>  
 URL <http://www.hitachi-cable.co.jp/en/products/rubber/index.html>  
 URL <http://www.hitachi-cable.com/about/publish/csr/index.html>

Available in: Worldwide (Except for Iran)

Eco-components // Automobile parts

EC-5-015

Automobile parts

steel materials

High-strength steel for forged connecting rods

Environmental performance

Higher performance and lighter weights of automobile engine components also contribute to reducing CO<sub>2</sub> emissions. This new material allows the two parts to be created on a single line by forging a single part and then splitting it. This helps to reduce the CO<sub>2</sub> that is produced by the production line.

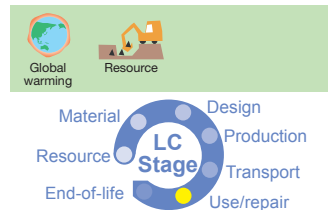
Product performance

In collaboration with Honda Motor Co., Sumitomo Metals has developed a revolutionary new material for use in the connecting rods that transmit the reciprocating motion of the pistons to the crankshaft. Previously, a connecting rod was composed of two components manufactured on two separate lines. However this new material allows the two parts to be created on a single line by forging a single part and then splitting it. This also reduces the weight of the part by 13% because of its improved fatigue strength.

Sumitomo Metal Industries, Ltd.

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 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Connecting rod and cracking surface

Eco-components // Automobile parts

EC-5-016

Automobile parts

steel materials

Non-heat treated nitrocarburized high-strength crankshaft steel

Environmental performance

This material contains titanium nitride and molybdenum, making it possible to omit the normalizing heat treatment that was previously essential in order to improve material fatigue strength and bending correction properties. This reduces the CO<sub>2</sub> emissions from the manufacturing process by 22%.

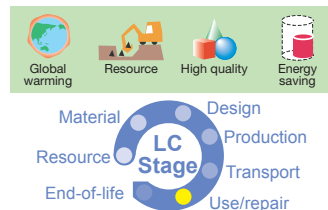
Product performance

Sumitomo Metals has developed a new material for crankshafts jointly with Honda Motor Co.

Sumitomo Metal Industries, Ltd.

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 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Crankshaft

EC-5-017

Automobile parts

steel materials

High-strength case-hardened boron steel

Environmental performance

However there are concerns that the world's supply of molybdenum is being depleted. A high-strength case-hardened boron steel uses boron as the additive instead of molybdenum. These products are contributing to resource saving.

Product performance

Ordinarily, molybdenum is added to the main shaft and counter shaft (steel components) of a motorcycle transmission so that heat treatment can be used to create an extremely hard surface. We, in collaboration with Honda Motor Co., have developed a high-strength case-hardened boron steel, which uses boron as the additive instead of molybdenum.



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 URL <http://www.sumitomometals.co.jp>



Main shaft (top) and counter shaft (bottom)

Available in: Worldwide

EC-5-018

Automobile parts

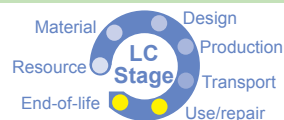
aluminum wheels

Fashionable Aluminium Road Wheel "SCUBA™"

Environmental performance

Hitachi Metals' aluminum wheels SCUBA™ are created by employing high-precision CAE (computer-aided engineering) technology. They are very strong, rigid, and light (15% lighter than our previous products) and contribute to fuel savings of vehicles as well as reduced CO<sub>2</sub> emissions. We can provide fashionable and delicate designs wheels to take advantage of aluminum casting techniques. We can also provide VOCs\* free surface treatment and the high-grade surface treatment such as our high-quality LUSTERIC™ coating.

\*VOCs: Volatic Organic Compounds



Hitachi Metals, Ltd.

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 URL [http://www.hitachi-metals.co.jp/e/prod/prod06/p06\\_05.html](http://www.hitachi-metals.co.jp/e/prod/prod06/p06_05.html)  
 URL [http://www.hitachi-metals.co.jp/e/corp/corp14\\_01.html](http://www.hitachi-metals.co.jp/e/corp/corp14_01.html)



Fashionable Aluminium Road Wheel "SCUBA™"

Available in: Worldwide (Except for Iran)

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EC-5-019

Automobile parts  
aluminum wheels

Aluminum wheels for trucks and buses

Environmental performance

Aluminum wheels reduce vehicle weights and contribute to reducing CO<sub>2</sub> emissions. These correspond to the new emissions restrictions that took effect in 2010.

Product performance

Sumitomo Metals developed the first single-piece forged aluminum wheels for trucks and buses in Japan. These correspond to the new emissions restrictions that took effect in 2010, and new ISO standard. We also supply aluminum wheels for new transportation systems and special vehicles.

Sumitomo Metal Industries, Ltd.

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URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



"Tough Bright" New ISO-type wheel for Large Trucks

Eco-components // Automobile parts

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EC-5-020

Automobile parts  
tires for passenger car

Fuel Efficient Tires "ECOPIA"

Environmental performance

Bridgestone's advanced technology realizes a tire that combines lower rolling resistance with sustained braking performance. That is ECOPIA.

Compared with Bridgestone's standard tire, "B'style EX", ECOPIA EP100S reduces rolling resistance by 39%. Furthermore, ECOPIA EP100S has the same braking performance. ECOPIA EP100S is an environmentally friendly and fuel-efficient tire that does not compromise safety.

Compared with Bridgestone's standard tire, B250, ECOPIA EP100A reduces rolling resistance by 20% and improves fuel efficiency by 3.1%\*.

\*Fuel efficiency tests were conducted under Japan standard method (JC08 mode). Results may vary according to car model, tire size and driving performance.

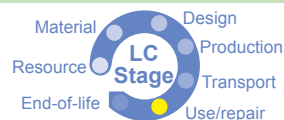
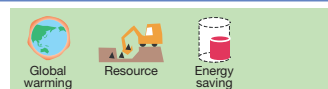
\*ECOPIA EP100S is available in Japan

\*ECOPIA EP100A is available in Asia, Middle East, Africa and Russia.

Bridgestone Corporation

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URL <http://www.bridgestone.com/responsibilities/csr/index.html>

Available in: Japan, Asia, Middle and Near East



ECOPIA EP100S

EC-5-021

Automobile parts

tires for passenger car

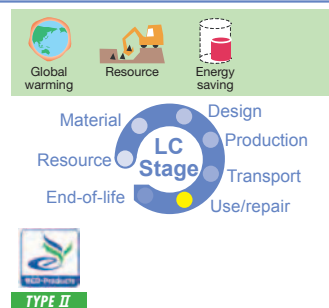
## Run-Flat tire "POTENZA S001 RFT"

## Environmental performance

Run-flat tires can be driven for up to 80 km at 80 km/h, under normal driving conditions at 0kPa inflation pressure. 59 mil.\*1 spare tires and contribute to saving resources. Further, the total CO<sub>2</sub> emissions during the life-cycle of spare tires could be lowered by an average of 2 million tons per year. Additional CO<sub>2</sub> emissions from spare tire wheels can also be cut back.

\*1 Bridgestone research

\*2 The figure is calculated from CO<sub>2</sub> emissions from the life-cycle of Bridgestone temper tire TR2 (size:145/70R18 107M). Tire CO<sub>2</sub> emissions are calculated using Japan Rubber Manufacturer's Association's "Tire Inventory Analysis Trail" (1998 version). Here, usage phase is considered as zero emissions.



Run-Flat tire "POTENZA S001 RFT"

## Bridgestone Corporation

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 URL <http://www.runflat-system.com/english/>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

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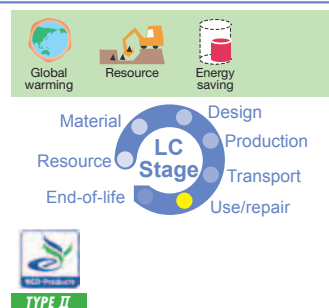
Automobile parts

tires for small trucks

## Fuel Efficient Tires "ECOPIA R680"

## Environmental performance

The R680, using the performance standards of the Durvais R670 as its base, has achieved a 20% reduction in rolling resistance and equal performance in the areas of wear life and regular wear endurance. Regarding the R680's wet brake performance, it should especially be noted that this is the first fuel efficient van tyre developed by Bridgestone to achieve equal performance standards to the R670.



ECOPIA R680

## Bridgestone Corporation

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 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

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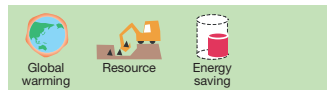
Automobile parts

tires for trucks and buses

Fuel Efficient Truck and Bus Tires "ECOPIA M801"

Environmental performance

The ECOPIA M801 is the latest product of truck bus mix ECOPIA series which was introduced to Japan market in 2002. It adopts low rolling resistance technology such as the new eco compound on tread rubber and Energy Saving Line "GUTT" on the casing structure to achieve superior low rolling resistance performance. It reduces rolling resistance by 36% from conventional life-oriented product M890.



TYPE II

Bridgestone Corporation

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 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

Available in: Japan



ECOPIA M801

EC-5-024

Automobile parts

tires for trucks and buses

Tire for Single Drive Axle "GREATEC"

Environmental performance

The GREATEC was introduced in 2000 as an ultra low profile tire which would replace two conventional dual tires into one single tire. This tire not only benefits in rolling resistance but also contributes in raw material reduction, weight saving & vehicle space constraint. It is mainly sold and used in fleets in North America, Japan and European market.



TYPE II

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 URL <http://www.bridgestone.co.jp/english/greatec/>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>

Available in: Japan, Europe, North America, U.S.A



GREATEC



EC-6-001

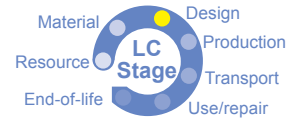
Packaging

beers

Beer in 206-diameter SuperEnd next-generation lightweight-end cans

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to reduce the weight of beer-can ends. In 2007, the company reduced the surface area of these ends by approx. 6% and their thickness by 0.01 mm through the introduction of 206-diameter SuperEnd next-generation lightweight ends featuring an exclusive countersink wall. This design reduces aluminum consumption by about 9% compared with the conventional model (approx. 0.3 g per end). Using this type of end for beer cans will save approx. 1,200 tons of aluminum annually and reduce CO<sub>2</sub> emissions by about 9,000 tons per annum. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.



Asahi Super Dry

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan  
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 URL <http://www.asahibeer.co.jp/english/>

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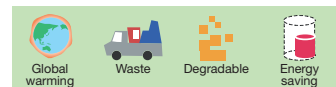
Packaging

beers

A beer-keg cap made from polylactic acid (a plant-derived plastic)

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to develop environmentally friendly containers and packaging materials. This product is a cap seal that protects the mouthpiece of kegs, and is made from polylactic acid (a plant-derived plastic). It is used for stainless kegs that contain beer and RTD, and is manufactured using a type of plant-derived plastic that has no petroleum content in its raw materials and is biodegradable. This is the world's first cap seal to be introduced for keg products. CO<sub>2</sub> emissions in the product cycle, from raw materials to manufacturing and disposal, will be reduced by approximately 60%, which amounts to about 150 tons per year. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.



Asahi Super Dry

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan  
 Tel +81-3-5608-5195 Fax +81-3-5608-5201  
 URL <http://www.asahibeer.co.jp/english/>

1 Eco-components // Packaging  
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EC-6-003

Packaging  
tea drinks

PET bottle based on universal design for environment load reduction

Environmental performance

PET bottle with hollow surface and thermal adhesion label  
Hollow bottle reduced the used quantity of resin by 21%. Its feature is that it is easy to hold and to pour. It is being used as the bottle of the tea drink for a famous brand. The thermal adhesion label can be thermally stuck at only one spot after it is wound up on the body of the bottle. It can reduce the used amount of label by 22% compared to conventional. The label is easy to be stripped, and it is expected to promote the classification and discharge of the bottle.

Asahi Soft Drinks Co., Ltd. contributes to the realization of rich, healthy eating habits of the consumers, through various company activities aimed at passing the earth on to the next generation in a healthier state.

Asahi Soft Drinks Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan  
Tel +81-3-5608-7227 Fax +81-3-5608-7248



Juroku-Cha PET

EC-6-004

Packaging  
tea drinks

PET bottle using biomass plastic label

Environmental performance

Asahi Soft Drinks Co., Ltd. introduced the eco-friendly "biomass label" on 500ml Juroku-cha PET bottles. Using 50% or more plant-derived polylactic acid made from corn starch, it is the first soft drink PET bottle label to attain the "biomass plus mark." As the labels reduce the use of fossil fuel resources, CO<sub>2</sub> emissions can be limited. Compared with conventional labels, approximately 200 tons of CO<sub>2</sub> per year will be reduced. This product won the Beverage Packaging Category Award of the Japan Packaging Contest. Asahi Soft Drinks Co., Ltd. contributes to the realization of rich, healthy eating habits of the consumers, through various company activities aimed at passing the earth on to the next generation in a healthier state.

Asahi Soft Drinks Co., Ltd.

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Tel +81-3-5608-7227 Fax +81-3-5608-7248



Juroku-Cha PET

EC-6-005

Packaging

wines

Wine in lightweight Ecology Bottles

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to reduce amounts of waste containers and packaging materials and to promote recycling in order to save resources. This product uses a lightweight wine bottle called the Ecology Bottle, which uses more than 90% recycled glass. It maintains the same height as existing wine bottles, but its weight is reduced by approx. 18%. CO<sub>2</sub> emissions during the model's manufacture are reduced by approx. 180 tons per year, and the resulting enhancements in transportation efficiency have also led to reduced CO<sub>2</sub> emissions. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.



Sainte Neige Wine

Asahi Breweries, Ltd.

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 URL <http://www.asahibeer.co.jp/english/>

EC-6-006

Packaging

printing on non-paper

Cartocan

Environmental performance

The Cartocan uses domestic lumber, including wood from forest-thinning, for over 30% of its raw materials and thus contributes to the prevention of global warming by helping to nurture healthy forests.

Product performance

An aseptic filling system is used and deterioration due to heat is minimal, meaning that the content's original quality is not lost. Toppan GL Film is used for the barrier layer. GL Film has outstanding barrier properties, enabling distribution at ambient temperatures and stable content conservation. The Cartocan has a cylindrical shape that can be held easily even by small hands and overflow of the content is minimized.



TOPPAN PRINTING CO., LTD.

1, Kanda Izumi-cho, Chiyoda-ku, Tokyo, 101-0024, Japan  
 Tel +81-3-3835-5549 Fax +81-3-3835-0849  
 E-mail [eco@toppan.co.jp](mailto:eco@toppan.co.jp)  
 URL <http://www.toppan.co.jp/english/>  
 URL <http://www.toppan.co.jp/english/csr/csrreport.html>

1 Eco-components // Packaging  
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EC-6-007

Packaging

beverage for baby & kids

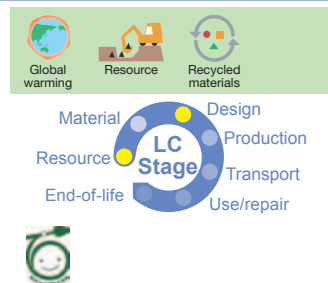
Paper container "Cartocan" using the forest thinning material

Environmental performance

Wakodo Co., Ltd. has acquired the public mark for "Forest Thinning Material" on its paper container "Cartocan," because it uses more than 30% domestic wood comprising forest thinning materials greater than 10%. Through the positive use of domestically obtained wood, some of the expense to repair local forests is fed back to the mountains, thus promoting a healthier forest. This activity coincides with a national project the Japan Forest Agency is promoting: "National campaign to promote the making of beautiful woods" and "The campaign to use domestic wood." This is helping the construction of a recycling society and the absorption of CO<sub>2</sub>. Beverages sold include a 125 ml pack for children, including Genkicchi and the caffeine-free blended tea "Juroku-Cha".

Wakodo Co., Ltd.

2-14-3 Kanda Tsukasa-machi, Chiyoda-ku, Tokyo, 101-0048, Japan  
Tel +81-3-5296-6815 Fax +81-3-5296-6808



Beverage for baby & kids 125ml pack ( 6 items )

Eco-components // Packaging

EC-6-008

Packaging

plastic containers

Beabelcup® - Air

Environmental performance

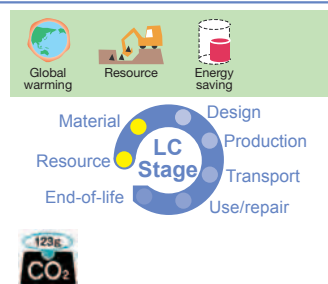
DNP has developed the lightest Injection Molded Cup 9.9g in the world, called "Beabel Cup Air", which was already adopted for Chilled Beverage Cup.

DNP achieved about 5.0 g reduction, that is, 33% resin weight reduction per a cup, compared to the conventional light weight Beabel Cup 14.8 g. Beabel Cup Air has no longer rigid feeling but soft with necessary strength as an original plastic cup.

<Major applications>  
Beverages, desserts.

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan  
Tel +81-3-5225-5901  
URL <http://www.dnp.co.jp/eng/>



Available in: Worldwide

EC-6-009

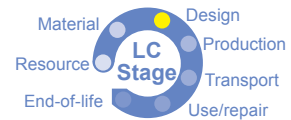
Packaging

golf ball boxes

## eco slim box

## Environmental performance

'Eco-slim box' is a package for the golf ball where the quantity consumed of paper was reduced, the box has been used for the products since 2009. The package of the past was a structure that divided upper and lower part. By combining it, the quantity consumed of paper has been reduced in about 18~24%. The new package reduced by about 30% is developed, and used in 2010. The mark of 'Eco-slim box' is posted in the package and the catalog, the consumers can choose the product from respect of the environmental protection.



## BRIDGESTONE SPORTS CO.,LTD.

World Trade Bldg. 2-4-1, Hamamatsu-cho, Minato-ku, Tokyo, 140-0013, Japan  
URL <http://www.bs-sports.co.jp/english/index.html>



eco slim box

EC-6-010

Packaging

paperboard boxes and cups

## The package using the paper which is made from pulp derived from managed forest

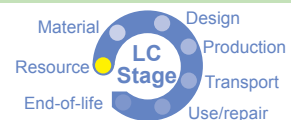
## Environmental performance

Forest certification systems intend to achieve sustainable use and protect forest resources through labeling which represents to meet a certain standard such as avoiding illegal logging and preserving bio-diversity for managing forest resources in an appropriate way.

Therefore, certified paper is made from pulp derived from appropriately-managed forest.

Logo of Forest Stewardship Council (FSC) has been printed on paper package for 'Toro-Fuwa pudding'. FSC is one of the two major credible forest certification systems in the world.

Dai Nippon Printing Co., Ltd. as package manufacturer has been certified as meeting the requirement of FSC's chain of custody standards.



## MORINAGA MILK INDUSTRY CO.,LTD.

34-6, Shiba 5-Chome Minato-ku, Tokyo, 108-8384, Japan  
Tel +81 3(3798)0145 Fax +81 3(3798) 1049



Available in: Japan

EC-6-011

Packaging

plastic containers

IB-Film<sup>®</sup>

Environmental performance

IB-film is a transparent film with high barrier performance as an oxygen and moisture barrier. It is made by depositing aluminum oxide and silicon oxide onto polyester and nylon films. Its transparency, high barrier features and suitability for printing make it useful as a base material for packaging. IB-film allows the elimination of layers (such as aluminum foil), aluminum vapor deposition and other plastic films with barrier capability. This reduces the weight of packing materials, thus contributing to a reduction of the environmental burden it creates. And It can be used for heating in microwaves, thus enhancing convenience.

<Major applications>

Food, snacks, beverages, drugs, medical materials, industrial materials, packaging materials

Dai Nippon Printing Co., Ltd.

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 Tel +81-3-5225-5901  
 URL <http://www.dnp.co.jp/eng/>

Available in: Worldwide



Eco-components // Packaging 1  
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EC-6-012

Packaging

printing on non-paper

Clear high barrier film : GL and GX Film

Environmental performance

GL and GX Film are collective names for Toppan's clear high barrier films developed using coating and deposition technologies. Since these films do not use chlorine-based resins, no chlorine gases are released on incineration. When they are used as packaging material, the high barrier properties preserve contents and best before and sell by dates can be extended. This therefore contributes to reducing waste from products that have passed their use or sell by dates. It is also possible to reduce waste because the packaging material itself is rationalized and reduced in volume.

Product performance

GL and GX Films have outstanding barrier properties and stability achieved through original deposition processing technologies. They hold the top share of the global market and are used widely for various applications including food packaging, toiletries, electrical components.

TOPPAN PRINTING CO., LTD.

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 Tel +81-3-3835-5549 Fax +81-3-3835-0849  
 E-mail [eco@toppan.co.jp](mailto:eco@toppan.co.jp)  
 URL <http://www.toppan.co.jp/english/>  
 URL <http://www.toppan.co.jp/english/csr/csrreport.html>



GL and GX clear high barrier films

EC-6-013

Packaging

plastic containers

## Synchronized aseptic filling system

## Environmental performance

This is an aseptic system that enables the filling of light PET bottles that have no heat resistance at normal temperatures in place of heavy heat-resistant PET bottles designed for hot filling.

The technique represents a low-cost, environmentally friendly system that has integrated processes from blow molding to filling by making effective use of the residual heat from blow molding to sterilize bottles.

The system has enabled a reduction in the weight of bottles and the use of bottles with improved design characteristics, thereby significantly cutting the amount of energy used.

In the new method the amount of water required to wash bottles can be reduced to approximately one sixth compared to the conventional method.

Scope of reduction

Installation space : Reduced by 50percent

Utility used :Reduced by 50percent

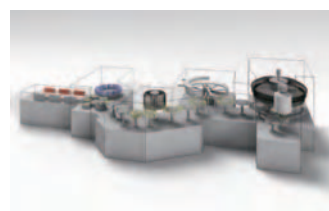
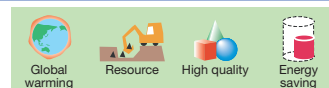
Water used : Reduced by 80percent

## Dai Nippon Printing Co., Ltd.

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Tel +81-3-5225-5901

URL <http://www.dnp.co.jp/eng/>



Available in: Worldwide

EC-6-014

Packaging

plastic containers

## One piece molding tube

## Environmental performance

One piece molding tube is which sholder and cap are integrated. DNP achieved 50 percent weight reduction per cap and sholder by molding.

About the part of body, It is possible that 30 percent weight reduction by changing extrusion tube to laminate tube.

In the case of one piece laminate tube, it is possible that 40 percent weight reduction.

By molding shoulder and cap at the same time, there is no clearance between the shoulder and cap, clean water and dust entering.

<Major applications>

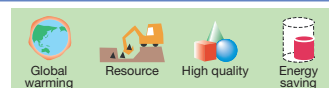
Conditioner, cosmetics

## Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

Tel +81-3-5225-5901

URL <http://www.dnp.co.jp/eng/>





EC-6-015

Packaging

plastic containers

Micvac

Environmental performance

MicVac is a valve system developed in Sweden used for in-pack cooking and pasteurization of foods. Fresh food ingredients and pre-cooked sauce are first filled into a tray, a MicVac valve is applied to a film lid and the lid is then sealed to the tray.

Sealed trays are then passed through a continuous microwave system to cook and pasteurize the food.

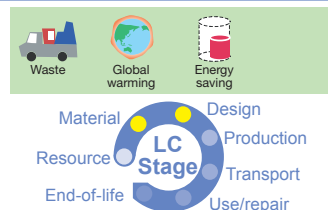
The key purpose of this system is to increase shelf life. Food products packed in this way and maintained at temperatures below 8 degrees C can have a life of up to 35 days, reducing food waste through spoilage. It will be the reason to reduction of disposal loss.

Long preservation and retention of product quality: Oxidization is almost totally eliminated so spoilage is minimized.

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan  
 Tel +81-3-5225-5901  
 URL <http://www.dnp.co.jp>  
 URL <http://packaging.jp>  
 URL <http://www.dnp.co.jp/jis/eco/index02.html>

Available in: Japan, Republic of Korea



Eco-components // Packaging

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EC-6-016

Packaging

plastic containers

DynAsept

Environmental performance

This system is efficient aseptic packaging in comparison with the retort packaging or frozen packaging that is representative food save technology. In addition, you can largely reduce plastic materials to use, because you can replace an institutional packaging with a single pouch from BIB.

This is Aseptic Packaging System which can support wide product size from 10cc to 1000cc.

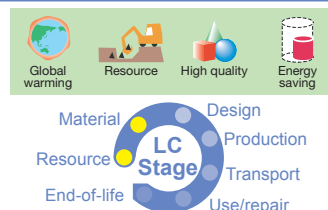
This System can fill product from low viscosity such as Noodles soup, Soup stock and sauce to high viscosity such as Demi-glace sauce and White sauce. We succeeded in development of a new Aseptic Packaging System (DynAsept-Deca), which can support wide product size from 1L to 10L.

<Major applications>  
 Seasoning food such as Soup stock and sauce, Dairy products and Drink.

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

Available in: Worldwide





EC-6-017

Packaging

DVD/CD packaging

Re-fill DVD/CD packaging

Environmental performance

The life of conventional spindle cases tends to last only until the discs they hold are used, and they are then discarded. Re-fill, a product by Imation Corp., is a resource-saving idea that involves the refilling of spindle cases with discs to reduce waste and the consumption of material resources.



Imation Corp. Japan

Aoyama Oval Building, 52-2, Jingumae 5-chome, Shibuya-ku, Tokyo, 150-0001, Japan

Available in: Japan

EC-6-018

Packaging

containers

One Dish Aid confectionery container

Environmental performance

Ceramic confectionery containers used for puddings, etc., are usually disposable. The One Dish Aid confectionery container is made using 20% crushed (recycled) material from waste tableware collected from households, etc. This is Japan's first product for which a deposit system for container reuse was adopted. It also contributes to nature conservation and O<sub>2</sub> reduction through a system in which 2 yen of the profits from each container are donated to tree planting activities and the like. Promotion of this product not only contributes to recycling of exhaustible ceramic materials, but also if use at least 5 times during its total lifecycle, reduces CO<sub>2</sub> emissions to 1/4 those of conventional containers.

Product performance

To enable this product to be used repeatedly, it has an antifouling highly-glazed finish, an easy-to-wash shape, slits to facilitate drying of the base, and thick edges to improve its washing efficiency and strength. The containers come in three sizes frequently used for confectionery, and two colors (white and brown), with an extremely safe glaze. A stackable type has also been put on the market to improve storage efficiency in shops and homes.



NPO JAPAN One Dish Aid Association

Shibuya Bldg. 5F 6-10 Samon-cho, Shinjuku-ku, Tokyo, 160-0017, Japan  
 Tel +81-3-3354-9012 Fax +81-3-3354-9013  
 E-mail info@e-sakon.co.jp  
 URL http://onedish.net  
 URL http://onedish.net/youki/youki\_top.html  
 URL http://onedish.net/katsudou/index.html

Available in: Japan

EC-6-019

Packaging  
seal labels

Earth-conscious linerless seal label, Non-Sepa®

Environmental performance

Non-Sepa (linerless) labels use no backing papers even during the production process. Since no waste backing is left behind, the amount of paper used and CO<sub>2</sub> emissions are reduced.

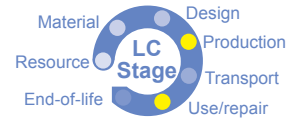
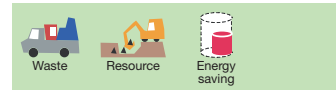
Product performance

Disposal time and cost are reduced. In addition, roughly 40% more labels are in each roll compared with a standard roll of the same diameter, while work efficiency is improved and spaces for stock and transportation costs can be cut. Sato's Ecomatch series promotes the 3Rs (Reduce, Reuse, Recycle) , and supports customers conducting environmental conservation activities.

SATO CORPORATION

7-1, Shimomeguro 1-chome, meguro-ku, Tokyo, 153-0064, Japan  
URL <http://www.sato.co.jp>

Available in: Japan,Asia,Oceania,Europe,North America,South America



Eco-components // Packaging  
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EC-6-020

Packaging  
wood packaging

Revolutionary Systems-Concept Packaging

Environmental performance

The Revolutionary Systems-Concept Packaging (RSCP) is a nail-free, lightweight packaging made from Oriented Strand Board (OSB) material. OSB is a green material sourced solely from FSC-certified sustainable forests, enabling us to cut down on indiscriminate logging and deforestation. The nail-free feature prevents products inside the packaging from getting damaged.

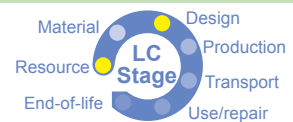
**REDUCE**- Using 20% to 60% less timber, RSCP optimises raw materials and enhances the structure of the packaging to provide greater support, resulting in lighter packaging that saves material and freight cost.

**REUSE** - RSCP has in-built collapsible features, allowing for easy dismantle and storage, and reassembled for reuse when needed.

**RECYCLE** - RSCP can also be easily recycled into chipboards or fibreboards as they do not contain nails or metallic fasteners.

Greenpac (S) Pte Ltd

8 Pandan Crescent, #01-01 United Tech Park, Singapore 128464, Singapore  
Tel +65-6567-8366  
E-mail [info@greenpac.com.sg](mailto:info@greenpac.com.sg)  
URL <http://www.greenpac.com.sg>



Nail-Free Revolutionary Systems-Concept Packaging

EC-7-001

Others

bathroom equipment

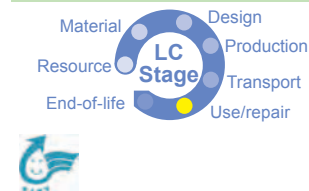
## Dual-Flush Devices SF810

## Environmental performance

With this water conservation dual-flush toilet retrofit device, toilets can save up to 50% of water.

## Product performance

Compared with ordinary toilets, which release about 6L of water in each flush, toilets equipped with dual-flush devices can save up to 50% of water by adjusting water consumption per flush for liquid waste.



## LUNG TIEN HSIA INDUSTRIAL CO., LTD.

No.47, Yongxiang Rd., Fangliao Township, Pingtung County, Taiwan, 940, Republic of China  
Tel +886-7-6163666 Fax +886-7-6160361  
E-mail [service@lth.com.tw](mailto:service@lth.com.tw)  
URL <http://www.lth.com.tw>

Available in: Taiwan (Rep. of China)

EC-7-002

Others

PE Pipe

## PE Water Pipe

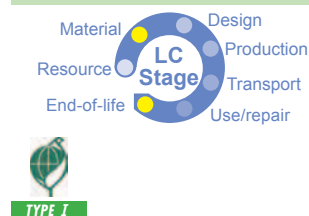
## Environmental performance

Low-pollution, non-toxic.

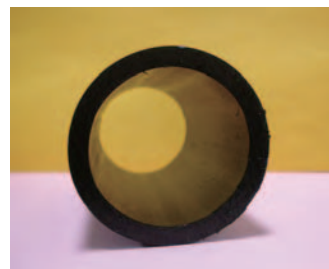
The product does not contain chlorine, phthalates (esters of 1, 2-benzenedicarboxylic acid), the compounds of cadmium, lead, mercury or tin.

## Product performance

- \* Low-pollution, non-toxic.
- \* Recyclable.
- \* Easy to install.
- \* Durable in a wide range of temperatures.



TYPE I



## SHUN-MING PLASTIC INDUSTRIAL CORP.

No. 287-1, Feng Yeh Village, Yang-Mei City, Taoyuan County, Taiwan, 326, Republic of China  
Tel +886-3-4726548 Fax +886-3-4726549  
E-mail [sm265879@ms17.hinet.net](mailto:sm265879@ms17.hinet.net)  
URL <http://www.shunming.com.tw>

Available in: Worldwide

EC-7-003

Others

PE Pipe

## PE Pipe for General Uses (Electricity, Telecommunication, Sewage, Boats)

## Environmental performance

Low-pollution, non-toxic.

The product does not contain chlorine, phthalates (esters of 1, 2-benzenedicarboxylic acid), the compounds of cadmium, lead, mercury or tin.

## Product performance

- \* Low-pollution, non-toxic.
- \* Recyclable.
- \* Easy to install.
- \* Durable in a wide range of temperatures.

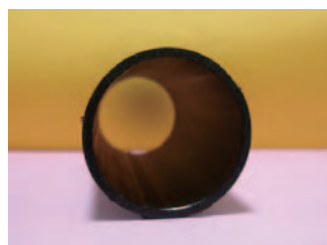
## SHUN-MING PLASTIC INDUSTRIAL CORP.

No. 287-1, Feng Yeh Village, Yang-Mei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4726548 Fax +886-3-4726549  
 E-mail sm265879@ms17.hinet.net  
 URL <http://www.shunming.com.tw>

Available in: Worldwide



TYPE I



EC-7-004

Others

printing on non-paper

## Color filter (BM made of organic resin)

## Environmental performance

To improve light transmission that contributes to saving electric power for liquid crystal display panels (LCDs), the width of the color filter's black matrix (BM) is formed narrower than before.

In addition, more environmentally friendly materials, resin, is used instead of chrome which has been widely used as BM material.

## Product performance

Color filters are key components of color LCD panels and consist of primary three-color patterns of RGB.

In the process of manufacturing them, it is necessary to form BM first on a glass substrate in order to prevent unnecessary leakage of light through patterns.

## TOPPAN PRINTING CO., LTD.

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 E-mail [eco@toppan.co.jp](mailto:eco@toppan.co.jp)  
 URL <http://www.toppan.co.jp/english/>  
 URL <http://www.toppan.co.jp/english/csr/csrreport.html>



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# Eco-products



- 1 Home electric appliances/lighting**
- 2 Carriers/automobiles**
- 3 OA/IT equipment**
- 4 Office supplies/furniture**
- 5 Apparel/textiles**
- 6 Household goods and equipment**
- 7 Building and civil engineering equipment**
- 8 Machines and equipment**
- 9 Others**

Eco-products are environment-friendly products. In this section, they refer particularly to “finished products” to differentiate them from “eco-materials” and “eco-components.” Like eco-materials and eco-components, eco-products include “products that help clean and conserve the environment” and “products with high performance, yet creating a low environmental impact.” The latter come in a wide variety. The first stage of eco-product development is eco-design. Eco-design proceeds based on the evaluation of three factors: 1) effective and efficient use of materials; 2) energy saving; and 3) low/no toxicity.

Characteristics of eco-products, including the environment-friendly aspect, are determined during the design stage, and evaluation factors are therefore crucial. These three product evaluation factors differ from the six criteria for eco-materials (see the page titled “Eco-materials”). This is because eco-products involve consumers more directly than eco-materials, and the environmental aspects of eco-products are appropriately evaluated from the consumer's viewpoint.

To help consumers understand eco-products better, environmental labels are widely used in Japan. It is hoped that an ideal cycle to support a low environmental-impact society will develop, where more consumers are encouraged by environmental labels to buy eco-products so that manufacturers make further efforts in eco-product development and the provision of environmental information in response to consumer demand.





EP-1-001

Home electric appliances/lighting

air conditioners

Room Air Conditioner with "Notice Navi" Function to Encourage Energy-Saving Operation

Environmental performance

--- << Material / Resource saving >> ---  
 - Our selection technology allows three major types of plastic to be separated from the mixed plastic that results from end-of-life home appliances. This technology enables recycled plastic to be reused for the plastic parts of this device, greatly increasing the utilization of recycled plastic produced from used devices.  
 - Our unique coating technology effectively reduces the adhesion of contamination to 1/10 the normal level.

--- << Energy saving >> ---  
 - Efficiency of compressors, heat exchangers and fan motors are improved, realizing the leading energy-saving performance in the industry.  
 - Our infrared sensor, Move Eye, senses floor and wall temperatures, as well as people's locations and movements, and automatically adjusts its direction and temperature according to individual body temperatures while achieving an energy saving of up to 65%.  
 - The "Notice Navi" function provides energy-saving advice during operation to develop the users' consciousness for energy saving.

--- << Toxicity / Chemical substances reduction >> ---  
 Emits no substances defined in the EU RoHS directive, Japanese Industrial Standards (JIS) or J-Moss.

Product performance

The Comfort Selection function is adopted to allow intuitive air conditioner operation by selecting pictures shown on the remote controller's LCD. This is the brand-new remote controller which allows users to select 21 different varieties of functions, such as foot heating and skin moisturizing. The Raku-raku Assist function displays easy-to-understand letters and pictures using the Graphical User Interface (GUI) on the 3.5-inch full-dot LCD. The advanced infrared sensor, Move Eye, senses the condition of rooms to operate the air conditioner automatically to provide comfort for users.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Room Air Conditioner ZW Series (MSZ-ZW401S)

EP-1-002

Home electric appliances/lighting

air conditioners

Air Conditioner : energy-saving, air-cleaning : CS/CU-S13NKT

Environmental performance

Energy saving is achieved by top class COP advanced inverter technology. Save more energy by "ECONAVI" with sunlight sensor, which can save energy by sensing human presence, activity volume and sunlight intensity inside the room. Through this product concept, we deliver to consumers the company message of "eco ideas".

Product performance

This air conditioner has new air purifying system (APS) "nanoe G", which can clean the room air speedily with its dust/bacteria collecting effects. In addition, this newly developed device can deactivate the adhere bacteria/virus in the room.

Panasonic Corporation, Appliances Company

Lot 2, Persiaran Tengku Ampuan, Section 21, Shah Alam Industrial Site, 40300 Shah Alam, Selangor, Malaysia  
 Tel +60-3-5891-4000 Fax +60-3-5891-4001  
 URL <http://papamy.panasonic.com.my/>

Available in: Asia



Model : CS/CU-S13NKT

Eco-product // Home electric appliances/lighting

EP-1-003

Home electric appliances/lighting

air conditioners

**Air Conditioner with Plasmacluster Technology**

**Environmental performance**

- (1) Realized high energy efficiency with compact chassis by adopting "Louverless Long Panel" based on hydrodynamics, and unique indoor and outdoor fans based on biomimetics engineering.
- (2) Can always achieve the most energy efficient operation of the moment by just one push of "auto-eco" button.

**Product performance**

- (1) Not only the air purification in the room, High-Density Plasmacluster 25000 will bring positive effects to make your skin beautiful.
- (2) Original air flow control system using panel type indoor unit will warm you immediately and powerfully from the feet without stress.
- (3) Comfortable cooling and heating without direct air Original "Ultra-wide Airflow" will cool down or warm up the room gently and comfortably without feeling direct airflow on your body.

**Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



TYPE II



**Plasmacluster Ion Technology**  
 A proprietary Sharp air purification method, this technology generates—through plasma discharge—and releases into the air positive and negative ions like those found in nature. These ions inhibit the action of airborne viruses and break down and eliminate airborne mold.

Air Conditioner with Plasmacluster: AY-B56SX

EP-1-004

Home electric appliances/lighting

air conditioners

**Energy-saving Performance for Long Period of Time - A World Leading Model in Terms of Quality and Environmental Performance**

**Environmental performance**

- Mitigation of climate change: 55% reduction in annual power consumption compared with the conventional model (a rated model of Toshiba). 1.1 tons/year reduction in CO<sub>2</sub> emissions compared with the conventional model.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel plating.

**Product performance**

- Self-cleaning function: Automatic cleaning to maintain energy-saving performance for a long time.
- Comfort control: New flaps for omnidirectional airflow contribute to comfort with minimal uneven temperature distribution.
- Simple installation: The monitor displays the status during trial operation for simple, quick installation.

**Toshiba Carrier Corporation**

3-23-17 Takanawa, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/environment.htm>



1 Eco-product // Home electric appliances/lighting

EP-1-005

Home electric appliances/lighting

air conditioners

Energy-Efficient Package Air Conditioners: Mr Slim ER Clean Plus Series

Environmental performance

----<< Material / Resource saving >>----

- Pipe cleaning and pipe replacement has become unnecessary.
- Frictional heat from the compressor's moving parts has been reduced.
- An originally developed highly stable alkylbenzene refrigerant oil (Models P40-P63).

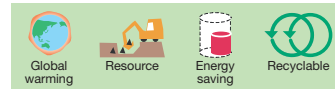
----<< Energy saving >>----

<Indoor Unit>

- The "Move Eye 360" determines radiant floor temperature.
- The "Area Move Eye" and unique air-flow control delivers energy-efficient operation with minimal unnecessary running.
- The "Automatic Filter Cleaning Unit" cuts power consumption by 10% (Slim ER Clean Plus).

<Outdoor Unit>

- The scroll compressor with an original "frame compliance mechanism" greatly reduces refrigerant gas leakage and friction loss (Slim ER Models P112-P240).
- A cross-stair fin heat exchanger and large-diameter fan improves performance (Slim ER Models P112-P240).



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

MPLZ-ERP140BECM

EP-1-006

Home electric appliances/lighting

air conditioners

Replacement Multi Air Conditioner Reusing Existing Refrigerant Tubing

Environmental performance

----<< Material / Resource saving >>----

Compact design in outdoor unit enables to be carried by an elevator for 6 people. Automatic refrigerant charge and automatic mineral oil collection enables great shortening of term of construction. It collects oil through general air conditioning operation.

----<< Toxicity / Chemical substances reduction >>----

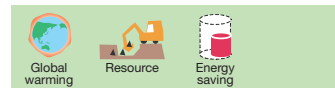
R410 refrigerant is zero ODP (Ozone Depletion Potential)

Product performance

"Replace Multi" is an air conditioning system for building using existing refrigerant tubing, which basically contributes to resource saving.

The Prize of the Chairman of JIII, 2007

(JIII: Japan Institute of Invention and Innovation)



Mitsubishi Electric Corporation

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E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

Replace Multi E ECO

EP-1-007

Home electric appliances/lighting

air conditioners

Compact Design "City Multi" Air Conditioner

Environmental performance

----<< Material / Resource saving >>----

The manageability of the outdoor unit has been improved due to a drastic reduction in weight, leading to easy transportation, installation, and reduction in withstand load.

----<< Energy saving >>----

VRF (Variable Refrigerant Flow) is a multi and direct expansion type air conditioning system whereby one outdoor unit can be connected to multiple indoor units.

The amount of refrigerant can be regulated freely according to the load on the indoor unit by the inverter driven compressor in the outdoor unit.

Energy conservation is easily handled because individual indoor units can stop and start as needed.

----<< Toxicity / Chemical substances reduction >>----

R410 refrigerant is zero ODP (Ozone Depletion Potential)

Product performance

Due to the compact design of the outdoor unit, industry leading space saving is realized.

Mitsubishi Electric Corporation

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E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia,Oceania,Europe,South America



PUHY-P250YJM-A

EP-1-008

Home electric appliances/lighting

air conditioners

First in the world. The air-conditioner which operation by voice.

Environmental performance

- Mitigation of climate change: Equipped with a dual compressor, cooling and heating is done with only 45W power consumption (1yen/hour). 28% reduction in annual power consumption. (conventional model RAS-406YDR '00 model)

- Power saving operation can be set up easily by voice controller.

- Eliminate futility operation which checked person motion and brightness by active search sensor and brightness sensor.

- Peak cut operation is possible by power selection function.

Product performance

- Voice controller: Operation of an air-conditioner can be performed with a sound.

- Air cleaning: Control of virus and mold by pico-ion.

- Dash heating: Warm air blow off at about 1 minute.

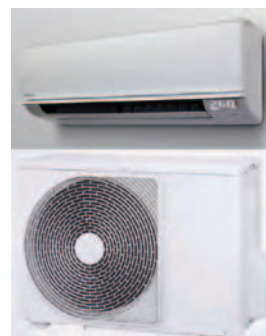
TOSHIBA HOME APPLIANCES CORPORATION

2-15, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Room Air-Conditioner DAISEIKAI NDR; RAS-402NDR

1 Eco-product // Home electric appliances/lighting  
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EP-1-009

Home electric appliances/lighting

air conditioners

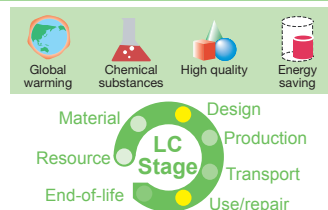
HITACHI PAM Air Conditioner "Stainless Clean SHIROKUMAKUN" RAS-S40B2

Environmental performance

- Indoor unit heat exchanger with reduced divided sections, high-density outdoor unit condenser, CV-PAM<sup>1</sup> Control and Jet Scroll Compressor with high efficient motor realized high energy efficiency. (APF<sup>2</sup>6.7 Period Power Consumption 1,196kW)
- \*1 Cascade Vector PAM control
- \*2 Annual Performance Factor

Product performance

- "Stainless Clean System" which stainless steel material is applied to the indoor unit interior prevents dirt from sticking inside of the unit. Auto-filter cleaning is also applied to reduce cleaning workload.
- By pressing "Eco Korekkiri" (=once and for all) button, the combination of Watch, Listen and Feel sensors detect the user's life scene precisely and creates comfortable and energy saving operation.
- With "Electricity Cut" function, it reduces max electricity consumption and keeps the room temperature at 20°C (heating) and 28°C (cooling). It also controls the air flow direction to the remote controller's location.
- Heating power is increased thanks to "Jet Scroll Compressor" and CV-PAM control.



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12 Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Japan

RAS-S40B2

EP-1-010

Home electric appliances/lighting

air conditioners

WALL MOUNTED SPLIT TYPE AIR CONDITIONER FROST FU-112CS1 (G)+ FI-112CS1 (A)

Environmental performance

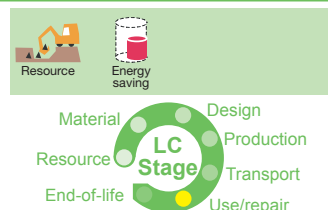
Environmentally friendly, low noise; free of the controlled substances of the Montreal Protocol, helpful in preventing heavy metal pollution; highly efficient in energy use, electricity-saving; free of hazardous chemicals, helpful in preventing hazardous substance pollution; made from recycled materials.

Product performance

Eco-friendly, energy-saving (EER ≥ 3.14), fast cooling, low noise (indoor ≤ 58dB, out door ≤ 62dB), easy to operate, providing a comfortable living environment.

Product Series:

- \* FROST FU-112CS1 (G) (outdoor unit) + FROST FI-112CS1 (A) (indoor unit)
- \* FROST FU-112CSD1 (G) (outdoor unit) + FROST FD-112CS1 (indoor unit)



TYPE I



FAST ELECTRIC CO., LTD.

No. 59, Hsin Chuang, Hsin Chuang Village, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5783233-320 Fax +886-6-5783889  
 E-mail [aircon@frost.com.tw](mailto:aircon@frost.com.tw)  
 URL <http://www.frost.com.tw>

Available in: Worldwide



EP-1-011

Home electric appliances/lighting

air conditioners

WALL MOUNTED SPLIT TYPE AIR CONDITIONER FROST FUV-22CS1+ FIV-22CS1(S)M

**Environmental performance**

Environmentally friendly, low noise; free of the controlled substances of the Montreal Protocol, helpful in preventing heavy metal pollution; highly efficient in energy use, electricity-saving; free of hazardous chemicals, helpful in preventing hazardous substance pollution; made from recycled materials

**Product performance**

Eco-friendly, energy-saving (EER ≥ 3.19), fast cooling, low noise (indoor ≤ 50dB, out door ≤ 53dB), easy to operate, providing a comfortable living environment.

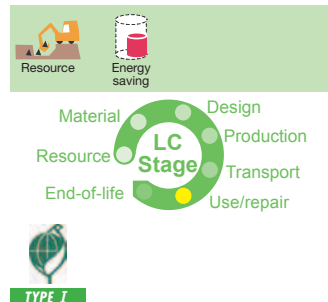
Product Series:

- \* FROST FUV-22CS1 (outdoor unit) + FROST FIV-22CS1 (S) M (indoor unit)
- \* FROST FUV-22CS1 (outdoor unit) + FROST FIV-22CS1 (S) (indoor unit)
- \* FROST FUV-22CS1 (outdoor unit) + FROST FIV-22CS1 (D) M (indoor unit)
- \* FROST FUV-22CS1 (outdoor unit) + FROST FIV-22CS1 (D) (indoor unit)

**FAST ELECTRIC CO., LTD.**

No. 59, Hsin Chuang, Hsin Chuang Village, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5783233-320 Fax +886-6-5783889  
 E-mail aircon@frost.com.tw  
 URL <http://www.frost.com.tw>

Available in: Worldwide



TYPE I

1 Eco-product // Home electric appliances/lighting  
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EP-1-012

Home electric appliances/lighting

air conditioners

WINDOW TYPE AIR CONDITIONER FROST FW-52CS1

**Environmental performance**

Environmentally friendly, low noise; free of the controlled substances of the Montreal Protocol, helpful in preventing heavy metal pollution; highly efficient in energy use, electricity-saving; free of hazardous chemicals, helpful in preventing hazardous substance pollution; made from recycled materials.

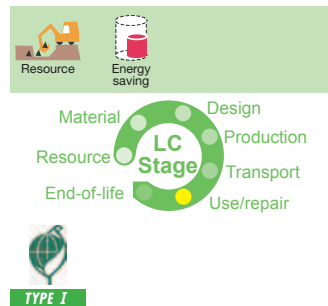
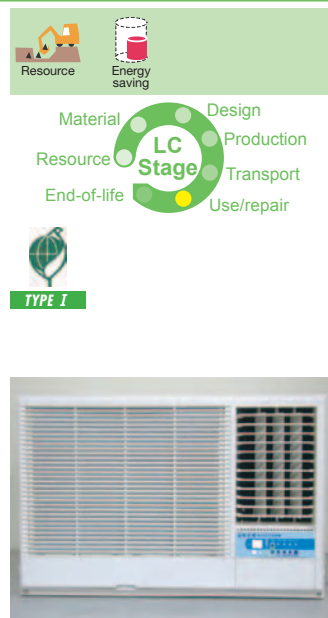
**Product performance**

Eco-friendly, energy-saving (EER ≥ 2.86), fast cooling, low noise (indoor ≤ 58dB, out door ≤ 62dB), easy to operate, providing a comfortable living environment.

**FAST ELECTRIC CO., Ltd.**

No. 59, Hsin Chuang, Hsin Chuang Village, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5783233-320 Fax +886-6-5783889  
 E-mail aircon@frost.com.tw  
 URL <http://www.frost.com.tw>

Available in: Worldwide



TYPE I

EP-1-013

Home electric appliances/lighting

air conditioners

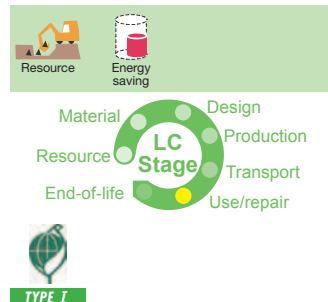
WINDOW TYPE AIR CONDITIONER FROST FWV-41CS1

**Environmental performance**

Environmentally friendly, low noise; free of the controlled substances of the Montreal Protocol, helpful in preventing heavy metal pollution; highly efficient in energy use, electricity-saving; free of hazardous chemicals, helpful in preventing hazardous substance pollution; made from recycled materials.

**Product performance**

Eco-friendly, energy-saving (EER ≥ 3.05), fast cooling, low noise (indoor ≤ 53dB, out door ≤ 57dB), easy to operate, providing a comfortable living environment.



**FAST ELECTRIC CO., Ltd.**

No. 59, Hsin Chuang, Hsin Chuang Village, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5783233-320 Fax +886-6-5783889  
 E-mail aircon@frost.com.tw  
 URL <http://www.frost.com.tw>

Available in: Worldwide

EP-1-014

Home electric appliances/lighting

air conditioners

WALL MOUNTED SPLIT TYPE AIR CONDITIONER FROST FU-36CS1 (D)+FI-36CS1 (D)M

**Environmental performance**

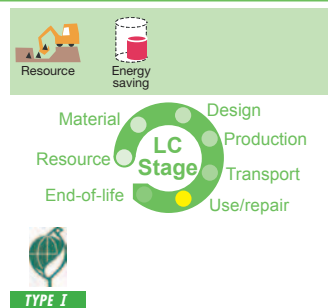
Environmentally friendly, low noise; free of the controlled substances of the Montreal Protocol, helpful in preventing heavy metal pollution; highly efficient in energy use, electricity-saving; free of hazardous chemicals, helpful in preventing hazardous substance pollution; made from recycled materials.

**Product performance**

Eco-friendly, energy-saving (EER ≥ 3.42), fast cooling, low noise (indoor ≤ 53dB, out door ≤ 57dB), easy to operate, providing a comfortable living environment.

Product Series:

- \* FROST FU-36CS1 (D) (outdoor unit) + FROST FI-36CS1 (D)M (indoor unit)
- \* FROST FU-36CS1 (D) (outdoor unit) + FROST FI-36CS1 (D) (indoor unit)
- \* FROST FU-36CSD1 (outdoor unit) + FROST FD-36CS1 (indoor unit)



**FAST ELECTRIC CO., Ltd.**

No. 59, Hsin Chuang, Hsin Chuang Village, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5783233-320 Fax +886-6-5783889  
 E-mail aircon@frost.com.tw  
 URL <http://www.frost.com.tw>

Available in: Worldwide

Eco-product // Home electric appliances/lighting



EP-1-015

Home electric appliances/lighting

air conditioning and household equipment

Air Purifier

Environmental performance

- Adoption of Artificial Zeolite as a deodorizing filter deodorization material; this is made from coal ash generated in thermal power plants.
- RoHS\*1 Directive compliant.
- Realization of long-life filter (deodorizing filter approx. 10 years, air cleaner filter approx. 8 years).
- Equipped with eco power conservation operation that reduces power consumption during standby to zero\*2.
- \*1: Restriction of the use of certain hazardous substances
- \*2: Only a minute amount of electricity is expended for 10 minutes after operation is stopped.

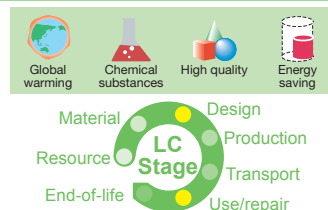
Product performance

- Equipped with a "Triple power deodorizing filter" that removes 11 types of odorous substances and 4 types of VOC.
- Efficiently removes odors using 2 deodorizing courses.
- The "Aleroff HEPA filter" acts to capture and remove cryptomeria pollen, free dust, and other particles.
- Equipped with dehumidifying and humidifying functions so that it can be used year round under a variety of conditions.
- 48 dB when using the powerful turbo air volume. Operates quietly 14 dB during static air volume so as to be barely noticeable when sleeping, etc.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Japan



EP-GV1000

EP-1-016

Home electric appliances/lighting

AV amplifier

The amplifier for home theater that thoroughly pursued energy saving

Environmental performance

The AV multi-channel amplifier VSX-S300 is a full-scale amplifier for home theater that thoroughly pursued energy saving. In addition to the high performances in audio and picture quality, environmental consciousness into the designing was incorporated. Complex operations were eliminated for eco activation by simply pressing the dedicated ECO button on the remote controller. In watching movies and listening to music, anyone may easily and comfortably enjoy the pleasures with eco performance.

《Main environment-friendly factors》

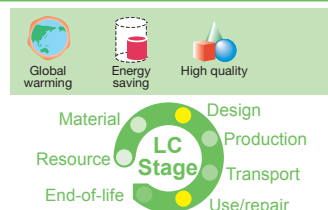
- Equipped with an easy-to-operate Eco Mode: This special power-saving feature reduces up to a maximum of 35% of power usage compared with normal operating use.
- 70W low power consumption: Realizes high sound quality and high power 120W output power per channel utilizing highly efficient Class D amplifiers and a newly developed power source while achieving 70W low power consumption; reduces power consumption by approximately 52%\*
- Helps to conserve energy during product transportation: Slim and compact size utilizing highly efficient Class D amplifiers and other equipment; successfully reduces product mass and packaging capacity; as a result, helps to enhance transport loading efficiency, thereby reducing the volume of CO<sub>2</sub> emission during product transportation by approximately 19%\*

\*Comparison with Pioneer's AV multi-channel amplifier VSA-C301 (released in 2003)

PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031, Japan  
 Tel +81-44-580-3211  
 URL <http://pioneer.jp/index-e.php>  
 URL <http://pioneer.jp/components/avamp/s300/index.html>  
 URL <http://pioneer.jp/environment-e/>

Available in: Japan



**0.576kg-CO<sub>2</sub>** not Inspection  
 Resource/Materials/Production/Transfer/Use/End-of-Life



AV multi-channel amplifier VSX-S300

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Eco-product // Home electric appliances/lighting

EP-1-017

Home electric appliances/lighting

blu-ray disc player

3D Blu-ray Disk Player DMP-BDT110/210

Environmental performance

Achieved stand-by power consumption of approx.0.1W. (North America model).

Achieved power consumption of approx.9.9W (North America model) due to low power circuit.

Circuit is highly integrated to conserve energy and Resources saving design employed for circuit boards and key components.

Non-Use of Specific Chemical Substances\*.

(\*: Lead,mercury,cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

3D Full HD Blu-ray Disk Player.

DLNA, Act Vila, Viera Cast, BD-LIVE.

High quality Digital Audio & Video and UniPhier™ Technology.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6906-3007

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>



3D Blu-ray Disk player DMP-BDT110

Available in: Japan,Asia,Oceania,Europe,North America,South America,Southeast Asia,Taiwan (Rep. of China),China

EP-1-018

Home electric appliances/lighting

blu-ray disc recorder

3D Blu-ray Disc recorder DMR-BZT9000/910/810/710

Environmental performance

Achieved power consumption of approx.29W (DMR-BZT9000)/approx.28W (DMR-BZT910)/approx.27W (DMR-BZT810)/approx.26W (DMR-BZT710) due to low power circuit technology.

Standby consumption :approx.0.03W

Circuit is highly integrated to conserve energy and Resources saving design employed for circuit boards and key components.

Non-Use of Specific Chemical Substances. \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

3D Blu-ray Disc recorder with 3TB (DMR-BZT9000) ,2TB (DMR-BZT910) ,1TB (DMR-BZT810) ,500GB (DMR-BZT710) HDD.

High quality Digital Audio & Video and UniPhier system Technology.

Digital triple Tuner.

Skype, Act Vila, DNLA.

100GB Blu-ray Disc (BDXL)



3D Blu-ray Disc recorder DMR-BZT9000

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6906-3007

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>

Available in: Japan

Eco-product // Home electric appliances/lighting

EP-1-019

Home electric appliances/lighting

blu-ray disc recorder

Blu-ray disc/DVD recorder BDZ-AT350S/ AT750W / AT950W / AT770T / AT970T / SKP75 / AX2700T

**Environmental performance**

- Energy-saving Auto Power Off  
Enters standby mode automatically if left unused for a specific period. Avoids wasting electricity if users forget to turn the unit off.
- Energy-efficient design reduces power consumption  
Display tubes are also deactivated when the unit is turned off-another example of energy-efficient design.
- Low power consumption in standby mode

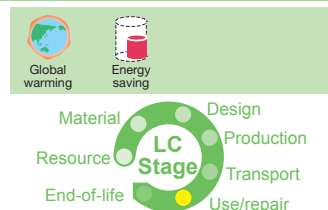
**Product performance**

- Instant start-up (0.5 sec)
- Can be used with an external hard disk
- Records up to three programs at once
- Intelligent Encoder 3 ensures superb picture quality
- Blu-ray 3D™ playback supported

**Sony Corporation**

1-7-1 Konan Minato-ku, Tokyo, 108-0075, Japan  
 URL <http://sony.co.jp/eco/>  
 URL <http://sony.jp/bravia/>  
 URL <http://sony.co.jp/csr/>

Available in: Japan



Blu-ray disc/DVD recorder  
 BDZ-AT350S/AT750W/AT950W/AT770T/  
 AT970T/SKP75/AX2700T

EP-1-020

Home electric appliances/lighting

blu-ray disc recorder

Ecological recorder : Specialize simple feature

**Environmental performance**

- Mitigation of climate change: Annual consumed power 21.8 kWh/year with 2.5inch HDD of low power consumption and by the deletion of the display tube.
- Efficient use of resources:2.2 kg most lightweight in industry.Previous model comparison 35% reduction)
- Notes) BD recorder comparison. (Research: October, 2011by Toshiba)
- Management of chemicals: EU RoHS directive suitability

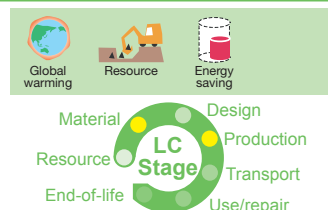
**Product performance**

- USB External HDD for adding even if main HDD become full.
- Fast start less than 1s from pressing power-on switch.
- Import the AVCHD data into high-definition video camera by the use of USB cable

**TOSHIBA CORPORATION Digital Products & Services Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



HDD & Blu-ray Disc Recorder  
 <REGZA Blu-Ray> BDR-C100

1 Eco-product // Home electric appliances/lighting  
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EP-1-021

Home electric appliances/lighting

blu-ray disk home theater system

3D Blu-ray Disk Home Theater System SC-BDT770/370/270

Environmental performance

Achieved stand-by power consumption of approx.0.05W. (North America model,Main Unit) .

Achieved power consumption of approx.85W (North America model,Main Unit) ) due to low power circuit technology.

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances\*

(\*: Lead,mercury,cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

5.1ch Full HD 3D Blu-ray Disk Home Theater System.

Stylish design.

Super Slim Main Unit.

Digital power Amplifier 1000W (RMS) .

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6906-3007

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>

Available in: Oceania,Europe,North America,Central America,South America,Southeast Asia



3D Blu-ray Home Theater System SC-BTT770

EP-1-022

Home electric appliances/lighting

car navigation system

Reducing fuel consumption by alleviating traffic jams with car navigation systems

Environmental performance

The 2011 carrozzeria "CYBER NAVI" series not only supports eco driving, but also helps to alleviate traffic jams. When driving on the highway at 70 kilometers per hour, maintaining a driving distance of at least 40 meters from the car in front was theoretically found to significantly alleviate traffic jams. Based on this discovery, the CYBER NAVI series, in augmented reality scouter mode, can measure the distance between cars and recommend a better distance\*1 via its on-screen car distance indicator. Traffic jams are alleviated if drivers maintain this recommended distance between vehicles; and driving at a steady speed with infrequent acceleration and deceleration helps improve fuel efficiency according to Eco Drive 10 Recommendations\*2.

The "Eco-route search" function estimates the optimum fuel efficient route from all possible routes in advance, based on the Smart Loop Congestion Information and Pioneer's proprietary "fuel estimation technology".

The "Eco-status" feature employs Pioneer's proprietary fuel estimation technology, so drivers can enjoy checking their level of eco-driving via user-friendly graphic displays and voice messages.

\*1: Supervised by Professor Nishinari of the University of Tokyo

\*2: Compiled by the Eco Drive Proliferation Network

PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031, Japan

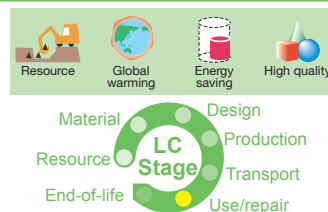
Tel +81-44-580-3211

URL <http://pioneer.jp/index-e.php>

URL <http://pioneer.jp/carrozzeria/cybernavi/>

URL <http://pioneer.jp/environment-e/>

Available in: Japan



carrozzeria "CYBER NAVI" AVIC-VH09CS

EP-1-023

Home electric appliances/lighting

compact stereo system

Compact Stereo System SC-HC55/35

Environmental performance

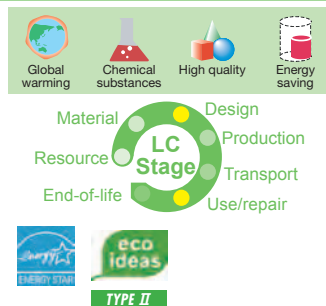
Achieved stand-by power consumption of approx. 0.07W (Japan model).  
 Achieved power consumption of approx. 28W (Japan model) due to low power circuit technology.  
 Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.  
 Non-Use of Specific Chemical Substances \*  
 (\*: Lead,mercury,cadmium, hexavalent chromium,two specific brominated flame retardants,designated by the EU RoHS Directive.)

Product performance

The slim design of the Compact Stereo System.  
 Slim Flat Design, which is only 69mm depth design.  
 Digital power Amplifier 40W (RMS).

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
 Tel +81-6-6906-3007  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>



Available in: Japan,Oceania,Europe,North America,Central America,South America,Southeast Asia

Compact Stereo System SC-HC55

EP-1-024

Home electric appliances/lighting

digital cameras

Digital Camera IXUS 1100 HS

Environmental performance

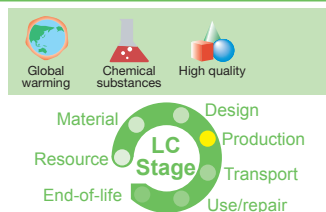
- (1) VOC-free coating line at mass production using water-based paint, which is a groundbreaking in the camera manufacturing industry and Canon products.
- (2) Compact and light body of only 183g contributes to resource savings.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) The world's slimmest 12x optical zoom lens model with only 21.9mm body depth.\*
  - (2) Intelligent IS detects optimal image stabilization automatically based on scenes.
  - (3) HS SYSTEM and full HD movie function enable you to shoot beautiful images based on scenes with reduced blur or noise even in low-light conditions.
  - (4) Touch Shutter can release the shutter just by lifting your finger from LCD screen.
- \*According to our research as of September 12, 2011 on compact digital cameras featuring 12x optical zoom lens with 28mm wide angle.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>



Available in: Worldwide

1 Eco-product // Home electric appliances/lighting  
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EP-1-025

Home electric appliances/lighting

digital cameras

DIGITAL SLR CAMERA EOS 550D

Environmental performance

- (1) Compact and light body of only 475g contributes to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) CMOS Sensor of approximately 18 mega pixels and DIGIC 4 Image Processor.
- (2) High sensitivity: ISO 100 - 6400 (normal) up to 12800.
- (3) EOS movie mode enables you to achieve gorgeous full HD movie shooting.
- (4) Wide 3.0-inch (3:2 aspect ratio) Clear View LCD monitor (Approximately 1.04 million dots)

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>

Available in: Worldwide

Material Design  
 Resource Production  
 End-of-life Use/repair

**LC Stage**

**TYPE III**  
 16.3kg-CO<sub>2</sub> Inspection  
 Resource/Materials/Production/Transfer/Use/End-of-Life



EP-1-026

Home electric appliances/lighting

digital cameras

Casio Digital Camera: EXILIM EX-H20G

Environmental performance

- \*Advanced low-power technology suited for the various situations enables to realize the highly precise and speedy position tracking.
- \*Complete with a wide range of functions useful for traveling, "Feel the nature" will foster a kindness to nature.
- \*Enables users to take up to 600 shots with a single battery charge.
- \*Contains no particular chemicals. (lead, mercury, cadmium, chromium hexavalent, flame retardant polybrominated biphenyls directed by EU RoHS/No PBDE)

Product performance

- \*World's first digital camera with autonomic indoor positioning through Hybrid GPS combining GPS with Motion-Sensor Driven Autonomic Positioning.
- \*Premium Auto function produces beautiful photos with just a press of the shutter button.
- \*New Engine Enabling accurately capture the photo subjects with high-speed and advanced image processing.
- \*Premium zoom that maintains high-resolution image quality through 15x.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo, 151-8543, Japan  
 Tel +81-3-5334-4111  
 URL <http://world.casio.com/>  
 URL <http://www.exilim.com/>  
 URL <http://world.casio.com/csr/>

Available in: Worldwide

Material Design  
 Resource Production  
 End-of-life Use/repair

**LC Stage**

**TYPE II**



EXILIM EX-H20G with Hybrid GPS technology

Eco-product // Home electric appliances/lighting

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EP-1-027

Home electric appliances/lighting

digital cameras

Casio Digital Camera: EXILIM EX-H30

Environmental performance

- \*The combination of the high-capacity battery and energy-saving performance of the computer circuitry and movement control ensures that single battery charge allows users to take up to 1,000 photos.
- \*Compact travel camera, making it ideal for travel, "Feel the nature" will foster a kindness to nature.
- \*Contains no particular chemicals. (lead, mercury, cadmium, chromium hexavalent, flame retardant polybrominated biphenyls directed by EU RoHS/ No PBDE)

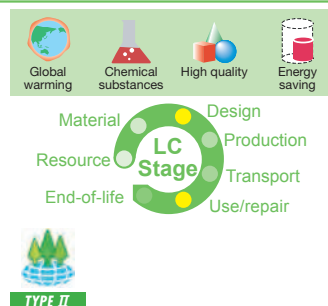
Product performance

- \*Premium zoom that maintains high-resolution image quality through 18.8x.
- \*Super-Resolution Image reproduces exceptional clarity and resolution.
- \*Premium Auto function produces beautiful photos with just a press of the shutter button.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo, 151-8543, Japan  
 Tel +81-3-5334-4111  
 URL <http://world.casio.com/>  
 URL <http://www.exilim.com/>  
 URL <http://world.casio.com/csr/>

Available in: Worldwide



EXILIM EX-H30

EP-1-028

Home electric appliances/lighting

digital cameras

Nikon Digital SLR Camera D5100

Environmental performance

- Reduction of weight
  - Reduces 39% of the parts compared to "D7000"
  - Reduces 28% of the weight, compared to "D7000", while equipping a CMOS image sensor with the same number of pixels as "D7000" and installing Vari-angle LCD monitor, so contributes to waste reduction and resource saving.
- Reduction of hazardous substances
  - Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
  - Lead-free solder: Used on all circuit boards
  - Eco-Glass (lead and arsenic-free) usage: 100%

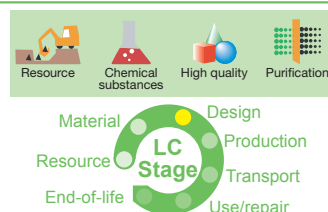
Product performance

"D5100" installs a Vari-angle LCD monitor, which gives you abilities to shoot from nearly any angle and improves the conveniences of live-view and D-Movie shooting. "D5100" is a high cost-effective digital camera, inheriting the high quality and high performance of the upper grade model D7000 and condensing easy uses and the stunning image effecting function, "special effects mode".

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
 Tel +81-3-3214-5311  
 URL <http://www.nikon.com/>  
 URL <http://imaging.nikon.com/lineup/dslr/d5100/>  
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon Digital SLR Camera D5100

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EP-1-029

Home electric appliances/lighting

digital cameras

Nikon Digital Compact Camera COOLPIX S1200pj

Environmental performance

- (1) Resource saving  
The suppression of photo print, by using a built-in projector, saves paper resource
- (2) You can also project data stored on PC at the presentation or meeting. This will be some sort of "Eco" at the business situations, instead of using the conventional data projectors
- (3) Power consumption efficiency: 50% increases the projector brightness over its predecessor "COOLPIX S1100PJ"
- (4) Reduction of hazardous substances
  - Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
  - Lead-free solder: Used on all circuit boards
  - Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

"COOLPIX S1200pj" is the compact digital camera with a built-in projector. You can start up the projector only by opening projector cover and enjoy projecting pictures on the spot they taken. "COOLPIX S1200pj" is a highly cost-effective camera with advanced functions, such as Optical 5x zoom from wide angle 28mm, VR image stabilization, Easy Auto Mode and Smart Portrait System etc.

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
 Tel +81-3-3214-5311  
 URL <http://www.nikon.com/>  
 URL <http://imaging.nikon.com/lineup/coolpix/style/s1200pj/>  
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon Digital Compact Camera COOLPIX S1200pj

EP-1-030

Home electric appliances/lighting

digital cameras

Digital Interchangeable Lens Camera: LUMIX DMC-GF3

Environmental performance

Achieved Main Product weight (w/o battery) of approx.222g due to low resource use technology.  
 Power saving performance realizing about 340 continuous shots (with 14mm lens unit).  
 Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.  
 Non-Use of Specific Chemical Substances \*  
 (\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Micro Four Thirds Camera System.  
 Ultra Compact System Camera Body with Built-in Flash.  
 12.1-megapixel Live MOS sensor  
 3.0-inch Touch Enabled LCD monitor.  
 Full High Definition AVCHD Movie Recording.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan  
 Tel +81-6-6906-3007  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Worldwide



Digital Interchangeable Lens Camera: LUMIX DMC-GF3

Eco-product // Home electric appliances/lighting

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EP-1-031

Home electric appliances/lighting

digital cameras

Digital Interchangeable Lens Camera: LUMIX DMC-G3

Environmental performance

Achieved Main Product weight (w/o battery) of approx.336g due to low resource use technology.  
 Power saving performance realizing about 270 continuous shots (with 14-42mm lens unit).  
 Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.  
 Non-Use of Specific Chemical Substances \*  
 (\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Micro Four Thirds Camera System.  
 16-megapixel Live MOS sensor.  
 Mirror-less Compact System with LVF.  
 3.0-inch Free Angle LCD monitor with Touch Control.  
 Full High Definition AVCHD Movie Recording.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan  
 Tel +81-6-6906-3007  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Worldwide



Digital Interchangeable Lens Camera: LUMIX DMC-G3

EP-1-032

Home electric appliances/lighting

digital video camera

Digital Movie Camera HX-WA10/DC15/DC10

Environmental performance

Achieved power consumption of approx. 2.2W (Japan model) due to low power circuit technology.  
 Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.  
 Non-Use of Specific Chemical Substances \*  
 (\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Upright compact Full-HD movie camera.  
 Full-HD movie & 16-Megapixel Still Picture Recording.  
 5x Optical Zoom.  
 12x Advanced Zoom.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
 Tel +81-6-6906-3007  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan,Asia,Oceania,Europe,North America,Southeast Asia,Thailand,Malaysia,Republic of Korea,Taiwan (Rep. of China),China,South Africa



Digital Movie Camera HX-WA10

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EP-1-033

Home electric appliances/lighting

digital video camera

Digital High Definition Video Camera HDC-TM25/TM40/SD40

Environmental performance

Achieved Main Product weight (w/o Battery) of approx.169g. Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Full-HD Video Camera.  
Compact Body.  
16.8x Optical Zoom.  
New Optical Image Stabilization.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
Tel +81-6-6906-3007  
URL <http://panasonic.net/>  
URL <http://panasonic.net/csr/>

Available in: Worldwide



Digital High Definition Video Camera  
HDC-TM25

EP-1-034

Home electric appliances/lighting

electric lighting fixtures

Mirror Ducts

Environmental performance

A mirror duct is a piece of equipment that contributes to the reduction of CO<sub>2</sub> emissions by lowering electric power usage for lighting, as well as creating an environment more comfortable than that of artificial lighting.

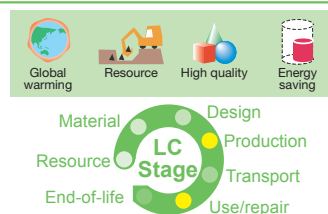
Product performance

This system brings daylight indoors for lighting purposes, and its thorough diffusion and control of light during the receiving and conducting processes makes it easy to use. It was adopted by Toyoko Summit heid in July,2008, and this prominent technology was introduced for the whole world.

1. simple structure allowing the economical utilization of abundant light;
2. high energy efficiency due to its direct use of natural light ;
3. collection and diffusion of light without the consumption of kinetic energy due to the absence of driving parts such as sun-trucking devices;
4. low maintenance due to a simple, sealed structure that protects it from failure and deterioration.

Materialhouse Co.,LTD

1-19-3, Naka-ikegami, Ota-ku, Tokyo, 146-0081, Japan  
Tel +81-3-3751-5158 Fax +81-3-3755-0065  
E-mail [h.arai@materialhouse.co.jp](mailto:h.arai@materialhouse.co.jp)  
URL <http://www.materialhouse.jp/>



EP-1-035

Home electric appliances/lighting

electric lighting fixtures

LED Canopy Light

Environmental performance

- (1) LED lamps provide the same high luminance as a conventional traditional HID lamp.
- (2) Long lifetime (60,000hours) \* 3 to 5 times less maintenance compared a with HID lamp.

\*Design life is regarded as the time until total luminous flux declines to 70% of the initial level.  
However, product service life cannot be guaranteed.

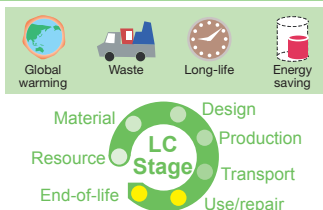
Product performance

- 1) Low operation temperature -30 to 40℃ for using original power supply unit
- 2) Instant ON/OFF
- 3) Less UV and less attract bugs, fine sight is held over a long period of time.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
Tel +81-6-6625-0438 Fax +81-6-6625-0153  
E-mail eco-info@sharp.co.jp  
URL <http://sharp-world.com/>  
URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



LED Canopy Light:DL-EG004

EP-1-036

Home electric appliances/lighting

electric lighting fixtures

Energy-saving and environment-friendly LED Ceiling Lights with long service life

Environmental performance

- (1) Achieves high energy saving performance by leveraging LED technology and efficient direct back lighting system for LCD TV back light.
- (2) Two eco-functions allow energy savings of up to 67%\*.
  - The Eco Dimmer function (all models) gently reduces brightness so the eyes can easily adjust to the change.  
(Note: This function was developed in collaboration with the Inoue Laboratory, Department of Residential Environment and Design, Faculty of Human Life and Environment, Nara Women's University.)
  - The Eco Sensor function detects natural light and other lighting fixtures and reduces the unnecessary light accordingly.

\*Sharp measurements. When two eco-functions (Eco Dimmer, Eco Sensor) are turned on versus turned off.

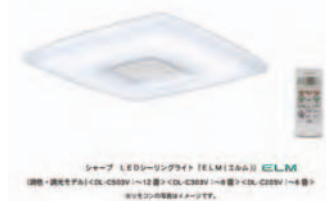
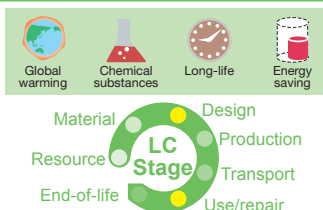
Product performance

Adjustable color function and dimmer function combine for a total of 103 different levels of color and brightness.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
Tel +81-6-6625-0438 Fax +81-6-6625-0153  
E-mail eco-info@sharp.co.jp  
URL <http://sharp-world.com/>  
URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



DL-C503V/303V/203V (Image figure)

1 Eco-product // Home electric appliances/lighting

EP-1-037

Home electric appliances/lighting

electric lighting fixtures

LED High-bay Light

Environmental performance

- (1) LED lamps provide the same high luminance as conventional 400W mercury lamps. Approximately 40% energy reduction compared with 400W mercury lamps .
- (2) Long lifetime (60,000 hours)\*, Heat diffuser used for controlling inside temperature in summer.

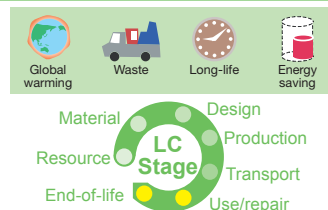
\*Design life is regarded as the time until total luminous flux declines to 70% of the initial level.However, product service life cannot be guaranteed.

Product performance

- (1) Lightweight (weight 4.5kg)
- (2) Wide spread type and middle spread type by using original unit of optical lens and LED.

Sharp Corporation

22-22 Nagaike-cho,Abeno-ku,Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail eco-info@sharp.co.jp  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>



LED High-bay Light:DL-EHS02/03 (Image figure)

EP-1-038

Home electric appliances/lighting

fluorescent lamp stabilizers

SAVEe

Environmental performance

The product contributes effectively to greenhouse gas reduction by saving 30% higher-power saving rate compared with conventional products. It also contributes to energy saving and reduction in the use of oil and other power generation resources.

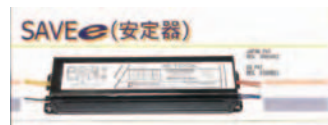
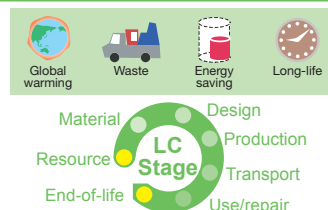
This products has extended service life of 20 years. (usual:10 Yrs) Due to the complete recycle, effective utilization of materials and the striking reduction of waste material are done.

Product performance

High power-saving rate : 30%.  
 The generation of high frequency wave is faint (verified by public institution) .  
 It prevents from Jamming, Irregular operation of Computer and Robot, Radio-noise, Short-circuit and Fire-risk.

Ohdensha Inc. Tokyo Branch

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 Tel +81-3-5835-5371 Fax +81-3-5441-6784  
 E-mail ohdentok@kmf.biglobe.ne.jp  
 URL <http://ohdensha.com>



EP-1-039

Home electric appliances/lighting

fluorescent lamps

Screw-in Fluorescent Lamp "spiraLUPICA mini"

Environmental performance

1. Energy saving
  - Consumption power is one fifth compared to an incandescent lamp (40W,60 W).
2. Long lifetime
  - The lifetime of "spiraLUPICA mini" is 10 times longer than that of an incandescent lamp. (EFA15)

Product performance

- SpiraLUPICA mini is a compact screw base fluorescent lamp. Its small spiral shaped inner bulb and compact inverter give it its compact size.
  - Consumption power is one fifth compared to an incandescent lamp (40W, 60W). Therefore, it enables energy saving and a reduction of greenhouse gas.
  - In addition, the lifetime of "spiraLUPICA mini" is 10 times longer than that of an incandescent lamp. (EFA15)
  - Run-up speed is fast, so it's bright even right after switching on a light.
  - The ON-OFF cycle is up to 20,000 times. (Cycle is 10 seconds on and 170 seconds off.)
- This product is also suitable for places where you frequently repeat switching on and off.



spiraLUPICA mini

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama, 220-0004, Japan  
 Tel +81-45-323-5187 Fax +81-45-323-5156  
 URL <http://www.mol-oml.co.jp>

Available in: Japan

EP-1-040

Home electric appliances/lighting

fluorescent lamps

Compact fluorescent lamp "FHP Platinum" "DULUX T/E Platinum"

Environmental performance

- Long lifetime
- Long lifetime of 20000 hours leads reduction of maintenance cost and discarded lamp.

Product performance

The lifetime of "FHP Platinum" is 1.6 times and "DULUX" T/E PLATINUM is twice longer than conventional products. They enable users to reduce maintenance cost and lead to the efficient use of resources. Other specification such as lighting color variation and lumen are the same as conventional products.



FHP Platinum and DULUX T/E Platinum

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama, 220-0004, Japan  
 Tel +81-45-323-5187 Fax +81-45-323-5156  
 URL <http://www.mol-oml.co.jp>

Available in: Japan

1 Eco-product // Home electric appliances/lighting  
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EP-1-041

Home electric appliances/lighting

fluorescent lamps

**OHILITE40w watt-saver34w**

**Environmental performance**

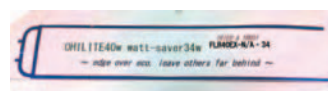
The minimal lamp wattage contributes to reduction of greenhouse gas.  
 No tin coat as ignition-aid.  
 (usual:all inner surface of the glass tube is coated with tin.  
 Complete recycling of mercury and glass-tube due to no tin coat.  
 Disposal: Complete due to complete recycle.  
 (usual:mercury oxide adhered to inner-surface of glass-tube and glass are buried.

**Product performance**

Minimal lamp wattage34w.  
 (usual:36w)  
 Rated lamp life 24000H is twice as long as usual.  
 No tin-coat contribute to saving of resource, favorable environment and tin and mercury pollution.

**Ohdensha Inc. Tokyo Branch**

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EP-1-042

Home electric appliances/lighting

fluorescent lamps

**Self-ballasted Fluorescent Lamp Offering Energy-saving Performance and Long Life**

**Environmental performance**

- Mitigation of climate change: About 30% reduction in power consumption compared with 2000's model, and 15% reduction in power consumption compared with the previous year's model.
- Efficient use of resources: Rated life has been doubled to 12,000 hours, which means a reduction in waste lamps. Weight has also reduced.
- Management of chemicals: Lead-free glass and soldering.

**Product performance**

- Easy replacement: Replacement of an incandescent lamp with this lamp is simple because it is virtually the same size and shape as an incandescent lamp.
- UV-cut: 99% ultraviolet protection. Less attraction of bugs. 58% reduction of color fading.
- Plastic globe: Plastic globe means no scattering of glass if the lamp gets broken.

**TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

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 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



Compact Self-ballasted Fluorescent Lamp "NeoBall Z Real PRIDE" EFA15EL/10-PD and two other models

Eco-product // Home electric appliances/lighting

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EP-1-043

Home electric appliances/lighting

fluorescent light bulb with hidden ballast-electronic

Self-Ballasted Fluorescent Lamps JTS-23EXD

Environmental performance

1. Average light beam maintenance rate is 90% or above when lit continuously for 1000 hours, and 85% when lit for 2000 hours, conforming to the specifications of Taiwan's Energy Label.
2. Saves at least 10% of electricity when compared with products of the same output power. Has a long service life, avoids over-production, and reduces carbon dioxide emissions.

Product performance

1. Uses the world's top-end photocatalyst from Japan.
2. High color rendering index (Ra > 82), 10%-15% higher than CNS-14125, Taiwan's national verification standard.
3. Directly applicable to common household lamp sockets (E27).

JIU TAI OPTOELECTRONICS CO., Ltd.

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 URL <http://jiutai.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



EP-1-044

Home electric appliances/lighting

fluorescent light bulb with hidden ballast-electronic

Self-Ballasted Fluorescent Lamps JTS-23EXL

Environmental performance

1. Average light beam maintenance rate is 90% or above when lit continuously for 1000 hours, and 85% when lit for 2000 hours, conforming to the specifications of Taiwan's Energy Label.
2. Saves at least 10% of electricity when compared with products of the same output power. Has a long service life, avoids over-production, and reduces carbon dioxide emissions.

Product performance

1. Uses the world's top-end photocatalyst from Japan.
2. High color rendering index (Ra > 82), 10%-15% higher than CNS-14125, Taiwan's national verification standard.
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 E-mail luaaaa0919@yahoo.com.tw  
 URL <http://jiutai.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



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Eco-product // Home electric appliances/lighting

EP-1-045

Home electric appliances/lighting

general lighting bulbs

LED Bulbs that Can Replace Incandescent Lamps Directly

Environmental performance

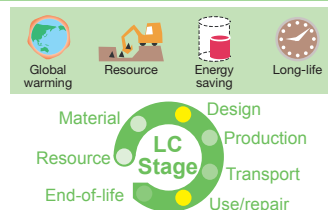
- Mitigation of climate change: Power consumption and CO<sub>2</sub> emissions slashed to 1/8~1/6 of those of incandescent lamps
- Management of chemicals: Mercury-free LED light source

Product performance

- Industry's No.1 energy-saving performance : 10.6W type LED lamp with small type incandescent bulb shape has 1000 lm and 93.4 lm/W.
- Long life and maintenance saving: Long life of 40,000 hours (40 times longer than an incandescent lamp) greatly reduces the need for replacement.
- Easy replacement: Replacement of an incandescent lamp with this low-power consumption LED lamp is simple because this lamp's cap is the same as that of an incandescent lamp.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



High-output LED Bulb "E-CORE Series"  
 Incandescent Bulb Type LDA11N- G  
 and 33 more models (non-dimming and dimming models)

EP-1-046

Home electric appliances/lighting

LED lamp

LED Lamp"PARATHOM"

Environmental performance

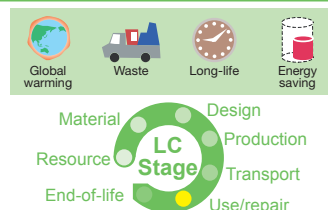
1. Energy saving
  - This lamp is more efficient than incandescent lamp. Consumption energy is 6.9W and the illuminance on the floor or desk is the same as 60W incandescent lamp. (6.9W E26 base type)
2. Long lifetime
  - The lifetime is 40000 hours. It's 40 times of incandescent lamp. (General lamp type)
3. Mercury free
  - LED lamp doesn't contain mercury.

Product performance

Run-up speed and on-off cycle is the same level as incandescent lamp.  
 In PARATHOM series, krypton mini lamp type, halogen lamp type and so on are lined up.

MITSUBISHI ELECTRIC OSRAM Ltd.

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 URL <http://www.mol-oml.co.jp>



PARATHOM 6.9W type

Available in: Japan

EP-1-047

Home electric appliances/lighting

Starters

Longer Lamp Life & Eco Lighting: Digital Starter Pro

Environmental performance

Have you got the problem of frequent fluorescent lamp/starter replacement in your building?

Longer lamp life directly leads to protecting the environment by minimizing the amount of toxic mercury contained inside fluorescent lamp waste. Moreover, Digital Starter Pro facilitates the diligent turn on/off of lamps to achieve greater energy saving.

Product performance

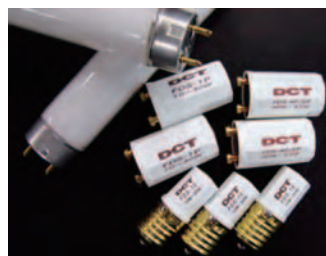
Digital Starter Pro has a built-in microcomputer chip for minimization of emitter diffusion in starting the fluorescent lamp. It provides maintenance-free benefits by extending lamp service life up to 30 times longer than a glow starter.

Features

1. Advanced digital ASIC assures the best optimized lamp start sequence for longer lamp life
2. Longer starter life
3. Multiple pulse lighting system for reliable lighting performance
4. Quick lamp start
5. Automatic re-start function
6. Safety protection system

DCT Co., Ltd.

3-15-6, Higashi, Shibuyaku, Tokyo, 150-0011, Japan  
 Tel 03-5468-7131 Fax 03-5468-7399  
 E-mail info@dct-web.co.jp  
 URL http://www.dct-web.co.jp



Digital Starter Pro series:  
FDS-1E, 1P and 4P/5P

Available in: Worldwide

EP-1-048

Home electric appliances/lighting

starters

PM Sensor Digital Starter Pro/ Sensor lighting realized by fluorescent lamp starter

Environmental performance

PM Sensor Digital Starter Pro is the world-first revolutionary technology that realizes photo/motion sensor lighting by fluorescent lamp starter. Photo/Motion sensor embedded Digital Starter is driven by the cutting-edge technology that combines fluorescent lamp starter function and photo/motion sensor driver in one ASIC.

DCT ASIC receives signal from sensor part and automatically turn on/off the lamp accordingly without physical switching; proprietary Quenching Technology. Combined with the longer lamp life benefit of Digital Starter, sensor Digital Starter overcomes the problems of conventional sensor lighting such as shorter lamp life and shorter fixture life especially in out-door applications.

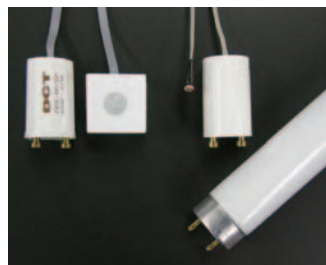
Product performance

Features

1. Easy to install: just replace starter to DCT in existing magnetic ballast based fixtures.
2. PM Digital starter controls the turn on/off the lamp by sensor without physical switching.
3. Longer lamp life even under frequent turn on/off by sensors
4. Super environment-friendly: reducing lamp disposal and saving electricity consumption.

DCT Co., Ltd.

3-15-6, Higashi, Shibuyaku, Tokyo, 150-0011, Japan  
 Tel 03-5468-7131 Fax 03-5468-7399  
 E-mail info@dct-web.co.jp  
 URL http://www.dct-web.co.jp



FDS-PM series

Available in: Worldwide

EP-1-049

Home electric appliances/lighting

halogen lamp

Halogen Lamp "Halogen Energy Saver"

Environmental performance

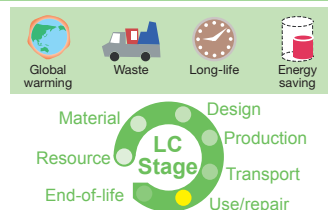
- 1. Energy saving  
-25% energy saving compared with an incandescent lamp  
(Our white bulb lamp 60 W)
- 2. Long lifetime  
-Twice the life time compared with an incandescent lamp  
(Our white bulb lamp 40 W, 60 W)

Product performance

This halogen lamp is our original product which has outer glass and an E26 base like an incandescent lamp. It is more energy saving and has a longer lifetime than an incandescent lamp. It can be used in dimming fixtures. It also has the same quality of light, shape and size as an incandescent lamp.

MITSUBISHI ELECTRIC OSRAM Ltd.

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Halogen Energy Saver

EP-1-050

Home electric appliances/lighting

sealed beam lamp units

MR16 LED SPOTLIGHT YLR601

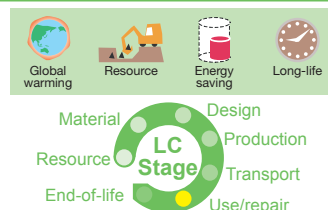
Environmental performance

The MR16 LED energy-saving projection light is of an environmentally friendly product intended to replace the conventional halogen lamps, and provides the following yield to the environment in extended use:

1. Lead free.
2. Mercury free.
3. Power saving, conserving over 90% of power when compared with the conventional halogen lamps.
4. Extended operating life.
5. Free of ultraviolet ray.
6. Low operating temperature relatively saves the air-conditioning bills.

Product performance

- \* Replacing the traditional MR16 halogen spotlight without changing original transformers.
- \* Save up to 90% electricity than MR16 halogen spotlight.
- \* High brightness. Low temperature.
- \* Work well with various AC/DC 12V electron transformers and magnetic transformers.
- \* Single light source; good light distribution; no multi shadow.
- \* Lead-free. Mercury-free.
- \* No UV light.
- \* Can be used in most fixtures designed for MR16 lamps.
- \* Beautiful external appearance with light transparency design.
- \* Plastic parts made from fireproof materials.



<b>4kg-CO<sub>2</sub></b>	Resource/Materials/ Production/Transfer/Use/ End-of-Life
not Inspection	

YOULIGHT TECHNOLOGY INC.

No.4, Ln.7, Siwei St., Dali Dist., Taichung City, Taiwan, 412, Republic of China  
Tel +886-4-22859556 Fax +886-4-22852942  
E-mail [sharonliu@youlight.com.tw](mailto:sharonliu@youlight.com.tw)  
URL <http://www.youlight.com.tw>



Available in: Taiwan (Rep. of China)

EP-1-051

Home electric appliances/lighting

electric lighting fixtures

Epoch-making LED Downlight with the Industry's top level efficiency and total luminous flux.

Environmental performance

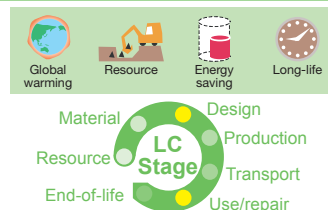
- Mitigation of climate change: Compared with current products using fluorescent lamp or incandescent light bulb, power consumption and CO<sub>2</sub> emissions slashed to 2/3~1/6.
- Management of chemicals: Mercury-free LED light source

Product performance

- Increased illuminance: 8000 lumen series has top level luminous flux of 8,600lm and integrated efficiency of 75lm/W.
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.
- Dimming function: 5-100% continuous dimming function to suit user preference.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



LED Unit, flat type LEDF13N-GX53 and 20 moer model

EP-1-052

Home electric appliances/lighting

electric lighting fixtures

Ceramic Metal Halide Lamp, Giving an Energy-saving High-grade Illumination Space

Environmental performance

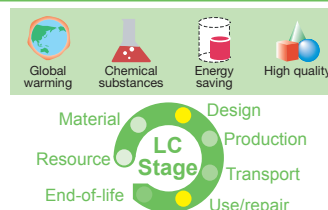
- Mitigation of climate change: Power consumption slashed by about 64% from 400W to 145W.
- Efficient use of resources: External tube diameter is reduced from 116mm to 40mm; the slimmer tube saves resources.
- Management of chemicals: Mercury content cut to less than one fifth.

Product performance

- Beautiful and bright: Dramatic improvement in efficiency from 55lm/W to 130lm/W, the industry's best performance. Color rendering index (Ra) doubled from 40 to 80 for higher color performance.
- Quick start-up: Start-up time slashed from around 4 minutes to 2 minutes.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



Neocera "PRIDE" MT145CHE-W

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EP-1-053

Home electric appliances/lighting

electric lighting fixtures

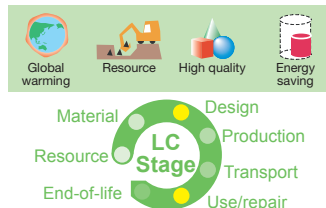
Dimming and toning Functions to Fine-tune the Lighting According to User Preference, and Greater Energy Saving according to auto dimming by a sensor.

Environmental performance

- Mitigation of climate change: About 18% reduction in power consumption, compared with current products using fluoresce lamp. Auto dimming control by a sensor allows a maximum of about 60% reduction
- Management of chemicals: Mercury-free LED light source

Product performance

- Dimming and toning function: 1-100% dimming function and toning function to suit user preference.
- Auto operation for energy saving by a sensor perceives light from windows
- Various timer functions: Morning timer, night timer, on/off timer can be used



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



LED Ceiling Light LEDH82100Y-LC and 24 more model

EP-1-054

Home electric appliances/lighting

electric lighting fixtures

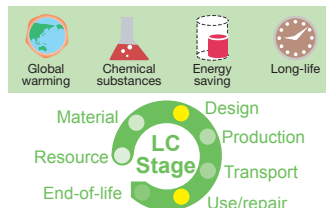
LED Security Light with Sufficient Luminance but Minimal Electricity Charge

Environmental performance

- Mitigation of climate change: 70% reduction in power consumption and CO<sub>2</sub> emissions, compared with current products using mercury lamp.
- Efficient use of resources: Optimum design to secure a distance of 35 m between lamps (\*) to minimize the number of lamps required.
- \*Class B illumination recommended by the Japan Security Systems Association -Management of chemicals: Mercury-free light source.

Product performance

- Economical: Possible to lower the electricity contract category for greater economy.
- Long life and maintenance saving: Rated life of 60,000 hours means no need for replacement for 15 years. (used 4000 hour per year)
- Compact and lightweight: Easy installation and difficult to break without glass bulbs.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>



High-efficiency LED Crime Prevention Light "E-CORE Series" LEDG-70942-LS8 and 6 more models



EP-1-055

Home electric appliances/lighting

electric lighting fixtures

LED down light, using flat and exchangeable type LED unit with GH76p cap.

Environmental performance

- Mitigation of climate change: Power consumption and CO<sub>2</sub> emissions slashed to 60% compared with current products using incandescent light bulb. (attached the suitable fixture)
- Management of chemicals: Mercury-free LED light source

Product performance

- Flat thin-model : LED unit with GH76p-cap, light colors and angles are selected.
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.



LED down light LEDD-1600-LD9 and 3 moer models

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL [http://www.tlt.co.jp/tlt/index\\_j.htm](http://www.tlt.co.jp/tlt/index_j.htm)  
 URL <http://www.tlt.co.jp/tlt/english/products/index.htm>

EP-1-056

Home electric appliances/lighting

high-efficiency energy-saving T5 lighting

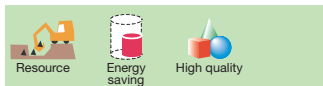
T-BAR T5 Lighting 28W Series (28W\*1 28W\*2 28W\*3 Available) CFA008 28W SERIES

Environmental performance

High energy efficiency with a PF rating of greater than 98% which can reduce energy waste.

Product performance

With a PF rating of greater than 98%, it has a light emitting efficiency of greater than 60lm/w and a uniformed light dispersion index of less than 19, excelling the maximum energy-saving effect, with a unique refractive board design that aims to achieve optimal light dispersion effect, and is ideal for use at homes or offices.



LIXMA TECH CO., LTD.

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 E-mail [gracewu@lixma.com.tw](mailto:gracewu@lixma.com.tw)  
 URL <http://www.lixma.com.tw>

Available in: Asia, Taiwan (Rep. of China)

1 Eco-product // Home electric appliances/lighting  
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EP-1-057

Home electric appliances/lighting

high-efficiency energy-saving T5 lighting

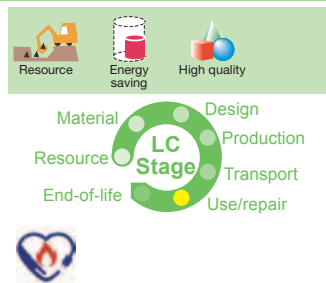
T-BAR T5 Lighting 14W\*4 CFA0150144F1

**Environmental performance**

High energy efficiency with a PF rating of greater than 98% which can reduce energy waste.

**Product performance**

With a PF rating of greater than 98%, it has a light emitting efficiency of greater than 60lm/w and a uniformed light dispersion index of less than 19, excelling the maximum energy-saving effect, with a unique refractive board design that aims to achieve optimal light dispersion effect, and is ideal for use at homes or offices.



**LIXMA TECH CO., LTD.**

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 Tel +886-4-35048188-703 Fax +886-4-35009168  
 E-mail gracewu@lixma.com.tw  
 URL <http://www.lixma.com.tw>

Available in: Asia, Taiwan (Rep. of China)

EP-1-058

Home electric appliances/lighting

high-efficiency energy-saving T5 lighting

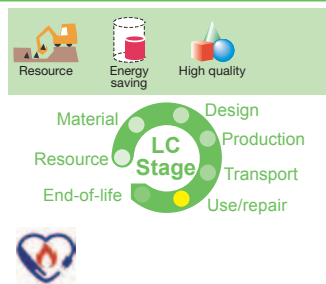
T-BAR T5 Lighting 14W Series (14W\*2 14W\*3 Available) CFA008 14W SERIES

**Environmental performance**

High energy efficiency with a PF rating of greater than 98% which can reduce energy waste.

**Product performance**

With a PF rating of greater than 98%, it has a light emitting efficiency of greater than 60lm/w and a uniformed light dispersion index of less than 19, excelling the maximum energy-saving effect, with a unique refractive board design that aims to achieve optimal light dispersion effect, and is ideal for use at homes or offices.



**LIXMA TECH CO., Ltd.**

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 E-mail gracewu@lixma.com.tw  
 URL <http://www.lixma.com.tw>

Available in: Asia, Taiwan (Rep. of China)

EP-1-059

Home electric appliances/lighting

LED Lighting

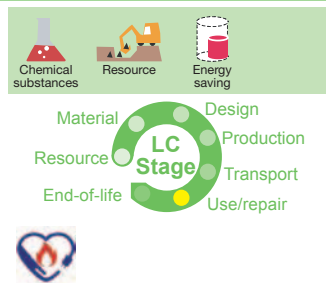
LED T-Bar Ceiling GZO-T840311

Environmental performance

- \*LED light tubes
- \*Long service life
- \*High light-emission efficiency
- \*In conformity with RoHS specifications

Product performance

T-BAR 4 Feet \*3  
Light-emission efficiency 73 lm/w



Guang Zhao Opto Tech Co., Ltd.

9F., No.225, Zhonghua 1st Rd., Gushan Dist., Kaohsiung City, Taiwan, 804, Republic of China  
Tel +886-7-5555059-200 Fax +886-7-5552616  
E-mail hank@gzo.com.tw  
URL <http://www.gzo.com.tw>

Available in: Japan,Thailand,Taiwan (Rep. of China)

EP-1-060

Home electric appliances/lighting

LED Lighting

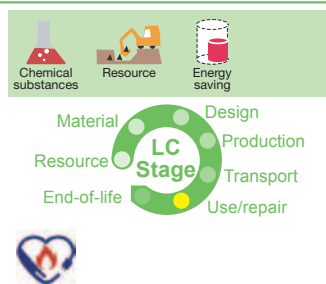
LED T-Bar Ceiling GZO-40211

Environmental performance

- \*LED light tubes
- \*Long service life
- \*High light-emission efficiency
- \*In conformity with RoHS specifications

Product performance

T-BAR 4 Feet \*2  
Light-emission efficiency 73 lm/w



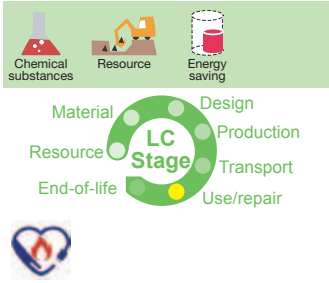

Guang Zhao Opto Tech Co., Ltd.

9F., No.225, Zhonghua 1st Rd., Gushan Dist., Kaohsiung City, Taiwan, 804, Republic of China  
Tel +886-7-5555059-200 Fax +886-7-5552616  
E-mail hank@gzo.com.tw  
URL <http://www.gzo.com.tw>

Available in: Japan,Thailand,Taiwan (Rep. of China)

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<b>EP-1-061</b>	<b>Home electric appliances/lighting</b>
<b>LED Lighting</b>	
<b>LED T-Bar Ceiling GZO-20411</b>	
<p><b>Environmental performance</b></p> <ul style="list-style-type: none"> <li>*LED light tubes</li> <li>*Long service life</li> <li>*High light-emission efficiency</li> <li>*In conformity with RoHS specifications</li> </ul> <p><b>Product performance</b></p> <p>T-BAR 2 Feet *4 Light-emission efficiency 68 lm/w</p>	 
<p><b>Guang Zhao Opto Tech Co., Ltd.</b></p> <p>9F., No.225, Zhonghua 1st Rd., Gushan Dist., Kaohsiung City, Taiwan, 804, Republic of China Tel +886-7-5555059-200 Fax +886-7-5552616 E-mail hank@gzo.com.tw URL <a href="http://www.gzo.com.tw">http://www.gzo.com.tw</a></p>	
<p>Available in: Japan,Thailand,Taiwan (Rep. of China)</p>	

<b>EP-1-062</b>	<b>Home electric appliances/lighting</b>
<b>LED Lighting</b>	
<b>LED T-Bar Ceiling GZO-T820311</b>	
<p><b>Environmental performance</b></p> <ul style="list-style-type: none"> <li>*LED light tubes</li> <li>*Long service life</li> <li>*High light-emission efficiency</li> <li>*In conformity with RoHS specifications</li> </ul> <p><b>Product performance</b></p> <p>T-BAR 2 Feet *3 Light-emission efficiency 68 lm/w</p>	 
<p><b>Guang Zhao Opto Tech Co., Ltd.</b></p> <p>9F., No.225, Zhonghua 1st Rd., Gushan Dist., Kaohsiung City, Taiwan, 804, Republic of China Tel +886-7-5555059-200 Fax +886-7-5552616 E-mail hank@gzo.com.tw URL <a href="http://www.gzo.com.tw">http://www.gzo.com.tw</a></p>	
<p>Available in: Japan,Thailand,Taiwan (Rep. of China)</p>	

EP-1-063

Home electric appliances/lighting

recessed lighting

Recessed Fluorescent Fixture TL-142099

Environmental performance

With luminaire efficiency (LOR) as high as 89%, this product provides enhanced luminance. FUYU's high-efficiency energy-saving lamp can achieve the same luminance with a smaller number of light tubes, thus relieving the load on the environment.

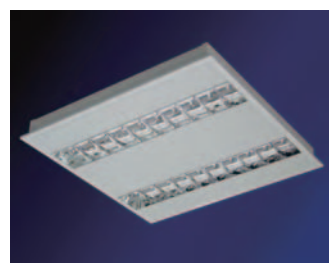
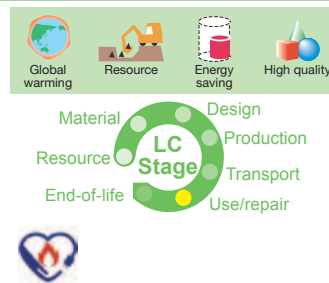
Product performance

The high-efficiency energy-saving T5 14W\*2-tube lamp is coated with a high-reflectivity material to provide a mirror-reflective surface. Also, the distribution curve of luminous intensity is optimized by employing applicable optical principles. Thanks to the patented mirror-reflective reflector and the patented 3D curved-surface design, the slender light tubes are turned into a surface light source that takes advantage of all light rays. Therefore, the luminance of the lamp is enhanced, and the total number of light tubes used can be decreased to save electricity.

FUYU ELECTRIC CO., LTD.

No. 35, Zhong. Feng Xin Rd., Guan Xi Township, Hsinchu County, Taiwan, 306, Republic of China  
 Tel +886-3-5170180 Fax +886-3-5170181  
 E-mail fuyu.light@msa.hinet.net  
 URL <http://fuyulight.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



EP-1-064

Home electric appliances/lighting

recessed lighting

Recessed Fluorescent Fixture TL-143099

Environmental performance

With luminaire efficiency (LOR) as high as 91%, this product provides enhanced luminance. FUYU's high-efficiency energy-saving lamp can achieve the same luminance with a smaller number of light tubes, thus relieving the load on the environment.

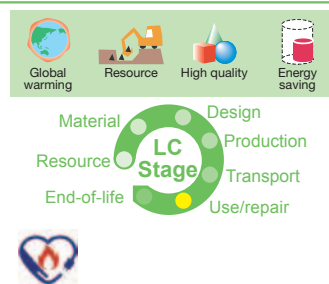
Product performance

The high-efficiency energy-saving T5 14W\*3-tube lamp is coated with a high-reflectivity material to provide a mirror-reflective surface. Also, the distribution curve of luminous intensity is optimized by employing applicable optical principles. Thanks to the patented mirror-reflective reflector and the patented 3D curved-surface design, the slender light tubes are turned into a surface light source that takes advantage of all light rays. Therefore, the luminance of the lamp is enhanced, and the total number of light tubes used can be decreased to save electricity.

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 E-mail fuyu.light@msa.hinet.net  
 URL <http://fuyulight.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



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EP-1-065

Home electric appliances/lighting

recessed lighting

Recessed Fluorescent Fixture TL-282099

Environmental performance

With luminaire efficiency (LOR) as high as 93%, this product provides enhanced luminance. FUYU's high-efficiency energy-saving lamp can achieve the same luminance with a smaller number of light tubes, thus relieving the load on the environment.

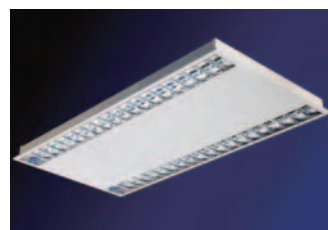
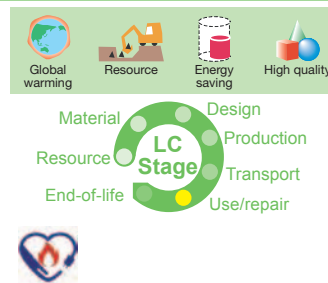
Product performance

The high-efficiency energy-saving T5 28W\*2-tube lamp is coated with a high-reflectivity material to provide a mirror-reflective surface. Also, the distribution curve of luminous intensity is optimized by employing applicable optical principles. Thanks to the patented mirror-reflective reflector and the patented 3D curved-surface design, the slender light tubes are turned into a surface light source that takes advantage of all light rays. Therefore, the luminance of the lamp is enhanced, and the total number of light tubes used can be decreased to save electricity.

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 E-mail fuyu.light@msa.hinet.net  
 URL <http://fuyulight.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



EP-1-066

Home electric appliances/lighting

recessed lighting

Recessed Fluorescent Fixture TL-283099

Environmental performance

With luminaire efficiency (LOR) as high as 94%, this product provides enhanced luminance. FUYU's high-efficiency energy-saving lamp can achieve the same luminance with a smaller number of light tubes, thus relieving the load on the environment.

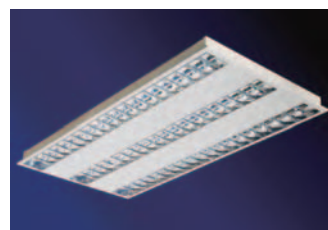
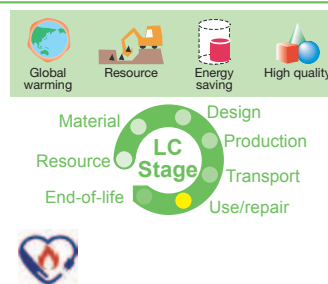
Product performance

The high-efficiency energy-saving T5 28W\*3-tube lamp is coated with a high-reflectivity material to provide a mirror-reflective surface. Also, the distribution curve of luminous intensity is optimized by employing applicable optical principles. Thanks to the patented mirror-reflective reflector and the patented 3D curved-surface design, the slender light tubes are turned into a surface light source that takes advantage of all light rays. Therefore, the luminance of the lamp is enhanced, and the total number of light tubes used can be decreased to save electricity.

FUYU ELECTRIC CO., LTD.

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 E-mail fuyu.light@msa.hinet.net  
 URL <http://fuyulight.myweb.hinet.net>

Available in: Taiwan (Rep. of China)



EP-1-067

Home electric appliances/lighting

recessed lighting

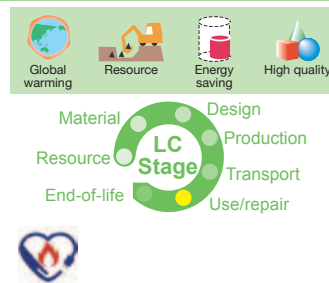
**Recessed Fluorescent Fixture TL5-283065**

**Environmental performance**

With luminaire efficiency (LOR) as high as 77%, this product provides enhanced luminance. The number of light tubes used can be reduced to alleviate the load on the environment.

**Product performance**

The energy-saving T5 28W\*3-tube lamp is coated with a high-reflectivity material to provide a mirror-reflective surface and thereby increase luminance. The total number of light tubes used can be decreased to save electricity.



**FUYU ELECTRIC CO., LTD.**

No. 35, Zhong. Feng Xin Rd., Guan Xi Township, Hsinchu County, Taiwan, 306, Republic of China  
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 E-mail fuyu.light@msa.hinet.net  
 URL <http://fuyulight.myweb.hinet.net>



Available in: Taiwan (Rep. of China)

EP-1-068

Home electric appliances/lighting

home electric appliances / lighting

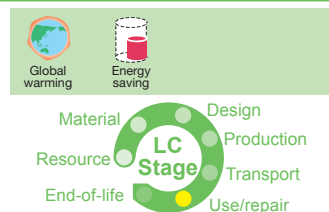
**Mobile solar power station : Violetta Solargear VS01**

**Environmental performance**

A pocket sized solar power station designed for charging AA/AAA batteries, and the batteries of small mobile applications, such as cellular phones, PDAs, digital cameras, portable audio/visual devices, and portable games. A long life and evergreen product awarded GOOD DESIGN AWARD 2001-2002, Small and Medium Enterprises Prize.

**Product performance**

Designed for charging 2 pieces of AA or AAA (sold separately) Violetta Ni-MH rechargeable batteries at the same time by sunlight. The batteries can be charged in shorter time by interconnecting 2 or more units with DC Power Cables (sold separately). Designed for charging the batteries of DC4V-6V appliances, such as cellular phones, PDAs and audio/visual devices with USB Power Adaptors (sold separately) and with widely available USB charger cables, Designed for powering DC3V appliances, such as audio/visual devices with DC Power Cables.



**STUDIO DEL SOLE INC.**

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan  
 Tel +81-3-5423-6801 Fax +81-3-5423-6802  
 E-mail [info@violetta.com](mailto:info@violetta.com)  
 URL <http://violetta.com/>



Available in: Worldwide

Violetta Solargear VS01

1 Eco-product // Home electric appliances/lighting  
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EP-1-069

Home electric appliances/lighting

household electric appliances

Mobile solar power station : Violetta Solargear VS12

Environmental performance

IP67 dust and waterproof mobile PV systems with a powerful and robust polycrystalline solar panel with APS (aluminum composite sheet) substrate and UV resistant polymer potting or the world's first\* commercial spherical silicon flexible solar panel designed for powering a broad range of appliances. Composed of a combination of a ultra-thin, light and unbreakable solar panel and a compact, lightweight yet rugged battery compartment for the ultimate portability, reliability, safety, impact resistance, weather resistance and ruggedness in business, disaster prevention, leisure and everyday living.

\*As of 1/10/2009, source by STUDIO DEL SOLE INC.

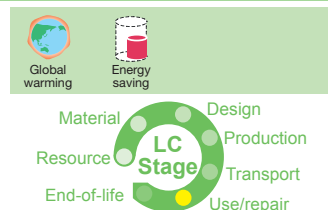
Product performance

Charging the built-in 12V batteries by sunlight, and powering a broad range of appliances through AC100V or 220V, DC12V and DC5V output.

STUDIO DEL SOLE INC.

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan  
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 E-mail info@violetta.com  
 URL http://violetta.com/

Available in: Worldwide



Violetta Solargear VS12

EP-1-070

Home electric appliances/lighting

electric refrigerators

Refrigerator : R-A6800C

Environmental performance

· The energy consumption<sup>1</sup> is reduced by approximately 18%<sup>2</sup> by adopting our original "Frost Recycling Cooling" technology, with which the coolness of frost sticking to the cooling device when the refrigerator is operated is effectively utilized.

\*1 The annual energy consumption was measured according to GB/T 8059.

\*2 Comparison was made between the new model R-A6800C (1.09kWh/24h) and the previous model R-Y6000C (1.34kWh/24h).

Product performance

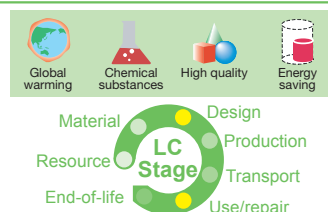
· "Vacuum"<sup>3</sup> Compartment" is equipped, with eliminate oxidization.

\*3 The meaning of Vacuum is the condition which air pressure is lower than the normal atmosphere.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL http://www.hitachi-ap.com/

Available in: China



R-A6800C

Eco-product // Home electric appliances/lighting



EP-1-071

Home electric appliances/lighting

electric refrigerators

Energy-saving refrigerator MR-R52T

Environmental performance

-----<< Use of recycled materials >>-----

Although the recycling of used home electric appliances has been difficult up to now for recycling manufacturers, the development of the company's original technology has made it possible for the three major kinds of plastics to be automatically sorted from among mixed and crushed waste plastics. That technology has also led to the creation of the nation's first large-scale high-purity plastic recycling system, which allows recycled plastics to be reused for the plastic parts of this refrigerator, largely increasing the usage ratio of plastics produced under the close-loop recycle system.

-----<< Energy saving >>-----

A sensor monitors individual spaces to carefully control the temperature in them. Energy-saving operation is also conducted by "learning" patterns in temperature changes for ideal operation according to each home.

-----<< Toxicity / Chemical substances reduction >>-----

Emits no substances defined in the EU RoHS directive, Japanese Industrial Standards (JIS) or J-Moss.

Product performance

Three different kinds of functions, including ECO Mode, Power Saving Mode and ECO Monitor, are operated by touching the power saving button. Under the ECO Mode, electric power is automatically saved. The Power Saving Mode cuts electricity by saving cooling energy for unused spaces and the Eco Monitor shows the condition of operation. The Spinning Shelves are installed on the top of the shelves in the refrigerator and can be rotated while putting foods on them. The Moving Shelves' heights can be changed, and the Rakuaki Handle allows you to open the door from both sides. All the functions improve usability and make the refrigerator easier to store.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

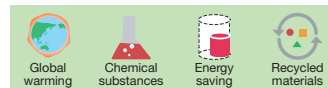
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Refrigerator MR-R52T

EP-1-072

Home electric appliances/lighting

electric refrigerators

Non-freon Inverter refrigerator (+ECONAVI)

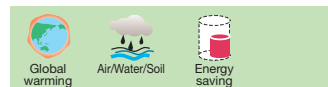
Environmental performance

The energy consumption of this refrigerator has been significantly reduced thanks to both the non-freon inverter compressor and the strengthened insulation of door gaskets.

This refrigerator has obtained 4 ticks of the energy ranking in Singapore.

Product performance

This refrigerator has ECONAVI function, which automatically saves energy according to different user's lifestyles.



TYPE II



NR-BY602X

Panasonic Corporation, Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan

Tel +81-77-563-3619

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>

Available in: Singapore, Thailand

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EP-1-073

Home electric appliances/lighting

electric refrigerators

Refrigerator with Plasmacluster

Environmental performance

- (1) Along with the high performance compressor and the "wide linear" inverter control, a high efficiency freezing cycle and a heat releasing fan provide the basis for the high energy-saving specifications.
- (2) use of parts made by recycled plastic material with Sharp original "Self Recycling Material Technology".
- (3) R600a refrigerant specification.
- (4) Complies with RoHS (examples are, PWB made of lead-free solder, and removal of specific brominated flame retardants)

Product performance

- (1) The original technology "e-COOL system" achieves high energy saving specification. In addition, the "Energy saving mode" with artificial intelligence saves further the energy, by up to approximately 15%.
- (2) "Fresh & Crisp" vegetable room, designed with the original high humidity sealed construction with a stainless plate, enables the retaining of moisture in the vegetables up to two times more.
- (3) Special ice-mode function offers automatically in making big and transparent, a typical "rock ice" at home.
- (4) The Plasmacluster technology strongly deodorizes and inactivates the airborne molds and adhering germs in the refrigerator compartment.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



**Plasmacluster Ion Technology**  
 A proprietary Sharp air purification method, this technology generates-through plasma discharge—and releases into the air positive and negative ions like those found in nature. These ions inhibit the action of airborne viruses and break down and eliminate airborne mold.

Refrigerator with Plasmacluster SJ-XF52W

EP-1-074

Home electric appliances/lighting

electric refrigerators

-Large capacity and energy saving, Equipped function of vegetable freezing.

Environmental performance

- Equipped Twin cooling which install cooler is adopted each of two temperature zones, and effect is demonstrated for energy saving in summer.
- About 10% of power-saving effect is acquired by energy saving mode.
- Recycle plastic collected from waste home appliances into parts for new home appliances.

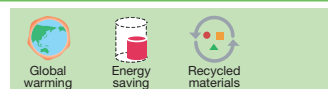
Product performance

- Keep freshness by W-twin cooling. and Moist supply vegetable room.
- Keep clean inside by Picoion unit.
- "New Vegetale freezing" can keep tastiness and nutrition of vegetable.
- A refrigerator reduces electric useless by "eco-mode control."

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Refrigerator-Freezer "VEGETA series" GR-E50FX

Eco-product // Home electric appliances/lighting

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EP-1-075

Home electric appliances/lighting

electric rice cookers

Rice Cooker & Warmer

Environmental performance

"Vacuum heat sealed" construction that uses a vacuum container with the inside wall which surrounds the inner pot realizes high energy savings by preventing the heat from escaping from the inner pot and reducing the amount of heating required to cook the rice and keep it warm.

In addition, continued use of the "thermal sprayed thick iron pot" which produces strong heating by iron that matches well with IH heating. And "Steam recycling mechanism" that uses the heat from the steam achieves an annual electricity consumption of 68.97kWh.

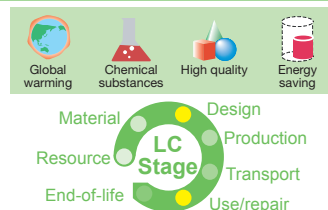
Product performance

In addition to the "pressure & steam" that cooks the rice at a high pressure of max. 1.3 atmospheres and high temperature of 107°C, a unique "vacuum heat seal" that uses a vacuum container for the inner wall that surrounds the strong heating "thermal sprayed thick iron pot" is used. Maintaining a high temperature while cooking the rice improves its flavor. Further, heat is used efficiently during warm keep to reduce the amount of heating required to keep the rice firm.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Japan



RZ-W1000K

EP-1-076

Home electric appliances/lighting

electric rice cookers

The best rice cooked by double vacuum and high heating.

Environmental performance

- Mitigation of climate change: Energy-saving-standard achievement rate of 104%. Annual power consumption of 91.0 kWh/year.

Product performance

- Dips in a double vacuum: It can absorb water to the core of rice in 17 minutes with vacuum technology.
- Keeping rice warm and white in a double vacuum: Cooked rice is kept warm and tasty for up to 40 hours.



Vacuum Pressure IH Rice Cooker RC-10VGE

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan  
 Tel +81-256-53-2545 Fax +81-256-53-2776  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

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EP-1-077

Home electric appliances/lighting

electric rice cookers

**IH Rice Cooker & Warmer -Compact body & delicious rice**

**Environmental performance**

The achievement of energy saving standard rate based on the energy saving law:118%  
 Annual power consumption of 72.8kWh/year.  
 Energy saving by high efficient induction heating and thermal insulated special pan.

**Product performance**

Delicious rice & Compact body  
 Cooks delicious rice with high power IH "Four IH coils & thermal insulation special pan"  
 The leftover cooked rice is arranged deliciously "Soup boiled rice course"  
 It fits in a kitchen exactly "Compact body design"

**Panasonic Corporation, Appliances Company**

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 E-mail mokubo.kazumitu@jp.panasonic.com  
 URL <http://panasonic.net/>  
 URL <http://panasonic.jp/suihan/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



SR-HB101 IH Rice Cooker & Warmer

EP-1-078

Home electric appliances/lighting

electric washing machines

**HITACHI Front Loading Automatic Washer and Dryer (Washing 10.5kg Drying 7.0kg)**

**Environmental performance**

- Saves water: Conserves water using "Shower spray rinsing." (Previously water fill rinse)
- Saves energy: Conserves energy using machine operation heat for drying.
- Chemical substance reduction: Complies with RoHS<sup>\*1</sup>. Uses steel sheet electroplated without using a chrome alloy and the lead-less solder is used for the printed circuit board.
- Recycles material: Recycled plastics are used for the outer tub and other parts.  
 \*1: Restriction of the use of certain hazardous substances

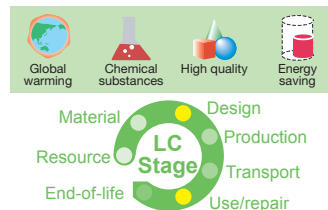
**Product performance**

- Hitachi original "Wind Iron" function removes wrinkles using high speed air blowing.
- Hitachi unique "Heat recycling Technology" utilizes machine operation heat to conserve energy.
- Beating effect of the large 61cm diameter drum and dissolving of detergent using a water circulation pump provides more even washing and removes stubborn dirt. The large drum also dries clothes gently to prevent wrinkling.

**Hitachi Appliances, Inc.**

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Asia



BD-W3300

EP-1-079

Home electric appliances/lighting

electric washing machines

**BW-105JV: Top Loading Washing Machine (Washing capacity 10.5kg)**

**Environmental performance**

- With a water circulation system, water consumption of this washing machine is 132.1L. (Singapore WELS)
  - RoHS\* Directive compliant. Lead-free solder is used for printed-circuit board.
- \*RoHS: Restriction of the use of certain hazardous substances

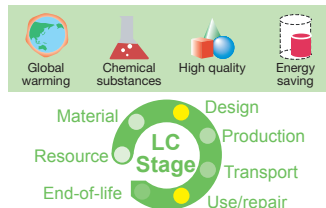
**Product performance**

- Water circulation flow and "Beat Wing" pulsator enables water savings and washes thoroughly at the same time.
- "Air Jet Dry" dries up to 4kg clothes in 3 hours with nano titanium filter cleanly and economically.

**Hitachi Appliances, Inc.**

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Singapore,Thailand,Malaysia



BW-105JV (Platinum)

EP-1-080

Home electric appliances/lighting

electric washing machines

**Full Auto Washer Dryer with Heat Pump System**

**Environmental performance**

Heat pump dry system: The heat pump dry system replaces the traditional water-using dryer.  
 It reduces the running cost by 34700 yen per year as well as CO2 emission reduction by 479kilograms in comparison to the conventional washer and dryer systems which we produced in 2004.The energy-saving performance is the one of the top-level in this industry.

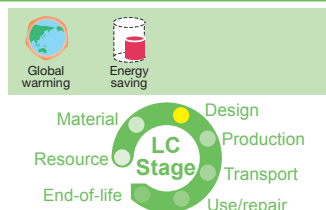
**Product performance**

The "Spin Dancing" wash technology  
 The machine discharges strong water flow from the whole directions of penetrate the detergent through the fabric.  
 In addition to traditional tumble washing,"Spin Dancing wash technology" gets your clothes very clean and reduces energy and water.  
 The "Eco navigation system" is equipped to determine dirt and quantities of the fabric to reduce approx. 9% of enegy and approx. 7% of water.  
 Nanoe tech deodorizer  
 "Nanoe" is the microscopical particles that can penetrate through the fabric."Nanoe" prevents the unpleasant smell and bacteria,also helps to wash stain away easily.

**Panasonic Corporation, Appliances Company**

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 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



TYPE II



1 Eco-product // Home electric appliances/lighting  
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EP-1-081

Home electric appliances/lighting

electric washing machines

Drum-type washing machine NA-148VG3

Environmental performance

"Environmental Technology (Inverter technology, Circulation Pump, 70L Big size Drum)" realized ranks the best for Energy saving "A+++ (based on New Energy label standards)", water saving performance (9750L/annum) in the European market with big capacity drum (8kg).

Product performance

- "Smart-wash & 3D sensor-wash" technology realized Energy saving by time-shortening.
- "DC brush-less motor & 3D sensor-wash" technology realized Noise reduction.

Panasonic Corporation, Appliances Company

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 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Asia, Oceania, Europe, Southeast Asia, Middle and Near East, Indonesia, Singapore, Thailand, Malaysia



EP-1-082

Home electric appliances/lighting

electric washing machines

Fully Automatic Washer/Dryer Combo with Plasmacluster

Environmental performance

- (1) Recycled plastic through Sharp's "Self Recycling Material Technology" is used for washing tub and bottom stand.
- (2) Complies with RoHS (examples are, PWB made of lead-free solder, and removal of specific brominated flame retardants)
- (3) Hole-less stainless steel tub enables energy efficiency and water saving from washing to drying. Since water does not pour into the outside of the tub, due to its hole-free design, the amount of water and detergent used is drastically reduced. This tub also keeps heat inside, and the temperature of the inner tub rises in a shorter time, thus achieving energy saving.
- (4) Stand by power consumption is 0W.

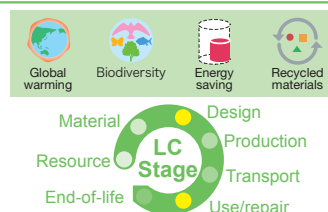
Product performance

- (1) The Sharp original air purification technology "Plasmacluster" technology is installed. After washing, Plasma discharge automatically generates and emits the same kind of positive and negative ions that exist in nature, into the place where the washing machine is set which suppress the effects of viruses and removes airborne mold. Using this technology you can also get rid of the smell of the laundry that is hard to be washed.
- (2) This machine adopts the "wide mouth" design with no inner lid which has been necessary in order to seal the heat air during drying. This makes the opening for laundry about 1.2 times as wide as the former one and makes it easier to put in and out large pieces of laundry such as blankets.
- (3) The wide open space of this machine can dry the hanging shirts, which contributes the speedy, less wrinkled, and uniformly dried laundry.

Sharp Corporation

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 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



**Plasmacluster Ion Technology**  
 A proprietary Sharp air purification method, this technology generates—through plasma discharge—and releases into the air positive and negative ions like those found in nature. These ions inhibit the action of airborne viruses and break down and eliminate airborne mold.

Fully Automatic Washer/Dryer Combo ES-TX810



EP-1-083

Home electric appliances/lighting

electric washing machines

Energy and water saving,drum-type electric washer dryer with heat pump

Environmental performance

- Mitigation of climate change:78% reduction in power consumption by the variable magnetic flux motor and the optimized control of heat pump unit.74% reduction in CO<sub>2</sub> emissions in comparison to the conventional model TW-F70 ('00 model).
- Efficient use of resources:67% reduction in water consumption to wash & dry 6kg of laundry by the high-pressure double shower, centrifugal wash and heat pump unit in comparison to the conventional model TW-F70 ('00 model).
- Recycle plastic collected from waste home appliances into parts for new home appliances.

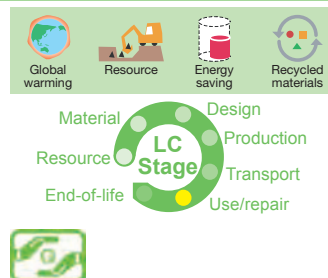
Product performance

- Water-saving "ZABOON"washing: By the centrifugal wash and high-pressure double shower, it washes firmly and can rinse with fewer water.
- Speedy: Reduction washing time by new active-suspension.
- Eco mode: Eliminate utility and water saving that detected cloth quantity, type and temperature by three sensors.
- Disinfection and deodorization: It is possible to prevent both unpleasant smells and bacteria by "pico ion" ,so that the drum and tub can be kept clean.

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Heat Pump Drum-type Electric Washer-dryer "ZABOON" TW-Z9200

EP-1-084

Home electric appliances/lighting

electronic ovens

Microwave Oven

Environmental performance

The oven is equipped with an "eco" shutter that closes the oven during heating to keep in the heat to shorten the preheating time and save electricity, and a "Double Kosoku Heater" that contains "Kosoku Heaters" to increase the oven heating speed and achieve an energy conservation standard rate of 111%. In addition, the initial setting that has the oven light on at all times other than during preheating to allow the user to see into the oven during cooking can be changed so that the light is off during cooking. Using this setting will save 1,170 Wh of electricity per year.

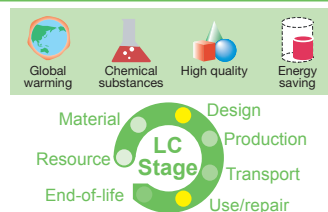
Product performance

This oven uses triple weight sensors to control the temperature and heating time in accordance with the weight of the food. The "ventilated double grill" and "steaming lid" can be used steam cook such foods as gyoza. Further, easy operation is provided by touching the LCD panel to select from 371 automatic cooking menus.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Japan



MRO-JV300

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EP-1-085

Home electric appliances/lighting

electronic ovens

New Oven with curved ceiling and side hot air system make delicious cooking and "Torechau Coat" that was new item improves cleaning performance.

Environmental performance

- Microwave performance is improved by Doom antenna and best impedance matching.
- Energy-saving-standard achievement rate of 115%. Annual power consumption of 63.9 kWh/year.

Product performance

- Temperature rising in Oven is only 5 minutes to reach 200 degrees C by rapid and even supply of Hot Air with new system, and Delicious Cooking is acquired by 350 degrees C Hot Oven.
- Ishikama tornade engine: Supply Hot Air by Heater with fin and double plate fan brade sysytem
- Dome Stone Oven : Curved ceiling of Oven make effective Convection of Hot Air
- Side Hot Air: Supply Hot Air also from side of Oven By this system, High Temperature Hot Air supplied to Foods even.

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Microwave Oven with Steam Function ER-JD510

EP-1-086

Home electric appliances/lighting

steam microwave oven

Energy saving Highly efficient Steam microwave oven : NE-R3300

Environmental performance

About 20% energy saving has been achieved compared with FY2005 model, NE-SS30. Input power consumption is changed from 82.4kWh/y to 65.5kWh/y. It have new function, "Grilling from frozen". It is grilling from frozen condition and 30% time saving achieved compared to grilling after defrosting. It conforms to the EU RoHS directive.

Product performance

The food bottom is baking while defrosting by combining the controls that effectively heat "Bistro grill plate" while increasing the amount of the micro wave that hits food directly by controlling "3D antenna" that discharges microwave and new hape "Bistro grill plate".

Panasonic Corporation, Appliances Company

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 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



Steam microwave oven NE-R3300

EP-1-087

Home electric appliances/lighting

ion generators

Plasmacluster Ion Generator (mobile type)

Environmental performance

- (1) Plasmacluster ion generating unit with low power consumption is installed.
- (2) Maximum power consumption 3.3W (when AC adapter is in use)
- (3) No specified brominated flame retardants which may produce harmful gas when burned.

Product performance

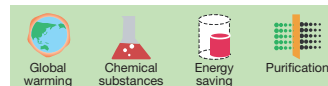
- (1) High density Plasmacluster 25000 is installed. It can remove airborne bacteria\* and adhering odor. In addition, Plasmacluster ion has 3 skin beautifying effects (brings moisture, elasticity, texture).
- (2) Palm-sized, compact design. Rechargeable battery (last for approx. 4 hours) allows you to use it when you are out or travelling in shinkansen (bullet train). It can also be easily recharged as it is chargeable from any USB port in the office or by AC adapters in the home.

\* Airborne bacteria : Effect after approx. 38 minutes in an approx. 40m<sup>3</sup> test room. Sharp does not guarantee the same results under actual operating conditions.

Sharp Corporation

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 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



IG-DM1S-B/P/A/W

EP-1-088

Home electric appliances/lighting

LCD panel

32" TFT-LCD TV Panel T315XW02 VQ

Environmental performance

The plastic components of this product are made of the self-developed material AU2000, which is a GP-certified halogen-free high-strength composite material of polycarbonate (PC) and glass fiber that can be used to reduce the use of plastics. All the metal components are SECC (Steel - ElectroGalvanized - ColdRolled-Coil) and 100% recyclable. The front metal frame can be installed without screws and, thanks to its small number of parts, is easily detachable. Power consumption of this product meets the Energy Star 4.0 Standard.

Product performance

This liquid crystal module is a 32" TFT active matrix liquid crystal display of 1366x768 pixels, featuring high brightness, wide viewing angle, high color saturation, high color depth, and low power consumption (about 78W). It also shows a 40% increase in optical transmittance (compared with other 32" LCD module).

AU Optronics Corporation

No.1, Lixing 2nd Rd., East Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-500-8800 -3629 Fax +886-3-577-2658  
 E-mail [yilin.wei@auo.com](mailto:yilin.wei@auo.com)  
 URL <http://auo.com>

Available in: Asia, Europe, U.S.A.



382kg-CO<sub>2</sub> Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



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EP-1-089

Home electric appliances/lighting

LCD Monitor

LCD Video Monitor: BT-LH910G

Environmental performance

- Achieved lowest power consumption in the industry due to Energy Efficiency technology.
- Non-Use of Specific Chemical Substances. (EU RoHS Directive.)
- Non-use of vinyl chloride (PVC) resin for internal wires

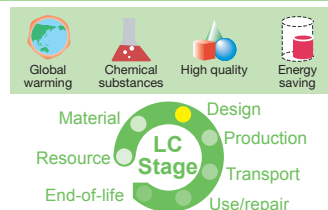
Product performance

- The 23 cm (9 inches) New IPS LCD Panel Produces High-Resolution, High-Quality Images.
- High Brightness, Superb Contrast, Wide Viewing Angle
- High-performance Image Processing Engine for Superb Moving Image Quality
- Gradation and RGB Manual Adjustment
- Outstanding Display Performance, Extensive Recording Assist Functions and a Wealth of Interfaces for Broadcasting Use.
- Cine-gamma and New Black Mode
- WFM (Y/R/G/B) and Vector Scope Display
- Closed Caption and Time Code Display
- Versatile Input Terminals, Including 3G-SDI and HDMI
- 3D Assist Functions Supported by Various Formats

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
 Tel +81-6-6905-8356 Fax +81-6-6905-4755  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Worldwide



LCD Video Monitor

EP-1-090

Home electric appliances/lighting

portable TV

Portable TV SV-ME970

Environmental performance

Achieved stand-by power consumption of approx. 0.07W.  
 Achieved power consumption of approx. 4W due to low power circuit technology.  
 Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.  
 Non-Use of Specific Chemical Substances \*  
 (\*: Lead,mercury,cadmium, hexavalent chromium,two specific brominated flame retardants,designated by the EU RoHS Directive.)

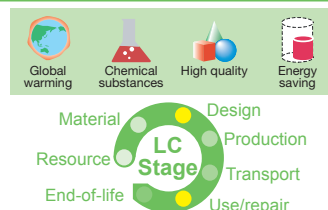
Product performance

7 inch wide display.  
 One segment digital Terrestrial TV tuner.  
 Web browser.  
 Wire-less LAN.  
 Waterproof (IPX6/IPX7) .

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
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 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



Portable TV SV-ME970

EP-1-091

Home electric appliances/lighting

televisions

LCD Television

Environmental performance

"Slim Block LED panel" saves the power consumption by controlling the black light for the dark portion of the pictures.

- "Low power consumption mode" decrease power consumption by appropriately adjusting brightness.
- "Automatic power off" automatically turns off the power after certain period of no operation or no signal.
- "Intelligent sensor" detects the brightness and color of lighting in the room, produces suitable pictures and decreases power consumption.
- "Human detector for saving energy" detects the viewer state and if necessary, sets power saving mode automatically.
- "Small size screen mode for saving energy" makes screen size small from 46" to 32" or 20" and save power consumption.

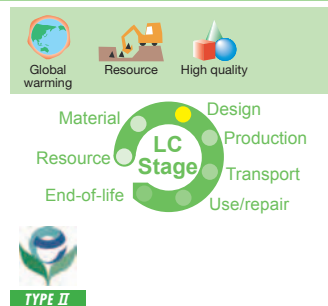
Product performance

- Fine and high contrast picture by "Slim Block LED panel"
- "Smooth cinema" function produces smooth, natural pictures.

Hitachi Consumer Electronics Co.,Ltd.

Shin-Otemachi Bldg. 2-1, Otemachi 2-chome, Chiyod-ku, Tokyo, 100-0004, Japan  
 Tel 0120-3121-11 Fax 0120-3121-34  
 URL <http://www.hitachi-ce.co.jp/en/index.html>  
 URL <http://av.hitachi.com/>

Available in: Japan



L46-S08

EP-1-092

Home electric appliances/lighting

televisions

The Viera C-series hi-vision LCD-TV (19/32-inch models)

Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 39% due to energy saving design (compared with the TH-L32C2)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Product performance

IPS-alpha panels with LED back light system (TH-L32C3)

IPS panels with LED back light system (TH-L19C3)

Wide viewing angle with high-quality images

Viera Link, enabling remote control of Panasonic BDs and AV amps using control signals from HDMI cables

SD card slot

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/avc/viera/>

URL <http://panasonic.net/csr/>



LCD-TV VIERA TH-L32C3

Available in: Japan, Asia

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EP-1-093

Home electric appliances/lighting

televisions

The Viera G-series full hi-vision LCD-TV (42-inch models)

Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 5% due to energy saving design (compared with the TH-L42D2)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Product performance

IPS-alpha panels with LED back light system

Wide viewing angle with high-quality images

Dynamic Contrast 2,000,000:1

Viera Link, enabling remote control of Panasonic BDs and AV amps using control signals from HDMI cables

SD card slot

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

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URL <http://panasonic.net/>

URL <http://panasonic.net/avc/viera/>

URL <http://panasonic.net/csr/>



LCD-TV VIERA TH-L42G3

Available in: Japan,Asia

EP-1-094

Home electric appliances/lighting

televisions

The Viera DT-series full hi-vision 3D LCD-TV (32/37-inch models)

Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 32% due to energy saving design (compared with the TH-L32G1)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Product performance

FULL HD 3D

IPS-alpha panels with LED back light system

Wide viewing angle with high-quality images

Dynamic Contrast 5,000,000:1

Viera Link, enabling remote control of Panasonic BDs and AV amps using control signals from HDMI cables

SD card slot

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

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URL <http://panasonic.net/avc/viera/>

URL <http://panasonic.net/csr/>



LCD-TV VIERA TH-L37DT3

Available in: Japan,Asia

EP-1-095

Home electric appliances/lighting

televisions

The Viera R-series full hi-vision LCD-TV (37-inch models)

Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 6% due to energy saving design (compared with the TH-L37R2)

Chemical substances & recycling:

- Non-use of specific chemical substances (compliant with the EU RoHS directive)
- Non-use of lead-solder circuit boards
- Non-use of vinyl chloride (PVC) resin for internal wires

Product performance

IPS-alpha panels with LED back light system

Wide viewing angle with high-quality images

Internal 1TB hard disk drive

Viera Link, enabling remote control of Panasonic BDs and AV amps using control signals from HDMI cables

SD card slot

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/avc/viera/>

URL <http://panasonic.net/csr/>



LCD-TV VIERA TH-L37R3

Available in: Japan,Asia

EP-1-096

Home electric appliances/lighting

televisions

Terrestrial/BS/CS110° Digital High-Definition LCD TV (60/52/46/40V-inch)

Environmental performance

- Achieves both high image quality and high energy efficiency by combining an LCD panel that uses high-speed UV<sup>2</sup>A technology\*1 and four-color technology\*2 with an LED backlight that offers precise, efficient control of light. (Reduction in power consumption by more than 25% compared to previous models\*3.)
- Backlight longevity is about 60,000 hours.
- Resource conservation by reduction of the amount of materials (Reduction in weight by approximately 23% compared to previous models\*4.)
- Recycled paper is used for the operation manuals.

\*1 Abbreviation of ultraviolet induced Multi-domain Vertical Alignment. Photo-alignment technology that can precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.  
 \*2 Sharp's four-color concept was designed for use with LCDs; it differs from the conventional three-primary-color concept of light and color.  
 \*3 LV3 series  
 \*4 Based on comparison of LC-60L5 and LC-60LV3.

Product performance

- High-speed UV<sup>2</sup>A LCD panel and 240Hz scanning LED backlight. (TV contrast\*1 of 7,000,000:1)
- ARSS\*2 eight-speaker system\*3 integrates video and audio, plus Duo Bass low-vibration woofer\*4.
- Impressive 3D images with screen brightness approximately 1.8 times\*5 higher than previous models.

\*1 The maximum contrast level a TV set is capable of achieving.  
 \*2 Abbreviation of "Around Speaker System". Audio technology in which speakers are arranged around the screen.  
 \*3 Featured in 60V/52V/46V-inch models (40V-inch models use a 7-speaker system).  
 \*4 Featured in 60V/52V/46V-inch models.  
 \*5 Comparing light utilization efficiency with Sharp's previous technology (which does not incorporate FRED technology)

Sharp Corporation

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E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)

URL <http://sharp-world.com/>

URL <http://sharp-world.com/corporate/eco/>



AQUOS Quattron 3D (LC-60L5)

Available in: Japan

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EP-1-097

Home electric appliances/lighting

televisions

**BRAVIA HX820 Series LCD TVs: Higher Picture Quality, Lower Power Consumption**

**Environmental performance**

BRAVIA HX820 series feature an array of power-saving features, including an Intelligent Presence Sensor.

- Dynamic Edge LED technology optimizes the television screen's LED backlight for a superior picture and superb contrast while power consumption is significantly reduced.
- Intelligent Presence Sensor detects motion and faces to determine whether people are in front of the television and watching, so that the screen can be dimmed or turned off.

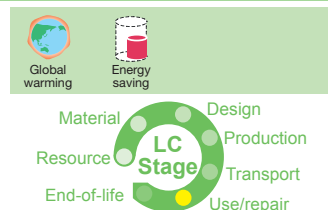
**Product performance**

Full HD 3D TV with Dynamic Edge LED, Motionflow XR 480/400, Wi-Fi. Innovations such as Dynamic Edge LED backlighting and an Intelligent Presence Sensor contribute to superior picture quality while saving energy. The series also embodies Monolithic Design, ensuring both a beautiful appearance and a beautiful picture.

**Sony Corporation**

1-7-1 Konan Minato-ku, Tokyo, 108-0075, Japan  
 URL <http://sony.co.jp/eco/>  
 URL <http://sony.jp/bravia/>  
 URL <http://sony.co.jp/csr/>

Available in: Japan,Asia,Oceania,Europe,North America,South America,Taiwan (Rep. of China),China



BRAVIA HX820 Series

EP-1-098

Home electric appliances/lighting

televisions

**It is possible to look and listen about 3 hours by battery power supply**

**Environmental performance**

- Mitigation of climate change: 27% reduction in annual power consumption by adopting LED panel of low consumption.
- Efficient use of resources: Usage of recycled plastic. Mark the material name for a plastic parts that greater than or equal 25g

**Product performance**

- Power peak-shift: Switch the power source in use from AC to the battery at times of a day of the peak power demand
- Energy saving : 18% energy saving mode embarkation.
- High quality 19 inch LED LCD : Look and listen

**TOSHIBA CORPORATION Digital Products & Services Company**

1-1, Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Digital high-definition LCD TV REGZA 19P2

Eco-product // Home electric appliances/lighting

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EP-1-099

Home electric appliances/lighting

speaker

High-Fidelity and eco-friendly loudspeaker with cabinets made from used whiskey barrels

Environmental performance

The cabinets of the "Pure Malt Speaker" series are made from used whiskey barrels (virgin white oak) that produce rich sounds. Pioneer promotes the 3Rs (Reduce, Reuse, Recycle) aggressively, by not using new wood, preventing forest destruction, and preserving bio-diversity.

Oak trees grow for 100 years before serving as whiskey casks for another 50 to 70 years. After that, the wood is recycled into speaker cabinets that produce warm, rich sounds for many more years.

By using heat from natural spas, energy is saved during the wood processing from barrels; efforts in using lower VOCs (Volatile Organic Compounds) in adhesives and paint are used; and pulp molded material is adopted as shock absorbing material for packaging.

Pioneer's original efforts to reduce harmful chemical substances through stricter in-house standards than those of the EU RoHS Directive are also implemented.

A portion of the revenues from product sales is donated to the Green Fund of the National Land Afforestation Promotion Organization as a contribution to government-led promotion of afforestation.



PURE MALT SPEAKER S-A4SPT-PM

PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031, Japan

Tel +81-44-580-3211

URL <http://pioneer.jp/index-e.php>

URL [http://pioneer.jp/components/puremalt/index.html?cl=200903\\_main\\_puremalt](http://pioneer.jp/components/puremalt/index.html?cl=200903_main_puremalt)

URL <http://pioneer.jp/environment-e/>

Available in: Japan, Europe, Southeast Asia, China

EP-1-100

Home electric appliances/lighting

speaker system

2.1-Channel SoundBar Speaker System SC-HTB15

Environmental performance

Achieved stand-by power consumption of approx. 0.05W (North America model). Achieved power consumption of approx. 40W (North America model) due to low power circuit technology.

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

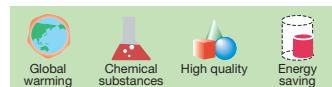
Product performance

2.1-Channel SoundBar Speaker System.

With Powerful Down-Firing Subwoofer system.

Setting up is possible install Horizontal style or Vertical style as Soundbar system.

Digital power Amplifier 240W.



2.1-Channel SoundBar Speaker System SC-HTB15

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6906-3007

URL <http://panasonic.co.jp/>

URL <http://panasonic.net/csr/>

Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia

1 Eco-product // Home electric appliances/lighting  
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EP-1-101

Home electric appliances/lighting

vacuum machines

Vacuum Cleaner

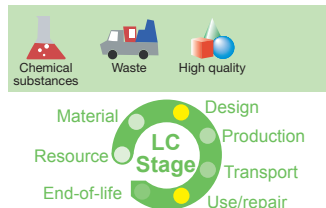
Environmental performance

- Lead-free solder for power control board.

Product performance

- Easy to use and high power bagless type cleaner.
- This Cyclone type vacuum cleaner was awarded the Allergy UK\* Seal of Approval in recognition of its proven ability to reduce exposure to allergens.

\*Tested by Allergy UK (The British Allergy Foundation)



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>



Available in: Thailand, Malaysia

CV-SJ21V

EP-1-102

Home electric appliances/lighting

vacuum machines

Cyclone type vacuum cleaner MC-SS310GX

Environmental performance

- \* Infrared ray sensor detects minute house dust of about 20 μm. Power is controlled in four levels depending on quantity of dust. The new "Floor Detective Sensor" also detects the load of a rotation brush by recognizing the type of floor which is carpet or flooring. Power is automatically changed to Energy Saving Mode on the flooring and where there is little dust. And it is additionally reduced in two steps when nozzle is away from the floor surface. 56% of energy can be saved with these functions as compared with other models not using them.

- \* Suction power of more than 99% can be maintained by "Power Press Cyclone System" that reduces power loss.

Product performance

More than 99% of power can be maintained with the industry's first "Power Press Cyclone", and 56% of energy can be saved by the "House Dust Detective Sensor" equipped with the idling function and the new "Floor Detective Sensor".



Panasonic Corporation, Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan  
 Tel +81-77-561-2065 Fax +81-77-561-6749  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>



Available in: Japan

EP-1-103

Home electric appliances/lighting

vacuum machines

Equipped with Dual Tornado System and Quiet Construction. A Cleaner of the Energy Saving and Low Noise

Environmental performance

- Mitigation of climate change: Because continue strong power of absorption in Dual Tornado System, Don't use useless electricity. A maximum of about 60% reduction in power consumption in Eco Automatic Mode compared with High Mode.
- Recycle plastic collected from waste home appliances into parts for new home appliances.

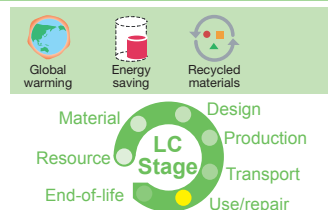
Product performance

- Long-lasting: Power lasts by Dual Tornado System.
- Low noise: Vibration control structure is strengthened with using a spring for keep of motor.
- Self-propelled head: Ease cleaning with the grip which easy to use.

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 259-1393, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Cyclone Cleaner "TORNEO" VC-CG511X

EP-1-104

Home electric appliances/lighting

watches

Casio Wristwatch: Radio Wave Solar Watch PROTOREK

Environmental performance

- \*Uses a solar-power battery as the power source.
- \*An originally-designed solar system is utilized to transform even low amounts of light into power.
- \*Advanced measurement functions benefiting from miniaturized sensor technologies monitor the constant changes in natural phenomena with reliable accuracy, "Feel the field" will foster a kindness to nature.

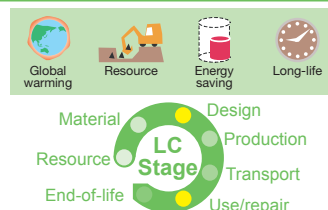
Product performance

- \*The latest auto radio-wave receiving function, Multi-Band 6, receives time calibration radio signals up to six times per day (Japan [2], US, UK, Germany and China).

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo, 151-8543, Japan  
 Tel +81-3-5334-4111  
 URL <http://world.casio.com/>  
 URL <http://world.casio.com/csr/>

Available in: Worldwide



TYPE II



PROTOREK PRW5000-1

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EP-1-105

Home electric appliances/lighting

water/space heaters

Prior Eco-JOES - Highly-efficient Central Heating Boiler

Environmental performance

Employing a latent heat recovery-type heat exchanger, the system utilizes the thermal energy of exhaust gas which was previously wasted, achieving a high thermal efficiency of 95%\*1 in hot water supply and 89%\*2 in space heating.

\*1:235-N060 hot water supply capacity

\*2:235-N060 at low temperature combustion

With its smaller energy consumption, Eco-JOES has reduced annual CO<sub>2</sub> emissions by 240kg, which is equal to the amount of CO<sub>2</sub> absorbed by 24 eucalyptus trees.\*3

\*3:235-N060 data compared to conventional systems. CO<sub>2</sub> emission factor of gas: 2.29kg-CO<sub>2</sub>/m<sup>3</sup> (Osaka Gas data)

Product performance

It produces enough hot water for the bathroom and kitchen. It is equipped with an automatic control system for hot water supply and additional boiling and its boiling capacity is sufficient for floor heaters and/or bathroom heaters/dryers.

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL [http://home.osakagas.co.jp/search\\_buy/eco\\_jozu/index.html](http://home.osakagas.co.jp/search_buy/eco_jozu/index.html)

URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



Eco-JOES

EP-1-106

Home electric appliances/lighting

water heater

HOT KING KK-20 Heat Pump Water Heater

Environmental performance

During operation, it costs few energy and generates low CO<sub>2</sub>. When calculated with comparable fuel consumption, it conserves 38.7% to 78.4% energy.

When calculated by CO<sub>2</sub> discharge volume, it helps to reduce 38.3% to 78.4% of CO<sub>2</sub> emissions.

Product performance

High safety: The adoption of a heat pump system does not generate waste gas and is free of any fuel leak poisoning hazard.

Convenience: Utilizing the existing hot water system circuit in a parallel connection, it features fully automated control with the operating life cycle extending to as long as 10 to 15 years.

ETERNAL ENERGY INC.

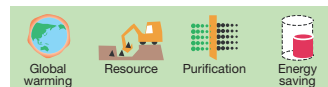
No.1-47, Sec.3, Wuquan W. Rd., Nantun Dist., Taichung City, Taiwan, 408, Republic of China

Tel +886-4-23806721 Fax +886-4-23806728

E-mail [geoshine@ms19.hinet.net](mailto:geoshine@ms19.hinet.net)

URL <http://www.hot-cool-king.com> or [www.geo-shine-solar.com.tw](http://www.geo-shine-solar.com.tw)

Available in: Taiwan (Rep. of China)



EP-1-107

Home electric appliances/lighting

water heater

HOT KING KK-30 Heat Pump Water Heater

Environmental performance

During operation, it costs few energy and generates low CO<sub>2</sub>. When calculated with comparable fuel consumption, it conserves 38.7% to 78.4% energy.

When calculated by CO<sub>2</sub> discharge volume, it helps to reduce 38.3% to 78.4% of CO<sub>2</sub> emissions.

Product performance

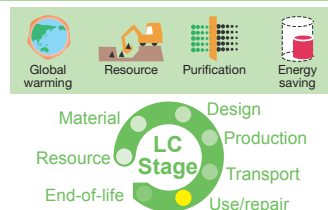
High safety: The adoption of a heat pump system does not generate waste gas and is free of any fuel leak poisoning hazard.

Convenience: Utilizing the existing hot water system circuit in a parallel connection, it features fully automated control with the operating life cycle extending to as long as 10 to 15 years.

ETERNAL ENERGY INC.

No.1-47, Sec.3, Wuquan W. Rd., Nantun Dist., Taichung City, Taiwan, 408, Republic of China  
 Tel +886-4-23806721 Fax +886-4-23806728  
 E-mail geoshine@ms19.hinet.net  
 URL <http://www.hot-cool-king.com> or [www.geo-shine-solar.com.tw](http://www.geo-shine-solar.com.tw)

Available in: Taiwan (Rep. of China)



EP-1-108

Home electric appliances/lighting

water heater

HOT KING KK-50 Heat Pump Water Heater

Environmental performance

During operation, it costs few energy and generates low CO<sub>2</sub>. When calculated with comparable fuel consumption, it conserves 38.7% to 78.4% energy.

When calculated by CO<sub>2</sub> discharge volume, it helps to reduce 38.3% to 78.4% of CO<sub>2</sub> emissions.

Product performance

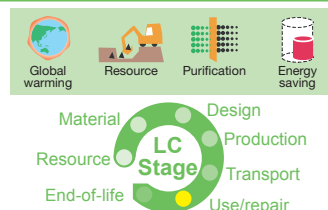
High safety: The adoption of a heat pump system does not generate waste gas and is free of any fuel leak poisoning hazard.

Convenience: Utilizing the existing hot water system circuit in a parallel connection, it features fully automated control with the operating life cycle extending to as long as 10 to 15 years.

ETERNAL ENERGY INC.

No.1-47, Sec.3, Wuquan W. Rd., Nantun Dist., Taichung City, Taiwan, 408, Republic of China  
 Tel +886-4-23806721 Fax +886-4-23806728  
 E-mail geoshine@ms19.hinet.net  
 URL <http://www.hot-cool-king.com> or [www.geo-shine-solar.com.tw](http://www.geo-shine-solar.com.tw)

Available in: Taiwan (Rep. of China)



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EP-1-109

Home electric appliances/lighting

water heater

**HOT KING KK-100 Heat Pump Water Heater**

**Environmental performance**

During operation, it costs few energy and generates low CO<sub>2</sub>. When calculated with comparable fuel consumption, it conserves 38.7% to 78.4% energy.

When calculated by CO<sub>2</sub> discharge volume, it helps to reduce 38.3% to 78.4% of CO<sub>2</sub> emissions.

**Product performance**

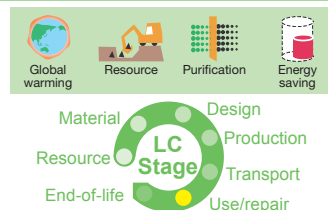
High safety: The adoption of a heat pump system does not generate waste gas and is free of any fuel leak poisoning hazard.

Convenience: Utilizing the existing hot water system circuit in a parallel connection, it features fully automated control with the operating life cycle extending to as long as 10 to 15 years.

**ETERNAL ENERGY INC.**

No.1-47, Sec.3, Wuquan W. Rd., Nantun Dist., Taichung City, Taiwan, 408, Republic of China  
 Tel +886-4-23806721 Fax +886-4-23806728  
 E-mail geoshine@ms19.hinet.net  
 URL <http://www.hot-cool-king.com> or [www.geo-shine-solar.com.tw](http://www.geo-shine-solar.com.tw)

Available in: Taiwan (Rep. of China)



EP-1-110

Home electric appliances/lighting

water heater

**HOT KING KK-150 Heat Pump Water Heater**

**Environmental performance**

During operation, it costs few energy and generates low CO<sub>2</sub>. When calculated with comparable fuel consumption, it conserves 38.7% to 78.4% energy.

When calculated by CO<sub>2</sub> discharge volume, it helps to reduce 38.3% to 78.4% of CO<sub>2</sub> emissions.

**Product performance**

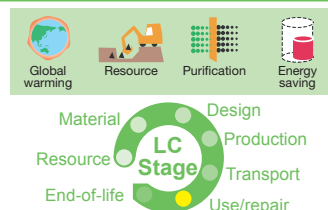
High safety: The adoption of a heat pump system does not generate waste gas and is free of any fuel leak poisoning hazard.

Convenience: Utilizing the existing hot water system circuit in a parallel connection, it features fully automated control with the operating life cycle extending to as long as 10 to 15 years.

**ETERNAL ENERGY INC.**

No.1-47, Sec.3, Wuquan W. Rd., Nantun Dist., Taichung City, Taiwan, 408, Republic of China  
 Tel +886-4-23806721 Fax +886-4-23806728  
 E-mail geoshine@ms19.hinet.net  
 URL <http://www.hot-cool-king.com> or [www.geo-shine-solar.com.tw](http://www.geo-shine-solar.com.tw)

Available in: Taiwan (Rep. of China)





EP-2-001

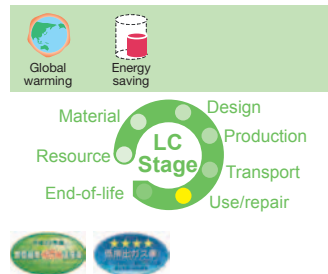
Carriers/automobiles

automobiles

**TOYOTA Prius with hybrid power**

**Environmental performance**

The new Prius model is equipped with THS II, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which refers to the simultaneous evolution of ecology and power. It has achieved world-beating fuel economy of 38.0 km/L\* and low exhaust emissions. The drive has been dramatically improved by the development of hybrid power. 10-15 mode drive. \*Ministry of Land, Infrastructure, and Transport figure.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



Prius

EP-2-002

Carriers/automobiles

automobiles

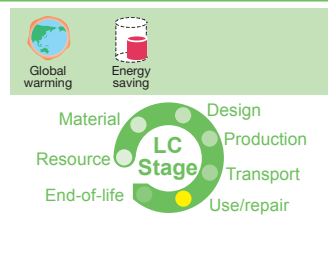
**TOYOTA FCHV-adv**

**Environmental performance**

The Toyota FCHV-adv achieved 25% better fuel economy and 60% higher pump-to-wheel efficiency in the Japanese 10-15 test cycle (Toyota test data) due to improvements made to the Toyota FC Stack and a redesigned fuel cell control system.

**Product performance**

From the start of the fuel cell vehicle effort in 1992, Toyota has pursued the development of its own fuel cell stack, the core component of any fuel cell vehicle. This high-performance fuel cell-the Toyota FC Stack-is a performance leader among vehicular fuel cells worldwide. In addition to the fuel cell, the FCHV has a secondary battery which stores energy regenerated during braking. When combined with the hybrid system which was first put to large-scale application in the Prius, the FCHV achieves highly efficient operation through sophisticated energy management.  
 (Fuel type) Hydrogen, (Max cruising range) 330 km, (Max speed) 155 km/h,  
 (Weight) 1880 kg, (Seating capacity) 5 people.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



TOYOTA FCHV-adv

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EP-2-003

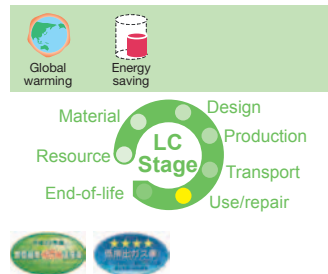
Carriers/automobiles

automobiles

**TOYOTA Prius α with hybrid power**

**Environmental performance**

The new Prius model is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which refers to the simultaneous evolution of ecology and power. It has achieved world-beating fuel economy of 31.0 km/L\* and low exhaust emissions. The drive has been dramatically improved by the development of hybrid power. 10-15 mode drive. \*Ministry of Land, Infrastructure, and Transport figure.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail satoshi\_aida@mail.toyota.co.jp  
 URL <http://www.toyota.co.jp>



Prius α

EP-2-004

Carriers/automobiles

automobiles

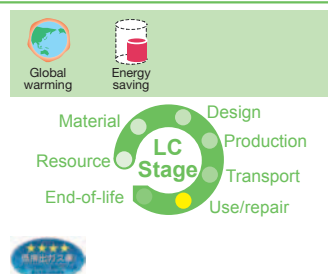
**TOYOTA PRIUS PLUG-IN HYBRID**

**Environmental performance**

TOYOTA has extended the cruising range of the electric-motor-only driving mode (EV mode). In addition to reducing CO2 emissions and gasoline consumption as well as contributing to air pollution control.

**Product performance**

The new Prius PULUG-IN HYBRID is a hybrid vehicle which can also recharge batteries directly from household electricity as an electric vehicle. It is an evolution through integration of hybrid and electric vehicles.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail satoshi\_aida@mail.toyota.co.jp  
 URL <http://www.toyota.co.jp>



Prius PLUG-IN HYBRID

Eco-product // Carriers/automobiles

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EP-2-005

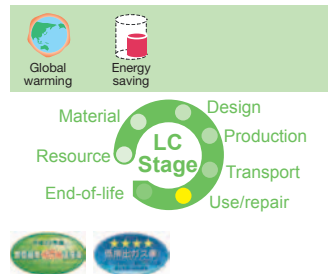
Carriers/automobiles

automobiles

**TOYOTA SAI with hybrid power**

**Environmental performance**

The SAI is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which refers to the simultaneous evolution of ecology and power. It has achieved world-beating fuel economy of 24.0 km/L\* and low exhaust emissions. The drive has been dramatically improved by the development of hybrid power. 10-15 mode drive. \*Ministry of Land, Infrastructure, and Transport figure.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail satoshi\_aida@mail.toyota.co.jp  
 URL <http://www.toyota.co.jp>



SAI

EP-2-006

Carriers/automobiles

automobiles

**TOYOTA CROWN HYBRID**

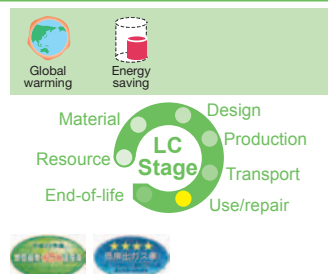
**Environmental performance**

Automobile hybrid systems combine two motive power sources, namely an internal combustion engine and an electric motor, to take advantage of the benefits provided by both these power sources while compensating for each other's shortcomings, resulting in highly efficient driving performance. Although hybrid systems use an electric motor, they do not require external charging as do all-electric vehicles.

**Product performance**

Toyota Crown Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 15.8 km/liter
- 2) Technology to reduce fuel consumption
  - Variable valve timing
  - Electric power steering system
  - Direct injection 4 stroke gasoline engine
  - Idling stop system



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail satoshi\_aida@mail.toyota.co.jp  
 URL <http://www.toyota.co.jp>



TOYOTA CROWN HYBRID

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EP-2-007

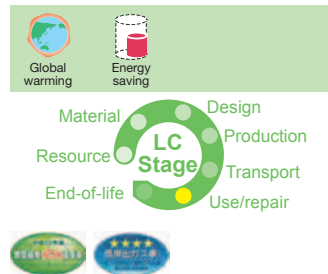
Carriers/automobiles

automobiles

**TOYOTA HARRIER HYBRID**

**Environmental performance**

Toyota Harrier Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure, and Transport. (1) Specific fuel consumption (10-15 Japanese test cycle): 17.8 km/liter (2) Technology to reduce fuel consumption: Hybrid system -- Continuously variable transmission, Variable valve timing, Electric power steering system



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



TOYOTA HARRIER HYBRID

EP-2-008

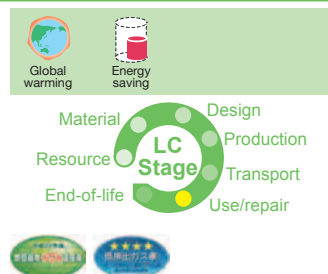
Carriers/automobiles

automobiles

**TOYOTA ESTIMA HYBRID**

**Environmental performance**

Toyota ESTIMA Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure, and Transport. (1) Specific fuel consumption (10-15 Japanese test cycle): 20.0 km/liter (2) Technology to reduce fuel consumption: Hybrid system -- Continuously variable transmission, Variable valve timing, Electric power steering system



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 URL <http://www.toyota.co.jp>



TOYOTA ESTIMA HYBRID

EP-2-009

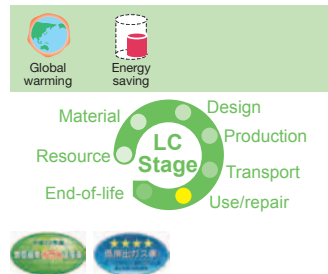
Carriers/automobiles

automobiles

**Lexus LS600h with hybrid power**

**Environmental performance**

The Lexus 600h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 12.2 km/L and low exhaust emissions.



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 URL <http://www.toyota.co.jp>



Lexus LS600h with hybrid power

EP-2-010

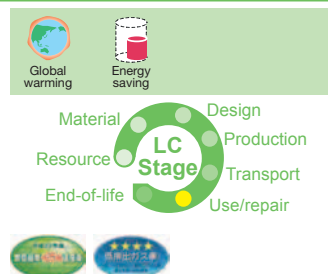
Carriers/automobiles

automobiles

**Lexus GS450h with hybrid power**

**Environmental performance**

The Lexus GS450h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 14.2 km/L and low exhaust emissions.



**Toyota Motor Corporation**

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 URL <http://www.toyota.co.jp>



Lexus GS450h with hybrid power

1 Eco-product // Carriers/automobiles  
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EP-2-011

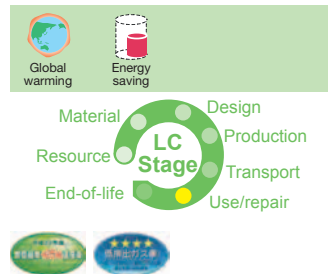
Carriers/automobiles

automobiles

Lexus HS250h with hybrid power

**Environmental performance**

The Lexus HS250h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 23.0 km/L and low exhaust emissions.



**Toyota Motor Corporation**

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 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



Lexus HS250h

EP-2-012

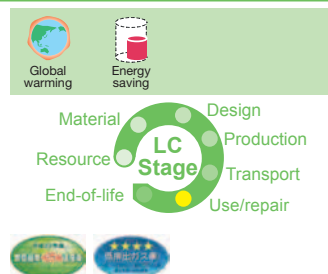
Carriers/automobiles

automobiles

Lexus CT200h with hybrid power

**Environmental performance**

The Lexus CT200h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 34.0 km/L and low exhaust emissions.



**Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
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 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



Lexus CT200h with hybrid power

EP-2-013

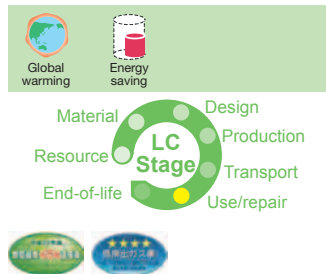
Carriers/automobiles

automobiles

**Lexus RX450h with hybrid power**

**Environmental performance**

The Lexus RX450h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 19.4 km/L and low exhaust emissions.



**Toyota Motor Corporation**

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 URL <http://www.toyota.co.jp>



Lexus RX450h with hybrid power

EP-2-014

Carriers/automobiles

automobiles

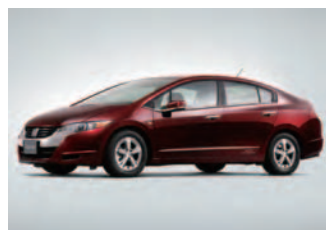
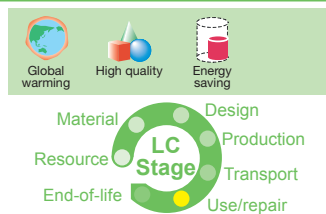
**FCX Clarity**

**Environmental performance**

Cruising range:620km

**Product performance**

Length:4,845mm  
 Widht:1,845mm  
 Height:1,470mm




**Honda motor Co.,Ltd**

2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan

Available in: Japan

FCX Clarity

1 Eco-product // Carriers/automobiles  
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<b>EP-2-015</b>	<b>Carriers/automobiles</b>
<b>automobiles</b>	
<b>Insight</b>	
<p><b>Environmental performance</b></p> <p>further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.</p> <p>JC08 mode:27.2km/h 10-15 mode:31.0km/h</p> <p><b>Product performance</b></p> <p>Lenght:4,390mm Width:1,695mm Height:1,425mm</p>	 <p>Global warming High quality Energy saving</p> <p>Material Design Resource Production End-of-life Transport Use/repair</p> <p>LC Stage</p> <p>☆☆☆☆ 低排出力次第</p> <p>Insight</p>
<b>Honda motor Co.,Ltd</b>	
2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan	
Available in: Japan	Insight

<b>EP-2-016</b>	<b>Carriers/automobiles</b>
<b>automobiles</b>	
<b>CR-Z</b>	
<p><b>Environmental performance</b></p> <p>further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.</p> <p>JC08 mode:22.8km/h 10-15 mode:25.0km/h</p> <p><b>Product performance</b></p> <p>Lenght:4,080mm Width:1,740mm Height:1,395mm</p>	 <p>Global warming High quality Energy saving</p> <p>Material Design Resource Production End-of-life Transport Use/repair</p> <p>LC Stage</p> <p>☆☆☆☆ 低排出力次第</p> <p>CR-Z</p>
<b>Honda motor Co.,Ltd</b>	
2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan	
Available in: Japan,Europe	CR-Z



EP-2-017

Carriers/automobiles

automobiles

Fit Hybrid

**Environmental performance**

further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.

10-15 mode:24.5km/h

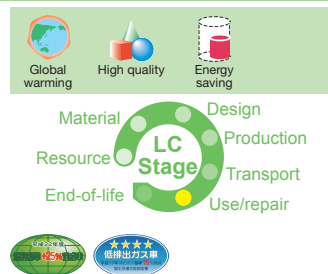
**Product performance**

Lenght:3,900mm  
Width:1,695mm  
Height:1,525mm

**Honda motor Co.,Ltd**

2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan

Available in: Japan,Europe



Fit Hybrid

EP-2-018

Carriers/automobiles

automobiles

Fit Shuttle Hybrid

**Environmental performance**

further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.

JC08 mode:25.0km/h  
10-15 mode:30.0km/h

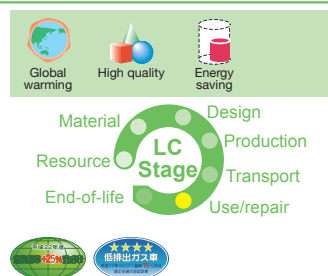
**Product performance**

Lenght:4,410mm  
Width:1,695mm  
Height:1,540mm

**Honda motor Co.,Ltd**

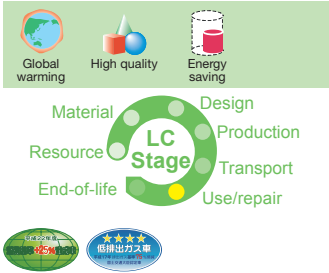

2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan


Available in: Japan



Fit shuttle Hybrid

1 Eco-product // Carriers/automobiles  
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<b>EP-2-019</b>	<b>Carriers/automobiles</b>
<b>automobiles</b>	
<b>Freed hybrid</b>	
<p><b>Environmental performance</b></p> <p>ECON mode and the Ecological Drive Assist System (Eco Assist), which is designed to help the driver develop and maintain a fuel-efficient driving style, are both standard.</p> <p>JC08 mode:21.6km/h 10-15 mode:24.0km/h</p> <p><b>Product performance</b></p> <p>Lenght:4,215mm Width:1,695mm Height:1,715mm</p>	
<b>Honda motor Co.,Ltd</b>	
2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan	Freed hybrid
Available in: Japan	

<b>EP-2-020</b>	<b>Carriers/automobiles</b>
<b>automobiles</b>	
<b>Freed Spike Hybrid</b>	
<p><b>Environmental performance</b></p> <p>ECON mode and the Ecological Drive Assist System (Eco Assist), which is designed to help the driver develop and maintain a fuel-efficient driving style, are both standard.</p> <p>JC08 mode:21.6km/h 10-15 mode:24.0km/h</p> <p><b>Product performance</b></p> <p>Lenght:4,215mm Width:1,695mm Height:1,715mm</p>	
<b>Honda motor Co.,Ltd</b>	
2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan	
Available in: Japan	

EP-2-021

Carriers/automobiles

automobiles

EV-neo

Environmental performance

On top of the excellent environmental performance offering a clean and quiet ride worthy of an electric scooter with zero CO<sub>2</sub> emissions while riding, the EV-neo leverages a motor that, even with cargo loaded, generates high torque even in the low-speed range to achieve a powerful starting and hill-climbing performance.

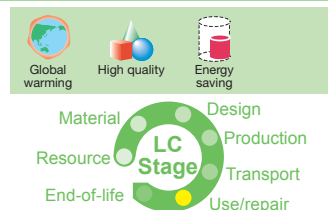
Product performance

Length: 1.830m  
Width: 0.695m  
Height: 1.065m

Honda motor Co.,Ltd

2-1-1 Minami-aoyama, minato-ku, Tokyo, Japan

Available in: Japan



EP-2-022

Carriers/automobiles

automobiles

Nissan LEAF

Environmental performance

Nissan LEAF is a zero emission car which doesn't produce CO<sub>2</sub> or exhaust gas. As a uniquely designed mass production EV, it has a roomy 5 passenger seating capacity and features a laminated lithium-ion battery (90kW) manufactured by AESC, a Nissan and NEC joint venture that give it a driving range of 200km (under JC08 mode). The inverter and small high-powered motor which gives the Nissan LEAF its powerful and linear driving are also assembled by Nissan. A full 100% charge takes about 8 hours with a normal charging outlet (200V) and when depleted can be powered up to 80% in just 30 minutes using the Quick Charger. Special features also include a unique Zero Emission IT support system that guide drivers to the nearest charging spots while traveling and a timed charging system that automatically charges, to take advantage of cheaper electricity rates at night time when plugged in. Nissan LEAF reduced CO<sub>2</sub> emissions by approximately 40% compared with a comparable gasoline vehicle on the basis of LCA.



Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan  
Tel +81-45-523-5523  
URL <http://www.nissan-global.com>  
URL <http://www.nissan-zeroemission.com>

Available in: Japan, Europe, North America

Nissan LEAF

EP-2-023

Carriers/automobiles

automobiles

### Nissan Clean Diesel X-TRAIL 20GT

#### Environmental performance

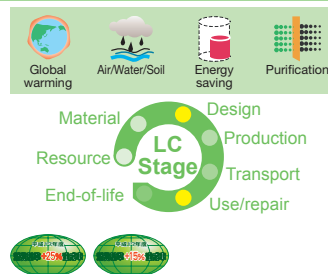
Nissan Clean Diesel X-TRAIL 20GT meets most stringent emissions regulation and also achieves excellent fuel economy such as 15.2km/l (manual transmission) / 14.2km/l (automatic transmission) in 10/15 mode by featuring advanced technologies for emission reduction.

- Common rail fuel injection system
- Re-circulated exhaust gas cooler
- Diesel particulate filter
- New Lean NOx trap catalyst
- Double swirl port

Nissan Clean Diesel X-TRAIL 20GT highly reduced typical diesel noise and vibrations and also provides superior quietness in the cabin.

#### Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan  
 Tel +81-45-523-5523  
 URL <http://www.nissan-global.com>



Nissan Clean Diesel X-TRAIL 20GT

Available in: Japan

EP-2-024

Carriers/automobiles

automobiles

### Nissan Fuga Hybrid

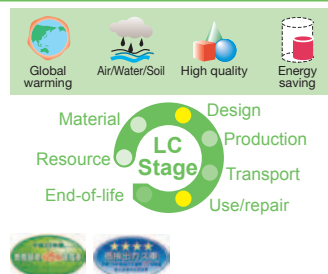
#### Environmental performance

The Fuga Hybrid's Intelligent Dual Clutch Control system connects the high-response electric motor and engine directly to the transmission, without the use of a torque converter. This highly efficient and lightweight hybrid system contributes to fuel efficiency of 19.0km/L (10-15 mode) - comparable to that of a compact car, while also providing the direct feel and exhilarating driving performance. Since one of the two clutches completely disconnects the motor from the engine, quiet and highly efficient EV mode driving is realized. The EV mode is frequently applied, helping the Fuga Hybrid achieve best-in-class\* fuel economy. The Fuga Hybrid's compact, high-output lithium-ion battery is able to charge/discharge quickly. Also the Fuga Hybrid's electronic 7-speed hybrid transmission with manual shift mode features optimized shift performance according to the motor's output characteristics.

\*Four-door sedan with 3.0 liter engine or above. (As of October 2010, according to Nissan)

#### Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan  
 Tel +81-45-523-5523  
 URL <http://www.nissan-global.com>



Nissan Fuga Hybrid

Available in: Japan, North America

Eco-product // Carriers/automobiles

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EP-2-025

Carriers/automobiles

cranes for trucks

Economical & Ecological Crane U-can ECO

Environmental performance

The electronically-controlled double pump mechanism, Eco Pump System, halves the number of revs during the operation of a crane (\*1). In addition, the fuel consumption rate has been improved by up to 40% (\*1), cutting CO<sub>2</sub> emissions while realizing a high economic effect. Furthermore, the decrease in revs contributes to the creation of a soundproofed working environment and improvement of noise issues.

\*1: Compared with the company's product U-can (for middle-sized trucks)

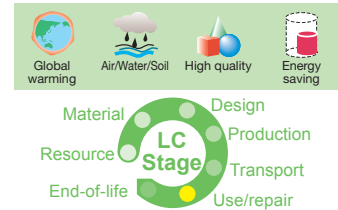
Product performance

- (1) Thanks to the improvement of the fuel consumption rate by approximately 40% (\*2), fuel expenses are saved by approximately 196,000 yen (\*3) per year and roughly 4,000 kg (\*3) of CO<sub>2</sub> emissions can be cut annually.
- (2) The 50% reduction in the number of revs (\*2) realizes a lower noise by nearly -4dB (\*4).
- \*2: Compared with the company's Unic Crane, U-can (for middle-sized trucks)
- \*3: Light oil price: 125 yen/L, CO<sub>2</sub> emission coefficient: 2.62 kg-CO<sub>2</sub>/L (In case of being operated three hours per day, 250 days a year)
- \*4: Comparing the maximum when a crane is operated. Average within 7m on each side of the crane

FURUKAWA UNIC CO., LTD.

1-5-3, NIHONBASHI, CHUO-KU, TOKYO, Japan  
 Tel +81-3-3231-8611 Fax +81-3-3231-8261  
 URL <http://www.furukawaunic.co.jp/>

Available in: Japan



Economical & Ecological Crane U-can ECO

EP-2-026

Carriers/automobiles

energy storage systems for rolling stock

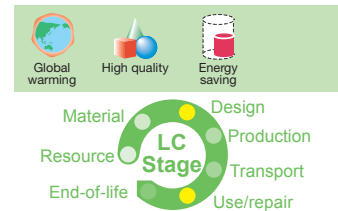
An Accumulating System for Rolling Stock which Recycles Discharged Thermal Energy

Environmental performance

- Mitigation of climate change: 8% of inverter regenerated energy (energy generated during braking) is absorbed and recycled, amounting to 2% of the rolling stock acceleration energy.

Product performance

- Improvement in brake energy consumption: 50% of the energy previously consumed by the mechanical brakes of a motor-powered train is recycled.
- Increased brake life: Reduced brake abrasion lengthens the life of parts.
- ※EDLC: Electric double-layer capacitor



TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-4573 Fax +81-3-5444-9267  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Energy storage system (EDLC):  
 COB015-A0, DC/DC converter system:  
 COV068-A0

1 Eco-product // Carriers/automobiles  
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EP-2-027

Carriers/automobiles

forklift trucks

Internal combustion lift truck "GENEO (8FG/D)"

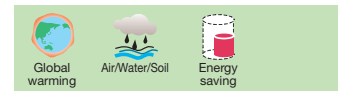
Environmental performance

The newest model internal combustion lift truck "GENEO (8FG/D)" now comes equipped as standard with an electronically controlled fuel injection system and a three-way catalytic muffler. Compared to our previous model lift truck, CO emissions have been cut by nearly 57%, and NOx and HC emissions have been reduced nearly 99%. Thanks to these improvements the exhaust gasses are cleaner and they already meet the new exhaust gas emissions standards for gasoline powered vehicles.

Also, operating noise has been reduced through the adoption of sound insulation and absorption measures, as well as a mechanism to prevent fork operating noise. Improvements to the paints used and the use of lead-free solder have lead to huge reductions in lead and hexavalent chromium.

Toyota Industries Corporation

2-1, Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan  
 Tel +81-566-22-2511 Fax +81-566-27-5650  
 URL <http://www.toyota-industries.com/>  
 URL <http://www.toyota-industries.com/product/indv/lf/sangyo01.html#sangyo01a>  
 URL <http://www.toyota-industries.com/csr/library/>



Internal combustion lift truck "GENEO (8FG/D)"

EP-2-028

Carriers/automobiles

drilling machines

Hydraulic crawler drill equipped with super economy mode HCR910-DS

Environmental performance

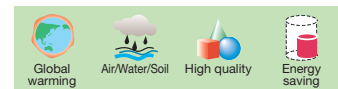
The new Super Economy Mode, the improved version of the Auto Throttle System, which automatically makes an engine shift into full speed during drilling, allows users to operate drilling with an adequate number of engine revs by selecting one of four speeds according to the rock condition. The new mode reduces energy consumption by up to 30% and reduces greenhouse gas emissions when compared to conventional models. The engine of this crawler drill meets the US EPA Tier3 and Euro Stage-3 emission regulations, contributing to reduce particulates and nitrogen oxide contained in exhaust gas.

Product performance

Super Economy Mode allows users to set the maximum revolutions of the engine to four speeds (1,600 RPM, 1,800 RPM, 2,000 RPM and 2,200 RPM in Power Mode) with the Power Economy Select Switch and the Maximum Speed Revolution Select Switch on the control panel. When cleaning the hole, automatically change to the maximum revs (maximum air flow) at any speed to set, a blast hole will be clean without residual dust.

FURUKAWA ROCK DRILL CO., LTD.

1-5-3, NIHONBASHI, CHUO-KU, TOKYO, Japan  
 Tel +81-3-3231-6982 Fax +81-3-3231-6994  
 URL <http://www.furukawarockdrill.co.jp/>



Hydraulic Crawler Drill HCR910-DS

Available in: Worldwide

Eco-product // Carriers/automobiles

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EP-2-029

Carriers/automobiles

motorcycles

**SuperCub50****Environmental performance**

Reliable starter.

Super Cub 50 equipped with Programmed Fuel Injection ( PGM-FI ) for great performance in all traffic conditions.

Fuel economy:110.0km/h

**Product performance**

Length:1.800m

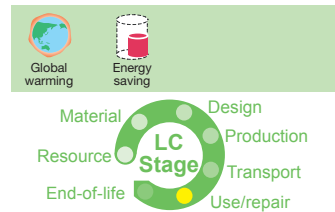
Width:0.660m

Height:1.010m

**Honda motor Co.,Ltd**

2-1-1 Minami-aoyama,minato-ku,Tokyo, Japan

Available in: Worldwide



EP-2-030

Carriers/automobiles

trucks

**Natural Gas Truck****Environmental performance**

The natural gas vehicle ( NGV ) is environmentally friendly as it emits no PM / black exhaust and less NO<sub>x</sub> / CO<sub>2</sub> than gasoline or diesel vehicles.

Because of its environmentally-friendly features, NGV plays an important role in reducing the world's dependency on oil. Osaka Gas promotes broader use of NGVs in Japan by spreading it in the network of intercity transportation.

**Product performance**

(1) Mileage per filling: 450 km (Tank capacity: 721 l)

(2) Displacement: 9,900 cc

(3) Maximum output: 350 Ps

(4) Maximum load: 13.3 t

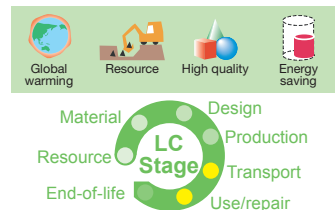
**Osaka Gas Co., Ltd.**

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)



Available in: Japan

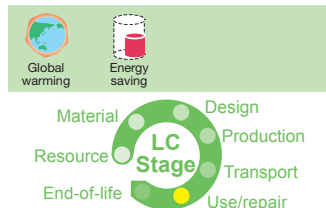
Natural Gas Truck



Clean Diesel Truck "TOYOTA DYNA & TOYOACE Hybrid"

Environmental performance

This truck equipped with a hybrid system is the first of its kind in the world and was jointly developed with Hino Motors, Ltd. This truck has achieved a PM & NO<sub>x</sub> emission level that is 10% lower than the standard levels for 2005, qualifying it as a low emission diesel vehicle. The truck's fuel efficiency has also been improved by 30%. Max payload: 2-3 tons; Fuel type: low-sulfur diesel at 50 ppm max



Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan  
 Tel +81-565-23-1341 Fax +81-565-23-5754  
 E-mail [satoshi\\_aida@mail.toyota.co.jp](mailto:satoshi_aida@mail.toyota.co.jp)  
 URL <http://www.toyota.co.jp>



Clean diesel truck "TOYOTA DYNA Hybrid"

EP-3-001

OA/IT equipment  
disk array system

Hitachi Storage Solutions

Environmental performance

- Power consumption is reduced by 7 to approx. 50 percent compared with the previous model.
- Lead-free solder (paste and flow) is used in circuit board.
- Fully compliant with RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) regulation, which limits the use of hazardous materials in electronic equipment.

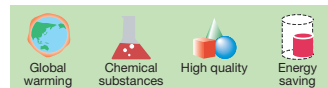
Product performance

- The storage solution unifies your storage infrastructure in optimal consolidation of and provides top-level availability and performance in the class to meet your business needs.

Hitachi, Ltd.

6-26-2 Minami-ooi, Shinagawa-ku, Tokyo, 140-8573, Japan  
 Tel +81-3-5471-2201 Fax +81-3-5471-2549  
 E-mail [www-info-hss@ml.itg.hitachi.co.jp](mailto:www-info-hss@ml.itg.hitachi.co.jp)  
 URL <http://www.hitachi.com/>  
 URL <http://www.hitachi.co.jp/storage/>  
 URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



TYPE II



Disk Array Systems  
"Hitachi Virtual Storage Platform"

EP-3-002

OA/IT equipment  
disk arrays

ETERNUS DX400series: Disk array with throughput, operability improvement and power saving

Environmental performance

1. Power saving
  - Power saving of 54% (DX410 S2) is achieved with high efficiency power supply and 2.5inch drives.
  - Utilizing MAID technology, "eco-mode" is supported. Power consumption is reduced by stopping the disk rotation when not accessed.
  - Management of "eco-mode" and watch of power consumption and temperature become possible with storage management software "ETERNUS SF V15".
2. Miniaturization
  - Miniaturization of 58% from the preceding product is achieved by high density packaging design and reduction of number of parts.
3. Green Purchasing Law compliant

Product performance

1. Great throughput improvement by adoption of the latest technology
  - 4.2 times (in maximum) improvement is achieved from the preceding product, with high-speed CPU and speed-up of internal bus.
2. Improvement of operability with storage management software and new function

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 Tel +81-03-5568-1170  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/services/computing/storage/eternus/products/diskstorage/dx-mid/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



TYPE II



2.5インチタイプ



3.5インチタイプ

ETERNUS DX410 S2

EP-3-003

OA/IT equipment

mid-range computers

**PRIMERGY TX120 S3: Compact server delivering low noise, space saving, and energy saving**

**Environmental performance**

1. Energy saving
  - Target in energy consumption based on Act on the Rational Use of Energy 2011 is achieved.
  - Power consumption when operating is reduced by 47% from the preceding product.
  - Adoption of power supply unit of excellent conversion efficiency (Certified "80PLUS PLATINUM")
2. Miniaturization
 

This product is miniaturized by 63% in mass, by 76% in volume, by 29% in number of parts, from the preceding product.
3. Green Purchasing Law compliant

**Product performance**

1. Space saving of top level in the industry
 

This product is miniaturized to 1/3 in space, to 1/4 in volume, from the preceding product. It can be installed in the office.
2. Many kinds of CPU is available.
 

Intel Xeon E3-1200 series is installed. Also Intel Corei3/Pentium processor can be selected for use.
3. Built-in storage can be selected according to the usage.

**Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 Tel +81-03-5568-1170  
 URL <http://www.fujitsu.com/global/>  
 URL [http://ts.fujitsu.com/products/standard\\_servers/tower/primergy\\_tx120s3.html](http://ts.fujitsu.com/products/standard_servers/tower/primergy_tx120s3.html)  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



TYPE II



PRIMERGY TX 120 S3

EP-3-004

OA/IT equipment

mid-range computers

**Hitachi Compute Rack family, Hitachi Compute Tower family**

**Environmental performance**

Hitachi Compute Rack/Tower family are the high performance PC servers use the Intel Xeon Processor and are available in rack-mounted and tower configurations that have superb capabilities for memory and I/O (input/output) expansions. They have a wide range of uses in datacenters and corporate IT systems extending from file servers and mail servers to application servers and database servers.  
 Hitachi Compute Rack/Tower family support energy saving functions such as power capping and use energy-efficient components including low power-consumption processors, memory, SSDs (solid state drives), and a highly efficient power supply with 80 PLUS certification.  
 For example, Hitachi Compute Rack 220 with the energy-efficient components is 28.5% power-saving compared with the one without the energy-efficient components. Hitachi Compute Rack/Tower family comply with EU RoHS Directive.

**Product performance**

- "Hitachi Compute Rack 110"
  - 1U (the number of units according to EIA standards), a power supply module: The 80PLUS GOLD certified
- "Hitachi Compute Rack 210"
  - 1U, a power supply module: The 80PLUS GOLD certified
- "Hitachi Compute Rack 220"
  - 2U (the number of units according to EIA standards), a power supply module: The 80PLUS GOLD certified
- "Hitachi Compute Rack 440"
  - 4U (the number of units according to EIA standards), a power supply module: The 80PLUS GOLD certified
- "Hitachi Compute Tower 10"
  - Small tower, a power supply module: The 80PLUS GOLD certified
- "Hitachi Compute Tower 20"
  - Tower, a power supply module: The 80PLUS Bronze certified
- "Hitachi Compute Slim Tower 10"
  - Slim tower, a power supply module: The 80PLUS Silver certified

**Hitachi, Ltd.**

1, Horiyamashita, Hadano-shi, Kanagawa-ken, 259-1392, Japan  
 Tel +81-463-87-6786 Fax +81-463-87-4714  
 E-mail [shinichi.matsumura.es@hitachi.com](mailto:shinichi.matsumura.es@hitachi.com)  
 URL <http://www.hitachi.com/>  
 URL <http://www.hitachi.co.jp/HA8000>  
 URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



TYPE II



Hitachi Compute Rack 220

Eco-product // OA/IT equipment

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

EP-3-005

OA/IT equipment

mid-range computers

Hitachi Compute Blade 2000/320

Environmental performance

Hitachi Compute blade family has two powerful, flexible and reliable models available. "Compute Blade 2000" is the high-end model focused on core computing system and "Compute Blade 320" is small-space and highly-integrated model. "Compute Blade 320" is 24% power-saving, 40% space-saving, and 50% lightweight compared with the rack mount server. (comparison with Hitachi PC server: at the time of November, 2009) Moreover, Compute Blade 320 possesses Hitachi logical partition feature and long life support service (maximum 10 years) is provided. Compute Blade comply with EU RoHS Directive.

Product performance

"Compute Blade 2000"  
8 blades/10 U (the number of units according to EIA standards) , a power supply module: The 80PLUS® GOLD certified  
"Compute Blade 320"  
10 blades/6 U (the number of units according to EIA standards) , a power supply module: The 80PLUS® SILVER certified

Hitachi, Ltd.

1, Horiyamashita, Hadano-shi, Kanagawa-ken, 259-1392, Japan  
Tel +81-463-87-6786 Fax +81-463-87-4714  
E-mail shinichi.matsumura.es@hitachi.com  
URL <http://www.hitachi.com/>  
URL [http://www.hitachi.co.jp/products/bladesymphony\\_global/index.html](http://www.hitachi.co.jp/products/bladesymphony_global/index.html)  
URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



TYPE II



Hitachi Compute Blade 2000, Hitachi Compute Blade 320

EP-3-006

OA/IT equipment

hard disk drive

Halogen- and antimony-free 2.5-type HDD with 1 TB Capacity

Environmental performance

- Mitigation of climate change: Improvement of the energy consumption efficiency to 1/63 compared with the benchmark model.
- Efficient use of resources: Weight is less than about 1/4 that of a 3.5-type HDD with the same capacity.
- Management of chemicals: Bromine-, chlorine- and antimony-free\* HDD.  
\*Benchmark model: MK2016GAP  
\*Self standard value Chlorine : less than 900ppm  
Bromine : less than 900ppm  
Chlorine + Bromine : less than 1500ppm  
Antimony : less than 1000ppm

Product performance

- Large capacity: Storage capacity of 1 TB (1000 GB) is realized by improvement of the magnetic head and disk. This large capacity is suitable for the storage of video and photos on a notebook PC, TV and game machine.
- Low noise: Reduction of acoustic noise in idle mode by 2dB compared with the previous model (MK7559GSXP).

TOSHIBA CORPORATION Semiconductor & Storage Products Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
URL <http://www.toshiba.co.jp/index.htm>  
URL <http://www3.toshiba.co.jp/storage/index.htm>  
URL <http://www.toshiba.co.jp/csr/en/index.htm>

Available in: Worldwide



2.5-type Hard Disk Drive MQ01ABD100 series

EP-3-007

OA/IT equipment  
network cameras

Network Camera VB-C500D

Environmental performance

- (1) Compliance with the RoHS Directive.
- (2) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) An image compression and transmission engine, DIGIC NET, achieves high image quality.
- (2) Smart Shade Control to make easier to see the subject even if the background of the subject is too bright.
- (3) Shutter Priority AE to achieve blur-free images of fast-moving subjects.
- (4) Compact and adaptable to a wide variety of environments, the VB-C500D can easily be placed in an upright, ceiling-mounted, or wall-mounted position.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
Tel +81-3-3758-2111  
URL <http://www.canon.com/environment/>

Available in: Worldwide

Global warming, Chemical substances, High quality

Material, Design, Production, Transport, Use/repair, End-of-life, Resource

**LC Stage**

**TYPE III**

65.5kg-CO<sub>2</sub> Inspection

Resource/Materials/Production/Transfer/Use/End-of-Life



EP-3-008

OA/IT equipment  
video cameras, except broadcast video cameras

Ultra Compact Full HD Camera with USB and DVI output

Environmental performance

- Mitigation of climate change: 2.5 inch HDD of the low consumption
- Efficient use of resources: Adoption of recycle plastic to C mount lens cap.
- Management of chemicals: Halogen-free printed circuit board

Product performance

- FULL HD (1920x1080) output. Smallest and lightest CMOS remote head color camera in this field.
- 1/3 type 2.2 million pixel (effective pixel) progressive scanning CMOS is adopted.
- To obtain the best image quality, various function such as photometry are area setting, 6 color matrix setting etc. are abundantly installed.
- DVI-I output enables us to connect with a commercial FULL HD monitor by 60 frames per second.  
(as of August 2009)

TOSHIBA CORPORATION Network & Solution Control Center

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
URL <http://www.toshiba.co.jp/index.htm>  
URL [http://www.toshibacameras.com/products/prod\\_detail\\_ikhr2d.jsp](http://www.toshibacameras.com/products/prod_detail_ikhr2d.jsp)  
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan, North America

Global warming, Resource, Energy saving, Recycled materials

Material, Design, Production, Transport, Use/repair, End-of-life, Resource

**LC Stage**



Industrial Full HD Camera IK-HR2D

EP-3-009

OA/IT equipment  
terminal units

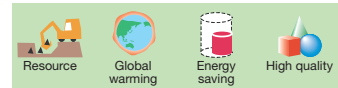
Mobile POS with built-in printer where battery operation is achieved

Environmental performance

- Mitigation of climate change: To reduce power consumption around half compared with current touch POS model (ST-A10)
- Efficient use of resources: Space saving with printer integrated "all-in-one" design
- Silent fan-less design increases the reliability of the product by eliminating moving parts

Product performance

- Battery operation allows the C10 to be used outside of the standard setting; such as, transportation, flea markets and stands at local fairs where conventional A/C power is not always available
- With their Integrated battery option and thermal receipt printer, the C10 allows greater flexibility of settings
- The C10 is designed with fan-less and drip-proof operation to maximize this reliability and the low cost of ownership
- This multi-purpose solution is ideal for use in applications not normally suitable for traditional POS solutions such as kiosks and information terminal



Mobile POS Terminal ST-C10

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan  
Tel +81-3-6422-7164 Fax +81-3-6422-7121  
URL <http://www.toshibatec.co.jp/index.html.html>  
URL <http://www.toshibatec.co.jp/csr/report/index.html>

Available in: Worldwide

EP-3-010

OA/IT equipment  
personal computers

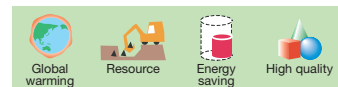
Endeavor ST150E ---Eco-friendly desktop PC that achieved high performance.

Environmental performance

- (1) Energy saving  
Compliant with International ENERGY STAR Program, it achieves power consumption as low as 16W in idle state using MoDT (Mobile on Desk-Top) technology devices.
- (2) Space saving  
Compact body of 195mm in width, 185mm in depth, and 75mm in height have high resource saving efficiency. It also makes it possible to be placed anywhere either vertically or horizontally.

Product performance

- 1) High performance  
Comes with HM55 chipset where Intel Core i series processor can be installed. Endeavor ST150E achieves both high performance and lower cost operation.
- 2) Silent  
System achieves less than 22dB idle state noise using an efficient cooling design. Silent, same as a notebook PC, providing comfortable working environment.
- 3) Multi monitor  
This system is equipped with a DVI-D and VGA port, supports multi monitor function to extend working area on your display.



<b>TYPE III</b>	Resource/Materials/ Production/Transfer/Use/ End-of-Life
<b>83.8kg-CO<sub>2</sub></b> Inspection	

EPSON DIRECT CORPORATION

2-21-45 Muraimachi Minami, Matsumoto-shi, Nagano-ken, 399-8703, Japan  
Tel +81-50-2000-3700 Fax +81-263-85-6100  
URL <http://shop.epson.jp>  
URL <http://shop.epson.jp/st150e>  
URL <http://www.epson.jp/csr>

Available in: Japan



Desktop computer "Endeavor ST150E"



EP-3-011

OA/IT equipment

personal computers

All-in-one, tough mobile with built-in optical drive: CF-S10 series

Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards adopting long-life backlight to achieve low power consumption
- "Effective use of resources" : Lightweight machine equipped with unique shell drive and thin-wall molding with Magnesium Alloy case

Product performance

- Easily portable, lightweight design : 1340g weight including a battery pack
- Designed to withstand rugged mobile : Free fall test at 76 cm height at development stage
- 12.1 inches Large wide screen for efficient operations : WXGA/1280X800 pixels

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
 Tel +81-6-6905-8356 Fax +81-6-6905-4755  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/avc/toughbook/>  
 URL <http://panasonic.net/csr/>

Available in: Japan,Oceania,North America,Singapore,Taiwan (Rep. of China),China



All-in-one, tough mobile with built-in optical drive : CF-S10 series

EP-3-012

OA/IT equipment

personal computers

Lightweight Mobile PC with high-speed CPU : CF-J10 series

Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards adopting long-life backlight to achieve low power consumption
- "Effective use of resources" : Lightweight machine equipped with thin-wall molding with Magnesium Alloy case

Product performance

- Easily portable, lightweight design: 990g weight including a battery pack (\*)
  - Designed to withstand rugged mobile : Free fall test at 76 cm height at development stage
  - Wide and High-definition screen which improves business efficiency
- (\*)CF-J10CWHDS

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan  
 Tel +81-6-6905-8356 Fax +81-6-6905-4755  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/avc/toughbook/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



Lightweight Mobile PC with high-speed CPU : CF-J10 series



EP-3-013

OA/IT equipment

personal computers

World top class eco PC with high energy saving performance

Environmental performance

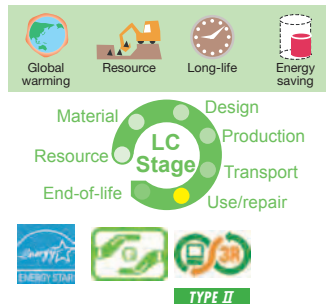
- Global Warming Mitigation : LED backlight LCD, SSD (Solid State Drive) in some models, Toshiba eco utility which you can change to optimized power saving mode through one touch operation, eco report viewer which a degree of contribution to power saving is indicated by score, and so on.
- Resource Saving: Thin magnesium casing, long life by robust design, etc.
- Chemical Substance Management: mercury-free PC, halogen and antimony compound-free materials in the main printed circuit board, PVC-free main body, etc.

Product performance

- Thin & light, robust design, secured carrying for mobile use.
- Robust design: HDD Protection, SSD (No HDD), spill resistant keyboard
- Long operation secured by long battery life

TOSHIBA CORPORATION Digital Products & Services Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>



Portege R830

Available in: Worldwide

EP-3-014

OA/IT equipment

personal computers

World top class eco PC with high energy saving performance

Environmental performance

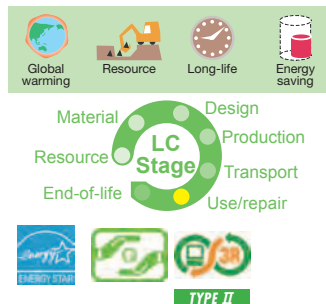
- Global Warming Mitigation : LED backlight LCD, SSD (Solid State Drive) in some models, Toshiba eco utility which you can change to optimized power saving mode through one touch operation, eco report viewer which a degree of contribution to power saving is indicated by score, and so on.
- Resource Saving: long life by robust design, etc.
- Chemical Substance Management: mercury-free PC, halogen and antimony compound-free materials in the main printed circuit board, PVC-free main body, etc.

Product performance

- Thin & light, robust design, secured carrying for mobile use.
- Robust design: HDD Protection, SSD (No HDD), spill resistant keyboard
- Long operation secured by long battery life

TOSHIBA CORPORATION Digital Products & Services Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>



Tecra R840

Available in: Worldwide

1 Eco-product // OA/IT equipment  
 2  
 3  
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 9

EP-3-015

OA/IT equipment

personal computers

World top class eco PC with high energy saving performance

Environmental performance

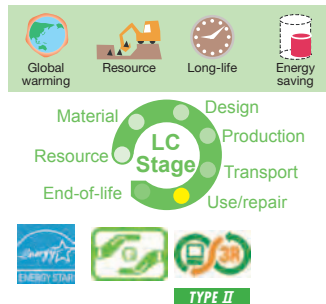
- Global Warming Mitigation : LED backlight LCD, SSD (Solid State Drive) in some models, Toshiba eco utility which you can change to optimized power saving mode through one touch operation, eco report viewer which a degree of contribution to power saving is indicated by score, and so on.
- Resource Saving: long life by robust design, etc.
- Chemical Substance Management: mercury-free PC, halogen and antimony compound-free materials in the main printed circuit board, PVC-free main body, etc.

Product performance

- 15.6"large display in thin & light body with long battery operation
- Robust design realizes secured carrying for mobile use
- Robust design: HDD Protection, SSD (No HDD), spill resistant keyboard, etc.
- Good for presentation by full open display (180 degree open)

TOSHIBA CORPORATION Digital Products & Services Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-4340  
 URL <http://www.toshiba.co.jp/index.htm>



Tecra R850

Available in: Worldwide

EP-3-016

OA/IT equipment

personal computers

World top class thin & light PC with high energy saving performance

Environmental performance

- Global Warming Mitigation : LED backlight LCD, SSD (Solid State Drive) in some models, Toshiba eco utility which you can change to optimized power saving mode through one touch operation, eco report viewer which a degree of contribution to power saving is indicated by score, and so on.
- Resource Saving: Thin magnesium casing, long life by robust design, etc.
- Chemical Substance Management: mercury-free PC, halogen and antimony compound-free materials in the main printed circuit board, PVC-free main body, etc.

Product performance

- Ultra thin & light PC
- Robust design and long battery operation for handy carrying
- Robust desing: HDD protection, SSD (No HDD), spill resistant keyboard

TOSHIBA CORPORATION Digital Products & Services Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>



Portege Z830

Available in: Worldwide

EP-3-017

OA/IT equipment  
computer system

GP-O GL888

**Environmental performance**

Energy saving, low pollution, low noise so can reduce the impact to the earth.

**Product performance**

The Genuine GL888 is of a commercial computer designed for general small offices, and is equipped with the official Windows 7 Professional 64bit (OEM) operating system, Celeron Dual Core E3500 processor, 2GB DDRIII memory cache, 500GB large hard disk, multiple-in-one card reader, DVD burner and the like, offering high efficiency, good stability, and also at a low cost. All parts have undergone comprehensive compatibility testing, and the operating system has already been installed.



TYPE I



**Genuine C&C INC**

No.36, Lane 66, Ruiguang Rd., Neihs District, Taipei City, Taiwan, 114, Republic of China  
Tel +886-2-2795-6677-366 Fax +886-2-2793-6559  
E-mail bill.fan@gcnc-group.com  
URL <http://www.gcnc-group.com>

Available in: Taiwan (Rep. of China)

EP-3-018

OA/IT equipment  
Plain Paper FAX

Plain Paper FAX KX-PD301 / KX-PD701

**Environmental performance**

Stand-by power consumption (main unit)  
KX-PD301 0.5W  
Compare with the model of 2005  
KX-PW605 0.9W

Stand-by power consumption (main unit)  
KX-PD701 0.5W  
Compare with the model of 2007  
KX-PW607 1.2W

Stand-by power consumption reduction  
[main unit] 44%

Stand-by power consumption reduction  
[main unit] 58%

**Product performance**

[KX-PD301]  
1. Handset with 1.8 inch LCD  
2. One-touch dial  
3. Recording beforehand

[KX-PD701]  
1. 4.9" LCD (main unit)  
2. Full Touch Panel screen  
3. Handset with 2.1" LCD



TYPE II



**Panasonic System Networks Co.,Ltd.**

4-1-62, Minosima Hakata-ku Fukuoka, 812-8531, Japan  
URL <http://panasonic.net/>  
URL <http://panasonic.net/csr/>

Available in: Japan

Plain Paper FAX KX-PD301

EP-3-019

OA/IT equipment

digital cordless phone

Digital Cordless Phone VE-GD21 / VE-GD51

Environmental performance

Stand-by power consumption (main unit)

VE-GD21 0.6W

Compare with the model of 2009

VE-GP24 1.7W

Stand-by power consumption reduction

[main unit] 65%

Stand-by power consumption (main unit)

VE-GD51 1.1W

Compare with the model of 2009

VE-SV08 1.7W

Stand-by power consumption reduction

[main unit] 35%

Product performance

[VE-GD21]

1. New wireless "DECT" system
2. Handset with 1.8 inch LCD
3. One-touch dial
4. Ringtone of comfortable tone

[VE-GD51]

1. New wireless "DECT" system
2. Handset with 2.1 inch LCD
3. One-touch dial
4. Ringtone of comfortable tone

Panasonic System Networks Co.,Ltd.

4-1-62, Minoshima Hakata-ku Fukuoka, 812-8531, Japan

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>

Available in: Japan



Digital Cordless Phone VE-GD21

EP-3-020

OA/IT equipment

multifunctional copy machines/printers

DocuCentre-IV C2263

Environmental performance

With enhanced power saving performance and quiet operation, it can be used comfortably even at your desk side.

Quiet design utilizes natural air flow, it has achieved low noise levels of 6.4B during operation and in power saving mode, and 3.3B during standby mode. Smart power saving technology only supplies power to the functions that are being used. For example, power is not supplied to the printing output components during scanner/fax, which conserves energy. Also, the control panel can be used after just 3 seconds when recovering from sleep mode. By enhanced power consumption, TEC value (Typical Energy Consumption value over a one-week period) has been improved by about 39% over past models.

Biomass plastic parts with a plant-derived component ratio of 50% by weight or higher are used. CO<sub>2</sub> emissions were reduced by 32% over past biomass plastics.

Fuji Xerox Co., Ltd.

9-7-3 Akasaka, Minato-ku, Tokyo, 107-0052, Japan

Tel +81-3-6271-5111

URL <http://www.fujixerox.com/eng/>

Available in: Japan, Asia, Oceania



Eco-product // OA/IT equipment

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EP-3-021

OA/IT equipment

multifunctional copy machines/printers

ApeosPort-IV C5575/C4475/C3375/C3373/C2275

**Environmental performance**

To achieve new environmental performance that couples energy conservation with ease of use, it is loaded with three new technologies: Smart WelcomEyes, Smart power saving and Rapid sleep recovery. These allow energy conservation with zero wait times when the device is used. This device has achieved both comfort and energy conservation. SmartWelcomEyes is our company's proprietary human sensor technology that allows device to automatically recover from power saving mode when a user approaches the device.

Smart power saving technology only supplies power to the functions that are being used. This, for example, cuts 54% of the energy on scanner/fax transmission. Due to automatic recovery via Smart WelcomEyes, users can begin using the device with almost no waiting.

By Rapid sleep recovery technology, the output unit recovers from sleep mode in 3.9 seconds.

**Fuji Xerox Co., Ltd.**

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 Tel +81-3-6271-5111  
 URL <http://www.fujixerox.com/eng/>

Available in: Japan, Asia, Oceania



TYPE I



EP-3-022

OA/IT equipment

multifunctional copy machines/printers

ApeosPort-IV 7080/6080 DocuCentre-IV 7080/6080

**Environmental performance**

With improvements in environmental performance and ease of use, this is our company's top-class monochrome digital multifunction device.

It helps keep the office quiet and reduce CO<sub>2</sub> emissions through the introduction of a technology that only supplies power to parts as they are needed for the functions being used.

In addition, by introducing this technology, the control panel display comes on after only about three seconds once the power saving mode release button is pressed, and screen operation becomes immediately available.

Its TEC value (Typical Energy Consumption value over a one-week period) has also improved by approximately 11% compared to past models, and power consumption has also been reduced..

**Fuji Xerox Co., Ltd.**

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 Tel +81-3-6271-5111  
 URL <http://www.fujixerox.com/eng/>

Available in: Japan, Asia, Oceania



TYPE I

TYPE I

TYPE I



1 Eco-product // OA/IT equipment  
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EP-3-023

OA/IT equipment

multifunctional copy machines/printers

**ApeosPort-IV 5070/4070/3070 DocuCentre-IV 5070/4070**

**Environmental performance**

A monochrome digital multifunction device that was designed with our customers' operability and environment in mind.

It contributes to reduced CO<sub>2</sub> emissions through the introduction of a technology that only supplies power to parts as they are needed for the functions being used. Furthermore, during fax reception and when print order has been given, no power is supplied to the unused output equipment or scanning equipment, which vastly cuts down the level of noise in the office. Also, through the introduction of this technology, the control panel display comes on after only about three seconds once the power saving mode release button is pressed, and screen operation becomes immediately available.

Its TEC value (Typical Energy Consumption value over a one-week period) has been improved by approximately 7.5% over past models, and power consumption has also been reduced.

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 URL <http://www.fujixerox.com/eng/>

Available in: Japan, Asia, Oceania



EP-3-024

OA/IT equipment

multifunctional copy machines/printers

**Digital Full Color Multifunctional System (MX-3610N/3110N/2610N)**

**Environmental performance**

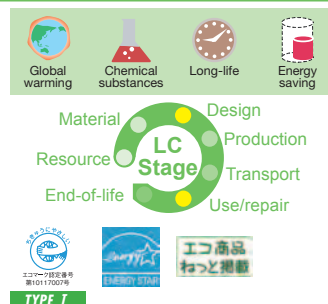
- Eco-learning function capable of automatically adjusting the time of auto power shutoff.
- Energy-saving design with power-saving button/ auto power shutoff mode.
- "BP-mark" certification as biomass plastic product containing some substances coming from organic resources above certain criteria.
- Meets International Energy Star program requirements.
- Meets Japan Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities.
- Meets Eco Mark Certification Criteria of Japan Environment Association.
- Meets European RoHS regulation.
- PVC-free AC cord.

**Product performance**

- Touch panel-support 10.1-inch large-size color LCD capable of intuitive operation.
- Industry top-class light and compact body.
- High quality images due to our own developed technologies such as Mycrostoner HG2.

**Sharp Corporation**

22-22 Nagaïke-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>



MX-3610N/3110N/2610N (inc. options)

Eco-product // OA/IT equipment



EP-3-025

OA/IT equipment

multifunctional copy machines/printers

imageRUNNER ADVANCE C2020/C2030

Environmental performance

- (1) Energy saving and quick start with Canon's original On-Demand fixing technology, achieving the power consumption of less than 1W in sleep mode and less than 10 seconds for recovery (warm-up time)
- (2) Comply with EU RoHS Directive, and further lead-free in anticipation of RoHS exemptions review
- (3) Biomass plastic with more than 25% plant-derived constituents used for operation buttons

\*This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

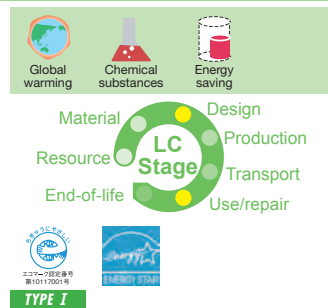
Product performance

- (1) Compact body and space-saving design with internal finishing configuration
- (2) High definition color screen with user-friendly icons making operation ever so easy and customizable menu to improve operation efficiency
- (3) Auto-duplex which reduces the cost for paper

CANON INC.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>

Available in: Worldwide



imageRUNNER ADVANCE C2030 with option units

EP-3-026

OA/IT equipment

multifunctional copy machines/printers

Color Laser Printer, imageCLASS LBP7010C/7018C

Environmental performance

- (1) Both energy saving and quick wake-up has been achieved with Canon's original On-Demand fixing technology. The power consumption is average approx 1.1W in sleep mode, with recovery time of approx 10 seconds from sleep.
- (2) Noiseless during stand-by without exhaust heat fan
- (3) Compact body of 223mm high
- (4) EU RoHS (restriction of the use of hazardous substances) compliant

Product performance

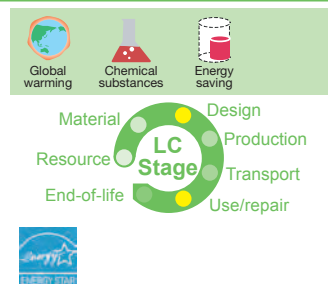
- (1) A4 print speed: 16ppm (monochrome) and 4ppm (color)
- (2) Easy toner cartridge replacement
- (3) Space-saving compact design. Lightweight of 10.7kg (not includes a cartridge) makes it easy to carry and move.

Note: The white colored model, imageCLASS LBP7010C is not introduced in some countries.

CANON INC.

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 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>

Available in: Japan,Asia,Oceania,Europe



imageCLASS LBP7018C

1 Eco-product // OA/IT equipment  
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EP-3-027

OA/IT equipment

multifunctional copy machines/printers

iR 6570N

Environmental performance

- (1) The used machines collected from the customers are disassembled and remanufactured. Only the parts complying with the remanufacturing quality standards are selected and cleaned. An average 91% of parts are reused by weight with Canon's original recycling technology for cleaning the exterior parts. The high rate of reused parts reduces environmental burden (converted to CO<sub>2</sub> emissions) up to the manufacturing stage.
- (2) Canon's original IH fixing technology is equipped, which achieves great reduction of energy consumption.

\*This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

Product performance

- (1) 65ppm
- (2) Standard LIPS LX is incorporated which shortens data processing time and improves printing performance

Canon Inc.

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 URL <http://www.canon.com/environment/>

Available in: Japan, Republic of Korea



iR 6570N-R for Japan (same as iR 6570N for Korea) with optional finisher

EP-3-028

OA/IT equipment

multifunctional copy machines/printers

Black and White Multifunctional Printer iR 3245/3245N

Environmental performance

- (1) Energy saving with Canon's original On-Demand fixing technology, resulting in the power consumption of 1.5W in sleep mode and 10 sec or less recovery time.
- (2) Comply with the EU RoHS Directive which restricts and prohibits the use of chemical substances
- (3) Standard automatic duplexing

\*This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

Product performance

- (1) Copy/Print speed 45 ppm (A4 size)
- (2) Compact body of 565 mm (same as with optional Finisher-S1)
- (3) Providing with color scanning. With the optional Color Universal Send Technology, users can distribute scanned documents to multiple network destinations such as e-mail addresses and network folders.
- (4) Control panel designed with a new TFT touch-screen, providing a wider viewing angle and greater contrast to facilitate easier operation.

Canon Inc.

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 URL <http://www.canon.com/environment/>

Available in: Worldwide



iR 3245 with DADF-U1, Finisher-S1, etc.

EP-3-029

OA/IT equipment

multifunctional copy machines/printers

imageRUNNER ADVANCE C5051/C5045/C5035/C5030

Environmental performance

- (1) Energy saving with Canon's original On-demand fixing technology and less than 1.5W power consumption in sleep mode.
- (2) CO<sub>2</sub> emissions in product life cycle (the stages of producing, use and transportations) are reduced, using original new design system.
- (3) Biomass plastic with highest levels of flame retardance is used in exterior plastic parts. Biomass plastic is also used in a touch pen and operation buttons.
- (4) Comply with the EU RoHS Directive, and further lead-free in anticipation of RoHS exemptions review.

\*This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

Product performance

- (1) A large screen with user-friendly icons making operation ever so easy and customizable menu to improve operation efficiency
- (2) Security options to ensure that your documents stay safe and confidential
- (3) Compact body and space-saving design

Canon Inc.

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Available in: Worldwide



imageRUNNER ADVANCE C5035 with options including Inner Finisher

EP-3-030

OA/IT equipment

multifunctional copy machines/printers

PIXUS MG5330/PIXMA MG5370, A4 Inkjet Photo All-In-One Printer

Environmental performance

- (1) Energy saving: The MG5330 has achieved an approx. 55% reduction in power consumption, or approx. 16% with Wi-Fi (wireless LAN) enabled, compared with the Canon's previous MP520 through technology to save energy during operation/standby and at power-off.
- (2) Resource saving: While realizing enhanced functions, the MG5330 in its compact body is approx. 8% less in volume than the conventional MP520. The packaging volume is also reduced by approx. 13%.
- (3) Certified by Eco Mark and various other eco-labels

Product performance

- (1) High-definition photo printing at a resolution of 9600 dpi with ink droplets as small as one picoliter, fast printing of a 4"x6" borderless photo in approx. 20 seconds, and data scanning at a high resolution of 4800 dpi
- (2) Standard Wi-Fi capability to enable wireless printing & scanning
- (3) Wireless printing from an iPhone, an iPad, or an Android mobile device
- (4) PIXUS Cloud Link enables online connectivity and direct printing without a PC.
- (5) The "ECO Setting" function allows users to set automatic two-sided printing and Auto Power-Off on the printer's LCD monitor.

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 URL <http://www.canon.com/environment/>

Available in: Worldwide



PIXUS MG5330/PIXMA MG5370

Eco-product // OA/IT equipment

EP-3-031

OA/IT equipment

multifunctional copy machines/printers

Large Format Inkjet Printer "ImagePROGRAF iPF6300S/iPF8300S"

Environmental performance

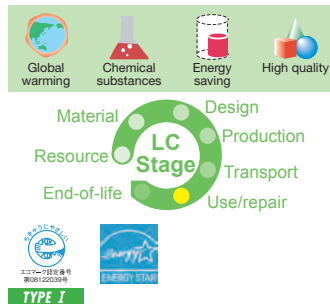
1. Energy-saving: iPF6300S reduces about 13% and iPF8300S reduces about 26% power consumption in a year in comparison with iPF6000S (released in 2008) and iPF8000S (released in 2007), respectively.
2. These products support Economy printing that can reduce ink consumption about 50% from a standard mode.
3. These models meet EU RoHS directive, which limits use of lead, mercury, cadmium, hexavalent chromium and PBB/PBDE.
4. These products have Ecomark certification. (No.08122039)

Product performance

1. Poster solutions including poster-creation software, folded duplex printing function and easy enlargement printing on a copier are available as standard.
2. By the adoption of the new print process, iPF6300S can print A1-sized document in about 35 seconds, while iPF8300S is capable of printing B0-sized output in about 1.3 minutes, up to about double in speed performance over the former models.
3. By the adoption "LUCIA EX" eight-color pigment ink system, these products have about 20% wider color gamut in comparison with iPF6000S/8000S and reproduce black with the depth.

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 URL <http://www.canon.com/environment/>



iPF8300S

Available in: Japan,Asia,Europe,North America

EP-3-032

OA/IT equipment

multifunctional copy machines/printers

Multi-Function Product (Copier, Printer, Scanner and Facsimile)

Environmental performance

Ricoh's Philosophy - "...to achieve a sustainable society where environmental impact is limited to a level that the Earth can deal with."  
 Like all Ricoh products, the awarded models reflects Ricoh's commitment to the environment through:  
 - Life Cycle Management - striving to reduce all environmental impact systematically, including business partners, in every environmental aspect of the total life cycle.  
 - Total Green Office Solution - Ricoh has developed tools to help you better compare, assess and monitor your organization's carbon foot print.

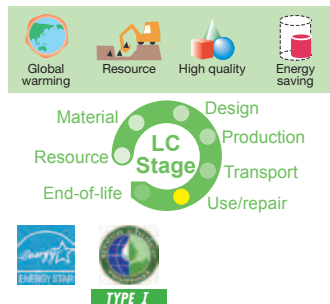
Ricoh provides all levels of technical support to address any issue, ranging from basic break/fix support to questions related to Ricoh software and solutions.

Product performance

High Quality & Eco-friendly Products & Services at its finest!  
 Ricoh's Managed Document Services is a global service that goes way beyond printing. We can help improve your document workflow and office processes as well as manage and optimize your information. You will see increased productivity and reduced TCO. This means that all you have to do is focus on the job.

RICOH Philippines, Incorporated

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 1200, 1200, Philippines  
 Tel (+632) 7507383 Fax (+632) 8950896  
 E-mail [sales@rph.ricoh.com.ph](mailto:sales@rph.ricoh.com.ph)  
 URL <http://www.ricoh.com.ph>



MP1600, MP1900, MP2000Le

Eco-product // OA/IT equipment

EP-3-033

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 5001

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

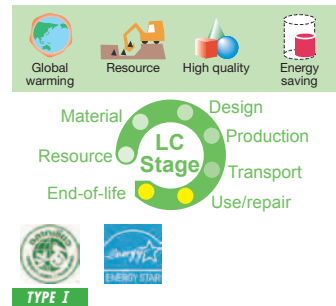
Product performance

- Productive : 50 papers per munute.
- Efficient : application for personalized settings.
- Time-saving : (colour) scan and distribute in a single step.
- Professional : finishers, Super G3/IP fax, IPDS/Postscript 3TM options.
- Secure and flexible : data protection and handling of various media types.

RICOH (THAILAND) LIMITED

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 URL <http://www.ricoh.com>  
 URL <http://www.ricoh.co.th>

Available in: Thailand



EP-3-034

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 2851

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

Product performance

- Productive : 28 pages per minute.
- Efficient : applications for personalized settings.
- Time-saving : (colour) scan and distribute in a single step.
- Professional : finishers, Super G3/IP fax, IPDS/Postscript 3TM options.
- Secure and flexible : data protection and handling of various media types.

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 URL <http://www.ricoh.com>  
 URL <http://www.ricoh.co.th>



EP-3-035

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 3351

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparafins, take back toner cartridges and drum from the customer.

Product performance

- Productive : 33 pages per minute.
- Efficient : applications for personalized settings.
- Time-saving : (colour) scan and distribute in a single step.
- Professional : finishers, Super G3/IP fax, IPDS/Postscript 3TM options.
- Secure and flexible : data protection and handling of various media types.

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TYPE I



EP-3-036

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 4000

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparafins, take back toner cartridges and drum from the customer.

Product performance

- Productive : 40 pages per minute.
- Exceptional productivity.
- Unique colour scanning & distribution.
- Multifunctional wizards.
- Professional faxing.
- Essential security.
- Expert finishing.
- East operation.
- Wide media versatility.
- At the forefront of.

RICOH (THAILAND) LIMITED

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 URL <http://www.ricoh.com>  
 URL <http://www.ricoh.co.th>



TYPE I



Eco-product // OA/IT equipment

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EP-3-037

OA/IT equipment

multifunctional copy machines/printers

EP-804A (Epson Stylus Photo PX730WD/TX730WD, Epson Artisan730), All-in-One Printer

Environmental performance

<Resource saving>  
The EP-804A is 45% smaller and 24% lighter than the PM-A920 (FY2006). Reduced size has resulted in a 33% increase in the number of units that can be loaded on pallets for delivery.

<Products that are focused on the effective use of resources>  
Unpainted housing: Reduces the impact of painting and improves plastic recyclability  
Use of recycled materials: Uses recycled plastic for internal printer parts  
Effective use of paper: Save up to 50% on paper with automatic, two-sided printing

<Elimination of hazardous substances>  
RoHS compliant

\*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation.

Product performance

This product gives you all the tools you need with a smart touch panel and 2.5" LCD. Print, scan, and access memory card slots from any room in the house with Wi-Fi CERTIFIED™ wireless networking and built-in Ethernet networking. Or, use Epson Connect to print directly from your smartphone, tablet and more.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan  
Tel +81-266-52-3131  
URL <http://global.epson.com/SR/environment/index.html>  
URL <http://www.epson.com/>  
URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)

Available in: Japan,Asia,Oceania,Europe,North America,Central America,South America,Southeast Asia,Middle and Near East,Republic of Korea,China



TYPE I

69kg-CO<sub>2</sub> not Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



Epson Stylus Photo TX730WD

EP-3-038

OA/IT equipment

multifunctional copy machines/printers

PX-434A (Epson ME OFFICE 570W, Epson Stylus TX430W), All-in-One Printer

Environmental performance

<Global warming impact>  
Material manufacturing and transport contributions to global warming (expressed as a CO<sub>2</sub> equivalent) were reduced by 13% compared to the PX-403A (FY2010) by reducing product size and packaging.

<Resource saving>  
- Approximately 35% smaller and 11% lighter than the PX-403A  
- The smaller design enables 35% more units to be packed per shipping container.

<Products that are focused on the effective use of resources>  
- Unpainted housing: Reduces the impact of painting and improves plastic recyclability  
- Use of recycled materials: Uses recycled plastic for internal printer parts

<Elimination of hazardous substances>  
RoHS compliant

\*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation.

Product performance

- Built-in Wi-Fi for wireless printing and scanning  
- Epson iPrint enables printing directly from a smartphone  
- Instant-drying pigment ink for beautiful prints

Seiko Epson Corporation

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URL <http://global.epson.com/SR/environment/index.html>  
URL <http://www.epson.com/>  
URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)

Available in: Japan,Asia,Oceania,Europe,North America,Central America,South America,Southeast Asia,Middle and Near East,Republic of Korea,Taiwan (Rep. of China),China,South Africa



TYPE I



Epson Stylus TX430W

EP-3-039

OA/IT equipment

multifunctional copy machines/printers

**Business All-in-One Inkjet Printer, WorkForce 7520/7521/7525**

**Environmental performance**

<Products that are focused on the effective use of resources>  
 - Use of recycled materials: Uses recycled plastic for internal printer parts  
 - Paper-saving features include automatic two-sided printing and ability to print or copy multiple pages per sheet

<Elimination of hazardous substances>  
 RoHS compliant

**Product performance**

An A3+ all-in-one machine that meets every business need and comes standard with automatic two-sided printing, copying, scanning, and facsimile functions and with two high-capacity, front-loaded paper trays.

**Seiko Epson Corporation**

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 Tel +81-266-52-3131  
 URL <http://global.epson.com/SR/environment/index.html>  
 URL <http://www.epson.com/>  
 URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)

Available in: Japan, Oceania, Europe, North America, Middle and Near East, Republic of Korea, Taiwan (Rep. of China), China



WorkForce 7521

EP-3-040

OA/IT equipment

multifunctional copy machines/printers

**High-Capacity Ink Tank Printer, Epson L100**

**Environmental performance**

<Global warming impact>  
 The L100 generates some 46% fewer CO<sub>2</sub> emissions across the product life cycle than the Epson Stylus T13, a similar printer with replaceable ink cartridges, largely because ink is supplied by high-capacity bottles instead of cartridges.

<Products that are focused on the effective use of resources>  
 - Unpainted housing: Reduces the impact of painting and improves plastic recyclability  
 - Use of recycled materials: Uses recycled plastic for internal printer parts

<Elimination of hazardous substances>  
 RoHS compliant

**Product performance**

A new business printer equipped with high-capacity ink tanks.  
 - Highly reliable genuine ink tank system  
 - High-capacity ink tanks for high-volume printing

**Seiko Epson Corporation**

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan  
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 URL <http://global.epson.com/SR/environment/index.html>  
 URL <http://www.epson.com/>  
 URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)

Available in: Southeast Asia, Middle and Near East, Republic of Korea, Taiwan (Rep. of China)



Epson L100

Eco-product // OA/IT equipment

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EP-3-041

OA/IT equipment

multifunctional copy machines/printers

Digital Multifunctional System (AR-181G)

Environmental performance

- Warm-up time reduced by approximately 44% compared with the existing machine (AR-164G, released in 2009). Moreover, Pre-heat mode/ Auto power shutoff mode included.
- Meets International Energy Star program requirements.
- Meets Japan Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities.
- Meets Eco Mark Certification Criteria of Japan Environment Association.
- Use of non-halogen resin in its exterior parts and some interior parts. PVC resin-free AC cord.

Product performance

- 3 functions - copying, printing and color-scanning - equipped in its compact body.
- A3-size full-color scanner as standard equipment. In addition, the installation of an option allows scanned data to be directly saved into USB memory.
- Extensible network function.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>



AR-181G (inc. options)

EP-3-042

OA/IT equipment

multifunctional copy machines/printers

Multifunction Peripheral which is superior compatibility with networks with its newly designed architecture.

Environmental performance

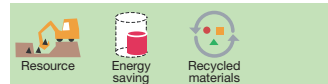
- Mitigation of climate change: Conforms to the newest test criteria set forth in Energy Star version 1.1, reduced sleep mode power consumption from about 25W to a mere 5W with System-on-a-Chip (SoC) technology.
- Adopted biomass plastics as material for their power-switch covers.
- Efficient use of resources: It is used recycled plastics for the efficient use of resources.

Product performance

- Touch panel: Large color LCD with touch panel enables easy operation
- Comprehensive management: A diverse range of account/user management functions streamline management efficiency and reduce output costs.
- e-BRIDGE Open Platform: Various System Interface is prepared to be able to use it more easily as input/output terminal of user system.
- Remote interface: Make it possible can operate one unit of MFP and external system by readout of internal information of MFP or operate it from external system.
- Bluetooth Connection Support: Supported Bluetooth which is easy connect. It is useful when you use MFP from PC is not connect to LAN, temporarily. Because you able to connect it without complex setup

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan  
 Tel +81-3-6422-7164 Fax +81-3-6422-7121  
 URL <http://www.toshibatec.co.jp/index.html.html>  
 URL <http://www.toshibatec.co.jp/csr/report/index.html>



Multifunctional Digital Color Systems e-STUDIO5540C

Available in: Japan

EP-3-043

OA/IT equipment

multifunctional copy machines/printers

**DEVELOP ineo 501**

**Environmental performance**

- Saving energy, reducing waste
- Clean Planet Recycling
- Resource saving

**Product performance**

- High-speed printing
- High-speed scanning (up to 70 opm)
- Sophisticated scanning features
- Proved and reliable hardware
- Reassuring security functions
- Max. 5,650-sheet paper supply

**Ub Office Systems Inc.**

5F., No.2, Wuquan 5th Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C.),  
 248, Republic of China  
 Tel 02-2299-6666 Fax 02-2299-4807  
 E-mail ivylin@ubos.com.tw  
 URL <http://www.ubos.com.tw>  
 URL <http://greenliving.epa.gov.tw/GreenLife>

Available in: Taiwan (Rep. of China)

**TYPE I**

EP-3-044

OA/IT equipment

multifunctional copy machines/printers

**DEVELOP ineo 423 (Type series:DEVELOP ineo 363/DEVELOP ineo 283)**

**Environmental performance**

- Saving energy, reducing waste
- Clean Planet Recycling
- Resource saving

**Product performance**

- sophisticated scanning capabilities in colour and black and white
- fast copying and printing at professional standards
- various finishing capabilities for inhouse document production
- workflow software solutions
- smart add-ons with i-Options

**Ub Office Systems Inc.**

5F., No.2, Wuquan 5th Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C.),  
 248, Republic of China  
 Tel 02-2299-6666 Fax 02-2299-4807  
 E-mail ivylin@ubos.com.tw  
 URL <http://www.ubos.com.tw>  
 URL <http://greenliving.epa.gov.tw/GreenLife>

Available in: Taiwan (Rep. of China)

**TYPE I**

Eco-product // OA/IT equipment  
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EP-3-045

OA/IT equipment

multifunctional copy machines/printers

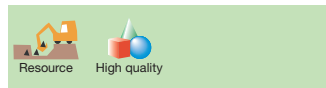
**DEVELOP ineo 213 (Type series:DEVELOP ineo 163/DEVELOP ineo 163v)**

**Environmental performance**

- Saving energy, reducing waste
- Clean Planet Recycling
- Resource saving

**Product performance**

- Efficient performance in essential office functions
- Optional networking and communication capabilities
- Improved information workflow
- Greater productivity
- Ease of use
- Economical performance



TYPE I



**Ub Office Systems Inc.**

5F., No.2, Wuquan 5th Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C.),  
 248, Republic of China  
 Tel 02-2299-6666 Fax 02-2299-4807  
 E-mail ivylin@ubos.com.tw  
 URL <http://www.ubos.com.tw>  
 URL <http://greenliving.epa.gov.tw/GreenLife>

Available in: Taiwan (Rep. of China)

EP-3-046

OA/IT equipment

multifunctional copy machines/printers

**DEVELOP ineo+360 (Type series:DEVELOP ineo+280/DEVELOP ineo+220)**

**Environmental performance**

- Saving energy, reducing waste
- Clean Planet Recycling
- Resource saving

**Product performance**

- Colours that really stand out
- Fast and economical production of office documents in colour & b/w
- Economical b/w and colour document production
- Good environmental and security record



TYPE I



TYPE I



**Ub Office Systems Inc.**

5F., No.2, Wuquan 5th Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C.),  
 248, Republic of China  
 Tel 02-2299-6666 Fax 02-2299-4807  
 E-mail ivylin@ubos.com.tw  
 URL <http://www.ubos.com.tw>  
 URL <http://greenliving.epa.gov.tw/GreenLife>

Available in: Taiwan (Rep. of China)

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EP-3-047

OA/IT equipment  
printers

**80mm Thermal Receipt Printer WP-T800**

**Environmental performance**

Energy saving and low pollution.

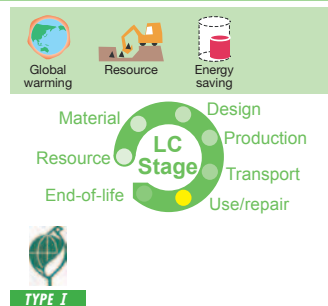
**Product performance**

It is suitable for the ECR systems, electronic equipment, computer equipment peripherals, the F&B industry's kitchen printers and so on. It has ultra high-speed printing of 220mm/second, and is compatible with RS-232C, Parallel, USB and the Ethernet interface card, for paper widths up to 80mm, with a built-in cash register output function, and it supports graphic and barcode printing.

**Winpos System Co., Ltd.**

4F., No. 5, Alley 6, Lane 45, Pao-Hsin Road, Hsin Tien District, New Taipei City, Taiwan, 231, Republic of China  
Tel +886-2-86657955-171 Fax +886-2-86659446  
E-mail patrick@winpos.com.tw  
URL <http://www.winpos.com.tw>

Available in: Taiwan (Rep. of China)



EP-3-048

OA/IT equipment  
printers

**Environmentally-friendly double-sided label printer Scantronics® GN412T**

**Environmental performance**

Bar-code printer that simultaneously prints on both sides of the label. Non-Sepa Combination Labels can be used as two separate labels by peeling the bonded sticky side. Since there is no liner waste, paper is saved and CO<sub>2</sub> emissions are reduced.

**Product performance**

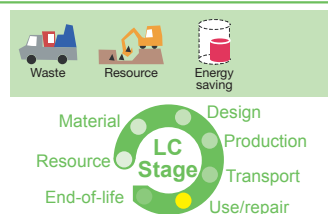
The automatic document feeder requires no label indicators to show the position when setting the labels for printing, and labels can be printed clearly from the beginning, so no labels are wasted. The ability to print all labels clearly eliminates waste. Sato's Ecomatch promotes the 3Rs (Reduce, Reuse, Recycle) to support the environmental conservation activities of customers.

For any query, send inquiry to the contact mentioned below.

**SATO CORPORATION**

7-1, Shimomeguro 1-chome, Meguro-ku, Tokyo, 153-0064, Japan  
URL <http://www.sato.co.jp>

Available in: Japan



Eco-product // OA/IT equipment

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EP-3-049

OA/IT equipment

printers

Color Page Printer, Epson AcuLaser CX17NF

Environmental performance

<Resource saving>

- The Epson AcuLaser CX17NF is 62% smaller and 59% lighter than the Epson AcuLaser CX11F/CX11FN (FY2005) by space-saving design.
- Compact toner cartridges help save space and resources.
- Prints or copies multiple pages per sheet to save paper

<Elimination of hazardous substances>

RoHS compliant

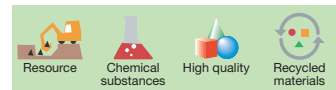
\*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information.

Product performance

- Among the smallest and lightest A4 color multifunction laser printers in Japan
- Choice of small- or medium-sized toner cartridges, depending on use
- Inlet cooling mechanism eliminates distracting exhaust for a quiet and pleasant office environment.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan  
 Tel +81-266-52-3131  
 URL <http://global.epson.com/SR/environment/index.html>  
 URL <http://www.epson.com/>  
 URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)



TYPE I



Available in: Japan,Asia,Oceania,Europe,Southeast Asia,Middle and Near East,Republic of Korea

Epson AcuLaser CX17NF

EP-3-050

OA/IT equipment

printers

Thermal Receipt Printer, TM-T88V

Environmental performance

<Global warming impact>

Generates 10% fewer life cycle CO<sub>2</sub> emissions than the previous model (TM-T88IV).

<Energy saving>

The TM-T88V uses 14% less total power than the TM-T88IV from 2006. The move to a high-efficiency AC adapter and the use of a low-power ASIC chip that controls power so that it is supplied only when and where needed, help minimize power usage.

<Resource saving>

- Paper-saving functions
- Top Margin-less function Through printing the top logo of receipts before cutting, the top margin has been reduced by 12mm.
- Automatic paper reduction function The amount of receipt margin reduction is specified and memorized on the printer side, and actual receipt length is reduced without altering the printing data.

<Elimination of hazardous substances>

RoHS compliant

Product performance

High-speed, silent printing enables smooth output. With support for Asian and European languages, graphics and barcodes, this printer can be used for a wide variety of applications including receipts, coupons and tickets.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan  
 Tel +81-266-52-3131  
 URL <http://global.epson.com/SR/environment/index.html>  
 URL <http://www.epson.com/>  
 URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)



Available in: Worldwide

TM-T88V

EP-3-051

OA/IT equipment  
printers

Inkjet Digital Label Press, SurePress L-4033A

Environmental performance

<Resource saving>

- Not necessary the pre-treatments of standard label stock, SurePress AQ ink has good adhesion on variety of standard label stocks.
- Resource-saving, reduced pre-press process like plate making, eliminated use of developer and films.
- Less-wasteful, easy color-matching and the plate-replacing is unnecessary, these enables SurePress to reduce standard label stock and the ink consuming.
- Reduction in waste, the specific wash is unnecessary and eliminates waste fluid emissions for maintenance.

<Elimination of hazardous substances>

RoHS compliant

Product performance

The SurePress L-4033A is a short-run, digital label press. This highly versatile narrow-web press has been designed to print labels efficiently and profitably to meet the growing global demand for fast turnaround, low volume, and multiple version label jobs.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan  
 Tel +81-266-52-3131  
 URL <http://global.epson.com/SR/environment/index.html>  
 URL <http://www.epson.com/>  
 URL [http://global.epson.com/SR/report/2011/pdf/2011\\_en\\_sr.pdf](http://global.epson.com/SR/report/2011/pdf/2011_en_sr.pdf)

Available in: Japan, Oceania, Europe, North America, U.S.A., Indonesia, Singapore, Thailand, Philippines, Malaysia, Taiwan (Rep. of China)



SurePress L-4033A

EP-3-052

OA/IT equipment  
printers

"Apply new Energy star High speed thermal printer"

Environmental performance

- Mitigation of climate change: To Reduce off mode electric power consumption around half.
- Efficient use of resources: To have function to save ribbon.
- Management of chemicals: Adoption of halogen-free material for printed circuit board.

Product performance

- High speed (14ips)
- Easy operation: Utilizing the Graphic LCD.

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan  
 Tel +81-3-6422-7164 Fax +81-3-6422-7121  
 URL <http://www.toshibatec.co.jp/index.html.html>  
 URL <http://www.toshibatec.co.jp/csr/report/index.html>

Available in: Worldwide



Barcode Printer B-EX



EP-3-053

OA/IT equipment

printer toner cartridge

Remanufactured Cartridge

Environmental performance

In recent years, the growth of new technology has helped to develop innumerable new toner cartridge that has been rushed into the market enormously. However, they result in large amount of waste that would damage to the earth. It is a big environmental trouble.

Green Device understands the harms and damages caused by waste pollution; she has developed the high quality remanufactured toner cartridges to reduce the waste by produce. From product development to manufacturing, Green Device's design not only focuses on satisfying customers but also cares seriously to make a good use of the resulting waste material and avoid causing damage to the environments.

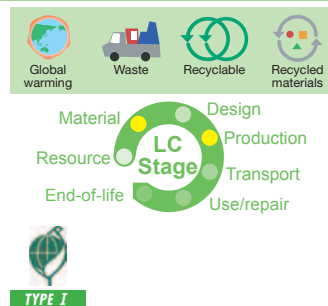
Product performance

100% made in Taiwan with quality guaranteed! Using G-Liquid as wiper blades lubricant.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Lujhu, Taoyuan, Taiwan, 33843, Republic of China  
 Tel +886-3-353-0954 Fax +886-3-353-0964  
 E-mail [service@greendevic.com.tw](mailto:service@greendevic.com.tw)  
 URL <http://www.greendevic.com.tw>

Available in: Worldwide



HP CE255X Remanufactured Cartridge

EP-3-054

OA/IT equipment

printer toner cartridge

Recycled and Refilled Toner Cartridge for Printer

Environmental performance

With recycled toner cartridges from the original factory, after cleaning and refilling we have the product. Based on the empirical data, the weight of each cartridge is around 1200 grams. 25%~30% is metals (steel/alumina), which can be recycled and reused. Other 50%~60% is plastic material, which can also be reused. Thus the goal of low pollution and waste reduction can be accomplished.

Product performance

1. With recycled toner cartridges from the original factory, the printer can work well with the product under our refilling process.
2. We replace consumptive parts of the recycled toner cartridges and conduct 100% inspection before shipment so that the printing quality is above standard.
3. No over packaging, and the packing materials are mainly recycled paper.
4. Human-based after-care service can help the user in trouble shooting.

Aaprotech Enterprise Co., Ltd.

No. 3, Aly. 37, Ln. 392, Fude 1st Rd., Xizhi Dist., New Taipei City, Taiwan, 221, Republic of China  
 Tel +886-2-2694-2266-109 Fax +886-2-2694-8576  
 E-mail [fji@aaprotech.com.tw](mailto:fji@aaprotech.com.tw)  
 URL <http://www.aaprotech.com.tw>

Available in: Taiwan (Rep. of China)



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EP-3-055

OA/IT equipment

printer toner cartridge

**NEWEAST Eco-Friendly Toner Cartridge NE-9730**

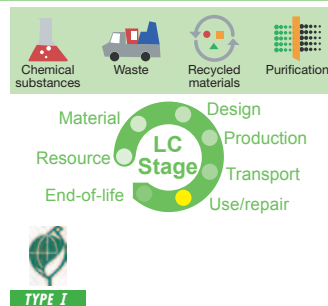
**Environmental performance**

Using recycled materials. Free of the controlled substances of the Montreal Protocol, heavy metals, or hazardous chemicals.

**Product performance**

Certified by the Green Mark system of Taiwan's Environmental Protection Administration. Print darkness/print yield reaching 95% or more that of new products. Free of heavy metals or other toxic substances that are hazardous to human health.

Manufactured with a production and management system conforming to international standards to ensure high product quality.



**Neweast Technology Co., Ltd.**

No. 26, Ln. 62, Baozhong 3rd St., East Dist., Chiayi City, Taiwan, 600, Republic of China  
 Tel +886-5-2786660 Fax +886-5-2785705  
 E-mail newneweast@yahoo.com.tw  
 URL <http://www.new-east.com.tw>

Available in: Taiwan (Rep. of China)

EP-3-056

OA/IT equipment

printer toner cartridge

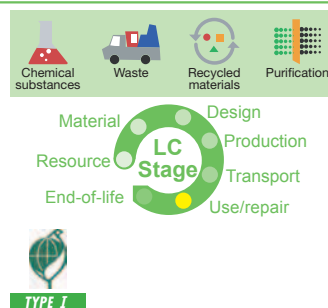
**NEWEAST Eco-Friendly Toner Cartridge NE-9731**

**Environmental performance**

Using recycled materials. Free of the controlled substances of the Montreal Protocol, heavy metals, or hazardous chemicals.

**Product performance**

Certified by the Green Mark system of Taiwan's Environmental Protection Administration. Print darkness/print yield reaching 95% or more that of new products. Free of heavy metals or other toxic substances that are hazardous to human health. Manufactured with a production and management system conforming to international standards to ensure high product quality.



**Neweast Technology Co., Ltd.**

No. 26, Ln. 62, Baozhong 3rd St., East Dist., Chiayi City, Taiwan, 600, Republic of China  
 Tel +886-5-2786660 Fax +886-5-2785705  
 E-mail newneweast@yahoo.com.tw  
 URL <http://www.new-east.com.tw>

Available in: Taiwan (Rep. of China)

Eco-product // OA/IT equipment

EP-3-057

OA/IT equipment

printer toner cartridge

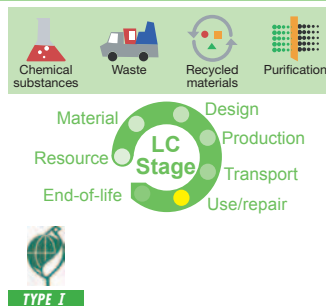
**NEWEAST Eco-Friendly Toner Cartridge NE-9732**

**Environmental performance**

Using recycled materials. Free of the controlled substances of the Montreal Protocol, heavy metals, or hazardous chemicals.

**Product performance**

Certified by the Green Mark system of Taiwan's Environmental Protection Administration. Print darkness/print yield reaching 95% or more that of new products. Free of heavy metals or other toxic substances that are hazardous to human health. Manufactured with a production and management system conforming to international standards to ensure high product quality.



**Neweast Technology Co., Ltd.**

No. 26, Ln. 62, Baozhong 3rd St., East Dist., Chiayi City, Taiwan, 600, Republic of China  
 Tel +886-5-2786660 Fax +886-5-2785705  
 E-mail newneweast@yahoo.com.tw  
 URL <http://www.new-east.com.tw>

Available in: Taiwan (Rep. of China)

EP-3-058

OA/IT equipment

printer toner cartridge

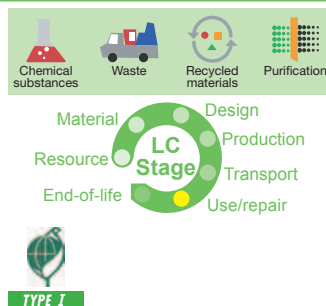
**NEWEAST Eco-Friendly Toner Cartridge NE-9733**

**Environmental performance**

Using recycled materials. Free of the controlled substances of the Montreal Protocol, heavy metals, or hazardous chemicals.

**Product performance**

Certified by the Green Mark system of Taiwan's Environmental Protection Administration. Print darkness/print yield reaching 95% or more that of new products. Free of heavy metals or other toxic substances that are hazardous to human health. Manufactured with a production and management system conforming to international standards to ensure high product quality.



**Neweast Technology Co., Ltd.**

No. 26, Ln. 62, Baozhong 3rd St., East Dist., Chiayi City, Taiwan, 600, Republic of China  
 Tel +886-5-2786660 Fax +886-5-2785705  
 E-mail newneweast@yahoo.com.tw  
 URL <http://www.new-east.com.tw>

Available in: Taiwan (Rep. of China)

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EP-3-059

OA/IT equipment

printer toner cartridge

Recharge Printer Toner Cartridge GD-HP-505A

Environmental performance

- \* Reduce energy and resource consumption.
- \* Prevent pollution attributable to the manufacturing process of new toner cartridges.
- \* 85% or more of their components are reusable to lower the amount of wastes to be processed.
- \* Waste plastic components are recyclable for reuse.

Product performance

1. High printout quality.
2. Lower clerical costs significantly.
3. Reduce industrial wastes substantially.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Luzhu Township, Taoyuan County, Taiwan, 338, Republic of China  
 Tel +886-3-353-0954 Fax +886-3-353-0964  
 E-mail lucy@greendevic.com.tw  
 URL <http://www.greendevic.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)



TYPE I



EP-3-060

OA/IT equipment

printer toner cartridge

Recharge Printer Toner Cartridge Green-C5550 (B)/(C)/(M)/(Y)

Environmental performance

- \* Reduce energy and resource consumption.
- \* Prevent pollution attributable to the manufacturing process of new toner cartridges.
- \* 85% or more of their components are reusable to lower the amount of wastes to be processed.
- \* Waste plastic components are recyclable for reuse.

Product performance

1. High printout quality.
2. Lower clerical costs significantly.
3. Reduce industrial wastes substantially.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Luzhu Township, Taoyuan County, Taiwan, 338, Republic of China  
 Tel +886-3-353-0954 Fax +886-3-353-0964  
 E-mail lucy@greendevic.com.tw  
 URL <http://www.greendevic.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)



TYPE I



Eco-product // OA/IT equipment

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EP-3-061

OA/IT equipment

printer toner cartridge

Recharge Printer Toner Cartridge Green-16A

Environmental performance

- \* Reduce energy and resource consumption.
- \* Prevent pollution attributable to the manufacturing process of new toner cartridges.
- \* 85% or more of their components are reusable to lower the amount of wastes to be processed.
- \* Waste plastic components are recyclable for reuse.

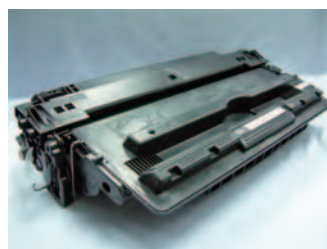
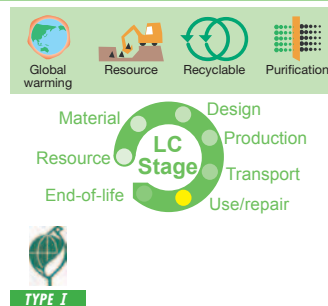
Product performance

1. High printout quality.
2. Lower clerical costs significantly.
3. Reduce industrial wastes substantially.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Luzhu Township, Taoyuan County, Taiwan,  
338, Republic of China  
Tel +886-3-353-0954 Fax +886-3-353-0964  
E-mail lucy@greendevic.com.tw  
URL <http://www.greendevic.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)



EP-3-062

OA/IT equipment

printer toner cartridge

Recharge Printer Toner Cartridge Green-12A

Environmental performance

- \* Reduce energy and resource consumption.
- \* Prevent pollution attributable to the manufacturing process of new toner cartridges.
- \* 85% or more of their components are reusable to lower the amount of wastes to be processed.
- \* Waste plastic components are recyclable for reuse.

Product performance

1. High printout quality.
2. Lower clerical costs significantly.
3. Reduce industrial wastes substantially.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Luzhu Township, Taoyuan County, Taiwan,  
338, Republic of China  
Tel +886-3-353-0954 Fax +886-3-353-0964  
E-mail lucy@greendevic.com.tw  
URL <http://www.greendevic.com.tw>

Available in: Japan,U.S.A.,Taiwan (Rep. of China)



EP-3-063

OA/IT equipment

projectors

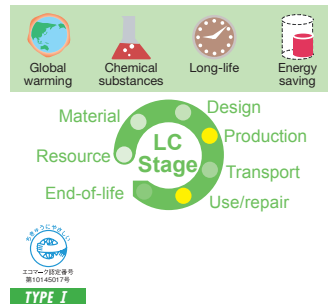
Power Projector LV-7390

Environmental performance

- (1) Extended lamp life up to 6,000 hours contributes to resource savings.
- (2) Compact and light body of only 2.98kg contributes to resource savings.
- (3) Compliance with the RoHS Directive.

Product performance

- (1) Projection of large 80 inch image from 2.8m short-throw distance.
- (2) A powerful built-in 10W speaker and a line-out terminal enable you to deliver a presentation through a microphone while projecting images without external audio equipment.



Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>



Available in: Worldwide

EP-3-064

OA/IT equipment

projectors

Power Projector LV-7290

Environmental performance

- (1) Extended lamp life up to 6,000 hours contributes to resource savings.
- (2) Compact and light body of only 2.98kg contributes to resource savings.
- (3) Compliance with the RoHS Directive.

Product performance

- (1) Projection of large 80 inch image from 2.8m short-throw distance.
- (2) A powerful built-in 10W speaker and a line-out terminal enable you to deliver a presentation through a microphone while projecting images without external audio equipment.



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 Tel +81-3-3758-2111  
 URL <http://www.canon.com/environment/>



Available in: Worldwide

Eco-product // OA/IT equipment

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EP-3-065

OA/IT equipment  
projectors

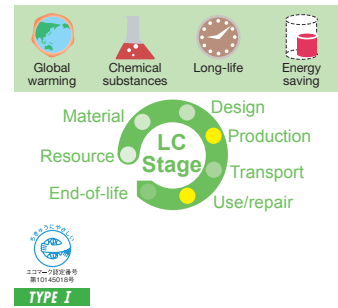
Power Projector LV-8225

Environmental performance

- (1) Extended lamp life up to 6,000 hours contributes to resource savings.
- (2) Compact and light body of only 2.98kg contributes to resource savings.
- (3) Compliance with the RoHS Directive.

Product performance

- (1) Projection of large 80 inch image from 2.8m short-throw distance.
- (2) A powerful built-in 10W speaker and a line-out terminal enable you to deliver a presentation through a microphone while projecting images without external audio equipment.



Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan  
Tel +81-3-3758-2111  
URL <http://www.canon.com/environment/>



Available in: Worldwide

EP-3-066

OA/IT equipment  
projectors

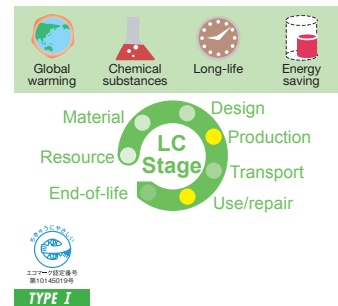
Power Projector LV-7490

Environmental performance

- (1) Extended lamp life up to 5,000 hours contributes to resource savings.
  - (2) Intelligent Lamp Dimming System reduces power consumption up to 62%\*.
  - (3) Compliance with the RoHS Directive.
- \* By comparison between "Normal" and "Auto" of lamp modes at image mode: Dynamic.

Product performance

- (1) High brightness of 4,000 lumens for real XGA.
- (2) Projection of large 80 inch image from 2.8m short-throw distance.
- (3) A powerful built-in 10W speaker and a line-out terminal enable you to deliver a presentation through a microphone while projecting images without external audio equipment.



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URL <http://www.canon.com/environment/>



Available in: Worldwide

EP-3-067

OA/IT equipment  
projectors

Casio Mercury-free high bright Projector : Green Slim XJ-A256

Environmental performance

- \*Realizing World First High-Brightness, 3000 ANSI lm, thanks to an original Mercury-free Hybrid Light Source which combines Laser and LED technology.
- \*Adopting a new semiconductor-based system has enabled to realize 10 times of longer light source life of approximately 20,000 hours, and cuts the running and maintenance cost dramatically.
- \*8 seconds quick startup to maximum brightness and immediate shutdown without warm-up and cool-down, will make you feel so comfortable.
- \*The new integrated brightness sensors automatically adapt the brightness to different lighting conditions, this means further reduction of energy consumption.

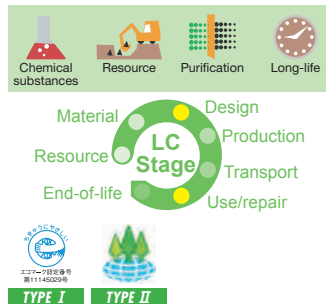
Product performance

- \*It measures just thickness 43 mm and 2.3 kg in an A4-size, slim and mobile size with advanced feature, will make your travels easier.
- \*Thanks to the Hybrid Light Source which combines Laser and LED technology, Color Purity is amazingly increased realizing a consistent brightness and superior color.
- \*Optimum adjustment of pictures to the size of the projection screen to match distance from the screen: the wide angle 2x optical zoom make this possible.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo, 151-8543, Japan  
Tel +81-3-5334-4111  
URL <http://world.casio.com/>  
URL <http://world.casio.com/csr/>

Available in: Worldwide



Green Slim XJ-A256

EP-3-068

OA/IT equipment  
projectors

Casio Mercury-free high bright Projector : Signature Models XJ-M150 / 250 series

Environmental performance

- \*Realizing World First High-Brightness, 3000 ANSI lm, thanks to an original Mercury-free Hybrid Light Source which combines Laser and LED technology.
- \*Adopting a new semiconductor-based system has enabled to realize 10 times of longer light source life of approximately 20,000 hours, and cuts the running and maintenance cost dramatically.
- \*5 seconds quick startup to maximum brightness and immediate shutdown without warm-up and cool-down, will make you feel so comfortable.
- \*The new integrated brightness sensors automatically adapt the brightness to different lighting conditions, this means further reduction of energy consumption.

Winning "Product of the Year" in Eco Mark Award 2011.

Product performance

- \*Thanks to the Hybrid Light Source which combines Laser and LED technology, Color Purity is amazingly increased realizing a consistent brightness and superior color.
- \*Optimum adjustment of pictures to the size of the projection screen to match distance from the screen: the wide angle 1.5 x optical zoom make this possible.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo, 151-8543, Japan  
Tel +81-3-5334-4111  
URL <http://world.casio.com/>  
URL <http://world.casio.com/csr/>

Available in: Worldwide



Signature Model XJ-M256

Eco-product // OA/IT equipment

EP-3-069

OA/IT equipment  
projectors

Ultra-short throw projector

Environmental performance

- Compliance with the RoHS Directive.
- Contributing to resource-saving through reduction of resources, reduction of CO<sub>2</sub> emission during distribution, and annual power consumption reduction.
- Saving-energy by using recycled materials for packing.
- Saving time at disposal by using easily dismantled structure.

Product performance

- High performance lens with adjustable-shaped surface.
- Ultra short can expand the picture size up to 80" only at 23cm distance.
- Optical mechanism that corrects the distortion of screen image by adjustable-shaped mirror.

Hitachi Consumer Electronics Co.,Ltd.

Shin-Otemachi Bldg. 2-1,Otemachi 2-chome, Chiyod-ku, Tokyo, 100-0004, Japan  
Tel 0120-3121-19  
URL <http://www.hitachi-ce.co.jp/en/index.html>  
URL <http://av.hitachi.com/>



CP-A300N

Available in: Japan,Oceania,Europe,North America,South America,Southeast Asia,Middle and Near East,U.S.A.,Indonesia,Singapore,Thailand,Philippines,Malaysia,Mexico,Republic of Korea,Taiwan (Rep. of China),China,South Africa (Except for Iran)

EP-3-070

OA/IT equipment  
scanners

Scanner DT-0603H (FB6000U Series)

Environmental performance

Energy Saving: International ENERGY STAR compliant, sleep mode power consumption 4.2W.  
Chemical Substances Control: Compliant with European Union RoHS, WEEE and Taiwan Green Mark requirements.

Product performance

- \* Support A3-sized document.
- \* Hi-speed USB 2.0 interface (USB 1.1 compatible). TWAIN driver included.
- \* One-button functionality allows you to assign up to nine scanning applications and select at the touch of a button.
- \* Energy saving.

Avision Inc.

No. 20, Creation Rd. I, Science Park, Hsinchu City, Taiwan, 300, Republic of China  
Tel +886-3-5782388-8753 Fax +886-3-5643480  
E-mail [angela\\_lin@avision.com.tw](mailto:angela_lin@avision.com.tw)  
URL <http://www.avision.com.tw>



Available in: Japan,Oceania,Europe,U.S.A.,Taiwan (Rep. of China)

EP-3-071

OA/IT equipment

scanners

Scanner DF-0902H (AV3852U Series)

Environmental performance

Energy Saving: International ENERGY STAR compliant, sleep mode power consumption 3.34W.

Chemical Substances Control: Compliant with European Union RoHS, WEEE and Taiwan Green Mark requirements.

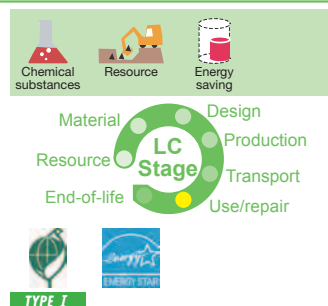
Product performance

- \* Automatic image cropping and straightening at full scanning speed.
- \* Brightness and contrast controls to customize color output for specific applications.
- \* Fast USB 2.0 interface for plug-and-play connectivity and rapid transfer of images.
- \* Industry-standard ISIS and exclusive Avision-developed TWAIN drivers to achieve rated speeds and easy integration.
- \* Hold up to 50 pages in auto document feeder.

Avision Inc.

No. 20, Creation Rd. I, Science Park, Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5782388-8753 Fax +886-3-5643480  
 E-mail [angela\\_lin@avision.com.tw](mailto:angela_lin@avision.com.tw)  
 URL <http://www.avision.com.tw>

Available in: Japan,Oceania,Europe,U.S.A.,Taiwan (Rep. of China)



EP-3-072

OA/IT equipment

scanners

Scanner FT-0807H (AV320D2+ Series)

Environmental performance

Energy Saving: International ENERGY STAR compliant, sleep mode power consumption 3.24W.

Chemical Substances Control: Compliant with European Union RoHS, WEEE and Taiwan Green Mark requirements.

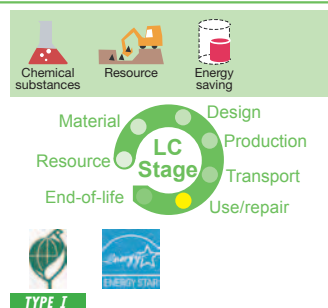
Product performance

- \* Scan rate up to 60 PPM/120 IPM at 300 dpi, color mode.
- \* Support document up to A3 size, and support long page scanning up to 3 meters (118").
- \* Avision Button Manager (One Touch).
- \* New TWAIN driver supports to enhancement such as the ability to adjust sensitivity of dynamic threshold, document/photo color matching, custom color dropout, automatic multiple cropping, intelligent multi-feed, reduce despeckle, image count, digital imprinter, and transport timeout.
- \* Ultrasonic Multi-Feed Detection.

Avision Inc.

No. 20, Creation Rd. I, Science Park, Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5782388-8753 Fax +886-3-5643480  
 E-mail [angela\\_lin@avision.com.tw](mailto:angela_lin@avision.com.tw)  
 URL <http://www.avision.com.tw>

Available in: Japan,Oceania,Europe,U.S.A.,Taiwan (Rep. of China)



EP-3-073

OA/IT equipment

scanners

Scanner FF-0901H (AV220D2+ Series)

**Environmental performance**

Energy Saving: International ENERGY STAR compliant, sleep mode power consumption 4.2W.

Chemical Substances Control: Compliant with European Union RoHS, WEEE and Taiwan Green Mark requirements.

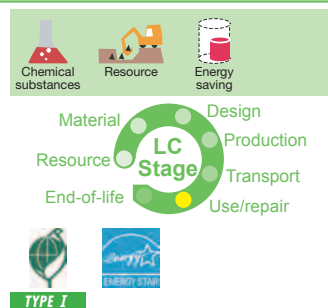
**Product performance**

- \* Scan rate up to 60 PPM/120 IPM at 200 dpi, color mode and 50 PPM/100 IPM at 300 dpi.
- \* Include front input tray and support long page scanning up to 3 meters (118").
- \* One-button functionality.
- \* New TWAIN driver supports to enhancement such as the ability to adjust sensitivity of dynamic threshold, document/photo color matching, custom color dropout, automatic multiple cropping, intelligent multi-feed, reduce despeckle, image count, digital imprinter, and transport timeout.
- \* Ultrasonic Multi-Feed Detection.

**Avision Inc.**

No. 20, Creation Rd. I, Science Park, Hsinchu City, Taiwan, 300, Republic of China  
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 E-mail [angela\\_lin@avision.com.tw](mailto:angela_lin@avision.com.tw)  
 URL <http://www.avision.com.tw>

Available in: Japan,Oceania,Europe,U.S.A.,Taiwan (Rep. of China)



EP-3-074

OA/IT equipment

scanners

Scanner

**Environmental performance**

Considering to lower the environmental impact, the device are compliant with EPA Energy Star Program, Sleep mode power consumption is 2.96W

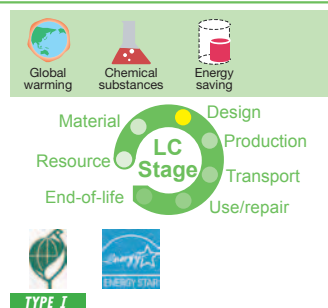
The plastic components of the product are also compliant chemical Substances requirements

Also, the product are meet Eropean Union RoHS and WEEE directive, and Taiwan Green mark.

**Avision Inc.**

No. 20, Creation Rd., Science Park, Hsinchu, Taiwan, 300, Republic of China  
 Tel +886-3-5782388  
 URL <http://www.avision.com.tw/>  
 URL <http://www.avision.com.tw/motion.asp?siteid=100407&lgid=2&menuid=10075&prodid=121242&cat=9>

Available in: Worldwide



1 Eco-product // OA/IT equipment  
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EP-3-075

OA/IT equipment

scanners

Scanner

Environmental performance

Considering to lower the environmental impact, the device are compliant with EPA Energy Star Program, Sleep mode power consumption is 4.2W

The plastic components of the product are also compliant chemical Substances requirements.

Also, the product are meet Eropean Union RoHS and WEEE directive, and Taiwan Green mark.

Product performance

For workgroups who frequently need to digitalize large sized documents, the Avision FB6000U is the answer. Supporting documents up to A3 sizes, it can complete scans in 7.6 seconds at 200 dpi in black and white. Built with a CCD sensor and a optical resolution of 600 dpi, you can depend on the FB6000U for quality scans.

Avision Inc.

No. 20, Creation Rd., Science Park, Hsinchu, Taiwan, 300, Republic of China  
 Tel +886-3-5782388  
 URL <http://www.avision.com.tw/>  
 URL <http://www.avision.com.tw/motion.asp?siteid=100407&lgid=2&menuid=10075&prodid=121208&cat=13>

Available in: Worldwide



EP-3-076

OA/IT equipment

scanners

Compact slimline Document scanner "imageFORMULA P-215"

Environmental performance

- Automatic Power ON/OFF with opening/closing the feeder tray
- Conforms to ENERGY STAR standards
- Power consumption
- Scanning: 2.5W (USB2.0 x1), 4.5W (USB3.0 x1), 5.0W (USB2.0 x2)
- Sleep mode: 1.5W Power OFF: 0.1W
- Compliant with European RoHS Directive

Product performance

- High-speed 1-pass duplex scanning
- B&W/Grayscale: 12 ppm/14 ipm, Color: 10 ppm/10 ipm (A4/LTR, portrait, 200dpi, USB2.0x1)
- B&W/Grayscale: 15 ppm/30 ipm, Color: 10 ppm/20 ipm (A4/LTR, portrait, 200dpi, USB3.0x1 or USB2.0x2)
- Bus power Drive
- Can scan with 1USB connection
- Plug & Scan function
- Can scan without installing Scanning Software onto PC
- Card Scanning with switchback feeding mechanism
- Scan to Cloud applications
- Canon's Advanced image processing functions
- Auto size detection, Deskew, Skip blank page, Text orientation recognition, Auto color detection, Background smoothing, Full Auto mode, Automatic setting of resolution, etc.

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan  
 Tel +81-3-6910-4119 Fax +81-3-5472-7671  
 E-mail [kankyo@canon-elec.co.jp](mailto:kankyo@canon-elec.co.jp)  
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>  
 URL <http://www.canon-elec.co.jp/english/products/ims/en-p215/index.html>

Available in: Worldwide



Document Scanner P-215

Eco-product // OA/IT equipment

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EP-3-077

OA/IT equipment

scanners

Real compact Document scanner with upright U-turn feeding "imageFORMULA DR-C125"

Environmental performance

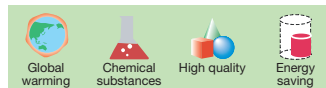
- Energy-efficient and compact design with CMOS CIS and light source of LED
- Automatic Power OFF depending on the status of the connected PC
- Conforms to ENERGY STAR standards
- Power consumption  
Scanning: 12.8W, Sleep mode: 1.9 W, Power Off: 0.5W
- Space-saving design which eliminates the space for the output documents
- Compliant with European RoHS Directive

Product performance

- High-speed 1-pass duplex scanning  
B&W/Grayscale/Color: 25 ppm/ 50 ipm (A4/LTR, portrait, 200dpi)
- Intuitive way of scanning with "Face-up document-setting"
- 2way scan  
Canon unique upright U-turn path feeding and straight path for card-scanning
- Ultrasonic Double Feed Detection function
- Scan to Cloud applications
- Canon's Advanced image processing functions  
Auto size detection, Deskew, Skip blank page, Text orientation recognition, Auto color detection, Background smoothing, Full Auto mode, Automatic setting of resolution, etc.

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan  
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 E-mail [kankyo@canon-elec.co.jp](mailto:kankyo@canon-elec.co.jp)  
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>  
 URL <http://www.canon-elec.co.jp/english/products/ims/en-drc125/index.html>



Document Scanner DR-C125

Available in: Worldwide

EP-3-078

OA/IT equipment

scanners

Compact and high speed Document scanner with Front-loaded mechanics "imageFORMULA DR-M140"

Environmental performance

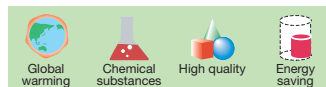
- Energy-efficient and compact design with CMOS CIS and light source of LED
- Conforms to ENERGY STAR standards
- Power consumption  
Scanning: 25W, Sleep mode: 1.9W, Power OFF: 0.5W
- Compliant with European RoHS Directive

Product performance

- Compact and high speed Document scanner with selectable scanning of U-turn path or Straight path Feeding
- High speed 1-pass duplex scanning  
B&W/Gray/Color: 40ppm/80ipm (A4/LTR portrait/200dpi)
- Compact and ease of use with front loading/output operation
- Canon unique U-turn path and straight path feeding
- Reliable feeding of a wide range of documents from embossed plastic cards to documents as large as A3/11"x17" (using folio mode)
- Ultrasonic Double Feed Detection function
- Canon's advanced image processing functions  
Auto size detection, Deskew, Text orientation recognition, Auto color detection, Shadow cropping, Background smoothing, Automatic setting of resolution, etc.

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan  
 Tel +81-3-6910-4119 Fax +81-3-5472-7671  
 E-mail [kankyo@canon-elec.co.jp](mailto:kankyo@canon-elec.co.jp)  
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>  
 URL <http://www.canon-elec.co.jp/english/products/ims/en-drm140/index.html>



Document Scanner DR-M140

Available in: Worldwide

EP-3-079

OA/IT equipment

scanners

Super-fast, high volume and tough built Document Scanner"imageFORMULA DR-M160"

Environmental performance

- High energy-efficient and compact design with CMOS CIS and light source of LED
- Conforms to ENERGY STAR standards
- Power consumption
- Scanning: 27 W, Sleep mode: 1.8 W, Power OFF: 0.5 W
- Compliant with European RoHS Directive

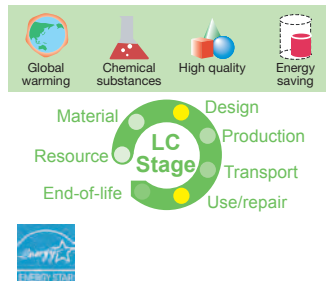
Product performance

- High speed 1-pass duplex scanning
- B&W/Gray/Color: 60ppm/120ipm (A4/LTR portrait/200dpi)
- Robust and compact body
- High volume feeding tray which holds maximum 60 sheets
- Reliable feeding of a wide range of documents from embossed plastic cards to documents as large as A3/11"x17" (using folio mode)
- Thin paper mode
- Feeding speed slows down to transport thin document gently to prevent from any damages
- Ultrasonic Double Feed Detection function
- Canon's various advanced image processing functions
- Auto size detection, Deskew, Skip blank page, Text orientation recognition, Auto color detection, Shadow cropping, Background smoothing, Automatic setting of resolution, etc.

CANON ELECTRONICS INC.

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 Tel +81-3-6910-4119 Fax +81-3-5472-7671  
 E-mail [kankyo@canon-elec.co.jp](mailto:kankyo@canon-elec.co.jp)  
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>  
 URL <http://www.canon-elec.co.jp/english/products/ims/en-drm160/index.html>

Available in: Worldwide



Document Scanner DR-M160

EP-3-080

OA/IT equipment

scanners

fi-6800 - The fastest and smallest A3 image scanner in its class

Environmental performance

- Resource saving: fi-6800 is smallest in its class (See Note) (Takes up 53% less space and is 72% lighter than its previous model (fi-4860C2)).
- Energy saving: Short recovery time (within 6 seconds). Low power consumption when in sleep mode (less than 4W without CGA board interface)
- Eco-efficiency factor: Enhanced performance improves scanning efficiency and reduces the size of body. The fi-6800 has an Eco-efficiency factor of 2.15.
- EU RoHS compliant.

Note:Applies to business scanners priced between ¥1,170,000 and ¥4,400,000.

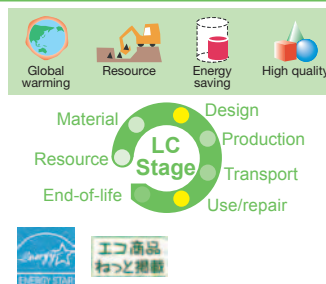
Product performance

- The fi-6800 offers fast, 130ppm/260ipm, A4 landscape size color scanning (200/300dpi) with smallest body in the class.
- The fi-6800 supports new automatic functions that make scanner operating tasks even easier, faster and more energy efficient.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan  
 Tel +81-44-540-4668 Fax +81-44-540-4639  
 E-mail [scanners@pfu.fujitsu.com](mailto:scanners@pfu.fujitsu.com)  
 URL <http://www.fujitsu.com/global/about/environment/>  
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



fi-6800

Eco-product // OA/IT equipment

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EP-3-081

OA/IT equipment

scanners

fi-60F - Resource and energy saving A6 flatbed scanner

Environmental performance

- Resource saving: The smallest and fastest scanner in its class.
- Incorporated environmentally friendly material: The fi-60F has been painted with easy to recycle paint and makes use of a mercury-free light source.
- Energy saving: The fi-60F is one of the top performing international ENERGY STAR standards meeting scanners. (The fi-60F requires a mere 2W or less when in sleep mode.)
- Quiet performance: Operates at 42dB or lower.
- EU RoHS compliant.

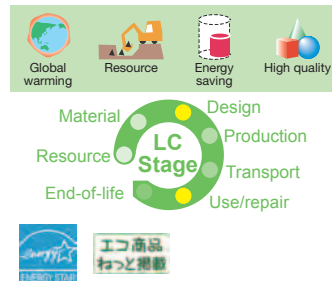
Product performance

- The fi-60F A6 flatbed color scanner offers first-rate speedy one-second scanning (200dpi, monochrome).

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan  
 Tel +81-44-540-4668 Fax +81-44-540-4639  
 E-mail [scanners@pfu.fujitsu.com](mailto:scanners@pfu.fujitsu.com)  
 URL <http://www.fujitsu.com/global/about/environment/>  
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



fi-60F

EP-3-082

OA/IT equipment

scanners

ScanSnap S1100 - The world's smallest class document scanner

Environmental performance

- Resource saving: S1100 is the world's smallest class form factor (takes up 79.6% less space than its previous model (S1300)). Necessary parts for S1100 are reduced to 75.4%.
- Energy saving: Low power consumption (22.4% for the standard (sleep mode) in the International Energy Star Program)
- Eco-efficiency factor: Enhanced performance improves scanning efficiency and reduces the size of body. S1100 has an Eco-efficiency factor of 3.9.
- EU RoHS compliant.

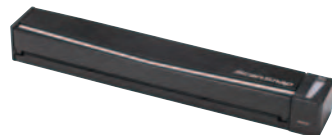
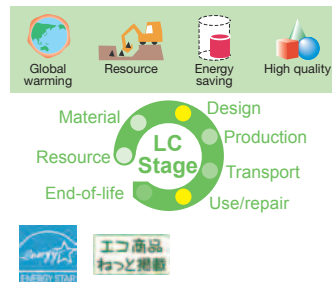
Product performance

- S1100 delivers a snappy 7.5 seconds/page scanning for A4 color documents.
- Despite being a simplex sheet-feed document scanner, S1100 allows non-stop, smooth scanning of two sided, multi-page documents.
- Supports plastic card (ISO7810 ID-1 format compliant) scanning and other handy scanning features.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan  
 Tel +81-44-540-4668 Fax +81-44-540-4639  
 E-mail [scanners@pfu.fujitsu.com](mailto:scanners@pfu.fujitsu.com)  
 URL <http://www.fujitsu.com/global/about/environment/>  
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



ScanSnap S1100

EP-3-083

OA/IT equipment

scanners

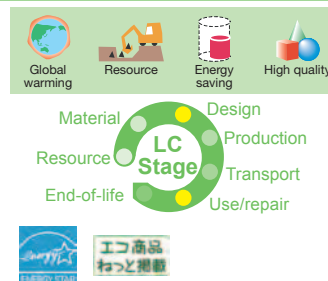
ScanSnap N1800 - The first network scanner to offer Could Linking functions

Environmental performance

- Resource saving: N1800 takes up 68.3% less space than its previous model (fi-6010N). Necessary parts for N1800 are reduced to 68.9%.
- Energy saving: Low power consumption (32.9% for the standard (sleep mode)).
- Eco-efficiency factor: N1800 improves energy efficiency and reduce the size of body. N1800 has an Eco-efficiency factor of 2.83. (on 200dpi scanning)
- EU RoHS compliant.

Product performance

- N1800 comes ready with functions that enable users to e-mail, save and print scanned data through a network. More functions can be added through specialized applications called Add-ins.
- N1800 carries all the labor-saving automated functions that have become a staple of the ScanSnap series through touch panel operation.
- Flexible and expandable features to suit any business from SOHO to enterprises.



ScanSnap N1800

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan  
 Tel +81-44-540-4668 Fax +81-44-540-4639  
 E-mail [scanners@pfu.fujitsu.com](mailto:scanners@pfu.fujitsu.com)  
 URL <http://www.fujitsu.com/global/about/environment/>  
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide

EP-3-084

OA/IT equipment

scanners

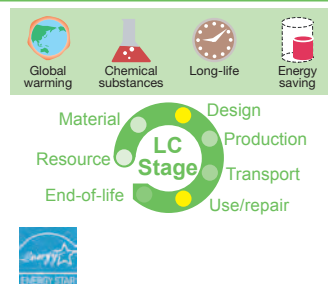
Desktop type OCR scanner S1500 for high-speed data entry from paper documents

Environmental performance

- Mitigation of climate change: Reduction about 77% power consumption in operation due to the "low power consumption" mode featuring ENERGY STAR compliant and high-speed scanning.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Management of chemicals: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

Product performance

- High-speed scanning: High-speed scanning for OCR of 50 sheets per minute for A4-sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble-free operation, even with mixed sheet thickness.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.



Desktop type OCR scanner S1500

Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan  
 Tel +81-3-3457-3260 Fax +81-3-5444-9429  
 E-mail [eco-info@toshiba-sol.co.jp](mailto:eco-info@toshiba-sol.co.jp)  
 URL <http://www.toshiba-sol.co.jp/>  
 URL <http://www.toshiba.co.jp/index.htm>

Eco-product // OA/IT equipment

EP-3-085

OA/IT equipment

scanners

Desktop type OCR scanner S2500 for high-speed data entry from paper documents

Environmental performance

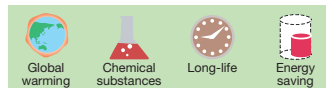
- Mitigation of climate change: Reduction about 81% power consumption in operation due to the "low power consumption" mode featuring ENERGY STAR compliant and high-speed scanning.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Elimination of harmful chemical substances: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

Product performance

- High-speed scanning: High-speed scanning for OCR of 120 sheets per minute for A4-sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble free operation, even with mixed sheet thickness.
- Duplex imprinting mechanism: OCR software for document format identification decides suitable imprinting side even for batch scanning with stacks of inter-mixed forms.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.

Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan  
 Tel +81-3-3457-3260 Fax +81-3-5444-9429  
 E-mail [eco-info@toshiba-sol.co.jp](mailto:eco-info@toshiba-sol.co.jp)  
 URL <http://www.toshiba-sol.co.jp/>  
 URL <http://www.toshiba.co.jp/index.htm>



Desktop type OCR scanner S2500

EP-3-086

OA/IT equipment

scanners

High-end OCR scanner S10000 for scanning and sorting various kind of sheets (size and paper quality) in large batches.

Environmental performance

- Mitigation of climate change: Reduction about 43% power consumption in operation due to the highest-speed (\*) scanning in all ENERGY STAR compliant products.
- Efficient use of resources: Using fewer, thinner components and recycle parts realized 88% recycle rate.
- Elimination of harmful chemical substances: Uses a mercury-free, long-life light source; made of xenon lamps instead of fluorescent lamps.

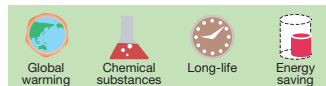
(\*) Refer to the Web site of The Energy Conservation Center, Japan on Jan., 2012.

Product performance

- High-speed scanning: High-speed scanning for OCR of 300 sheets per minute for A4-sized documents.
- Scanning mixed sheets: Multi-stage Separator mechanism improved to separate and feed various forms of sheets.
- Transport performance: "Skew Aligning Transport mechanism" aligning skew of sheets automatically reduced the transport error rate.
- Operators workload saving: "Impeller Stacking mechanism" ejecting the sheets in aligned tip reduced operators workloads.

Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-3260 Fax +81-3-5444-9429  
 E-mail [eco-info@toshiba-sol.co.jp](mailto:eco-info@toshiba-sol.co.jp)  
 URL <http://www.toshiba-sol.co.jp/>  
 URL <http://www.toshiba.co.jp/index.htm>



Ultra high volume OCR scanner S10000



EP-3-087

OA/IT equipment

layer 2 switch

SR-X340TR1: Layer 2 switch the best equipped with server rack

Environmental performance

1. Energy saving
  - Target in energy consumption efficiency based on Act on the Rational Use of Energy is achieved. Consumption power is top level in the industry.
  - Built-in sensor watches power consumption.
  - Automatic control of power consumption of unused port
2. Case design considering equipment on the rack with server
  - Front suction and rear exhaust (same as the server) is adopted to enable an efficient cooling in the rack.
3. Miniaturized by 33% in volume, by 48% in number of parts
4. Reduction of hazardous chemical substance
  - Lead free solder for all printed-circuit boards

Product performance

- 1giga interface in 40 ports and 10giga interface in 4 ports on 1U
- Rear access model that LAN interface side is the back of rack and front access model, both available
- AC100V, AC200V power supply is supported. They can be doubled.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 Tel +81-03-5568-1170  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan

SR-X340TR1

EP-3-088

OA/IT equipment

information display

Information Display (PN-V602)

Environmental performance

- (1) The PN-V602 owes much of its outstanding black levels, amazing contrast, and superb energy efficiency to local dimming of the LED backlight.
    - 1,500cd/m<sup>2</sup> Local dimming OFF: 500W
    - 1,500cd/m<sup>2</sup> Local dimming High: 270W (ref) 700cd/m<sup>2</sup> Local dimming High: 155W
  - (2) Mercury-free because LED backlight is incorporated.
- ※ Results of Sharp measurements when displaying broadcast content (sub-clause 11.6) stipulated under IEC 62087 Ed.2.0 and with brightness set to maximum. Note that the power consumption reduction will vary depending on the images displayed.

Product performance

- (1) Ultra-high brightness of 1,500cd/m<sup>2</sup> lets the PN-V602 excel in brightly lit indoor locations, even those awash in sunlight.
- (2) Slim bezel. Decreasing width of the bezel create a multi-screen configuration that impressively displays large, detailed images.

Sharp Corporation

22-22 Nagaïke-cho, Abeno-ku, Osaka, 542-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>

Information Display PN-V602

Eco-product // OA/IT equipment



**Touch Display (PN-L702B)**

**Environmental performance**

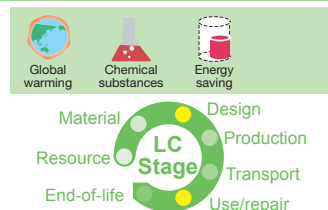
- (1) Low power consumption (240W) and high image quality thanks to Sharp's proprietary UV<sup>2</sup>A technology and LED backlighting.
- (2) Mercury-free because LED backlight is incorporated.

**Product performance**

- (1) Touchscreen-integrated LCD monitor incorporates a large 70-inch LCD panel.
- (2) Ideal for use as an electronic whiteboard with the bundled touch pen and Sharp Pen Software.

**Sharp Corporation**

22-22 Nagaïke-cho, Abeno-ku, Osaka, 545-8522, Japan  
 Tel +81-6-6625-0438 Fax +81-6-6625-0153  
 E-mail [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)  
 URL <http://sharp-world.com/>  
 URL <http://sharp-world.com/corporate/eco/>



Touch Display PN-L702B

EP-4-001

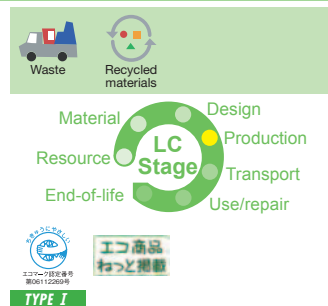
Office supplies/furniture

chalk

Chalk using recycled eggshells discarded by food processing companies

Environmental performance

Eggshells discarded by food processing companies were heated, sterilized, crushed and ground up, and chalk was manufactured by substituting 60% of the raw material in regular calcium carbonate chalk (i.e., calcium carbonate) with the ground eggshells. Discarded eggshells were recycled into chalk raw materials for use at schools, construction sites, etc. Sprinkling chalk powder generated from chalk use also leads to soil improvement.



NIHONHAKUBOKU INDUSTRY CO., LTD.

3-43 KAMIGUCHI MISATO-SHI SAITAMA-KEN, 341-0055, Japan  
 Tel +81-48-952-7171 Fax +81-48-952-7175  
 E-mail junji@tenjin-chalk.co.jp  
 URL <http://www.tenjin-chalk.co.jp/>



Available in: Japan,Indonesia,Singapore,Thailand,Philippines,Malaysia,Republic of Korea,Taiwan (Rep. of China),China

ECO Chalk 72

EP-4-002

Office supplies/furniture

chipboard

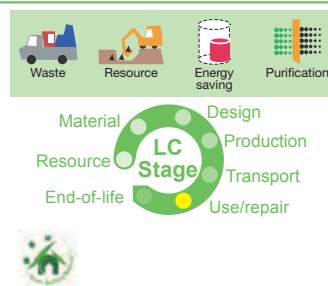
Wedego E1 Class F3 Type Chipboard

Environmental performance

\* Low formaldehyde  
 \* Green Building Material:  
 Exposure assesment of HCHO: N.D.  
 Exposure assesment of TVOC: 0.103 mg / m<sup>2</sup> .hr

Product performance

In response to varied purposes, it can be processed into waterproofing, scratch resistant, wear resistant features, and the plank wood has a solid, heavy feel, no less than the texture of solid wood.



Taiwan Order Furniture Corporation

3F, No.84, Sec. 1, Wenhua 1st Rd., Linkou Dist., New Taipei City, Taiwan,  
 244, Republic of China  
 Tel +886-2-2600-6008-1163 Fax +886-2-2600-6028  
 E-mail maggie@order.com.tw  
 URL <http://www.order.com.tw>



Available in: Taiwan (Rep. of China),China

Eco-product // Office supplies/furniture

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EP-4-003

Office supplies/furniture

chipboard

Melamine Face Chipboard

Environmental performance

Using recycled wood material and factory scraps as the main content, it helps to reduce the dependence on log.

- 1.recycled wood (mainly pallets) - 25%
- 2.factory scraps
  - (1) remnants from lumber yards - 40%
  - (2) furniture and remnants from lumber mills - 17%
  - (3) fine sawdust from lumber yards - 18%

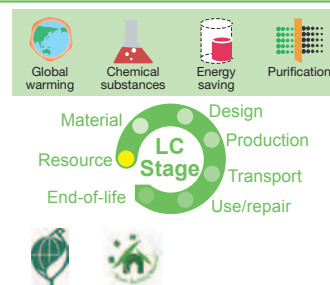
Product performance

No preservatives or pesticides harmful to the human body, such as formaldehyde, isocyanides, chlorine, PCP, Lindane or hydroxybenzene are added in the production process, making it environmentally friendly and healthy.

LONGLAND INTERNATIONAL CO., LTD.

No.28, Gong 9th Rd., The 2nd Industrial Park, Linkou Dist., New Taipei City 244, Taiwan, 244, Republic of China  
 Tel +886-4-26595338 Fax +886-4-26595358  
 E-mail jerrywu@longland.com.tw  
 URL <http://www.longland.com.tw>

Available in: Taiwan (Rep. of China)



EP-4-004

Office supplies/furniture

chipboard

MELAMINE FACE CHIPBOARD OWP

Environmental performance

Recycled wood is broken into wood particles, and the wood particles are bonded and pressed into particle boards; thus, the consumption of trees is effectively reduced. Particle boards can be made from the timber of secondary forests to facilitate continuous development of the ecosystem.

Product performance

Melamine chipboard is commonly used in system cabinets, furniture, school desks and chairs, bed boards, closets, etc.

ODENWALD WOOD PRODUCTS CO., LTD.

No.12, Jingjian Rd., Pingtung Export Processing Zone, Pingtung City, Pingtung County, Taiwan, 90093, Republic of China  
 Tel +886-8-7516388 Fax +886-8-7517388  
 E-mail owp@odenwald.com.tw

Available in: Taiwan (Rep. of China)



Eco-product // Office supplies/furniture

EP-4-005

Office supplies/furniture

plywood

### Blockboard CCB175

#### Environmental performance

The inspection and testing performed for TCLP (lead, total silver, hexavalent chromium, cadmium, mercury, arsenic, copper), asbestos, radiation, total evaporative organic matters (TVOC) and formaldehyde (HCHO) screening find that the product complies to the green building material - healthy green building material standards.

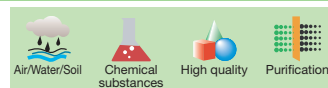
#### Product performance

Using Lauan as the raw material with the middle is primarily made of solid strips, it is mainly used in interior furnishing, and is also often used in furniture, kitchen cabinets, bedding sets and so forth.

### Chuan-Chi Lumber Co., Ltd.

No.290, Wubian Ln., Yongjing Township, Changhua County, Taiwan, 512, Republic of China  
 Tel +886-4-8220521 Fax +886-4-8232129  
 E-mail [service@chuan-chi.com.tw](mailto:service@chuan-chi.com.tw)  
 URL <http://plywoodcenter.com>

Available in: Taiwan (Rep. of China)



EP-4-006

Office supplies/furniture

chairs

### Highly functional and eco-friendly office chair "Spina"

#### Environmental performance

Use of recycled materials: Parts made from 100% recycled polypropylene out of recovered battery cases are used for the mechanism cover, levers, etc.  
 Reduction of material use: The inner shell with numerous slits in the seat pan provides a cushion effect, reducing the amount of urethane compared with conventional products.  
 Material labeling: The materials used in most plastic parts are labeled to facilitate separation and recycling at the time of disposal.  
 We offset whole greenhouse gas emitted from the entire life cycle of all products of this model (domestic sale only). This project obtained public certification for Carbon offsetting.

#### Product performance

With the passive slide seat (PSS) system that makes the seat sink and slide back when seated, and the active lumbar support (ALS) system that makes the lumbar part of the chair's backrest push forward, Spina chair supports the user's back properly even when sitting back and leaning or sitting forward. This human-friendly Spina chair won the Gold Prize of the Good Design Award in 2007.

### ITOKI CORPORATION

4-12, Imafukuhigashi 1-chome, Joto-ku, Osaka, 536-0002, Japan  
 Tel +81-6-6935-2200 Fax +81-6-6935-2268  
 URL <http://www.itoki.jp/>  
 URL <http://www.itoki.jp/spina/>  
 URL <http://www.itoki.jp/udeco/communication/erreports.html>

Available in: Japan, North America



TYPE 1



Spina Chair

EP-4-007

Office supplies/furniture

chairs

**NOVITE Folding Chair PA1310****Environmental performance**

The entire chair is made of 100% polypropylene, a recyclable and renewable material.

**Product performance**

The entire chair comprises three components and two fittings, and it has surpassed the ANSI/BIFMA standards to be able to withstand 120kg of weight.

**Shiang Ye Industrial Co.,Ltd**

No. 32, Huadong Rd., Daliao Dist., Kaohsiung City, Taiwan, 831, Republic of China  
Tel +886-7-7872120 Fax +886-7-7874584  
E-mail [elly@chairking.com.tw](mailto:elly@chairking.com.tw)  
URL <http://www.chairking.com.tw>

Available in: Worldwide



TYPE I



EP-4-008

Office supplies/furniture

chairs

**ROSA Stacking Chair PA2310****Environmental performance**

The entire chair is made of 100% polypropylene, a recyclable and renewable material.

**Product performance**

The sharp angle-free, curvature design offers a sense of comfort. The zero screw design is suitable for indoors and outdoors, and the zero metal parts warrant rustfree endurance against atmospheric moisture. The UV-inhibited plastic protection safeguards the color from fading under the sunlight. Its stackable feature facilitates transporting multiple units at once. It adopts a single material to simplify the recyclable and reusing processes.

**Shiang Ye Industrial Co.,Ltd**

No. 32, Huadong Rd., Daliao Dist., Kaohsiung City, Taiwan, 831, Republic of China  
Tel +886-7-7872120 Fax +886-7-7874584  
E-mail [elly@chairking.com.tw](mailto:elly@chairking.com.tw)  
URL <http://www.chairking.com.tw>

Available in: Worldwide



TYPE I



EP-4-009

Office supplies/furniture

desks

CX office desk made in the pursuit of simplified design

Environmental performance

CX desk has the following eco-friendly features.  
 Simplified design: The desk's weight was reduced by approximately 13% compared with our company's conventional products through simplified design to eliminate duplicated desk legs and modestly panels and downsized basic parts (in case of an island-type, face-to-face layout for 8 people).  
 Improved recyclability: Metals (steel, aluminum) are used for 96% of the total weight of the product (in case of non-pedestal desk).  
 Use of an eco-melamine desktop: The surface material of the desktop is made of originally developed eco-melamine using 52% waste paper.  
 Use of recycled materials: Recycled materials are used for 43% of the resin parts (in case of pedestal desk).

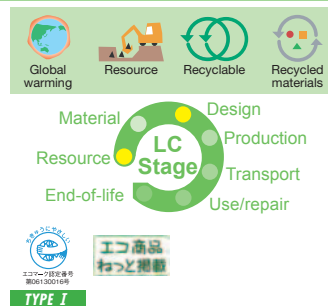
Product performance

CX desk is a neo-standard desk that meets a variety of office needs through the pursuit of simplified design for improved functionality and simplified structure.

ITOKI CORPORATION

4-12, Imafukuhigashi, 1-chome, Joto-ku, Osaka, 536-0002, Japan  
 Tel +81-6-6935-2200 Fax +81-6-6935-2268  
 URL <http://www.itoki.jp/>  
 URL <http://www.itoki.jp/products/desk/cx/>  
 URL <http://www.itoki.jp/udeco/communication/erreports.html>

Available in: Japan



CX DESK

EP-4-010

Office supplies/furniture

printed matter

Yes Eco-Friendly Notebook DYNB-09001

Environmental performance

The FSC™ label shows that the notebook is made out of materials coming from a well-managed forest. The FSC™ label provides the link between responsible production and consumption and thereby enables the consumer to make socially and environmentally responsible purchasing decisions.

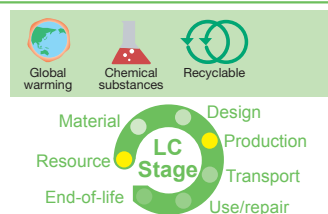
Product performance

Helps you stay organized and capture your good ideas. This notebook is perfect for keeping notes for class, work or personal projects.

Da Yeh Paper Co., Ltd.

3F., No. 351, Sec. 2, Zhongshan Rd., Zhonghe Dist., New Taipei City, Taiwan, 235, Republic of China  
 Tel +886-2-3234-4699 Fax +886-2-3234-4696  
 E-mail [stardust@printmax.com.tw](mailto:stardust@printmax.com.tw)  
 URL <http://www.dayeh.net>

Available in: Taiwan (Rep. of China)



Eco-product // Office supplies/furniture

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EP-4-011

Office supplies/furniture

printed matter

"United, We Help the Earth" 2011 Calendar DYCLD-099001

**Environmental performance**

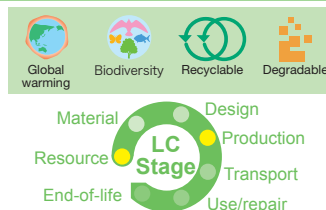
The FSC™ label shows that the calendar is made out of materials coming from a well-managed forest. The FSC™ label provides the link between responsible production and consumption and thereby enables the consumer to make socially and environmentally responsible purchasing decisions.

**Product performance**

Three local illustrators were invited to co-work on the creation of the calendar. There are 13 environmental themed paintings which show the artists' care for the earth, especially for forests. In each month, there is a paragraph introducing some environmental knowledge. Above all, this calendar is printed with FSC™ certificated paper and under FSC™ CoC certification, ensuring that the materials of this product come from well-managed forests.

**Da Yeh Paper Co., Ltd.**

3F., No. 351, Sec. 2, Zhongshan Rd., Zhonghe Dist., New Taipei City, Taiwan, 235, Republic of China  
 Tel +886-2-3234-4699 Fax +886-2-3234-4696  
 E-mail stardust@printmax.com.tw  
 URL <http://www.dayeh.net>



Available in: Taiwan (Rep. of China)

EP-4-012

Office supplies/furniture

stationery

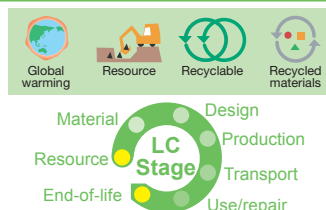
Recycled Kraft Paper Pipe File Folder Series

**Environmental performance**

Certified by Green Mark (made of recycled paper with at least 50%), our Kraft paper product need not to chop at trees, and can be 100% recycled after use.

**Product performance**

Made mainly from recycled materials, our Eco Friendly File Folder Series are produced with particular attention to controlling the pollution generated during production and minimizing the environmental impact created during recycling.



TYPE 1

**HSIN YING STATIONERY INDUSTRIAL CO., LTD.**

No.33, Pao An St., Taipei City, Taiwan, 103, Republic of China  
 Tel +886-2-25570463 Fax +886-2-25570466  
 E-mail [regina@ms79.hinet.net](mailto:regina@ms79.hinet.net)  
 URL <http://www.regina.com.tw>



Available in: Japan, Taiwan (Rep. of China)

1 Eco-product // Office supplies/furniture  
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EP-4-013

Office supplies/furniture

stationery

### Recycled Kraft Paper Lever Arch File Folder Series

#### Environmental performance

Certified by Green Mark (made of recycled paper with at least 50%), our Kraft paper product need not to chop at trees, and can be 100% recycled after use.

#### Product performance

Made mainly from recycled materials, our Eco Friendly File Folder Series are produced with particular attention to controlling the pollution generated during production and minimizing the environmental impact created during recycling.



### HSIN YING STATIONERY INDUSTRIAL CO., LTD.

No.33, Pao An St., Taipei City, Taiwan, 103, Republic of China  
 Tel +886-2-25570463 Fax +886-2-25570466  
 E-mail regina@ms79.hinet.net  
 URL <http://www.regina.com.tw>



Available in: Japan, Taiwan (Rep. of China)

EP-4-014

Office supplies/furniture

stationery

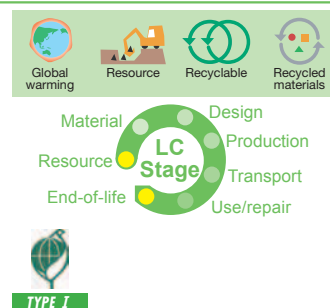
### Recycled Kraft Paper Spring File Folder Series

#### Environmental performance

Certified by Green Mark (made of recycled paper with at least 50%), our Kraft paper product need not to chop at trees, and can be 100% recycled after use.

#### Product performance

Made mainly from recycled materials, our Eco Friendly File Folder Series are produced with particular attention to controlling the pollution generated during production and minimizing the environmental impact created during recycling.



### HSIN YING STATIONERY INDUSTRIAL CO., LTD.

No.33, Pao An St., Taipei City, Taiwan, 103, Republic of China  
 Tel +886-2-25570463 Fax +886-2-25570466  
 E-mail regina@ms79.hinet.net  
 URL <http://www.regina.com.tw>



Available in: Japan, Taiwan (Rep. of China)

EP-4-015

Office supplies/furniture

stationery

### Recycled Kraft Paper File Box Series

#### Environmental performance

Certified by Green Mark (made of recycled paper with at least 50%), our Kraft paper product need not to chop at trees, and can be 100% recycled after use.

#### Product performance

Made mainly from recycled materials, our Eco Friendly File Folder Series are produced with particular attention to controlling the pollution generated during production and minimizing the environmental impact created during recycling.



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 Tel +886-2-25570463 Fax +886-2-25570466  
 E-mail regina@ms79.hinet.net  
 URL <http://www.regina.com.tw>



Available in: Japan, Taiwan (Rep. of China)

EP-4-016

Office supplies/furniture

stationery

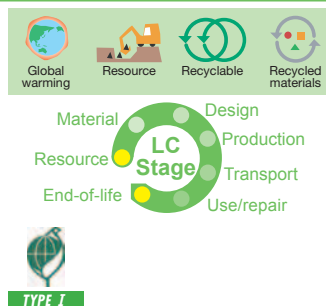
### Recycled Kraft Paper Magazine Holder Series

#### Environmental performance

Certified by Green Mark (made of recycled paper with at least 50%), our Kraft paper product need not to chop at trees, and can be 100% recycled after use.

#### Product performance

Made mainly from recycled materials, our Eco Friendly File Folder Series are produced with particular attention to controlling the pollution generated during production and minimizing the environmental impact created during recycling.



### HSIN YING STATIONERY INDUSTRIAL CO., LTD.

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 Tel +886-2-25570463 Fax +886-2-25570466  
 E-mail regina@ms79.hinet.net  
 URL <http://www.regina.com.tw>



Available in: Japan, Taiwan (Rep. of China)

EP-4-017

Office supplies/furniture

stationery

Stationery Papers LC-10R

Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

Product performance

For file sorting management.

Lan-I Huang Enterprise Co., LTD.

NO.11-1, Lane 8, Chengtian Rd., Tucheng Dist., New Taipei City, Taiwan, 236, Republic of China  
 Tel +886-2-2268-2211 Fax +886-2-2268-3320  
 E-mail Lan.chyn@msa.hinet.net  
 URL <http://www.lanchyn.com>

Available in: Taiwan (Rep. of China)



TYPE I



EP-4-018

Office supplies/furniture

stationery

Stationery Papers LC-180

Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

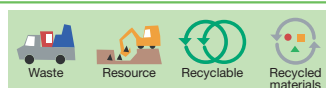
Product performance

For file sorting management.

Lan-I Huang Enterprise Co., LTD.

NO.11-1, Lane 8, Chengtian Rd., Tucheng Dist., New Taipei City, Taiwan, 236, Republic of China  
 Tel +886-2-2268-2211 Fax +886-2-2268-3320  
 E-mail Lan.chyn@msa.hinet.net  
 URL <http://www.lanchyn.com>

Available in: Taiwan (Rep. of China)



TYPE I



Eco-product // Office supplies/furniture

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EP-4-019

Office supplies/furniture

stationery

### Recyclable File Box LC60-R

#### Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

#### Product performance

For file sorting management.



TYPE I

### Lan-I Huang Enterprise Co., LTD.

NO.11-1, Lane 8,Chengtian Rd.,Tucheng Dist., NewTaipei City,Taiwan, 236, Republic of China  
 Tel +886-2-2268-2211 Fax +886-2-2268-3320  
 E-mail Lan.chyn@msa.hinet.net  
 URL <http://www.lanchyn.com>



Available in: Taiwan (Rep. of China)

EP-4-020

Office supplies/furniture

stationery

### Paper Laminated Binders SG940H

#### Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

#### Product performance

For documents, data sorting, grouping and filing.



TYPE I

### STRONG STATIONERY MFG. CO., LTD.

No.96, Shin-Lo Rd., Tainan City, Taiwan, 702, Republic of China  
 Tel +886-6-2636777 Fax +886-6-2611711  
 E-mail strongfm@ms29.hinet.net  
 URL <http://www.strongfile.com/>



Available in: Taiwan (Rep. of China)

EP-4-021

Office supplies/furniture

stationery

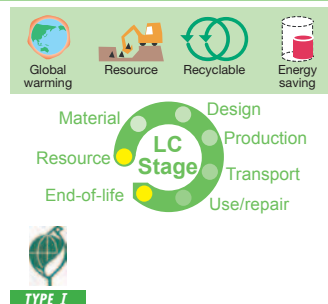
Paper Laminated Binders SG9510

Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

Product performance

For documents, data sorting, grouping and filing.



**STRONG STATIONERY MFG. CO., LTD.**

No.96, Shin-Lo Rd., Tainan City, Taiwan, 702, Republic of China  
 Tel +886-6-2636777 Fax +886-6-2611711  
 E-mail strongfm@ms29.hinet.net  
 URL <http://www.strongfile.com/>

Available in: Taiwan (Rep. of China)

EP-4-022

Office supplies/furniture

stationery

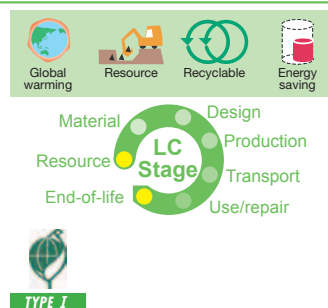
Paper Laminated Binders SG935

Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

Product performance

For documents, data sorting, grouping and filing.



**STRONG STATIONERY MFG. CO., LTD.**

No.96, Shin-Lo Rd., Tainan City, Taiwan, 702, Republic of China  
 Tel +886-6-2636777 Fax +886-6-2611711  
 E-mail strongfm@ms29.hinet.net  
 URL <http://www.strongfile.com/>

Available in: Taiwan (Rep. of China)

Eco-product // Office supplies/furniture



EP-4-023

Office supplies/furniture

stationery

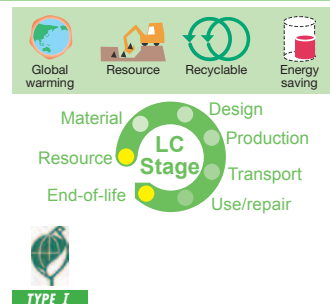
## Paper Laminated Binders SG920A

## Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

## Product performance

For documents, data sorting, grouping and filing.



## STRONG STATIONERY MFG. CO., LTD.

No.96, Shin-Lo Rd., Tainan City 702, Taiwan, 702, Republic of China  
Tel +886-6-2636777 Fax +886-6-2611711  
E-mail strongfm@ms29.hinet.net  
URL <http://www.strongfile.com/>



Available in: Taiwan (Rep. of China)

EP-4-024

Office supplies/furniture

stationery

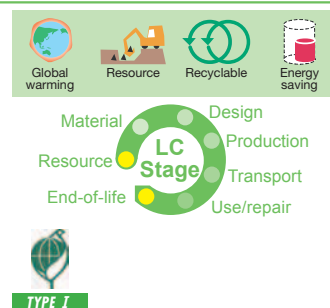
## Paper Laminated Binders SG9739

## Environmental performance

The product is made of recycled paper with at least 50% recycled paper content, and this minimal recycled paper content is subject to future revision in accordance with the improvement in paper production technology. And the product can be recycled after use.

## Product performance

For documents, data sorting, grouping and filing.



## STRONG STATIONERY MFG. CO., LTD.

No.96, Shin-Lo Rd., Tainan City 702, Taiwan, 702, Republic of China  
Tel +886-6-2636777 Fax +886-6-2611711  
E-mail strongfm@ms29.hinet.net  
URL <http://www.strongfile.com/>



Available in: Taiwan (Rep. of China)

EP-4-025

Office supplies/furniture

the raised floor made from plastic

100% recycled PET panels for groove-wiring double floors

Environmental performance

This wiring floor is made of recycled PET bottle flakes to effectively use resources to preserve the global environment. CO<sub>2</sub> emissions can be reduced by 32kg by recycling PET bottles to make 1m<sup>2</sup> panels.

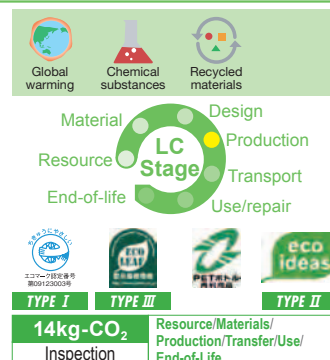
Product performance

1. The transparent cover allows wiring in grooves to be checked at a glance by just turning over the tile carpets.
2. The wire capacity of FPZ3000 is approx. three times that of our conventional wiring floor (FP). Therefore, it can also accommodate wiring in offices with many PCs.
3. The finished floor panel thickness is only 50mm. The thin panels can also be used in offices with a low ceiling.
4. The panel joint rings securely fix the panel corners. They prevent panel displacement and provide high resistance to earthquakes.

Panasonic Co.,Ltd

Kadoma1048,Kadoma city,Osaka pref., 571-8686, Japan  
 Tel +81-6-6909-0611 Fax +81-6-6908-2179  
 URL <http://panasonic.net/>  
 URL <http://panasonic.co.jp/products/>  
 URL <http://panasonic.net/csr/>

Available in: Japan,Asia,Indonesia



Wiring Floor FPR3000 NE11820  
 Wiring Floor FPZ3000 NE11840

EP-4-026

Office supplies/furniture

continuous form paper

Green Form

Environmental performance

Innovative eco-friendly paper for continuous computer form dot matrix printing, developed by SCG Paper with the intention to support organizations and businesses while promoting social responsibility and sustainable living by using EcoFiber 30% as a material to substitute virgin fiber sourced from trees. The product is made in accordance with "Green Label" standard to guarantee the quality which is equivalent to paper made from virgin fiber.

Product performance

Basis weights: 50, 60 gsm  
 Available sizes: 9 inches, 15 inches, 18 inches  
 Convention: Reel to Fanfold  
 Features: High stiffness

Thai Paper Co., Ltd. in SCG Paper

1 Siam Cement Rd. Bangsue, Bangkok, 10800, Thailand  
 Tel +66 2 586 1000 Fax +66 2 586 2070  
 E-mail [nuttavuv@scg.co.th](mailto:nuttavuv@scg.co.th)  
 URL <http://thaipaper.com>  
 URL <http://thaipaper.com/products-and-services/business-communication-papers/green-form/>

Available in: Thailand



EP-4-027

Office supplies/furniture

calendar

Ecology Carbon Offset Calendar

Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

Product performance

The Ecology calendar is compact, and features a large space for making notes.

Size: 119 x 150 mm, 1 cover + 12 main sheets, logo (VOC free, waterless printing)

Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan



Ecology Carbon Offset Calendar

EP-4-028

Office supplies/furniture

calendar

Eco-Mark-certified Green Calendar

Environmental performance

An Eco-Mark-labeled calendar. All the paper used in the product is 100% recycled. The packaging of the calendars is made from milk cartons. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

Product performance

Size: 119 x 150 mm, 12-page main text, Logotype



Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan

EP-4-029

Office supplies/furniture

calendar

### Window Memo Carbon Offset Calendar

#### Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

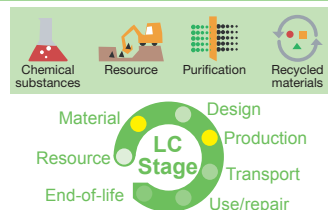
#### Product performance

The Window Memo is a fun calendar with a colorful and stylish design. Size: 120 x 180 mm, 12 main sheets, logo (VOC free, waterless printing)

### Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan



Window Memo Carbon Offset Calendar

EP-4-030

Office supplies/furniture

calendar

### Index Carbon Offset Calendar

#### Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

#### Product performance

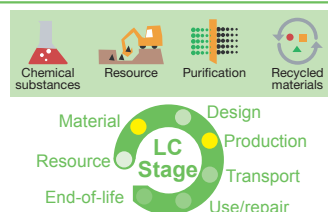
The Index Calendar has outstanding functionality and features easy-to-use tabs and a large space for making notes.

Size: 140 x 180 mm, 1 cover + 6 main sheets, logo (soy ink)

### Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan



Index Carbon Offset Calendar

EP-4-031

Office supplies/furniture

new year's cards

Eco Green New Year's Cards (postcards)

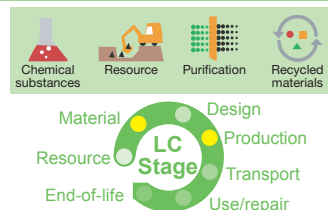
Environmental performance

When we initiated a carbon offset business in 2008, we launched carbon offset-type Green Eco New Years Cards in bags a conventional way of selling cards- along with an opportunity for consumers to participate in afforestation initiatives. Specially, we sold sets of three ecologically designed New Year's cards with lottery numbers and QR codes. The QR codes enable card recipients to see that approximately 400 grams of CO<sub>2</sub> is absorbed per card through afforestation. The cards in bags are sold at supermarket, bookstores, fancy goods stores, etc. In 2008, 2,500 sets were sold with a projected offset of about 5 tons of CO<sub>2</sub> by the November of 2009. In 2009, 7500 sets were sold with a projected offset of about 30 tons of CO<sub>2</sub> by 2010. In 2010, 10,000 sets were sold with a projected offset of about 48 tons of CO<sub>2</sub> by 2011.

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan



Green Eco New Year's Cards

EP-5-001

Apparel/textiles

recycled textiles

100% Recycled PET Monofilament(Natural) JS-Series (Natural White)

**Environmental performance**

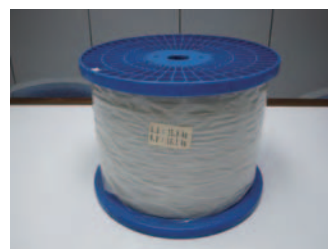
Each kilogram of product requires approximately 60 pieces of recycled 600cc PET bottles. This helps reduce the consumption of petrochemical materials, water and electricity.

**Product performance**

Made of polyester filaments generated from 100% PET bottle-reclaimed PET chips. Applicable to zippers, wigs, Velcro fasteners, etc. Having the same quality as if virgin PET chips are used.



TYPE I



**RI-THAI INTERNATIONAL INC.**

7F., No.186, Sec. 4, Nanjing E. Rd., Songshan Dist., Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-25786188 Fax +886-2-25796388  
 E-mail kay10@rithai.com  
 URL <http://www.rithai.com>

Available in: Japan,Europe,North America,Central America,South America,U.S.A.

EP-5-002

Apparel/textiles

recycled textiles

100% Recycled PET Monofilament(Black) JS-Series(Black)

**Environmental performance**

Each kilogram of product requires approximately 60 pieces of recycled 600cc PET bottles. This helps reduce the consumption of petrochemical materials, water and electricity.

**Product performance**

Made of polyester filaments generated from 100% PET bottle-reclaimed PET chips. Applicable to zippers, wigs, Velcro fasteners, etc. Having the same quality as if virgin PET chips are used.



TYPE I



**RI-THAI INTERNATIONAL INC.**

7F., No.186, Sec. 4, Nanjing E. Rd., Songshan Dist., Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-25786188 Fax +886-2-25796388  
 E-mail kay10@rithai.com  
 URL <http://www.rithai.com>

Available in: Japan,Europe,North America,Central America,South America,U.S.A.



EP-5-003

Apparel/textiles  
recycled textiles

Spun 10's/1

**Environmental performance**

Recycle PET yarn is made from recycled PET bottles. Its advantages include wastage decrease, educational meaning of Recycle PET, environmental burden decrease and so on. Recycle PET yarn also has the same features as polyester yarn, such as durable and good colour fastness.

In order to response to the Green policy of the government, we have developed and produced the Recycle PET material several years ago and were among the earlier ones to be granted the Green mark. We will keep innovation as our goal and create the best products for the environment.

**Product performance**

Recycle PET yarn is made from 100% post-consumer PET bottles. With the spirit of recycling, we spin all kinds of yarns through washing the bottles, flaking and drying. Finally the recycled PET bottles become the chips. The recycle PET yarn comes in various designs, such as weaving and stitch.

**ECOMAX**

No.117, Biantou Rd., Shengang Township, Changhua County, Taiwan, 509, Republic of China  
Tel +886-4-798-2028 Fax +886-4-798-0533  
E-mail sales@ecomaxtex.com.tw  
URL <http://www.ecomaxtex.com>

Available in: Asia, Europe, North America, Central America, South America, U.S.A.



TYPE I



EP-5-004

Apparel/textiles  
recycled textiles

Recycled Nylon Yarn 15D~1890D

**Environmental performance**

The nylon chips used are produced 100% from recycled materials to effectively reduce the demand of virgin CPL by 15% (21600 ton/year) and cut carbon emissions by 14.9% (21499 ton of CO<sub>2</sub>/year, equivalent to the amount that can be saved by planting and growing 46233 trees for 40 years). In addition, energy saving and waste water reduction are simultaneously achieved.

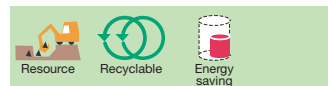
**Product performance**

Our company collects waste nylon cloths, chips and threads, Velcro fasteners, and like scraps through dedicated recycle facilities and makes CPL out of these recyclables. The CPL thus produced is similar in quality to virgin CPL and is turned into nylon fibers for making various eco-friendly customized nylon threads.

**FORMOSA CHEMICALS & FIBRE CORPORATION**

No.1, Zhongyang Industrial Park, Singang Township, Chiayi County, Taiwan, 61642, Republic of China  
Tel +886-928-062-189 Fax +886-5-3770430  
E-mail [CKY.NYLON@FCFC.COM.TW](mailto:CKY.NYLON@FCFC.COM.TW)  
URL <http://www.fcfc.com.tw/nylon/tw/default.htm>

Available in: Japan, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)



TYPE I



EP-5-005

Apparel/textiles

fibers

100% Recycled Polyester Yarn RePET® Drawn Textured Yarn (RePET® DTY)

Environmental performance

Compared to the traditional production process, the RePET® recycling process saves energy consumption by 52.6% and reduces CO<sub>2</sub> emission by 54.6%.

The RePET® Recycling Process:

Post-consumer bottle -> Bale breaker/Vibrating separator -> Label removing -> Crushing -> Washing & Sifting -> Clean flake -> Pelletizing -> Recycled chips -> RePET® yarn -> Apparel /Textile

Product performance

1. Made from recycled PET bottles. No petrochemical materials required.
2. Saving natural resources and relieving the load on the environment.
3. High quality for all purposes.

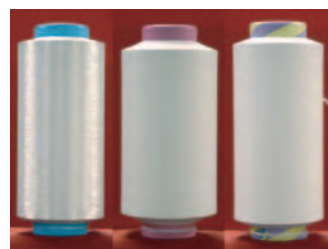
LEALEA ENTERPRISE CO., LTD.

11F., No.162, Sung-Chiang Rd., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-2-21001188-1127 Fax +886-2-21002688  
 E-mail yckao@lealea.com.tw  
 URL <http://www.libolon.com.tw>

Available in: Worldwide



TYPE I



EP-5-006

Apparel/textiles

fibers

100% Recycled Polyester Yarn RePET® Spin Drawn Yarn (RePET® SDY)

Environmental performance

Compared to the traditional production process, the RePET® recycling process saves energy consumption by 52.6% and reduces CO<sub>2</sub> emission by 54.6%.

The RePET® Recycling Process:

Post-consumer bottle -> Bale breaker/Vibrating separator -> Label removing -> Crushing -> Washing & Sifting -> Clean flake -> Pelletizing -> Recycled chips -> RePET® yarn -> Apparel /Textile

Product performance

1. Made from recycled PET bottles. No petrochemical materials required.
2. Saving natural resources and relieving the load on the environment.
3. High quality for all purposes.

LEALEA ENTERPRISE CO., LTD.

11F., No.162, Sung-Chiang Rd., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-2-21001188-1127 Fax +886-2-21002688  
 E-mail yckao@lealea.com.tw  
 URL <http://www.libolon.com.tw>

Available in: Worldwide



TYPE I



Eco-product // Apparel/textiles

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EP-5-007

Apparel/textiles

textured yarn of polyester

Polyester Textured Yarns 10d~300d

Environmental performance

150 pieces of clothing can be made from 3700 recycled PET bottles, effectively reducing waste and the trash on this densely populated earth. In addition, using recycled materials reduces energy consumption and emission of carbon dioxide, thereby slowing down global warming.

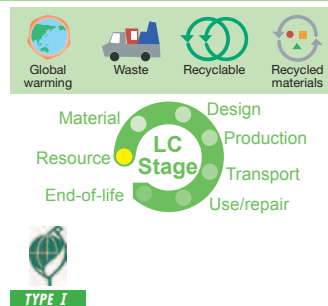
Product performance

This is a kind of recycled polyester fiber, made from recycled PET bottles. Its physical and chemical properties are similar to those of normal polyester, and it is suitable for making adult apparel. Suitable for Circular knitting, Neoprene, Tricot, Pantyhose, Socks, Underwear, Warp, Weft, N/C, C/N interwoven.

Nan Ya Plastics Corporation

5F., No.201, Tun Hwa North Rd., Taipei, Taiwan, 105, Republic of China  
 Tel +886-2-23718331-654 Fax +886-3-3970056  
 E-mail my258@npc.com.tw  
 URL <http://www.npc.com.tw/index.htm>

Available in: Asia,Europe,North America,Central America,South America,U.S.A.



EP-5-008

Apparel/textiles

filament yarn

Polyester Pre-Orientated Yarn (POY) 17d~450d

Environmental performance

150 pieces of clothing can be made from 3700 recycled PET bottles, effectively reducing waste and the trash on this densely populated earth. In addition, using recycled materials reduces energy consumption and emission of carbon dioxide, thereby slowing down global warming.

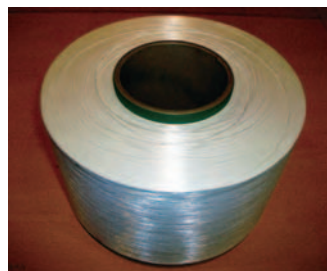
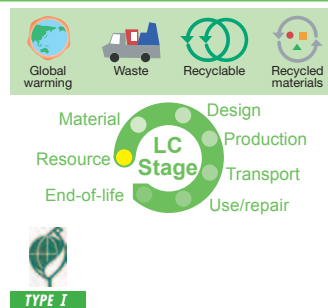
Product performance

This is a kind of recycled polyester fiber, made from recycled PET bottles. Its physical and chemical properties are similar to those of normal polyester, and it is suitable for making adult apparel. When processed with special additives, the fiber can be made into a strong, stretchable, breathable, absorbent or soft fabric, improving comfort and beauty of apparel.

Nan Ya Plastics Corporation

5F., No.201, Tun Hwa North Rd., Taipei, Taiwan, 105, Republic of China  
 Tel +886-2-23718331-654 Fax +886-3-3970056  
 E-mail my258@npc.com.tw  
 URL <http://www.npc.com.tw/index.htm>

Available in: Asia,Europe,North America,Central America,South America,U.S.A.



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Eco-product // Apparel/textiles

EP-5-009

Apparel/textiles

filament yarn

**Polyester Full-Orientated Yarns (SDY) 10d~300d**

**Environmental performance**

- \* Made of regenerated textile (from 100% recycled PET bottles)
- \* No content of Chromium (hexavalent)
- \* No content of MAK III A1 and III A2 classification-dye

**Product performance**

This is a kind of recycled polyester fiber, made from recycled PET bottles. Its physical and chemical properties are similar to those of normal polyester, and it is suitable for making adult apparel. When processed with special additives, the fiber can be made into a strong, stretchable, breathable, absorbent or soft fabric, improving comfort and beauty of apparel.



TYPE I

**Nan Ya Plastics Corporation**

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 URL <http://www.npc.com.tw/index.htm>



Available in: Asia, Europe, North America, Central America, South America, U.S.A.

EP-5-010

Apparel/textiles

covered yarn

**Spandex Covering Yarn, Spun Composition Yarn, Dyed Nylon, Dyed Polyester**

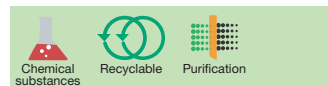
**Environmental performance**

The product is certified according to Oeko-Tex Standard 100, which is a globally uniform testing and certification system for textile raw materials, intermediate and end products at all stages of production. Its tests for harmful substances comprise substances which are prohibited or regulated by law, chemicals which are known to be harmful to health and parameters which are included as a precautionary measure to safeguard health.

**Product performance**

Spandex covered yarn is made by spinning a small amount (about 5%-20%) of spandex with a rigid yarn so that the resultant fabric has a different texture and appearance from conventional fabrics.

Color yarn is false twisted by a machine other than that used for the raw white yarn, so as for the yarn to have higher elasticity.



**MAW CHAWG ENTERPRISIE CO., LTD.**

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 E-mail machangx.yarn@machangx.com  
 URL <http://www.machangx.com>



Available in: Worldwide

EP-5-011

Apparel/textiles

clothes

## 100% Recyclable Green/White DA.AI Eco Garment D014WH150/90-B, D014GR150/180-B

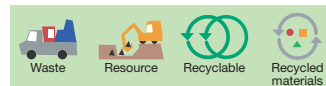
## Environmental performance

Made of yarns produced only from "green" and "white" PET bottles. The yarns are in their original colors and totally undyed. Fabricated 100% from eco-friendly materials-even the sewing threads and buttons are recyclable. Once entering the recycle system, the entire piece of garment can be melted, recycled and turned into new clothes.

Each piece of DA.AI garment takes at least ten PET bottles to complete.

## Product performance

Moisture-removing, fast drying, totally undyed, 100% recyclable.



## DA.AI TECHNOLOGY CO., LTD.

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E-mail eve\_lee@daait.com

URL <http://www.daait.com>

Available in: Oceania, North America, Central America, South America, U.S.A., Singapore, Philippines, Malaysia

EP-5-012

Apparel/textiles

clothes

## Super-Light Padded Jacket D008102BL-M

## Environmental performance

With a special eco-friendly lightweight shell, the jacket is lighter than ordinary padded jackets.

The completion of each jacket takes at least 35 pieces of recycled PET bottles.

## Product performance

1. The lining is made of hollow coffee yarn whose thermal insulation performance is as good as feather and which also removes odors.
2. With detachable sleeves, the jacket can be transformed into a vest.
3. The shell is water repellent and windproof.
4. Having a stow-away hood.
5. Complete with a storage bag for easy storage.

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URL <http://www.daait.com>



Available in: North America, Central America, South America, U.S.A.

EP-5-013

Apparel/textiles

clothes

**Fashion T-Shirt Celebrating the 100th Anniversary of ROC D006006BL-100Y**

**Environmental performance**

Each T-shirt requires at least seven recycled PET bottles.

**Product performance**

Features: Moisture-removing, fast drying, producing a cool sensation.  
 Functions: Profiled cross-section fibers.



**DA.AI TECHNOLOGY CO., LTD.**

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 URL <http://www.daait.com>

Available in: Malaysia

EP-5-014

Apparel/textiles

clothes

**Eco-Friendly Super-Fine Antistatic Fleece Poncho for Toddlers D025001PINK/D025001BU**

**Environmental performance**

The fabric used in this product is proven safe and harmless to babies' skin by the Bureau of Standards, Metrology and Inspection of the Ministry of Economic Affairs, Taiwan.  
 The completion of each poncho takes 20 pieces of recycled PET bottles.

**Product performance**

1. The buttons are specially designed to prevent scratching the baby's skin.
2. With buttons inside and outside the collar.
3. The two slits on the sides allow free movement of the arms.
4. Antistatic.
5. Super-fine fibers.



**DA.AI TECHNOLOGY CO., LTD.**

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 URL <http://www.daait.com>

Available in: Oceania, North America, Central America, South America, U.S.A., Malaysia



EP-5-015

Apparel/textiles

fabric

Eco Fleece Blanket D014GR150/180-B

Environmental performance

This product requires 54 pieces of green recycled PET bottles, is totally undyed, and reduces 1361g of carbon emissions, 28 cc of petro consumption, and 4784 cc of water resource consumption. This product received the world's first Carbon Footprint Label from the TUV Rheinland Group of Germany.

Product performance

Functions: Warm-keeping, breathable, undyed.



11kg-CO<sub>2</sub> not Inspection Resource/Materials/ Production/Transfer/Use/ End-of-Life

DA.AI TECHNOLOGY CO., LTD.

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 URL <http://www.daait.com>



Available in: North America, Central America, South America, U.S.A., Philippines, Malaysia

EP-5-016

Apparel/textiles

polyester short fiber

The 100% PET Bottle Recycled, Regenerated Color Fiber BR Series of Color Fibers

Environmental performance

Using 100% PET bottle fragments as the raw material for producing customized color fiber, it frees the customer from having to dye the color, cutting down dyeing energy consumption, carbon discharge and wastewater pollution. Adopting dye colorings conforming to the EU RoHS guideline to reduce the burden of eco-environmental pollution.

Product performance

Using 100% PET bottle fragments as the raw material for producing customized color (dope dyed) fiber, the fiber's physical property allows a preferred colorization, contributing to a reduced loss in yarn spinning and weaving, reducing the cost. It features a sunlight resistant bonding level at over the gray mark level 4.



TYPE I

True Young Co., Ltd.

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 URL <http://www.trueyoung.com.tw>



Available in: Taiwan (Rep. of China)

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Eco-product // Apparel/textiles

EP-5-017

Apparel/textiles

polyester short fiber

The Infrared Fiber (Functional Regenerated Polyester) WA

Environmental performance

Adopting 100% scrapped PET bottle fragments as the raw material, the infrared mother pallets are added for directly drawing and producing the infrared fiber, freeing the customer from having to process it into pallets to conserve energy and reduce carbon emissions, and also helping to reduce resource depletion.

Product performance

Natural ceramic powder is adopted during the infrared process, which absorbs the light and heat emitted by the human body and nature, and then releases 8~12 nanometer wavelengths, which is close to the 9.36 micron wavelength the human body emits, and in turn to create a resonance to achieve a fine health enhancing property. The high concentration infrared fiber has been tested to provide good bacterial-fighting and bacteria-eliminating effect. The natural ceramic content complies with the Atomic Energy council "Administrative Regulations for Natural Radioactive Material" standard, and can offer a continued heat insulation effect in punishing cold weather conditions.

True Young Co., Ltd.

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 URL <http://www.trueyoung.com.tw>

Available in: Taiwan (Rep. of China)



TYPE I



EP-5-018

Apparel/textiles

polyester short fiber

The Silver Ion Bacteria-Fighting Fiber (Functional Regenerated Polyester) AB

Environmental performance

Adopting 100% scrapped PET bottle fragments as the raw material, the bacteriafighting mother pallets are added for directly drawing and producing the bacteriafighting fiber, freeing the customer from having to process it into pallets to conserve energy and reduce carbon emissions, and also helping to reduce resource depletion.

Product performance

Adopting silver ions from ISHIZUKA GLASS CO., LTD., Japan, silver ions can disrupt vector spores' DNA and RNA synthesis, suppress DNA replication, deriving bacteria of agility thus die naturally. When the vector is destroyed, silver ions are released from the spores and continue to create oxidation reaction with other organic bacteria, and once again eliminate the vector in generating the cyclical bacteria elimination and bacteria-fighting property.

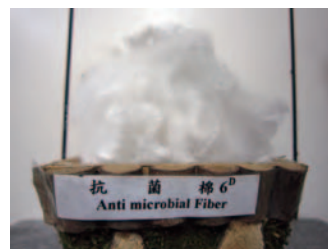
True Young Co., Ltd.

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Available in: Taiwan (Rep. of China)



TYPE I



EP-5-019

Apparel/textiles

polyester short fiber

## The Flame-Retardant Fiber (Functional Regenerated Polyester) NA

## Environmental performance

Using 100% PET bottle fragments as the raw material, the flame retardant mother pellets are added for directly drawing and producing the flame-retardant fiber, freeing the customer from having to process the palettes, and helping to achieve energy-saving, carbon reduction and cutting down resource depletion. Adopting sulfite serial flame retardants that comply with environmental protection demands.

## Product performance

With excellent flame retardant property, and an LOI rating at over 32 (exceeding the general flame retardant, heat-resistant standard LOI rating of 28), it is suitable for automotive, interior decoration, apparel material and related applications, with sulfite retardants complying with environmental protection demands.

## True Young Co., Ltd.

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URL <http://www.trueyoung.com.tw>

Available in: Taiwan (Rep. of China)



TYPE I



EP-5-020

Apparel/textiles

polyester short fiber

## The Cooling Fiber (Functional Regenerated Polyester) CO

## Environmental performance

Using 100% waste PET bottle fragments as the raw material, the cooling mother palettes are added for directly drawing and producing the cooling fiber, freeing the customer from processing the palettes, and helping to reduce carbon as well as resource depletion.

By relying on the cooling feel brought by the surface material, turning up the air-conditioner by 1 °C can save 3-5% of the electricity billing.

## Product performance

Featuring slow heat absorption and quick heat ventilation, it offers a cooling touch in the summer as the skin cools instantly by 1-2 °C, and under extended sunlight exposure for a period of time, it creates a cooling temperature differential of 4-6 °C.

## True Young Co., Ltd.

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URL <http://www.trueyoung.com.tw>

Available in: Taiwan (Rep. of China)



TYPE I



EP-5-021

Apparel/textiles

staple fiber of polyester

**Polyester Staple Fibers 0.8~20d**

**Environmental performance**

150 pieces of clothing can be made from 3700 recycled PET bottles, effectively reducing waste and the trash on this densely populated earth. In addition, using recycled materials reduces energy consumption and emission of carbon dioxide, thereby slowing down global warming.

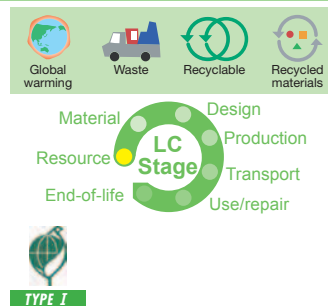
**Product performance**

This is a kind of recycled polyester fiber, made from recycled PET bottles. Its physical and chemical properties are similar to those of normal polyester, and it is suitable for making adult apparel. When processed with special additives, the fiber can be made into a strong, stretchable, breathable, absorbent or soft fabric, improving comfort and beauty of apparel.

**Nan Ya Plastics Corporation**

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 URL <http://www.npc.com.tw/index.htm>

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EP-5-022

Apparel/textiles

recycled fabric and its products

**100% Polyester Recycle Fiber (Raw White Filament) R-Series**

**Environmental performance**

Unlike natural fibers, polyester can be recycled to near-virgin or virgin-like quality. Each kilogram of product consumes approximately one kilogram of wastes.

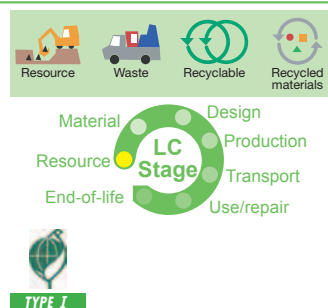
**Product performance**

Recycled plastics are used.

**Far Eastern New Century Corporation.**

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 URL <http://www.fenc.com>

Available in: Worldwide



Eco-product // Apparel/textiles

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EP-5-023

Apparel/textiles

recycled fabric and its products

Polyester Recycle Fiber (Black Filament) R-Series

Environmental performance

Unlike natural fibers, polyester can be recycled to near-virgin or virgin-like quality. Each kilogram of product consumes approximately one kilogram of wastes.

Product performance

Recycled plastics are used.



TYPE I



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Available in: Taiwan (Rep. of China)

EP-5-024

Apparel/textiles

recycled fabric and its products

Polyester Recycle Fiber (Raw White Staple) R-Series

Environmental performance

Unlike natural fibers, polyester can be recycled to near-virgin or virgin-like quality. Each kilogram of product consumes approximately one kilogram of wastes.

Product performance

Recycled plastics are used.



TYPE I



Far Eastern New Century Corporation.

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 URL <http://www.fenc.com>

Available in: Worldwide

1 Eco-product // Apparel/textiles  
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EP-5-025

Apparel/textiles

recycled fabric and its products

**Polyester Recycle Fiber (Black Staple) R-Series**

**Environmental performance**

Unlike natural fibers, polyester can be recycled to near-virgin or virgin-like quality. Each kilogram of product consumes approximately one kilogram of wastes.

**Product performance**

Recycled plastics are used.

**Far Eastern New Century Corporation.**

No.369, 3rd Neighborhood, Yadong Sec., Wunshan Rd., Sinpu Township, Hsinchu County, Taiwan, 305, Republic of China  
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 URL <http://www.fenc.com>

Available in: Worldwide



TYPE I



EP-5-026

Apparel/textiles

eyewear

**Linkskin Eco-friendly Eyewear**

**Environmental performance**

Linkskin encompasses the unique combination of non-toxic recycled plastic and stainless steel components to create probably the world's first recycled eyewear. It is environmentally friendly and the color is either compound or RoHS compliant with international environment protection standards through the adoption of eco-friendly processes in the production cycle.

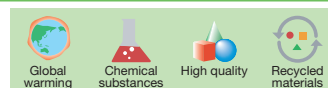
**Product performance**

The folding temples of Linkskin eco-friendly eyewear use a unique patented buckle-lock and slim "fork" locking system to replace the conventional screw-lock system that allows the temples to fold and at the same time creates a spring effect for wearing comfort. This application spells easy handling with no soldering or screws required for frame assembly and the holding of the lens is more secure compared to the conventional frame with screws. In the LKS model, nylon string is used to bind two sheet metals of different color together to form a frame front to create overlapping color effects, and the stitches also formed a design element. The temple in the SKA model is hand-stitched onto the frame front ends using nylon string and the stitch form part of the design of the frame front ends. The frame is extremely lightweight, durable and versatile.

**Eye-Biz Pte Ltd**

82 Genting Lane #06-05 Media Centre, 349567, Singapore  
 Tel 65-6744 6239 Fax 65-6842 1528  
 E-mail [info@eye-biz.com](mailto:info@eye-biz.com)  
 URL <http://www.eye-biz.com>  
 URL <http://www.linkskin.com>

Available in: Worldwide



TYPE I



Eco-product // Apparel/textiles

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EP-6-001

Household goods and equipment

shampoo

Green Tea Shampoo 400ml 1AA011

Environmental performance

The product fully adopts environmentally friendly materials from its contents to packaging; adopting natural organic certified contents with priority, the bottle packaging adopts the recycled environmentally friendly plastic bottle -HDPE, the bottle decal is printed using soybean environmentally friendly ink, and the labeling material and ink have surpassed SGS inspection to comply with EU RoHS environmental protection certification. The entire product does not obtrude nature's ecology, and helps to reduce the impact on the environment's ecology.

Product performance

For damaged hair types after the permanent wave, containing 90% of natural ingredients.

The natural green tea extract and the EU organic (ECOCERT) certified foaming ingredient are able to prevent the oxidation reaction triggered by the perm solution, helping to enhance the health of the hair and the scalp.

Hair O'right International Corporation

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 URL <http://www.oright.com.tw>

Available in: Oceania, Europe, U.S.A., Thailand, Malaysia, Taiwan (Rep. of China), China



0.8kg-CO<sub>2</sub> Inspection Resource/Materials/ Production/Transfer/Use/ End-of-Life



EP-6-002

Household goods and equipment

shampoo

Green Tea Shampoo 1000ml 1AA020

Environmental performance

The product fully adopts environmentally friendly materials from its contents to packaging; adopting natural organic certified contents with priority, the bottle packaging adopts the recycled environmentally friendly plastic bottle -HDPE, the bottle decal is printed using soybean environmentally friendly ink, and the labeling material and ink have surpassed SGS inspection to comply with EU RoHS environmental protection certification. The entire product does not obtrude nature's ecology, and helps to reduce the impact on the environment's ecology.

Product performance

For damaged hair types after the permanent wave, containing 90% of natural ingredients.

The natural green tea extract and the EU organic (ECOCERT) certified foaming ingredient are able to prevent the oxidation reaction triggered by the perm solution, helping to enhance the health of the hair and the scalp.

Hair O'right International Corporation

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Available in: Oceania, Europe, U.S.A., Thailand, Malaysia, Taiwan (Rep. of China), China



1.8kg-CO<sub>2</sub> Inspection Resource/Materials/ Production/Transfer/Use/ End-of-Life



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EP-6-003

Household goods and equipment

shampoo

Lara Environmental Shampoo Lara-001-01

Environmental performance

With biodegradability exceeding 95%, it is also free of nonylphenol. Without adding any fluorine, BHT, BHA, methane, triclosan, chlorine additives, benzoylresorcinol ultraviolet absorber, or any toxic chemical substance announced by the Environmental Protection Administration. The packaging material is free of PVC or chlorine-based plastic material. Adopting the food-grade raw material, it does not contain petrochemical raw materials, and is free of heavy metals, warranting zero pollution. Ultra concentrate formula.

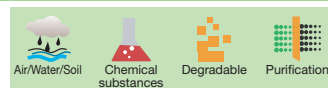
Product performance

A low-irritant formula shampoo, it is free of silica or dyes, bringing a refreshing, burden-free touch to the scalp and the hair.

SEA MILD INTERNATIONAL Co., LTD.

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 URL <http://www.seamild.com.tw/index.php>

Available in: Taiwan (Rep. of China)



TYPE I



EP-6-004

Household goods and equipment

hair treatment

White Tea Hair Treatment Set 1BB030

Environmental performance

Adopting natural organic certified contents with a priority which does not disrupt nature's ecology, helping to reduce the impact on the environment. An innovative hair care product that does not require a plug in for power and is easy to operate with low energy consumption. There is no need to purchase extra hair care machinery or equipment, thereby conserving energy used.

Product performance

Suitable for damaged hair types. Containing the EU organic (ECOCERT) certified white tea extract essence, offering excellent anti-oxidation property for professional, deep-layer repair and nourishing yield.

Hair O'right International Corporation

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 E-mail [angelia@hairoright.com](mailto:angelia@hairoright.com)  
 URL <http://www.oright.com.tw>

Available in: Oceania, Europe, U.S.A., Thailand, Malaysia, Taiwan (Rep. of China), China



0.34kg-CO<sub>2</sub>

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Resource/Materials/  
Production/Transfer/Use/  
End-of-Life



EP-6-005

Household goods and equipment

body cleanser

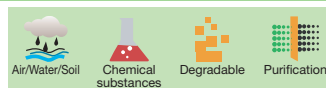
Sea Mild Shower Cream SM-003-04

Environmental performance

Using food-grade raw materials, it does not use petrochemical raw materials, industrial skin moisturizer or industrial fragrances. It is free of heavy metals, and of zero pollution.

Product performance

An herbal extract formula which moisturizes skin all over the body.



TYPE I



SEA MILD INTERNATIONAL Co., LTD.

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Available in: Taiwan (Rep. of China)

EP-6-006

Household goods and equipment

cationic surface-active agents

Humming Neo

Environmental performance

CO<sub>2</sub> emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 32% (\*) compared with conventional fabric softener, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency.

\*Compared with Kao's conventional fabric softener, bottle: refill = 2:8 by sales amount.

Product performance

Humming Neo fabric softener contains newly developed polymer. This formula helps softening ingredients adsorb 1.5 times(\*) more onto fabric (than conventional fabric softeners), which enable a small amount to make clothes even softer and more comfortable to wear every time you use it. (\*\*)

\*When washing with less water (using less than 12L of water for 1kg of clothes).

\*\*Compared with conventional Kao's Humming Concentrated fabric softener, used under the (standard OR recommended) usage.



TYPE II



Humming Neo

Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan  
 URL [http://www.kao.com/index\\_en.html](http://www.kao.com/index_en.html)  
 URL [http://www.kao.com/jp/humming/hmg\\_neo\\_white\\_00.html](http://www.kao.com/jp/humming/hmg_neo_white_00.html)  
 URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan

EP-6-007

Household goods and equipment

detergents

Attack Instant Clean Liquid

Environmental performance

Attack Instant Clean Liquid is a laundry detergent specially formulated to save water. It enables to save water in rinsing process for laundering in China, in which approx. 80% of water is used for rinsing. It contains high cleansing ability which enable a small amount to attack stains more efficiently, so that users can reduce rinsing times and save approx.15% of laundering water. It acquires the china certificate for water conservation product.

Product performance

Attack Instant Clean Liquid is a laundry detergent specially formulated to save water. It contains high cleansing ability which enable a small amount to attack stains more efficiently. Also its components are less clingy to fibers, so that at one time rinsing leaves less detergent on laundry than rinsing twice with conventional liquid detergent.

Kao Commercial (Shanghai) CO.,Ltd

19F, Longemont Yes Tower, 369 Kaixuan Road, Shanghai, 200051, P.R.China  
 URL <http://www.kao.com/cn/corp/>  
 URL [http://www.kao.com/cn/attack/atk\\_liquid\\_01.html](http://www.kao.com/cn/attack/atk_liquid_01.html)  
 URL [http://www.kao.com/cn/corp\\_csr/csr\\_reports.html](http://www.kao.com/cn/corp_csr/csr_reports.html)

Available in: China

Attack Instant Clean Liquid

EP-6-008

Household goods and equipment

detergents

Attack Neo

Environmental performance

CO<sub>2</sub> emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 21% (\*1) compared with conventional products, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency. By setting washing machine to a single-rinse mode, users can save water and electricity to reduce CO<sub>2</sub> emission by approx. 22% (\*2), compared with double-rinse mode. All in all, CO<sub>2</sub> emission throughout laundry is reduced by approx. 21% (from a viewpoint of lifecycle assessment).

\*1 Compared with Kao's conventional 1kg liquid detergent, bottle: refill = 2:8  
 \*2 Kao's survey, conducted in June 2009, automatic washing machine (capacity 8 kg), amount of clothes 4 kg, quantity of water 47 L

Product performance

Attack Neo has realized detergent concentration up to 2.5 times\* higher than conventional products, to reduce the product weight from 1kg to 400g. Less amount of detergent guarantees high washing performance. Since washing components are less clingy to fibers, rinsing process can be saved once. Amounts of detergent residues on laundry after rinsing once are almost the same as those after rinsing twice.\*  
 \* Compared with Kao's conventional 1kg liquid detergents.

Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan  
 URL [http://www.kao.com/index\\_en.html](http://www.kao.com/index_en.html)  
 URL [http://www.kao.com/jp/attack/atk\\_neo\\_00.html](http://www.kao.com/jp/attack/atk_neo_00.html)  
 URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan

Attack Neo

EP-6-009

Household goods and equipment

detergents

## Attack Neo Antibacterial EX Power

## Environmental performance

CO<sub>2</sub> emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 31% (\*1) compared with conventional products, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency. By setting washing machine to a single-rinse mode, users can save water and electricity to reduce CO<sub>2</sub> emission by approx. 22% (\*2), compared with double-rinse mode. All in all, CO<sub>2</sub> emission throughout laundry is reduced by approx. 26% (from a viewpoint of lifecycle assessment).

\*1 Compared with Kao's conventional 1kg liquid detergent, bottle: refill = 2:8

\*2 Kao's survey, conducted in June 2009, automatic washing machine (capacity 8 kg), amount of clothes 4 kg, quantity of water 47 L

## Product performance

Effective even in small amounts, Attack Neo Antibacterial EX Power features high odor-removing detergency and suppresses odor-causing bacteria throughout the laundry process.

- Formulated with antibacterial and bleaching agents
- A 2.5 times ultra-concentrated liquid detergent, compared with Kao's conventional 1kg liquid detergent.

## Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL [http://www.kao.com/index\\_en.html](http://www.kao.com/index_en.html)

URL [http://www.kao.com/jp/attack/atk\\_neoex\\_00.html](http://www.kao.com/jp/attack/atk_neoex_00.html)

URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan



Attack Neo Antibacterial EX Power

EP-6-010

Household goods and equipment

detergents

## New Beads Neo

## Environmental performance

CO<sub>2</sub> emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 38% (\*1) compared with conventional products, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency.

By setting washing machine to a single-rinse mode, users can save water and electricity to reduce CO<sub>2</sub> emission by approx. 22% (\*2), compared with double-rinse mode.

All in all, CO<sub>2</sub> emission throughout laundry is reduced by approx. 30% (from a viewpoint of lifecycle assessment).

\*1 Compared with Kao's conventional liquid detergent, bottle: refill = 2:8

\*2 Kao's survey, conducted in June 2009, automatic washing machine (capacity 8 kg), amount of clothes 4 kg, quantity of water 47 L

## Product performance

Attack Neo has realized detergent concentration up to 2.5 times\* higher than conventional products, to reduce the product weight from 1kg to 400g. Less amount of detergent guarantees high washing performance. Since washing components are less clingy to fibers, rinsing process can be saved once. Amounts of detergent residues on laundry after rinsing once are almost the same as those after rinsing twice.\*

\* Compared with Kao's conventional liquid detergents.

## Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL [http://www.kao.com/index\\_en.html](http://www.kao.com/index_en.html)

URL [http://www.kao.com/jp/newbeads/nbs\\_neo\\_00.html](http://www.kao.com/jp/newbeads/nbs_neo_00.html)

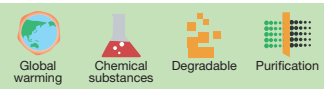


URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan



New Beads Neo

<b>EP-6-011</b>	<b>Household goods and equipment</b>
<b>detergents</b>	
<b>BAIGO Cold Water Wash 1000 (g)</b>	
<p><b>Environmental performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	   
<p><b>NICE Enterprise Co., Ltd.</b></p> <p>No. 21, Zhongshan Rd., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China                  Tel +886-5-221-7888-835 Fax +886-5-220-2427                  E-mail pdcaqc@mail.nice.com.tw                  URL <a href="http://www.nice.com.tw">http://www.nice.com.tw</a></p>	
<p>Available in: Taiwan (Rep. of China)</p>	

<b>EP-6-012</b>	<b>Household goods and equipment</b>
<b>detergents</b>	
<b>BAIGO Hand Wash Detergent 1000 (g)</b>	
<p><b>Environmental performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	   
<p><b>Product performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	
<p><b>NICE Enterprise Co., Ltd.</b></p> <p>No. 21, Zhongshan Rd., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China                  Tel +886-5-221-7888-835 Fax +886-5-220-2427                  E-mail pdcaqc@mail.nice.com.tw                  URL <a href="http://www.nice.com.tw">http://www.nice.com.tw</a></p>	
<p>Available in: Taiwan (Rep. of China)</p>	



EP-6-013

Household goods and equipment

detergents

Sea Mild Environmental Friendly Laundry Powder SM-001-07

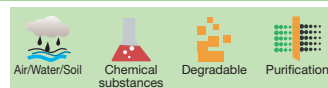
Environmental performance

Ingredients include raw materials from the ocean, natural plant extracts and foodgrade additives. Safe and toxic-free. This product does not contain petrochemical surfactants, phosphates, fluorescent agents or petrochemical bleaches.

Readily biodegradable.  
Ultra concentrate formula.

Product performance

Pure in quality and double the softness, it is suitable for cleaning intimate garments and infant and toddlers' clothing.



TYPE I



SEA MILD INTERNATIONAL Co., LTD.

No. 43, Guanye E. Rd., Pingzhen City, Taoyuan County, Taiwan, 324, Republic of China  
Tel +886-3-4688698 Fax +886-3-4687669  
E-mail seamild2000@yahoo.com.tw  
URL <http://www.seamild.com.tw/index.php>

Available in: Taiwan (Rep. of China)

EP-6-014

Household goods and equipment

detergents

Forever Friends Natural Detergent (Lavender) SM-006-03

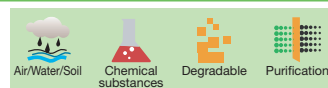
Environmental performance

Ingredients include raw materials from the ocean, natural plant extracts and foodgrade additives. Safe and toxic-free. This product does not contain petrochemical surfactants, phosphates, fluorescent agents or petrochemical bleaches.

Readily biodegradable.  
Ultra concentrate formula.

Product performance

Pure in quality and double the softness, it is suitable for cleaning intimate garments and infant and toddlers' clothing.



TYPE I



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Tel +886-3-4688698 Fax +886-3-4687669  
E-mail seamild2000@yahoo.com.tw  
URL <http://www.seamild.com.tw/index.php>

Available in: Taiwan (Rep. of China)

<b>EP-6-015</b>	<b>Household goods and equipment</b>
<b>dishwashing liquid</b>	
<b>PAOS Dishwashing Liquid 600, 1000, 2800 (g)</b>	
<p><b>Environmental performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	   
<p><b>NICE Enterprise Co., Ltd.</b></p> <p>No. 21, Zhongshan Rd., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China                  Tel +886-5-221-7888-835 Fax +886-5-220-2427                  E-mail pdcaqc@mail.nice.com.tw                  URL <a href="http://www.nice.com.tw">http://www.nice.com.tw</a></p>	
<p>Available in: Taiwan (Rep. of China)</p>	

<b>EP-6-016</b>	<b>Household goods and equipment</b>
<b>dishwashing liquid</b>	
<b>PAOS Anti-Bacterial Dishwashing Liquid (Lemon Essential Oil) 1000, 2800 (g)</b>	
<p><b>Environmental performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	   
<p><b>Product performance</b></p> <p>Biodegradability higher than 95% to reduce environmental pollution.</p>	
<p><b>NICE Enterprise Co., Ltd.</b></p> <p>No. 21, Zhongshan Rd., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China                  Tel +886-5-221-7888-835 Fax +886-5-220-2427                  E-mail pdcaqc@mail.nice.com.tw                  URL <a href="http://www.nice.com.tw">http://www.nice.com.tw</a></p>	
<p>Available in: Taiwan (Rep. of China)</p>	

EP-6-017

Household goods and equipment

dishwashing liquid

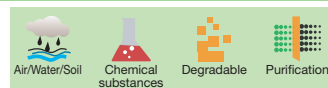
Sea Mild Environmental Friendly Dishwashing Liquid SM-002-03

Environmental performance

Extracted from freshly harvested fruit, it has a biodegradability exceeding 95%.

Product performance

A natural degreaser, it is safe, environmentally friendly, and does not cause harm to the human body and the environment.



TYPE I



SEA MILD INTERNATIONAL Co., LTD.

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 Tel +886-3-4688698 Fax +886-3-4687669  
 E-mail seamild2000@yahoo.com.tw  
 URL <http://www.seamild.com.tw/index.php>

Available in: Taiwan (Rep. of China)

EP-6-018

Household goods and equipment

cleaning liquid

Bio-Home Multi-Purpose Cleaner

Environmental performance

Bio-Home multi-purpose cleaner is readily biodegradable (tested according to OECD Method 301D, Closed Bottle Test). It is formulated with 100% renewable plant based active ingredients with readily biodegradable anti-bacterial agent, that are gentle on the environment while keeping the surfaces hygienically clean.

Product performance

The product is manufactured using a low-energy process, thus reducing energy consumption. Its concentrated rinse-free formulation reduces the utilisation of unnecessary packaging material and conserves water while cleaning, without compromising on today's consumers' demand for fast, easy to use yet effective product.



TYPE I



Bio-Home Multi-purpose cleaner

Lam Soon Edible Oils Sdn. Bhd.

Wisma DLS, No. 6, Jalan Jurunilai U1/20, Hicom-Glenmarie Industrial Park, 40150 Shah Alam, Selangor, Malaysia  
 Tel +603-78822399 Fax +603-55692160  
 E-mail lamsoon@lamsoonpj.com.my  
 URL <http://www.lamsoon.com.my>

Available in: Southeast Asia, Singapore, Malaysia

EP-6-019

Household goods and equipment

cleaning liquid

Bio-Home Dishwashing Liquid

Environmental performance

It is formulated with 100% renewable and biodegradable plant-based active ingredients that are gentle on the environment. Bio-Home dishwashing liquid is readily biodegradable (tested according to OECD Method 301D, Closed Bottle Test)

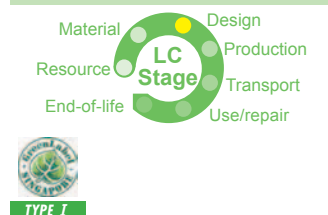
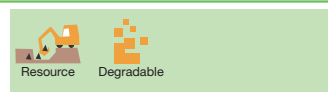
Product performance

The product is low foam and requires less water for rinsing, thus reduces water usage. Bio-Home dishwashing liquid is a concentrated formulation which reduces the utilisation of unnecessary packaging material. It is also manufactured using a low-energy process, thus reducing energy consumption.

Lam Soon Edible Oils Sdn. Bhd.

Wisma DLS, No. 6, Jalan Jurunilai U1/20, Hicom-Glenmarie Industrial Park, 40150 Shah Alam, Selangor, Malaysia  
 Tel +603-78822399 Fax +603-55692160  
 E-mail lamsoon@lamsoonpj.com.my  
 URL <http://www.lamsoon.com.my>

Available in: Southeast Asia, Singapore, Malaysia



Bio-Home Dishwash

EP-6-020

Household goods and equipment

cleaning and scouring preparations

Alkali Electrification Water Cleaner Series

Environmental performance

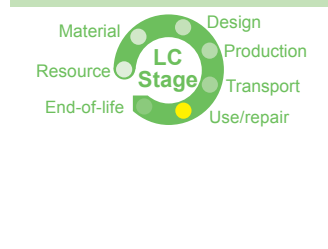
Ocean pollution is considered to be one of the causes of global warming. The origin of the problem includes domestic effluent, much of which comes from kitchen use. Closed water areas, such as the Inland Sea of Japan and Tokyo Bay, face a serious situation since it is difficult to purify the seawater in such areas.

Hattori Paper has been developing products with the aim of reducing ocean pollution caused by household effluent.

The Alkali Electrification Water Cleaner Series has adopted alkali electrification, which is generated by the electrolysis of water, as a detergent. Since no synthesized surfactant is contained, these products have almost no effect on the environment. Alkali electrification cleans oil spots more effectively than synthetic detergents, especially in the kitchen. When using normal detergents, you have to put both the cleanser and dirt through the drain outlet. Since the Alkali Electrification Water Cleaner forms disposable sheets, you need not to make the drain dirty by absorbing dirt into the product.

HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai, Kinsei-cho, shikokuchuo-city, Ehime, 799-0112, Japan  
 Tel +81-896-58-3005 Fax +81-896-58-3048  
 E-mail [nhp2006@hattoripaper.co.jp](mailto:nhp2006@hattoripaper.co.jp)  
 URL <http://www.hattoripaper.co.jp>  
 URL [http://www.hattoripaper.co.jp/online\\_shopping.php?kubun=1&lv=2&cat=26&subcat=3&page=1](http://www.hattoripaper.co.jp/online_shopping.php?kubun=1&lv=2&cat=26&subcat=3&page=1)



Alkali Electrification Water Cleaner Series, five items

Available in: Japan, Europe, North America, U.S.A, Singapore, Republic of Korea, Taiwan (Rep. of China), China, Tokyo Metropolitan Area

Eco-product // Household goods and equipment

EP-6-021

Household goods and equipment

cleaning and scouring preparations

furomizu-wonder

**Environmental performance**

Users can reduce water by approx.120L~160L by reused with reheated mineral bath.

\*condition:bath, be equiped with reheating sysytem

**Product performance**

Furomizu-wonder keeps bath clean, owning to be compounded with purifier ingredient.

Purifier ingredient is Sodium Dichloroisocyanurate, which prevents the various germs breeding.

It can be keep off slimy dirt and bad smell when users reheat mineral bath.

**Kao Corporation**

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL [http://www.kao.com/index\\_en.html](http://www.kao.com/index_en.html)

URL [http://www.kao.com/jp/furomizuwonder/fmw\\_furomizuwonder\\_00.html](http://www.kao.com/jp/furomizuwonder/fmw_furomizuwonder_00.html)

URL [http://www.kao.com/jp/en/corp\\_csr/pdf\\_reports.html](http://www.kao.com/jp/en/corp_csr/pdf_reports.html)

Available in: Japan



TYPE II



furomizu-wonder

EP-6-022

Household goods and equipment

cups, mugs

L'earth wheat composite Tumbler

**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete ith food supply or required deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

- 1.Singapore Green Label certified.
- 2.SEC- Senoko Power Green Innovation Award Winner 2010
- 3.SMa Sustainable Manufacturing Certified 2010-2012.

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

**L'earth S Pte Ltd**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609, 608609, Singapore

Tel +65 90717444 Fax 6565154557

E-mail [sale2@mylearth.com.sg](mailto:sale2@mylearth.com.sg)

URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE I



EP-6-023

Household goods and equipment

cups, mugs

L'earth wheat composite Mug

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

Product performance

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L'earth S Pte Ltd

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



EP-6-024

Household goods and equipment

cups, mugs

L'earth wheat composite Cup

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

Product performance

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

L'earth S Pte Ltd

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608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide





EP-6-025

Household goods and equipment

cutlery

L'earth wheat composite Cutlery

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

Product performance

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

L'earth S Pte Ltd

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



EP-6-026

Household goods and equipment

cutlery

L'earth wheat composite Cake knife

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

Product performance

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

L'earth S Pte Ltd

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



1 Eco-product // Household goods and equipment  
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EP-6-027

Household goods and equipment

disposable tableware & food-packaging

**CornWare Disposable Tableware**

**Environmental performance**

CornWare, disposable tableware is 100% biodegradable and carbon neutral. Made of up to 75% corn, it reduces the reliance on fossil fuels and cuts down on the release of toxic/green house gases when incinerated. Certified ISO-14001, ISO-14855, ASTM-6400, ASTM-6866, EN-13432.

**Product performance**

CornWare is a wide range of disposable tableware, packaging boxes and cutlery. It is microwaveable, waterproof, non-toxic, durable and affordable. CornWare is customisable to design, colour & print. Certified ISO-9001, FDA approved.



TYPE I

**Olive Green Marketing Pte Ltd**

2 Toh Tuck Link #05-03, 596225, Singapore  
 Tel 65 67671301  
 URL <http://www.olivegreen.com.sg>



Available in: Worldwide

CornWare Disposable Tableware

EP-6-028

Household goods and equipment

drinking water dispenser

**Cold/Warm/Hot Drinking Water Dispensers JD-8302**

**Environmental performance**

Compared with other same level parts without Taiwan Energy Label, it can reduce 107 kg of CO<sub>2</sub>.

**Product performance**

Five protective features. Granted Taiwan's Energy Label. Sodium ion-free filter cartridge with automatic replacement reminder. Automatic power off when water supply is cut off, and automatic power on when water supply resumes. Maintenance service light as malfunction indicator and maintenance cycle reminder.



**FOREST SPRING ENTERPRISE CO., LTD.**

No.10, Zhongxing St., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China  
 Tel +886-5-2210221-35 Fax +886-5-2210271  
 E-mail [qc@jinkon.com.tw](mailto:qc@jinkon.com.tw)  
 URL <http://www.jinkon.com.tw>



Available in: Taiwan (Rep. of China)

Eco-product // Household goods and equipment

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- 9

EP-6-029

Household goods and equipment

drinking water dispenser

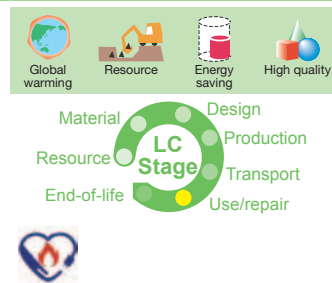
**Warm/Hot Drinking Water Dispensers (Not Equipped with Refrigerating Devices) JD-3221**

**Environmental performance**

Compared with other same level parts without Taiwan Energy Label, it can reduce 107 kg of Co<sub>2</sub>.

**Product performance**

Five protective features. Granted Taiwan's Energy Label. Sodium ion-free filter cartridge with automatic replacement reminder. Automatic power off when water supply is cut off, and automatic power on when water supply resumes. Maintenance service light as malfunction indicator and maintenance cycle reminder.



**FOREST SPRING ENTERPRISE CO., LTD.**

No.10, Zhongxing St., Minxiong Township, Chiayi County, Taiwan, 621, Republic of China  
 Tel +886-5-2210221-35 Fax +886-5-2210271  
 E-mail qc@jinkon.com.tw  
 URL <http://www.jinkon.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-030

Household goods and equipment

drinking water dispenser

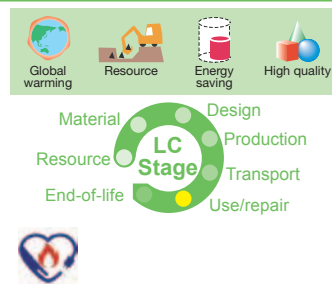
**Warm/Hot Drinking Water Dispensers (Not Equipped with Refrigerating Devices) JD-4202**

**Environmental performance**

Compared with other same level parts without Taiwan Energy Label, it can reduce 103 kg of Co<sub>2</sub>.

**Product performance**

Five protective features. Granted Taiwan's Energy Label. Sodium ion-free filter cartridge with automatic replacement reminder. Automatic power off when water supply is cut off, and automatic power on when water supply resumes. Maintenance service light as malfunction indicator and maintenance cycle reminder.



**FOREST SPRING ENTERPRISE CO., LTD.**

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 E-mail qc@jinkon.com.tw  
 URL <http://www.jinkon.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-031

Household goods and equipment

drinking water dispenser

Warm/Hot Drinking Water Dispensers (Not Equipped with Refrigerating Devices) JD-4209

Environmental performance

Compared with other same level parts without Taiwan Energy Label, it can reduce 102 kg of Co<sub>2</sub>.

Product performance

Five protective features. Granted Taiwan's Energy Label. Sodium ion-free filter cartridge with automatic replacement reminder. Automatic power off when water supply is cut off, and automatic power on when water supply resumes. Maintenance service light as malfunction indicator and maintenance cycle reminder.

The complex block contains several elements:
 

- Four icons at the top: 'Global warming' (globe), 'Resource' (pickaxe), 'Energy saving' (lightbulb), and 'High quality' (water tap).
- A circular 'LC Stage' diagram with 'Material', 'Design', 'Production', 'Transport', 'Use/repair', 'End-of-life', and 'Resource' around it.
- A small heart icon with a flame.
- A photograph of the white JD-4209 water dispenser.

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 E-mail qc@jinkon.com.tw  
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Available in: Taiwan (Rep. of China)

EP-6-032

Household goods and equipment

drinking water dispenser

Warm/Hot Drinking Water Dispensers (Not Equipped with Refrigerating Devices) JD-5322B

Environmental performance

Compared with other same level parts without Taiwan Energy Label, it can reduce 102 kg of Co<sub>2</sub>.

Product performance

Five protective features. Granted Taiwan's Energy Label. Sodium ion-free filter cartridge with automatic replacement reminder. Automatic power off when water supply is cut off, and automatic power on when water supply resumes. Maintenance service light as malfunction indicator and maintenance cycle reminder.

The complex block contains several elements:
 

- Four icons at the top: 'Global warming' (globe), 'Resource' (pickaxe), 'High quality' (water tap), and 'Energy saving' (lightbulb).
- A circular 'LC Stage' diagram with 'Material', 'Design', 'Production', 'Transport', 'Use/repair', 'End-of-life', and 'Resource' around it.
- A small heart icon with a flame.
- A photograph of the white JD-5322B water dispenser.

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Available in: Taiwan (Rep. of China)

Eco-product // Household goods and equipment

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EP-6-033

Household goods and equipment

video door phone

Video Door phone VL-SWD700KL

**Environmental performance**

Yealy power consumption  
VL-SWD700KL 20.4kWh/year ※1

Compare with the model of 2008  
VL-SWN350 25.4kWh/year ※1

※1 Based on our calculation standard

Yealy power consumption reduction 20%

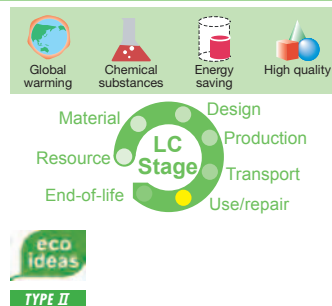
**Product performance**

- [VL-SWD700KL]  
 1, Touch Panel on main unit  
 2, Wide-angle lens on Entrance cordless handset, "Megapixel"  
 3, 7" wide LCD monitor on main unit  
 4, 2.4" TFT-LCD monitor on cordless handset  
 5, Telephone and FAX function as option feature

**Panasonic System Networks Co.,Ltd.**

4-1-62, Minoshima Hakata-ku Fukuoka, 812-8531, Japan  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



Video Door phone VL-SWD700KL

EP-6-034

Household goods and equipment

biodegradable plastics

(Poly Lactic Acid, PLA) FOOD CONTAINER CUP R700Y, R600Y, R600, R500Y, R520, R450, etc.

**Environmental performance**

Poly Lactic Acid (PLA) has the following advantages:

1. High biodegradability: Used PLA is completely degradable by micro-organisms, finally it will become carbon dioxide and water, which is pollution-free and environmentally friendly.
2. High compatibility and degradability: PLA can be burned without causing pollution, and burned PLA can be used as a fertilizer.

**Product performance**

Biodegradable corn PLA containers are made from a new type of PLA that is extracted from corn. This PLA has better performance than polyethylene, polypropylene, polystyrene, etc. and can replace existing plastic materials.

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 E-mail [qa-shinyi@goodflag.com.tw](mailto:qa-shinyi@goodflag.com.tw)  
 URL <http://www.goodflag.com>



Available in: Japan,Oceania,Europe,North America,U.S.A.,China

EP-6-035

Household goods and equipment

biodegradable plastics

(Poly Lactic Acid, PLA) FOOD CONTAINER BOWL P700,P600, P500, P360

Environmental performance

Poly Lactic Acid (PLA) has the following advantages:

1. High biodegradability: Used PLA is completely degradable by micro-organisms, finally it will become carbon dioxide and water, which is pollution-free and environmentally friendly.
2. High compatibility and degradability: PLA can be burned without causing pollution, and burned PLA can be used as a fertilizer.

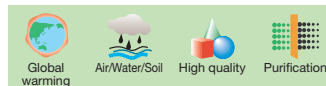
Product performance

Biodegradable corn PLA containers are made from a new type of PLA that is extracted from corn. This PLA has better performance than polyethylene, polypropylene, polystyrene, etc. and can replace existing plastic materials.

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 URL <http://www.goodflag.com>

Available in: Japan,Oceania,Europe,North America,U.S.A.,China



TYPE I



EP-6-036

Household goods and equipment

eco-friendly food containers

GGP140mm dish

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

CHANG HWA INDUSTRIAL

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 URL <http://www.ggpck.kr>

Available in: Republic of Korea



TYPE I





EP-6-037

Household goods and equipment

eco-friendly food containers

GGP130mm bowl

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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 E-mail kco0320@hanmail.net  
 URL <http://www.ggpck.kr>

Available in: Republic of Korea

The diagram includes icons for 'Air/Water/Soil' and 'Recyclable'. The 'LC Stage' circular diagram highlights 'Production' with a yellow dot. Below it is a 'TYPE I' logo and a photograph of a white, ribbed bowl.

EP-6-038

Household goods and equipment

eco-friendly food containers

GGP an individual container

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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The diagram includes icons for 'Air/Water/Soil' and 'Recyclable'. The 'LC Stage' circular diagram highlights 'Production' with a yellow dot. Below it is a 'TYPE I' logo and a photograph of a white individual container filled with various food items like fruits, vegetables, and meat.

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Eco-product // Household goods and equipment

EP-6-039

Household goods and equipment

eco-friendly food containers

GGP tray no.8 white

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Available in: Republic of Korea

Air/Water/Soil Recyclable

Material Design  
 Resource Production  
 End-of-life LC Stage  
 Transport Use/repair

TYPE I

EP-6-040

Household goods and equipment

eco-friendly food containers

GGP tray no.8 wood

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Available in: Republic of Korea

Air/Water/Soil Recyclable

Material Design  
 Resource Production  
 End-of-life LC Stage  
 Transport Use/repair

TYPE I

EP-6-041

Household goods and equipment

eco-friendly food containers

GGP tray no.8 a red net pattern

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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TYPE I



EP-6-042

Household goods and equipment

eco-friendly food containers

GGP tray no.8 black

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Eco-product // Household goods and equipment

EP-6-043

Household goods and equipment

eco-friendly food containers

GGP tray no.18 white

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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EP-6-044

Household goods and equipment

eco-friendly food containers

GGP tray no.18 wood

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Eco-product // Household goods and equipment

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EP-6-045

Household goods and equipment

eco-friendly food containers

GGP tray no.18 a red net pattern

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
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Available in: Republic of Korea



TYPE I



EP-6-046

Household goods and equipment

eco-friendly food containers

GGP tray no.18 black

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
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6. Proved good durability.
7. Totally disintegrated (100% totally disintegrated after wasted)
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Available in: Republic of Korea



TYPE I



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Eco-product // Household goods and equipment



EP-6-047

Household goods and equipment

eco-friendly food containers

GGP tray no.27 white

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
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7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Available in: Republic of Korea

EP-6-048

Household goods and equipment

eco-friendly food containers

GGP tray no.27 wood

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
3. Not use phosphor.
4. Harmless to human body from microwave and hot water.  
Acquired certificates proving harmless to human body (microwavable)
5. Cold resistance until -40 degree and hot resistance until 140 degree.
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7. Totally disintegrated (100% totally disintegrated after wasted)
8. Alkalinity eco-friendly products. (neutralize the acids)

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Eco-product // Household goods and equipment

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EP-6-049

Household goods and equipment

eco-friendly food containers

GGP lunchbox

Environmental performance

1. GGP is disposable product which is consist of SIO2 and PP as a new material more disintegrated than general PP product and a half of reducing Co2 when it is incinerated.
2. Possible recycling through seperating and sending out

Product performance

1. Peace of mind from environment hormone.
2. Carbon dioxide free when incinerated.
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Available in: Republic of Korea

Air/Water/Soil Recyclable

Material Design  
 Resource Production  
 End-of-life LC Stage  
 Transport Use/repair

TYPE I

EP-6-050

Household goods and equipment

fan

Ceiling Fan FD-800

Environmental performance

High performance: The DC motor greatly increases operation efficiency and saves 65% or more of electricity, compared with those driven by AC motors.

Product performance

Super quiet: The DC electronic step control module is noise-free.  
 New variable-speed remote control: Full-function remote control, including forward/backward rotation at six speeds and light control.  
 Low-temperature operation: Motor temperature kept below 50°C for an extended service life.

JIANG CAI ENTERPRISE CO., Ltd.

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 Tel +886-4-25358095 Fax +886-4-25358015  
 E-mail [jiangcai@ms47.hinet.net](mailto:jiangcai@ms47.hinet.net)  
 URL <http://www.jiangcai.com.tw>

Available in: Taiwan (Rep. of China)

Resource Energy saving High quality

Material Design  
 Resource Production  
 End-of-life LC Stage  
 Transport Use/repair

EP-6-051

Household goods and equipment

fan

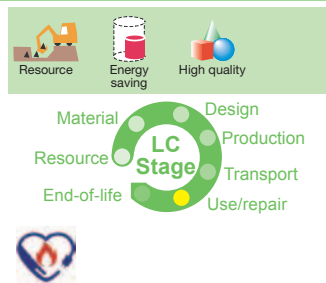
**Ceiling Fan FD-039B**

**Environmental performance**

High performance: The DC motor greatly increases operation efficiency and saves 65% or more of electricity, compared with those driven by AC motors.

**Product performance**

Super quiet: The DC electronic step control module is noise-free.  
 New variable-speed remote control: Full-function remote control, including forward/backward rotation at six speeds and light control.  
 Low-temperature operation: Motor temperature kept below 50°C for an extended service life.



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EP-6-052

Household goods and equipment

fan

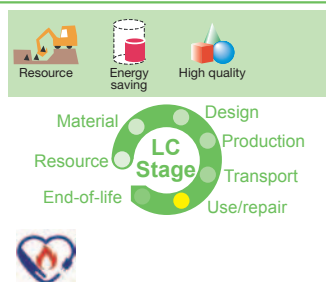
**Ceiling Fan FD-041B**

**Environmental performance**

High performance: The DC motor greatly increases operation efficiency and saves 65% or more of electricity, compared with those driven by AC motors.

**Product performance**

Super quiet: The DC electronic step control module is noise-free.  
 New variable-speed remote control: Full-function remote control, including forward/backward rotation at six speeds and light control.  
 Low-temperature operation: Motor temperature kept below 50°C for an extended service life.



**JIANG CAI ENTERPRISE CO., Ltd.**

No.22, Lane.158, Sanhe Rd., Shengang Dist., Taichung City, Taiwan, 42944, Republic of China  
 Tel +886-4-25358095 Fax +886-4-25358015  
 E-mail jiangcai@ms47.hinet.net  
 URL <http://www.jiangcai.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-053

Household goods and equipment

fan

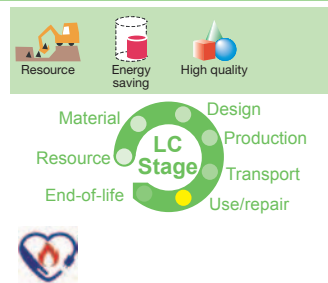
**Ceiling Fan FD-042B**

**Environmental performance**

High performance: The DC motor greatly increases operation efficiency and saves 65% or more of electricity, compared with those driven by AC motors.

**Product performance**

Super quiet: The DC electronic step control module is noise-free.  
 New variable-speed remote control: Full-function remote control, including forward/backward rotation at six speeds and light control.  
 Low-temperature operation: Motor temperature kept below 50°C for an extended service life.



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 URL <http://www.jiangcai.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-054

Household goods and equipment

fan

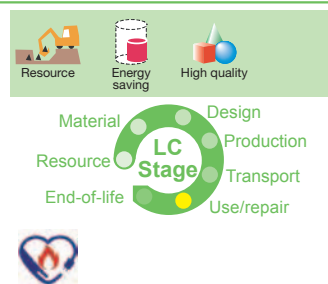
**Ceiling Fan FD-070B**

**Environmental performance**

High performance: The DC motor greatly increases operation efficiency and saves 65% or more of electricity, compared with those driven by AC motors.

**Product performance**

Super quiet: The DC electronic step control module is noise-free.  
 New variable-speed remote control: Full-function remote control, including forward/backward rotation at six speeds and light control.  
 Low-temperature operation: Motor temperature kept below 50°C for an extended service life.



**JIANG CAI ENTERPRISE CO., Ltd.**

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 E-mail [jiangcai@ms47.hinet.net](mailto:jiangcai@ms47.hinet.net)  
 URL <http://www.jiangcai.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-055

Household goods and equipment

faucet

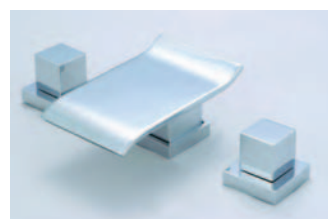
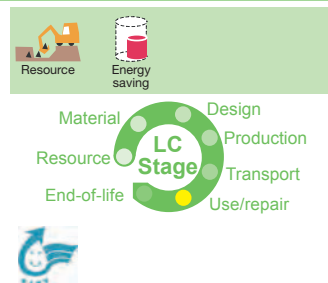
**Widespread Lavatory Faucet T219A-1 (B)**

**Environmental performance**

Water-saving features: The flow rates of 5.07L per minute conform to the specifications of Taiwan's Water Conservation Label. Highly effective in water conservation, preventing wasteful use of water resources.

**Product performance**

Product specifications: Dual-handle hot-cold water mixer with 25mm ceramic spindle and flat water outlet.



**HAW LONG MFG. CORP.**

No.238, Hui Nan Rd., Ho Mei Township, Chang Hwa County, Taiwan, 508, Republic of China  
 Tel +886-4-7632000 Fax +886-4-7628793  
 E-mail hawlong1@ms54.hinet.net  
 URL <http://www.hawlong.com>

Available in: North America, Central America, South America, U.S.A., Taiwan (Rep. of China), China

EP-6-056

Household goods and equipment

faucet

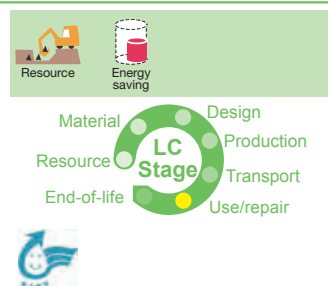
**Single Handle Faucet 1318**

**Environmental performance**

Water-saving features: The flow rates of 4.79L per minute conform to the specifications of Taiwan's Water Conservation Label. Highly effective in water conservation, preventing wasteful use of water resources.

**Product performance**

Product specifications: Single-handle hot-cold water mixer with 40mm ceramic spindle and flat water outlet.



**HAW LONG MFG. CORP.**

No.238, Hui Nan Rd., Ho Mei Township, Chang Hwa County, Taiwan, 508, Republic of China  
 Tel +886-4-7632000 Fax +886-4-7628793  
 E-mail hawlong1@ms54.hinet.net  
 URL <http://www.hawlong.com>

Available in: North America, Central America, South America, U.S.A., Taiwan (Rep. of China), China

Eco-product // Household goods and equipment

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EP-6-057

Household goods and equipment

faucet

**Infrared Activated Sensor Faucet HB-2600C**

**Environmental performance**

Conserves water resources and energy.

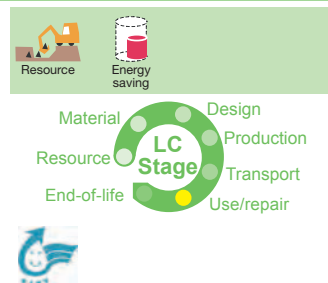
**Product performance**

1. The sensor angle can be flexibly adjusted to suit different venue needs.
2. The faucet comes with a self-detection function.
3. One faucet allows AC/DC switching at will.
4. It is easy to install and maintain in order to provide a convenient, sanitized and water-conserving bathroom space.
5. The electromagnetic valve design provides dependable and smooth functions without a water hammering sound.

**Hydrotek Corporation**

No. 3, Gong-Yeh N. 3rd Road, Nankang Ind. Park, Nan-Tou City, Nan-Tou County, Taiwan, 540, Republic of China  
 Tel +886-49-2254611 Fax +886-49-2254653  
 E-mail sales@hydrotek.com.tw  
 URL <http://www.hydrotek.com.tw>

Available in: Asia,Oceania,Europe,North America,South America



EP-6-058

Household goods and equipment

faucet

**Infrared Activated Sensor Faucet HB-6000C**

**Environmental performance**

Conserves water resources and energy.

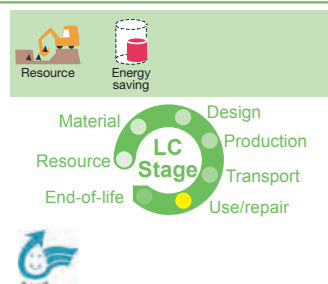
**Product performance**

1. The sensor angle can be flexibly adjusted to suit different venue needs.
2. The faucet comes with a self-detection function.
3. The same faucet allows AC/DC switching at will.
4. It is easy to install and maintain in order to provide a convenient, sanitized and water-conserving bathroom space.
5. The electromagnetic valve design provides dependable and smooth functions without a water hammering sound.

**Hydrotek Corporation**

No. 3, Gong-Yeh N. 3rd Road, Nankang Ind. Park, Nan-Tou City, Nan-Tou County, Taiwan, 540, Republic of China  
 Tel +886-49-2254611 Fax +886-49-2254653  
 E-mail sales@hydrotek.com.tw  
 URL <http://www.hydrotek.com.tw>

Available in: Asia,Oceania,Europe,North America,South America



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Eco-product // Household goods and equipment

EP-6-059

Household goods and equipment

faucet

**Infrared Activated Sensor Faucet HB-6700C**

**Environmental performance**

Conserves water resources and energy.

**Product performance**

1. The sensor angle can be flexibly adjusted to suit different venue needs.
2. The faucet comes with a self-detection function.
3. The same faucet allows AC/DC switching at will.
4. It is easy to install and maintain in order to provide a convenient, sanitized and water-conserving bathroom space.
5. The electromagnetic valve design provides dependable and smooth functions without a water hammering sound.

**Hydrotek Corporation**

No. 3, Gong-Yeh N. 3rd Road, Nankang Ind. Park, Nan-Tou City, Nan-Tou County, Taiwan, 540, Republic of China  
 Tel +886-49-2254611 Fax +886-49-2254653  
 E-mail sales@hydrotek.com.tw  
 URL http://www.hydrotek.com.tw

Available in: Asia,Oceania,Europe,North America,South America

The diagram shows the 'LC Stage' lifecycle with stages: Material, Design, Production, Transport, Use/repair, End-of-life, and Resource. A water drop icon is also present. Below the diagram is a photograph of the Infrared Activated Sensor Faucet HB-6700C, which is a sleek, chrome faucet with a curved spout and a square base.

EP-6-060

Household goods and equipment

faucet

**Infrared Activated Sensor Faucet HB-5000EM**

**Environmental performance**

Conserves water resources and energy.

**Product performance**

1. All parts and components are mounted on the faucet, making it easy to install and maintain.
2. It has dual manual and automatic operation as well as a temperature adjustment function.
3. The unique power-saving design helps to extend the battery's operating life.
4. The sensor self detects to adjust the distance according to varied faucets to avoid environmental disturbances.
5. The unique design is able to perform self diagnosis, and also displays the functional status.

**Hydrotek Corporation**

No. 3, Gong-Yeh N. 3rd Road, Nankang Ind. Park, Nan-Tou City, Nan-Tou County, Taiwan, 540, Republic of China  
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 E-mail sales@hydrotek.com.tw  
 URL http://www.hydrotek.com.tw

Available in: Asia,Oceania,Europe,North America,South America

The diagram shows the 'LC Stage' lifecycle with stages: Material, Design, Production, Transport, Use/repair, End-of-life, and Resource. A water drop icon is also present. Below the diagram is a photograph of the Infrared Activated Sensor Faucet HB-5000EM, which is a chrome faucet with a curved spout and a side handle.

Eco-product // Household goods and equipment

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EP-6-061

Household goods and equipment

faucet

### Kona Basin Faucet ECO-SLZ-10

#### Environmental performance

Unlike most general brass faucets, the product does not require excessive processing in the production process (such as forging, buffing, electro-plating and other related processes) to greatly reduce the emission of carbon dioxide, air pollution and chemical pollution. Moreover, the product's recyclable and reusable material features further achieve the objective of environmental conservation.

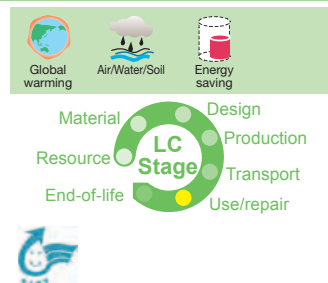
#### Product performance

**Healthy:** The material adopted complies with the NSF's RoHS certification standards.  
**Safety:** The heat is not conducted to the surface when dispensing hot water, helping to prevent burn trauma.  
**Water conservation:** Certified by Taiwan's Water Conservation Label.  
**Innovation:** An innovative style with a trendy look, setting it apart from the conventional faucets.  
**Durability:** A stain-resistant surface makes it stain resistant and the color does not fade.

### Kona Green Faucet (GEANN INDUSTRIAL CO., Ltd.)

No. 29, Tou-Lun Lane, Tou-Lun Vil., Lukang Township, Changhua County, Taiwan, 505, Republic of China  
 Tel +886-4-7720558 Fax +886-4-7712667  
 E-mail kimichen@geann.com.tw  
 URL <http://www.konafaucet.com>

Available in: Asia, Europe, Central America, South America, Middle and Near East



EP-6-062

Household goods and equipment

faucet

### Kona 4" Basin Faucet ECO-SLZ-40

#### Environmental performance

Unlike most general brass faucets, the project does not require excessive processing in the production process (such as forging, buffing, electro-plating and other related processes) to greatly reduce the emission of carbon dioxide, air pollution and chemical pollution. Moreover, the product's recyclable and reusable material features further achieve the objective of environmental conservation.

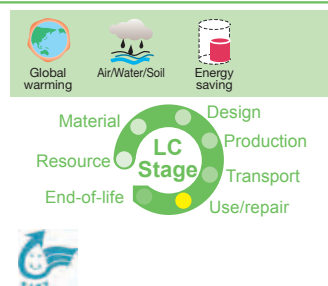
#### Product performance




**Healthy:** The material adopted complies with the NSF's RoHS certification standards.  
**Safety:** The heat is not conducted to the surface when dispensing hot water, helping to prevent burn trauma.  
**Water conservation:** Certified by Taiwan's Water Conservation Label.  
**Innovation:** An innovative style with a trendy look, setting it apart from the conventional faucets.  
**Durability:** A stain-resistant surface makes it stain resistant and the color does not fade.

### Kona Green Faucet (GEANN INDUSTRIAL CO., Ltd.)

No. 29, Tou-Lun Lane, Tou-Lun Vil., Lukang Township, Changhua County, Taiwan, 505, Republic of China  
 Tel +886-4-7720558 Fax +886-4-7712667  
 E-mail kimichen@geann.com.tw  
 URL <http://www.konafaucet.com>

Available in: Asia, Europe, Central America, South America, Middle and Near East



<b>EP-6-063</b>	<b>Household goods and equipment</b>
<b>faucet</b>	
<b>Fine Ceramic Water-Saving Long Valve (Atomization) LA-2012N</b>	
<p><b>Environmental performance</b> Water saving.</p> <p><b>Product performance</b> Stable water flow.</p>	 <div style="text-align: center;">  </div>   
<p><b>Lan In Copper Co., Ltd.</b></p> <p>No.18, Ln. 209, Sec. 3, Luhe Rd., Lugang Township, Changhua County, Taiwan, 505, Republic of China Tel +886-4-7715170 Fax +886-4-7721101 E-mail taiwan.lanin@hotmail.com.tw</p>	
<p>Available in: Taiwan (Rep. of China)</p>	

<b>EP-6-064</b>	<b>Household goods and equipment</b>
<b>faucet</b>	
<b>Fine Ceramic Water-Saving Vertical Valve (Atomization) LA-2005H</b>	
<p><b>Environmental performance</b> Water saving.</p> <p><b>Product performance</b> Stable water flow.</p>	 <div style="text-align: center;">  </div>   
<p><b>Lan In Copper Co., Ltd.</b></p> <p>No.18, Ln. 209, Sec. 3, Luhe Rd., Lugang Township, Changhua County, Taiwan, 505, Republic of China Tel +886-4-7715170 Fax +886-4-7721101 E-mail taiwan.lanin@hotmail.com.tw</p>	
<p>Available in: Taiwan (Rep. of China)</p>	

EP-6-065

Household goods and equipment

faucet

**Fine Ceramic Single-Hole Basin Faucet LA-523H**

**Environmental performance**

Water saving.

**Product performance**

Stable water flow.



**Lan In Copper Co., Ltd.**

No.18, Ln. 209, Sec. 3, Luhe Rd., Lugang Township, Changhua County, Taiwan, 505, Republic of China  
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 E-mail taiwan.lanin@hotmail.com.tw



Available in: Taiwan (Rep. of China)

EP-6-066

Household goods and equipment

faucet

**Single-Handle Water-Saving Long Valve (Atomization) LA-1023R**

**Environmental performance**

Water saving.

**Product performance**

Stable water flow.



**Lan In Copper Co., Ltd.**

No.18, Ln. 209, Sec. 3, Luhe Rd., Lugang Township, Changhua County, Taiwan, 505, Republic of China  
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 E-mail taiwan.lanin@hotmail.com.tw



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EP-6-067

Household goods and equipment

faucet

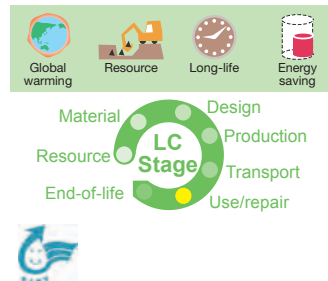
One Touch Tap HP-31801A (HP-31803A, HP-21805A, HP-21806A)

**Environmental performance**

The self-closing type of faucet effectively saves water over 84%.

**Product performance**

Repairing and replacing the touch-controlled faucet switch requires less than one-tenth of the cost of the sensor faucets. It may even be cheaper than common faucets. It is easy to repair without having to call an electrician, and it is easy to install.



**PINE STREET INDUSTRIAL CO., LTD.**

No. 13, Aly. 6, Ln. 36, Sec. 5, Minsheng E. Rd., Songshan District, Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-2753-3689 +886-2-2976-0335 Fax +886-2-2976-1470  
 E-mail redsun.tw@msa.hinet.net  
 URL <http://www.twredsun.com>



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EP-6-068

Household goods and equipment

faucet

One Touch Tap HP-21805 (HP-21806,HP-21802,HP-21605)

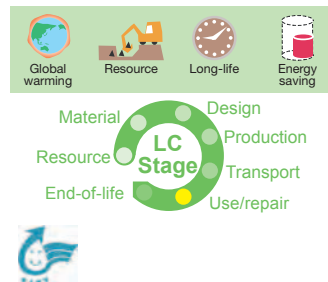
**Environmental performance**

This type of faucet effectively saves water over 45%.

**Product performance**

Sanitary: By the design of self-cleaning, it decreases the risk of bacteria multiplying.

Easy installation: Repairing and replacing the touch-controlled faucet switch requires less than one-tenth of the cost of the sensor faucets. It may even be cheaper than common faucets. It is easy to repair without having to call an electrician, and it is easy to install.



**PINE STREET INDUSTRIAL CO., LTD.**

No. 13, Aly. 6, Ln. 36, Sec. 5, Minsheng E. Rd., Songshan District, Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-2753-3689 +886-2-2976-0335 Fax +886-2-2976-1470  
 E-mail redsun.tw@msa.hinet.net  
 URL <http://www.twredsun.com>



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EP-6-069

Household goods and equipment

faucet

**Press-and-Lift Long-Bolt Water-Saving Faucet (Sprinkling) DWS-12C****Environmental performance**

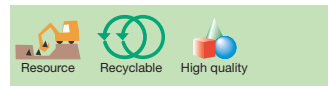
- \* With Taiwan Water Conservation Label
- \* Water flow no more than 9 liter/per minute, and min. water flow must no less than 1 liter/per minute (under the test condition: 1KG water pressure/cm<sup>2</sup>)

**Product performance**

The design incorporates a sanitation press-and-life switch, water volume adjustment switch, soap dish, with the button located at the water dispensing point, for sanitized hand-washing.

Surpassing the durability test 500,000 times.

The ball vale design switch is smoother and more durable.

**Ren Rong Hardware Industry Co., Ltd.**

No. 41, Yongbei Rd., Hemei Township, Changhua Country, Taiwan, 508, Republic of China  
Tel +886-4-7563407 Fax +886-4-7574422  
E-mail sales@renrong.com.tw

Available in: Taiwan (Rep. of China)

EP-6-070

Household goods and equipment

faucet

**Press-and-Lift Vertical-Bolt Water-Saving Faucet (Sprinkling) DWS-13C****Environmental performance**

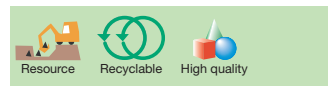
- \* With Taiwan Water Conservation Label
- \* Water flow no more than 9 liter/per minute, and min. water flow must no less than 1 liter/per minute (under the test condition: 1KG water pressure/cm<sup>2</sup>)

**Product performance**

The design incorporates a sanitation press-and-life switch, water volume adjustment switch, soap dish, with the button located at the water dispensing point, for sanitized hand-washing.

Surpassing the durability test 500,000 times.

The ball vale design switch is smoother and more durable.

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No. 41, Yongbei Rd., Hemei Township, Changhua Country, Taiwan, 508, Republic of China  
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E-mail sales@renrong.com.tw

Available in: Taiwan (Rep. of China)

EP-6-071

Household goods and equipment

faucet

Single Lever Basin Mixer B260C

Environmental performance

The maximum flow rate is less than 9L per minute under the test condition of 1 kg of flowing water pressure per square centimeter. Thus, water resources are effectively saved.

Product performance

Caesar's double-hole basin faucet is elegantly designed and features low flow rate and low water use that have received high-standard water conservation certifications.

SANITAR CO., LTD.

7F., No.111-8, Xingde Rd., Sanchong Dist., New Taipei City 241, Taiwan, 241, Republic of China  
 Tel +886-2-8512-3712 Fax +886-2-8512-3717  
 E-mail aaron@caesar.com.tw  
 URL <http://www.caesar.com.tw>

Available in: Asia,Southeast Asia,Taiwan (Rep. of China),China

EP-6-072

Household goods and equipment

faucet

Double-Hole Basin Faucet B262C

Environmental performance

The maximum flow rate is less than 9L per minute under the test condition of 1 kg of flowing water pressure per square centimeter. Thus, water resources are effectively saved.

Product performance

Caesar's double-hole basin faucet is elegantly designed and features low flow rate and low water use that have received high-standard water conservation certifications.

SANITAR CO., LTD.

7F., No.111-8, Xingde Rd., Sanchong Dist., New Taipei City 241, Taiwan, 241, Republic of China  
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 E-mail aaron@caesar.com.tw  
 URL <http://www.caesar.com.tw>

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Household goods and equipment

faucet

**Water-saving Noiseless Tap SD-301**

**Environmental performance**

With a multiple water-conservation design, it can be self adjusted to save water, with water-saving efficiency at 50%~90%.

**Product performance**

It can also be fitted with a variety of water-dispensing spouts to achieve a host of water-dispensing modes (mist, rain shower, air bubbles). The showerhead pipes are made of processed copper tubing that can be disassembled for easy parts replacement, and the silent sound function helps to reduce the water flow sound passing through the pipe works.

The diagram illustrates the LC Stage (Life Cycle Stage) with a central green circle labeled 'LC Stage' surrounded by eight stages: Material, Design, Production, Transport, Use/repair, End-of-life, Resource, and Global warming. Each stage is represented by a small icon. Below the diagram is a photograph of the Water-saving Noiseless Tap SD-301, a chrome faucet with a black handle.

**SHANG DER LIH COMPANY CO., LTD.**

No. 588, Minsheng Rd., Taoyuan City, Taoyuan County, Taiwan, 330, Republic of China  
 Tel +886-3-3471116 Fax +886-3-3331536  
 E-mail my3471116@yahoo.com.tw  
 URL <http://www.sdl-throttle.com.tw>

Available in: Worldwide

EP-6-074

Household goods and equipment

parts of faucet

**One Touch Tap (Spray) HP-265**

**Environmental performance**

Revolutionizing the usage habit and water-dispensing mode, it helps to reduce the daily water consumption and saves on energy.

**Product performance**

A water-saving device offers water-saving function and prevents bacteria crosscontamination and spread, with a water-saving ratio reaching 84%.

The diagram illustrates the LC Stage (Life Cycle Stage) with a central green circle labeled 'LC Stage' surrounded by eight stages: Material, Design, Production, Transport, Use/repair, End-of-life, Resource, and Air/Water/Soil. Each stage is represented by a small icon. Below the diagram is a photograph of the One Touch Tap (Spray) HP-265, a chrome showerhead with a black handle and the 'Hihippo' brand name.

**Highplus International Co., Ltd.**

6F., No.11, Ln. 155, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City, Taiwan, 22203, Republic of China  
 Tel +886-2-2662-5287 Fax +886-2-2662-5785  
 E-mail maylee@hihippo.com  
 URL <http://www.hihippo.com/>

Available in: Asia,Oceania,Europe,North America,Central America,South America,Middle and Near East,U.S.A.,Singapore,Philippines,Republic of Korea,Taiwan (Rep. of China),China,South Africa

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EP-6-075

Household goods and equipment

parts of faucet

**Aerator (Spray) HP-155**

**Environmental performance**

Revolutionizing the water dispensing volume to reduce daily water consumption and save on energy.

**Product performance**

Besides the water-saving function, the water-dispensing volume can also be adjusted as needed to satisfy water-saving needs in different regions, with the range of watersaving at 30%~60%.



**Highplus International Co., Ltd.**

6F., No.11, Ln. 155, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City, Taiwan, 22203, Republic of China  
 Tel +886-2-2662-5287 Fax +886-2-2662-5785  
 E-mail maylee@hihippo.com  
 URL <http://www.hihippo.com/>

Available in: Asia,Oceania,Europe,North America,Central America,South America,Middle and Near East,U.S.A.,Singapore,Philippines,Republic of Korea,Taiwan (Rep. of China),China,South Africa

EP-6-076

Household goods and equipment

parts of faucet

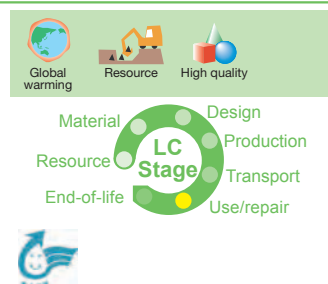
**Aerator (Aeration) HP-1055**

**Environmental performance**

Revolutionizing the water dispensing volume to reduce daily water consumption and save on energy.

**Product performance**

Besides emphasizing its water-saving function, the water dispensing volume can be adjusted as desired, achieving a water-saving ratio of 30%~60%.



**Highplus International Co., Ltd.**

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 E-mail maylee@hihippo.com  
 URL <http://www.hihippo.com/>

Available in: Asia,Oceania,Europe,North America,Central America,South America,Middle and Near East,U.S.A.,Singapore,Philippines,Republic of Korea,Taiwan (Rep. of China),China,South Africa

Eco-product // Household goods and equipment

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EP-6-077

Household goods and equipment

parts of faucet

Timer Tap HP-185S

**Environmental performance**

Revolutionizing the water dispensing volume to reduce daily water consumption and save on energy.

**Product performance**

A faucet offering the water-saving function, the water is turned on and turned off automatically by pressing the switch located underneath. It is suitable for public venues, as it not only saves water but also helps to prevent spreading bacteria, with a water conservation ratio at 87%.



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 E-mail maylee@hihippo.com  
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EP-6-078

Household goods and equipment

parts of faucet

One Touch Tap YS-185

**Environmental performance**

The self-closing type of faucet effectively saves water over 84%.

**Product performance**

Repairing and replacing the touch-controlled faucet switch requires less than one-tenth of the cost of the sensor faucets. It may even be cheaper than common faucets. It is easy to repair without having to call an electrician, and it is easy to install.



**PINE STREET INDUSTRIAL CO., LTD.**

No. 13, Aly. 6, Ln. 36, Sec. 5, Minsheng E. Rd., Songshan District, Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-2753-3689 +886-2-2976-0335 Fax +886-2-2976-1470  
 E-mail redsun.tw@msa.hinet.net  
 URL <http://www.twredsun.com>

Available in: Taiwan (Rep. of China)

EP-6-079

Household goods and equipment

parts of faucet

One Touch Tap YS-165,YS-1065

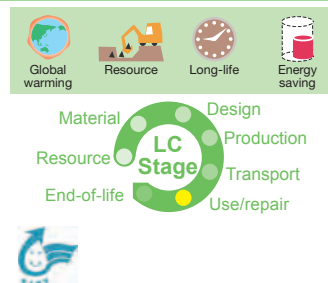
Environmental performance

This type of faucet effectively saves water over 45%.

Product performance

Sanitary: By the design of self-cleaning, it decreases the risk of bacteria multiplying.

Easy installation: Repairing and replacing the touch-controlled faucet switch requires less than one-tenth of the cost of the sensor faucets. It may even be cheaper than common faucets. It is easy to repair without having to call an electrician, and it is easy to install.



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 E-mail redsun.tw@msa.hinet.net  
 URL http://www.twredsun.com



Available in: Taiwan (Rep. of China)

EP-6-080

Household goods and equipment

faucet filter

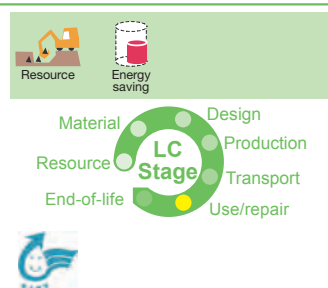
COSMINERGY FAUCET FILTER CW-02C

Environmental performance

It is a water-saving product.

Product performance

1. A wide-area water dispensing design enlarges the washing area to conserve water and energy.
2. Combining the four leading technologies of an international food-grade material: Japan (NSF, INS266), the United States (KDF, FDA, EPA), oscillated energy bio-ceramic energy technology (CE, SGS tested to comply with FDA rules), nanometer silver bacteria-fighting device (SGS).
3. Simple and easy installation for the instance convenience of an aggregate water flow.
4. Suitable for multiple faucet specifications: includes a number of connectors, offering high compatibility.
5. Extended operating life cycle: By estimating the water-borne residual chlorine at under 0.1L/mg in the tap water, the filtration core's operating life cycle (at approx. 60 liters per day) can last somewhere from 8 to 10 months.
6. The nanometer silver bacteria-fighting device suppresses bacterial growth with multiple yields combined in one, and with a disposable filtration core (chlorine removal, filtration, bacteria fighting, energizing, revitalizing, breaking down heavy metals).



Cosminergy Hitech Developing Co., Ltd.

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 Tel +886-2-2247-2567-533 Fax +886-2-2247-6687  
 E-mail joyce@cosminergy.com  
 URL http://www.cosminergy.com



Available in: Asia, Europe, Southeast Asia, Taiwan (Rep. of China)

EP-6-081

Household goods and equipment

water-saving accessories

**Water Saver for Shower Hoses SD-213**

**Environmental performance**

Installed between the showerhead and the gooseneck, it helps to save as much as 30%~40% of water, and it further saves on the heating source (power saving, fuel saving, gas saving).

**Product performance**

Deluxe meta chromium material (the 360 rotation type). With a flow stabilizing device, it is capable of achieving flow regulation and a smooth water discharge effect regardless of high or low water pressure. After installation, and upon igniting the heater, the water heater can operate normally (without affecting the water pressure).

**SHANG DER LIH COMPANY CO., LTD.**

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 E-mail my3471116@yahoo.com.tw  
 URL <http://www.sdl-throttle.com.tw>

Available in: Worldwide

EP-6-082

Household goods and equipment

water-saving accessories

**Swivel Aerator for Non-Threaded Taps (Insertion Type) SD-101**

**Environmental performance**

The embedded (plugged-in) type for installing onto the existing faucet, it offers a water-conservation ratio of 80%~90%.

**Product performance**

Compatible to unthreaded faucets.

**SHANG DER LIH COMPANY CO., LTD.**

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Available in: Worldwide

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EP-6-083

Household goods and equipment

water-saving accessories

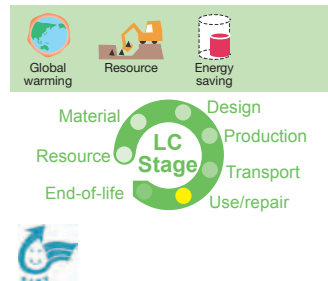
Swivel Aerator with Hose Adapter SD-105

Environmental performance

Mounted onto the general (unthreaded) faucets, with water conservation at 70%~80%.

Product performance

Compatible to threaded and unthreaded faucets.



SHANG DER LIH COMPANY CO., LTD.

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 URL <http://www.sdl-throttle.com.tw>

Available in: Worldwide

EP-6-084

Household goods and equipment

water-saving accessories

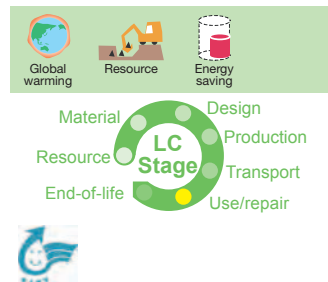
360-Degree Swivel Aerator for Threaded Taps SD-106

Environmental performance

Offers a water-conservation feature to achieve the best washing and water-saving effects.

Product performance

With adjustable water-dispensing angles and distance, it comes with two options of water jet (rain shower) and air bubbles.



SHANG DER LIH COMPANY CO., LTD.

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EP-6-085

Household goods and equipment

showerheads

**"Clic-Clac" Touch-Control Water-Saving Showerheads BW-2S-1****Environmental performance**

This product is test proven to provide a maximum flow rate of 9.74L/min under the condition of 1kgf/cm<sup>2</sup>, conforming to the specifications of Taiwan's Water Conservation Label. Water flow is immediately stopped when not in use. Avoids unnecessary waste and saves up to 35% of water.

**Product performance**

The uniquely designed handle can be used to start and stop water flow. Press the handle once, and water flows out; press the handle again, and water stops automatically. It is convenient as well as water- and energy-saving.

**BIDWIN INDUSTRIES CO., LTD.**

4F-2, No. 2, Ln. 43, Chung Hwa Rd., Sanxia Dist., New Taipei City, Taiwan,  
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Tel +886-2-26738246 Fax +886-2-26738141  
E-mail bidwin@kimo.com  
URL <http://www.bidwin.com.tw>

Available in: Asia,Europe,North America,South America



EP-6-086

Household goods and equipment

showerheads

**EZ n' SAVE Oxygenic SPA Hand Shower BW-6S-N****Environmental performance**

This product is test proven to provide a maximum flow rate of 9.74L/min under the condition of 1kgf/cm<sup>2</sup>, conforming to the specifications of Taiwan's Water Conservation Label. Water flow is immediately stopped when not in use. Avoids unnecessary waste and saves up to 60% of water.

**Product performance**

The handle can be operated in two steps. Water is released when the handle is gently pressed, and water is stopped as soon as the handle is pressed again. It is easy to use and saves both water and energy. The water outlet ring can be adjusted to different spray/flow mode. The nebulized spray is SGS tested to be rich in negative ions.

**BIDWIN INDUSTRIES CO., LTD.**

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Available in: Asia,Europe,North America,South America



EP-6-087

Household goods and equipment

showerheads

SPA n' SAVE Oxygenic SPA Hand Shower BW-8S

Environmental performance

Equipped with a water-saving valve to limit the flow rate to 6-11L/min. Effective in stabilizing water pressure and saving water. Saves up to 60% of water.

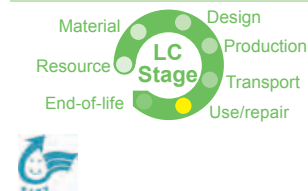
Product performance

- \* The patented water outlet ring structure has a pressurizing effect and can produce various spray/flow modes. The thin water streams provide a massaging effect, while the nebulized spray is SGS tested to contain more than 1,236,000 c.c. of negative ions.
- \* Built-in with a unique water-saving valve that can limit the flow rate to 6-11L/min, regardless of water pressure and on which floor of a building it is located. With water outlet pressure stabilized, baths can be taken in winter times without abrupt water temperature variations.

BIDWIN INDUSTRIES CO., LTD.

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 URL <http://www.bidwin.com.tw>

Available in: Asia, Europe, North America, South America



EP-6-088

Household goods and equipment

showerheads

SPA n' SAVE Oxygenic SPA Hand Shower BW-8SN

Environmental performance

Equipped with a water-saving valve to limit the flow rate to 6-11L/min. Effective in stabilizing water pressure and saving water. Saves up to 60% of water.

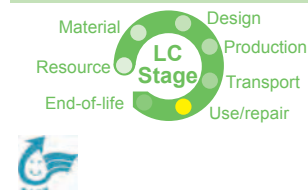
Product performance

- \* The patented water outlet ring structure has a pressurizing effect and can produce various spray/flow modes. The thin water streams provide a massaging effect, while the nebulized spray is SGS tested to contain more than 1,236,000 c.c. of negative ions.
- \* Built-in with a unique water-saving valve that can limit the flow rate to 6-11L/min, regardless of water pressure and on which floor of a building it is located. With water outlet pressure stabilized, baths can be taken in winter times without abrupt water temperature variations.

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EP-6-089

Household goods and equipment

showerheads

"SMART-FLOW" Faucet Water Saver BW-3S

**Environmental performance**

This product was granted the Water Conservation Label by the Ministry of Economic Affairs, Taiwan. And, according to the test results performed by Industrial Technology Research Institute of Taiwan, this product can save up to 89% of water.

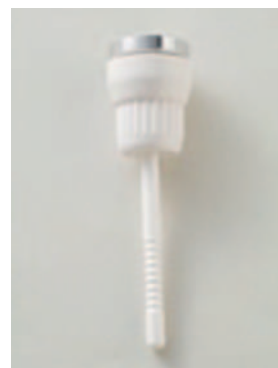
**Product performance**

"SMART-FLOW" is installed right under a faucet outlet. Once the faucet is turned on, water flow is started or stopped by triggering the control rod. Convenient: The faucet need not be turned on and off repeatedly. Hygienic: The control rod is washed while the user washes his or her hands. Therefore, the chances of infection are reduced.

**BIDWIN INDUSTRIES CO., LTD.**

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Available in: Asia,Europe,North America,South America



EP-6-090

Household goods and equipment

showerheads

Showerhead Handles A152

**Environmental performance**

Water-saving features: In conformity with the specifications of Taiwan's Water Conservation Label.

**Product performance**

Product specifications:  
 1. Inlet tube diameter: 1/2".  
 2. Suitable for showers in general.  
 3. Single-outlet showerhead, in the shape of a rectangular column.

**HAW LONG MFG. CORP.**

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 Tel +886-4-7632000 Fax +886-4-7628793  
 E-mail hawlong1@ms54.hinet.net  
 URL <http://www.hawlong.com>

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EP-6-091

Household goods and equipment

dual-flush devices

Water-Saving Foot-Operated Dual-Flush Valve DK-1014

Environmental performance

This product is water-saving, and most of the materials used are recyclable and reusable to reduce the use of raw materials.

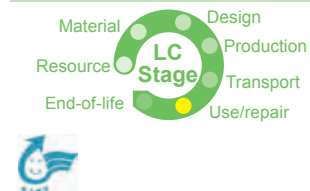
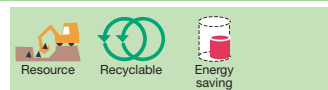
Product performance

This product is designed for use with fast-flush toilets. The control handle on the main body can be pressed to flush solid waste, and the red handle is for liquid waste. Besides, the flushing water is automatically stopped after four to five seconds. Thus, the purpose of water conservation is achieved.

LIYIH MAKE CO., Ltd.

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 Tel +886-4-7761759 Fax +886-4-7762552  
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 URL <http://www.duker.com.tw>

Available in: Taiwan (Rep. of China)



EP-6-092

Household goods and equipment

self-closing faucet

Self-Closing Long Valve DK-102

Environmental performance

This product is water-saving, and most of the materials used are recyclable and reusable to reduce the use of raw materials.

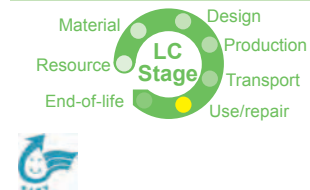
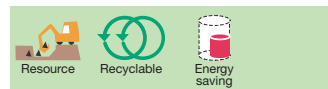
Product performance

A wall-mounted faucet with an upwardly extending press valve. Water is automatically released and stopped when the valve is pressed. The water release time is adjustable to save water.

LIYIH MAKE CO., Ltd.

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 URL <http://www.duker.com.tw>

Available in: Taiwan (Rep. of China)



EP-6-093

Household goods and equipment

self-closing faucet

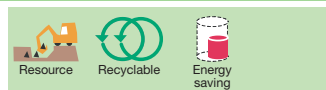
**Self-Closing Vertical Valve DK-329**

**Environmental performance**

This product is water-saving, and most of the materials used are recyclable and reusable to reduce the use of raw materials.

**Product performance**

Designed for wash basin, this product releases and stops water automatically when pressed. The water release time can be adjusted to save water.



**LIYIH MAKE CO., Ltd.**

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EP-6-094

Household goods and equipment

products for bathroom use

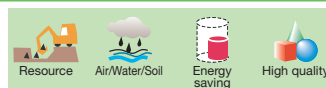
**Sensor-Operated Urinal Flushers L-361, L-362, L-363, L-365, L-366, L-367, L-368**

**Environmental performance**

Highly effective in saving water and preventing wasteful use of water resources.

**Product performance**

The sensing distance can be adjusted as needed.



**JYE LI AN TECHNOLOGY CO., LTD.**

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EP-6-095

Household goods and equipment

products for bathroom use

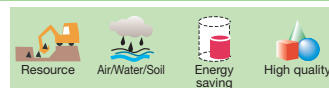
Sensor-Operated Urinal Flushers L-303, L-313, L-323, L-507, L-508, L-509

Environmental performance

Highly effective in saving water and preventing wasteful use of water resources.

Product performance

The sensing distance can be adjusted as needed.



JYE LI AN TECHNOLOGY CO., LTD.

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EP-6-096

Household goods and equipment

products for bathroom use

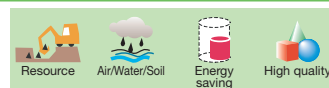
Sensor-Operated Urinal Flushers L-373, L-393, L-333, L-353

Environmental performance

Highly effective in saving water and preventing wasteful use of water resources.

Product performance

The sensing distance can be adjusted as needed.



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Household goods and equipment

products for bathroom use

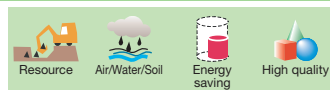
**Sensor-Operated Urinal Flushers L-501, L-502, L-503, L-505**

**Environmental performance**

Highly effective in saving water and preventing wasteful use of water resources.

**Product performance**

The sensing distance can be adjusted as needed.



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EP-6-098

Household goods and equipment

toilets

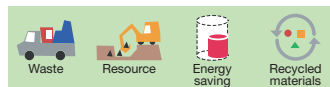
**Water-Saving Dual-Flush Toilet CS853**

**Environmental performance**

Compared with ordinary toilets, dual-flush toilets can save up to 50% of water.

**Product performance**

Water-saving dual-flush toilets release not more than 6L of water to flush solid waste, and not more than 3L of water to flush liquid waste. By contrast, ordinary toilets release about 6L of water in each flush. Compared with ordinary toilets, dual-flush toilets can save up to 50% of water.



**LUNG TIEN HSIA INDUSTRIAL CO., LTD.**

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 Tel +886-7-6163666 Fax +886-7-6160361  
 E-mail service@lth.com.tw  
 URL <http://www.lth.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-099

Household goods and equipment

toilets

**Water-Saving Dual-Flush Toilet CS873**

**Environmental performance**

Compared with ordinary toilets, dual-flush toilets can save up to 50% of water.

**Product performance**

Water-saving dual-flush toilets release not more than 6L of water to flush solid waste, and not more than 3L of water to flush liquid waste. By contrast, ordinary toilets release about 6L of water in each flush. Compared with ordinary toilets, dual-flush toilets can save up to 50% of water.



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 E-mail service@lth.com.tw  
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EP-6-100

Household goods and equipment

toilets

**SATIS:the water-saving ECO4toilet**

**Environmental performance**

SATIS, tankless toilet, is a super water-saving ECO4 toilet, full flush (4 liters) and partial flush (3.3 liters) product line, it cleans the entire bowl and provides water savings of about 73% and electrical savings of 76% compared with existing products. With Progurad treatment surface, prevents inorganic scale accumulating and drastically lowers water volume for cleaning. Also due to easily decomposable design and marking of materials it contains, easy recycling is possible when it reaches the end of its service life.

**Product performance**

Tankless toilet "SATIS" has a sophisticated design, making it more aesthetically pleasing, comfortable, and high quality. As the compact and simple form, it helps to free up space in the surrounding area. It is also equipped with a function to electronically move the hygienic function unit up and down to ensure easy cleaning.



SATIS

**LIXIL Corporation**

36F,Kasumigaseki Building,3-2-5 Kasumigaseki,Chiyoda-ku,Tokyo, 100-6036, Japan  
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Available in: Japan,U.S.A,Republic of Korea,Taiwan (Rep. of China),China

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EP-6-101

Household goods and equipment

toilets

## The Sensor Urinal: achieving excellent Water and Energy Saving

## Environmental performance

The Sensor Urinal flushes automatically after use. It has a built-in hydroelectric generator with a power generation function that effectively converts spouting water into electrical energy. It uses just 1 to 2 liters of water to flush monitoring the time of use, saving of about 70% compared with existing products.

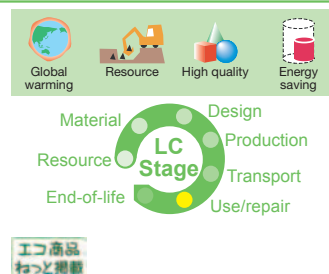
## Product performance

The Sensor Urinal has an ISO standard antibacterial ceramic surface and an easy-to-clean rim shape. It features a stylish design in addition to ease of maintenance.

## LIXIL Corporation

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Available in: Japan,China



Sensor Urinal:AWU-506RAMP/BN8

EP-6-102

Household goods and equipment

toilets

## One-Piece Wrapped-Designed Toilet with Dual Flush Function CF1347

## Environmental performance

Dual siphonic flush for flushing liquid and solid wastes selectively. Effective in saving water, for only 3-6 liters of water is used in each flush.

## Product performance

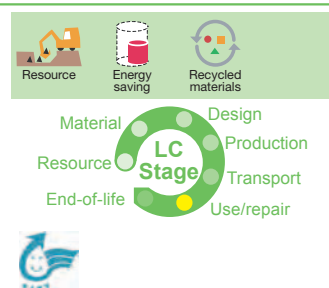
The rectangular, fully enclosed toilet has the following features:

1. The toilet is fully enclosed on the sides to keep the toilet pipe from view. This not only makes the toilet visually pleasing but also facilitates cleaning.
2. For the user's sitting comfort, the rectangular lower toilet cover is widened, and the seat is specially designed in terms of sitting angle and seated area.
3. In keeping with the global water saving concept and to cater for consumers' use habits, 3L and 6L flush buttons are designed for liquid and solid wastes respectively to save more water resources.

## SANITAR CO., LTD.

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E-mail [aaron@caesar.com.tw](mailto:aaron@caesar.com.tw)  
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Available in: Asia,Southeast Asia,Taiwan (Rep. of China),China



EP-6-103

Household goods and equipment

toilets

Connective Wrapped-Designed Toilet with Dual Flush Function CF1345

Environmental performance

Dual flush system for flushing liquid and solid wastes selectively. Effective in saving water, for only 3-6 liters of water is used in each flush.

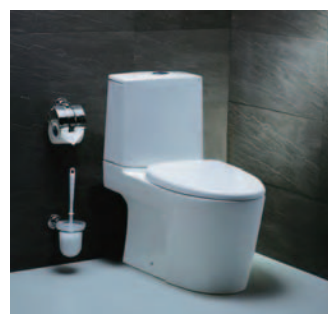
Product performance

- The circular, connected-and-enclosed-type toilet has the following features:
1. The toilet is fully enclosed on the sides to keep the toilet pipe from view. This not only makes the toilet visually pleasing but also facilitates cleaning.
  2. For the user's sitting comfort, the lower toilet cover is widened, and the seat is specially designed in terms of sitting angle and seated area.
  3. In keeping with the global water saving concept and to cater for consumers' use habits, 3L and 6L flush buttons are designed for liquid and solid wastes respectively to save more water resources.

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Available in: Asia,Southeast Asia,Taiwan (Rep. of China),China



EP-6-104

Household goods and equipment

toilets

One-Piece Wrapped-Designed Toilet with Dual Flush Function CF1346

Environmental performance

Dual siphonic flush for flushing liquid and solid wastes selectively. Effective in saving water, for only 3-6 liters of water is used in each flush.

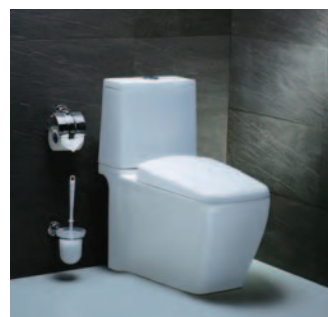
Product performance

- The rectangular, connected-and-enclosed-type toilet has the following features:
1. The toilet is fully enclosed on the sides to keep the toilet pipe from view. This not only makes the toilet visually pleasing but also facilitates cleaning.
  2. For the user's sitting comfort, the rectangular lower toilet cover is widened, and the seat is specially designed in terms of sitting angle and seated area.
  3. In keeping with the global water saving concept and to cater for consumers' use habits, 3L and 6L flush buttons are designed for liquid and solid wastes respectively to save more water resources.

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Available in: Asia,Southeast Asia,Taiwan (Rep. of China),China



EP-6-105

Household goods and equipment

products for bathroom use

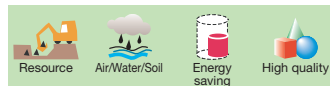
Sensor Faucets A-603, A-101, A-1011, A-201~3, A-601~2, A-605~6, A-701~3, A-705~6, A-801

**Environmental performance**

Highly effective in saving water and preventing wasteful use of water resources.

**Product performance**

The sensing distance can be adjusted as needed.



**JYE LI AN TECHNOLOGY CO., LTD.**

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Available in: Asia, Middle and Near East, Philippines, China

EP-6-106

Household goods and equipment

foot-operated faucet assembly

Foot-Operated Faucet Assembly DK-336

**Environmental performance**

This product is water-saving, and most of the materials used are recyclable and reusable to reduce the use of raw materials.

**Product performance**

Designed for wash basin. The water outlet valve is actuated by foot so as to avoid hand-to-product contact and meet hygienic requirements. Water is automatically released and stopped when the valve is pressed. The water release time is adjustable to save water.



**LIYIH MAKE CO., Ltd.**

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 URL http://www.duker.com.tw

Available in: Taiwan (Rep. of China)

Eco-product // Household goods and equipment

EP-6-107

Household goods and equipment

heat pump water heating systems

Heat Pump Water Heater for Commercial Use (Eco Cute for commercial applications)

Environmental performance

----<< Energy saving >>----

- A newly developed inverter-type scroll CO<sub>2</sub> compressor is adopted.
- Thermal energy absorbed from the atmosphere heats the water that passes through the heat exchanger. The system produces approximately three to four times the amount of electrical energy used (high efficiency).

----<< Toxicity / Chemical substances reduction >>----

- The CO<sub>2</sub> natural refrigerant has an ozone depletion potential of zero and a global warming potential of one.

Product performance

- The CO<sub>2</sub> heat pump and inverter capacity control technologies facilitate an optimum hot water output of up to 90°C.
- 10th Electric Load Leveling System Awards (Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy Director-General's Prize)

Mitsubishi Electric Corporation

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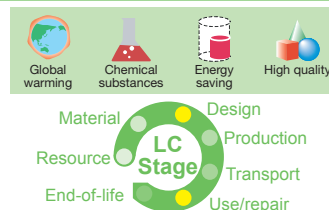
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



QAHV-N560C

EP-6-108

Household goods and equipment

heat pump water heating systems

Heat Pump Water Heater for Domestic Use

Environmental performance

This heat pump water heater makes use of ambient heat in the air to attain energy savings of one-third compared with Mitsubishi Electric's conventional electrical water heaters. As this model uses natural CO<sub>2</sub> as a refrigerant, it causes no damage to the ozone layer and has a global warming potential 1/1700 of that posed by CFC refrigerants. Moreover, it does not produce CO<sub>2</sub> emissions because it does not require the combustion of fuel.

The heat pump unit features an original rotary compressor\* for CO<sub>2</sub> refrigerant hot-water supply. In addition, it incorporates Mitsubishi Electric's unique open core coil-wound "Poki Poki Motor". This high-density coil technology helps to realize significant performance improvements.

\*The high-efficiency rotary compressor was awarded the fiscal 2007 Technology Prize of the Japan Society of Refrigerating and Air Conditioning Engineers (JSRAE).

Product performance

The Eco Check Function is adopted on the remote control devices with the aim of showing the degree of contribution to the environment.

The function allows users to recognize the degree of contribution to the environment by pushing a button to learn the ideal mode for heating water and the amount of emission cuts.

Mitsubishi Electric Corporation

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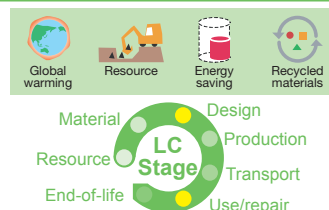
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



SRT-HP46WU6



EP-6-109

Household goods and equipment

heat pump water heating systems

EcoCute Featuring Silver Ionizer - Unprecedented in the Industry

Environmental performance

- Mitigation of climate change: The use of CO<sub>2</sub>, a natural refrigerant, GWP is only 1.
- Mitigation of climate change: The unit learns the usage patterns to heat a certain volume of water as required by user.
- Raising users' consciousness on energy-saving: The remote controller displays a real-time report on water usage, the availability of hot water at a set temperature, in order to raise users' consciousness on energy-saving.
- Raising users' consciousness on energy-saving: The silver ion's anti-bacterial and deodorant effects minimize dirt and smell in the hot water used in a bathtub on the previous day, and helps the water to be reused for laundry or other day-to-day applications.
- Efficient use of resources: 5kg(7%) of the tank weight is reduced.

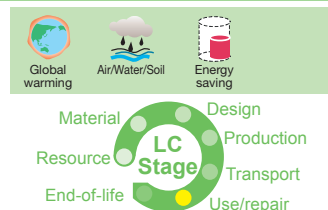
Product performance

- Clean energy: Heat Pump system, heating the water with heated air, achieves highly efficient operation.
- The APF is 3.3, about three times as high as a heater-type unit.
- Visible remote controller: This feature displays a real-time report on hot water at a set temperature.
- Silver Ionizer: The silver ions' antibacterial and deodorant effects purify hot water used in a bathtub for the repeated use.

Toshiba Carrier Corporation

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 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>

Available in: Japan



Heat Pump Water Heater using CO<sub>2</sub> Refrigerant ECO CUTE (left) HWH-451CU (right) HWH-FB371CT

EP-6-110

Household goods and equipment

cogeneration systems

Solid Oxide Fuel Cell (SOFC) for residential use

Environmental performance

SOFC consists of a generation unit and an exhaust heat utilization unit. Osaka Gas works on the development of these units jointly with Kyocera Corp. / Toyota Motor Corp. / Aisin Seiki Co., Ltd. and Chofu Seisakusho Co., Ltd., respectively. The compact size of each unit makes the system suited for residential use.

From 2007 through 2010, Osaka Gas have conducted the field test as part of a research led by NEDO and The New Energy Foundation. Osaka Gas strives toward the commercialization of this system by making use of the experiences and results of the field tests.

The generating efficiency of this system is higher than that of the average thermal power plant: maximum energy saving of 36% and maximum CO<sub>2</sub> emission reduction of 50%.

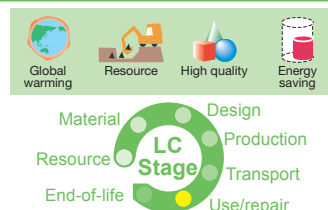
Product performance

Power generation efficiency (700W) : 40.6% (HHV) , 45% (LHV)  
 Total energy efficiency (700W) : more than 77% (HHV) , more than 85% (LHV)

Osaka Gas Co., Ltd.

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 URL <http://www.osakagas.co.jp/indexe.html>  
 URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



Solid oxide fuel cell

EP-6-111

Household goods and equipment

cogeneration systems

Polymer Electrolyte Fuel Cell (PEFC) Cogeneration System for residential use

Environmental performance

The PEFC Cogeneration Systems, which Osaka Gas has developed jointly with Toshiba Fuel Cell Power Systems Corp and ENEOS Celltech Corp and released in the market in FY2009, generates electricity through the electro-chemical reaction of oxygen in the air and hydrogen extracted from natural gas.

It is a highly energy-saving system which has realized total energy efficiency of more than 80% (\*1) by utilizing the exhaust heat from generation for heating water. It reduces CO<sub>2</sub> emissions by approximately 1.3 ton per annum (\*2).

\*1: Lower heating value basis

\*2: When introduced at a resident of 4 people, replacing the conventional system

Product performance

Power generation capacity: 700 - 250W

Power generation efficiency (700W): 31.5%\*, 35%\*\*

Total energy efficiency (700W): more than 72%\*, more than 80%\*\*

\*Higher heating value basis

\*\*Lower heating value basis

Osaka Gas Co., Ltd.

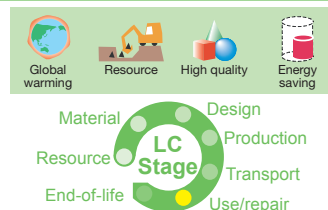
4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

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URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



ENEFARM - Toshiba, ENEOS Celltech

EP-6-112

Household goods and equipment

cogeneration systems

ECOWILL - energy-saving gas cogeneration system

Environmental performance

ECOWILL is an energy-efficient household-use cogeneration system fueled by environmentally-friendly natural gas. It generates electricity and supplies hot water by utilizing waste heat from the gas engine. It boasts an outstanding energy-saving effect with a generation efficiency of 26.3% and exhaust heat efficiency of 65.7%. The total energy efficiency reaches 92.0% (Lower heating value basis).

By utilizing waste heat associated with generation for hot water supply and space heating, it reduces the primary energy consumption by 27%\* and CO<sub>2</sub> emissions by 38%\*. The system offers higher level of comfort while contributing to environmental conservation.

\* Comparison of 1 kW of electricity and 2.5 kW of heat generation by ECOWILL with conventional systems (electricity generated at centralized thermal power plant and heat generation by current gas water/space heating system)

Product performance

The most energy-efficient generation is realized by a learning function which records and analyzes the status of generation and hot water utilization pattern at home. The hot water is also utilized for the floor heating and bath room heater/dryer.

Osaka Gas Co., Ltd.

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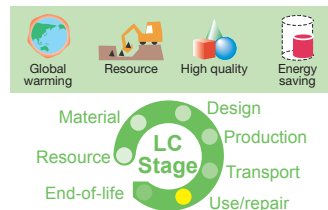
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URL <http://www.osakagas.co.jp/indexe.html>

URL [http://home.osakagas.co.jp/search\\_buy/ecowill/index.html](http://home.osakagas.co.jp/search_buy/ecowill/index.html)

URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



ECOWILL

EP-6-113

Household goods and equipment

heat pump water heating systems

## RESIDENTIAL FUEL CELL ENE FARM

## Environmental performance

ENE FARM, micro-CHP with fuel cell, extracts hydrogen from city gas and generates power, utilizing waste heat for hot water.

Tokyo Gas has already started sales of this residential fuel cell cogeneration system, which was jointly developed by Panasonic.

ENE FARM can realize 35% more efficient energy supply than conventional system and contributes to approximately 48% reduction of CO2 emission amount (1.5t/y).

## Product performance

Power output: 0.75kW

Rated power efficiency: 40% (in low heat value), 36% (in high heat value)

Rated heat recovery efficiency: 50% (in low heat value), 45% (in high heat value)

## Tokyo Gas Co., Ltd.

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Available in: Japan



0.382kg-CO<sub>2</sub>  
not Inspection

Resource/Materials/Production/  
Transfer/Use/End-of-Life



EP-6-114

Household goods and equipment

hot water floor heating systems

## "Econucool Pico" Heat Pump-type Hot water Floor Heating System for Energy Saving

## Environmental performance

----<< Material / Resource saving >>----

Succeeded in 67% of weight reduction (36kg to 12kg) from our previous model (made in the year 2001) by optimizing layout of component parts, making thinner heat exchange unit, and lightening its pump.

----<< Energy saving >>----

The rating COP is improved by 30% from our previous model (made in the year 2001) by making thinner heat exchange plate, adoption of DC motor for outer unit fan and circulating pump, and optimizing refrigeration cycle control.

----<< Toxicity / Chemical substances reduction >>----

R410A refrigerant does not deplete ozone layer.

Eliminated the use of the six substances specified by the EU's RoHS directive.

## Product performance

"Econucool Pico" is a heat source for hot water heat radiators such as floor heating panel.

## Mitsubishi Electric Corporation

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URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

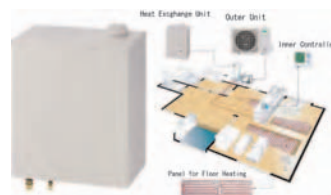
URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Energy Saving

TYPE II



VEH-406HCA-K

EP-6-115

Household goods and equipment

electromagnetic cooker

The suitable temperature is kept by detection of bottom temperature of pan, using DSP & infrared sensor. All of three heaters are using IH heater, without conventional heater.

Environmental performance

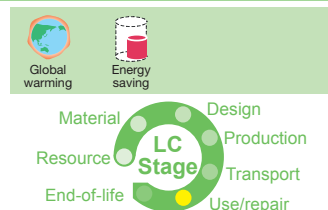
- Mitigation of climate change: Heat efficiency of 85% is achieved by the adoption of a high-efficiency inverter and improved heating coil. Auto power-off function achieves zero stand-by power consumption.

Product performance

- Large buttons: Universal design with large operation buttons and large letters, numbers etc. for easy operation.
- Low-noise design: Improved cooling fan performance for quiet operation (25 dB) at a gentle heat.
- Smooth open/close: Counter-top heater equipped with a slide rail door open/close mechanism.

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



IH Cooking Heater BHP-V732S

Available in: Japan

EP-6-116

Household goods and equipment

induction heating cooking heater

Induction Heating Cooking Heater : KZ-LT75VS series

Environmental performance

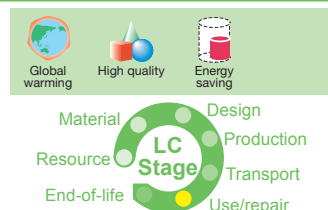
- High thermal efficiency: enamel-coated pans approx.90%, aluminum pans approx. 76% in water-heating mode. Minimal stand-by power consumption.
- Non-use of lead, mercury, cadmium, hexavalent chromium, and specific bromine fire retardant (Except the lead of sealing agent at sheathed heater)

Product performance

Double all metal wares can be used thanks to induction heating evolution. Heating power is highly enhanced. The built-in optical sensor and "ECONAVI" allow customers to operate with energy/resource saving and navigating appropriate firepower. In addition, the range hood is linked with IH cooking heater. That ventilates efficiently. And also, easy-to-read indicators and easy-to-operate universal design.

Panasonic Corporation, Appliances Company

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 Tel +81-78-992-9468  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>



IH Cooking Heater : KZ-LT75VS series

Available in: Japan

EP-6-117

Household goods and equipment

kitchen ware

Gas Cooking Stove with High-efficiency Burners

Environmental performance

This burner with 56% thermal efficiency has produced economic and energy-saving advantages over conventional cookers. The safety has been improved by being equipped with sensors for preventing overheating in all burners. The glass or double-coated surface reduces the cleaning time and labor. The introduction of a new type of burner which prevents the flame from spreading has enabled the thermal efficiency of 56%.

Compared with induction heating cookers, the gas cooking stove emits 60% less annual CO<sub>2</sub> emissions (336kg-CO<sub>2</sub>), which is equivalent to the effect of planting 20 cypress trees.

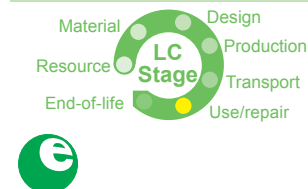
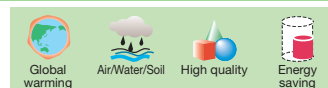
Product performance

The safety has been improved by installing sensor-equipped burners that enable the safety features to control or put out flames to prevent overheating in all models. With the help of the sensor, automatic cooking, such as rice cooking and fish grilling, are possible.

Osaka Gas Co., Ltd.

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 URL <http://www.osakagas.co.jp/indexe.html>  
 URL [http://home.osakagas.co.jp/search\\_buy/gascooker/index.html](http://home.osakagas.co.jp/search_buy/gascooker/index.html)  
 URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



Sensor-equipped cooking stove

EP-6-118

Household goods and equipment

kitchen ware

Visualization of Electricity Consumption and Charges at Home to Contribute to the Reduction of CO<sub>2</sub> Emissions

Environmental performance

- Mitigation of climate change: Visualization of power consumption allows users to recognize which appliances use a lot of electricity because CO<sub>2</sub> emissions, electricity charges, etc. are indicated. 6%\* reduction of CO<sub>2</sub> emissions.

\*Target at the time of commercialization

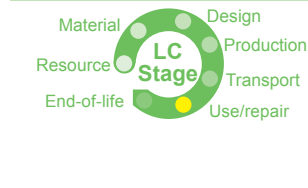
Product performance

- Visualization of electricity consumption: Electricity consumption, CO<sub>2</sub> emissions, and electricity charges are displayed for each circuit breaker and master breaker.
- Batch control of home appliances: Capable of batch control of air conditioners, lighting equipment, floor heating, etc.
- Control via a mobile phone: Check the operation of home appliances via a mobile phone and control them from a remote location.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

2-15, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan  
 URL [http://www.tlt.co.jp/tlt/index\\_e.htm](http://www.tlt.co.jp/tlt/index_e.htm)  
 URL [http://feminity.toshiba.co.jp/feminity/feminity\\_eng/index.html](http://feminity.toshiba.co.jp/feminity/feminity_eng/index.html)

Available in: Japan



Feminity with an IT unit for electricity measurement

1 Eco-product // Household goods and equipment  
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EP-6-119

Household goods and equipment

mattresses

### Order Green Spring Mattress

#### Environmental performance

Compliance with the "Green Mark" certification from the Environmental Protection Administration by, Taiwan. All materials do not contain any harmful chemical substances thus reduce incidents where the mattresses are the source of allergens for allergy sufferers.

- (1) To ensure the mattress does not become the source of pollutants to the human body
- (2) To avoid the damage of harmful substances on human and environment.
- (3) To avoid the build-up of toxic carcinogens in the house from materials that contains formaldehyde and Total Volatile Organic Compounds (TVoC).

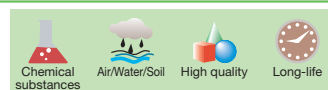
#### Product performance

- (1) The patented unique handmade Protection Net protects the force of the springs does not apply direct pressure to the spine. Instead, the high tension Protection Net helps the sleeper turn in the bed, which prevents the spine from deformation, and also increase the life of the inner springs.
- (2) All materials have gone through rigorous tests. The product's volatile formaldehyde concentration is only 0.016mg/m3 with TVoC 0.005mg/m3.

### Taiwan Order Furniture Corporation

3F., No.84, Sec. 1, Wenhua 1st Rd., Linkou Dist., New Taipei City, 24447, Republic of China  
 Tel 886-2-2600-6008 Fax 886-2-2600-6028  
 E-mail [maggie@order.com.tw](mailto:maggie@order.com.tw)  
 URL <http://www.order.com.tw>  
 URL <http://www.order.com.tw/#/tw/product/category?id=5>  
 URL <http://www.order.com.tw/tw/belief.aspx>

Available in: Japan,Europe,Taiwan (Rep. of China),China



TYPE I



Unique Handmade Protection Net

EP-6-120

Household goods and equipment

mattresses

### Order Green 3 Zone Pocket Springs Mattress

#### Environmental performance

Compliance with the "Green Mark" certification from the Environmental Protection Administration by, Taiwan. All materials do not contain any harmful chemical substances thus reduce incidents where the mattresses are the source of allergens for allergy sufferers.

- (1) To ensure the mattress does not become the source of pollutants to the human body
- (2) To avoid the damage of harmful substances on human and environment.
- (3) To avoid the build-up of toxic carcinogens in the house from materials that contains formaldehyde and Total Volatile Organic Compounds (TVoC).

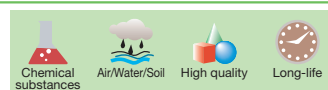
#### Product performance

- (1) The Honey Comb 3 Zone Pocket Spring Mattress uses a technique different from that of the Parallel Pocket Spring to increase the number of the springs by up to 6%. All springs are arranged in a solid and tight formation resembling a honey comb, which reduces the space between each spring, thus creating a perfect support system for the human body.
- (2) All materials have gone through rigorous tests. The product's volatile formaldehyde concentration is only 0.016mg/m3 with TVoC 0.005mg/3.

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 Tel 886-2-2600-6008 Fax 886-2-2600-6028  
 E-mail [maggie@order.com.tw](mailto:maggie@order.com.tw)  
 URL <http://www.order.com.tw>  
 URL <http://www.order.com.tw/#/tw/product/category?id=5>  
 URL <http://www.order.com.tw/tw/belief.aspx>

Available in: Japan,Europe,Taiwan (Rep. of China),China



TYPE I



3 Zone Pocket Springs



EP-6-121

Household goods and equipment

mattresses

Order Green Natural Latex Mattress

Environmental performance

Compliance with the "Green Mark" certification from the Environmental Protection Administration by, Taiwan. All materials do not contain any harmful chemical substances thus reduce incidents where the mattresses are the source of allergens for allergy sufferers.

- (1) To ensure the mattress does not become the source of pollutants to the human body
- (2) To avoid the damage of harmful substances on human and environment.
- (3) To avoid the build-up of toxic carcinogens in the house from materials that contains formaldehyde and Total Volatile Organic Compounds (TVoC).

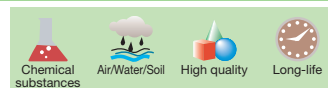
Product performance

Our proprietary blend of natural latex has an industry leading minimal of 95% natural material. It has the high quality, density, elasticity and full support your weight.

Taiwan Order Furniture Corporation

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 Tel 886-2-2600-6008 Fax 886-2-2600-6028  
 E-mail [maggie@order.com.tw](mailto:maggie@order.com.tw)  
 URL <http://www.order.com.tw>  
 URL <http://www.order.com.tw/#/tw/product/category?id=5>  
 URL <http://www.order.com.tw/tw/belief.aspx>

Available in: Japan,Europe,Taiwan (Rep. of China),China



TYPE I



ECO Natural Latex

EP-6-122

Household goods and equipment

mattresses

Order Green Memory Foam Mattress

Environmental performance

Compliance with the "Green Mark" certification from the Environmental Protection Administration by, Taiwan. All materials do not contain any harmful chemical substances thus reduce incidents where the mattresses are the source of allergens for allergy sufferers.

- (1) To ensure the mattress does not become the source of pollutants to the human body
- (2) To avoid the damage of harmful substances on human and environment.
- (3) To avoid the build-up of toxic carcinogens in the house from materials that contains formaldehyde and Total Volatile Organic Compounds (TVoC).

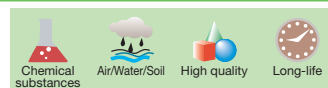
Product performance

- (1) The products fully comply with the original application of materials. Nothing was replaced or substituted.
- (2) The manufacturing plant has ISO certification, quality assured.

Taiwan Order Furniture Corporation

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 Tel 886-2-2600-6008 Fax 886-2-2600-6028  
 E-mail [maggie@order.com.tw](mailto:maggie@order.com.tw)  
 URL <http://www.order.com.tw>  
 URL <http://www.order.com.tw/#/tw/product/category?id=5>  
 URL <http://www.order.com.tw/tw/belief.aspx>

Available in: Japan,Europe,Taiwan (Rep. of China),China



TYPE I



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Eco-product // Household goods and equipment

EP-6-123

Household goods and equipment

mattresses

### Order Green Pocket-Springs Mattress

#### Environmental performance

Made of high capacity 72% high carbon steel, it provides the product with an even longer life cycle. Adopts 100% all natural rubber. The product's evaporative formaldehyde concentration is only 0.01mg/m<sup>3</sup> and TVoC 0.005mg/m<sup>3</sup>.

#### Product performance

Adopting handmade independent cylinder spring mattress, with the top layer containing 100% all natural, environmentally green rubber material to provide extra comfort, and can effective absorb the wobble when changing the sleeping posture at will by evenly supporting the weight of all body parts. The materials do not contain any cancerous chemical substances.



TYPE I



### Taiwan Order Furniture Corporation

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 Tel +886-2-2600-6008-1163 Fax +886-2-2600-6028  
 E-mail maggie@order.com.tw  
 URL <http://www.order.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-124

Household goods and equipment

mattresses

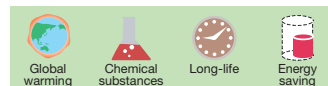
### Order Green Spring Mattress

#### Environmental performance

The high-capacity 77% high carbon steel provides longer product life cycle. All springs are kept to the maximum 190kgf/mm<sup>2</sup>. The product's evaporative formaldehyde is only at 0.01mg/m<sup>3</sup> and TVOC at 0.005mg/m<sup>3</sup>.

#### Product performance

The high carbon steel's springs, coupled with the "steel mesh", helps to support the head/spinal shape, and relaxes the body. The product's upper and bottom parts are in green rubber, which helps to relax the muscle and joints, with pure Tencel adopted as the mattress's surface fabric.



TYPE I



### Taiwan Order Furniture Corporation

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 URL <http://www.order.com.tw>

Available in: Taiwan (Rep. of China)

EP-6-125

Household goods and equipment

**lunch box**

**L'earth wheat composite lunch box**

**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

**L'earth S Pte Ltd**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE I



EP-6-126

Household goods and equipment

**lunch box**

**L'earth wheat composite bento lunch box**

**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

**Product performance**

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**L'earth S Pte Ltd**

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URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE I



Eco-product // Household goods and equipment

EP-6-127

Household goods and equipment

**lunch box**

**L'earth disposable wheat composite lunch box**

**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

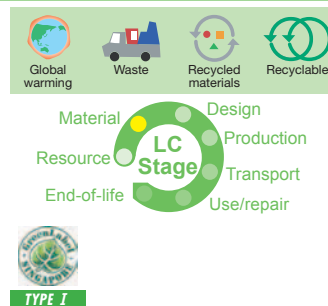
**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

**L'earth S Pte Ltd**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
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E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



EP-6-128

Household goods and equipment

**mini drawers**

**L'earth wheat composite mini drawer**

**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

**L'earth S Pte Ltd**

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608609, Singapore  
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E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



Eco-product // Household goods and equipment

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EP-6-129

Household goods and equipment

moulded or pressed articles of paper pulp

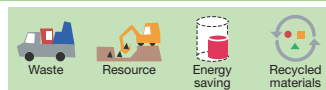
Egg Cartons

Environmental performance

Using 100% regenerated pulp in the recycling and reusing processes, the pulp molded products are biodegradable.

Product performance

The egg crates can be used repeatedly, and the egg crates also offer better protectiveness.



TYPE I

CHANG TAI ENVIRONMENTAL .CO., LTD.

No.191, Sec. 2, Zhangshui Rd., Puyan Township, Changhua County, Taiwan, 516, Republic of China  
 Tel +886-4-8653126 Fax +886-4-8657308  
 E-mail moulded.pulp@msa.hinet.net  
 URL <http://www.greeneearth.com.tw>



Available in: Taiwan (Rep. of China)

EP-6-130

Household goods and equipment

moulded or pressed articles of paper pulp

Roll Mat Material

Environmental performance

Using 100% regenerated pulp in the recycling and reusing processes, the pulp molded products are biodegradable.

Product performance

It helps to anchor tubular objects that are difficult to stack preventing them from rolling, and it can also be used repeatedly.



TYPE I

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 E-mail moulded.pulp@msa.hinet.net  
 URL <http://www.greeneearth.com.tw>



Available in: Taiwan (Rep. of China)

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Eco-product // Household goods and equipment

EP-6-131

Household goods and equipment

moulded or pressed articles of paper pulp

Pulp Packaging Materials

**Environmental performance**

Using 100% regenerated pulp in the recycling and reusing processes, the pulp molded products are biodegradable.

**Product performance**

It can be used to contain products with good protectiveness, and it can be regenerated and used repeatedly.



TYPE I

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 E-mail moulded.pulp@msa.hinet.net  
 URL <http://www.greenearth.com.tw>



Available in: Taiwan (Rep. of China)

EP-6-132

Household goods and equipment

moulded or pressed articles of paper pulp

Flow Plate

**Environmental performance**

Using 100% regenerated pulp in the recycling and reusing processes, the pulp molded products are biodegradable.

**Product performance**

When used to contain semi-finished goods or complete products, it helps to prevent damages that would arise from objects colliding with each other. It can also be used repeatedly.



TYPE I

**CHANG TAI ENVIRONMENTAL .CO., LTD.**

No.191, Sec. 2, Zhangshui Rd., Puyan Township, Changhua County 516, Taiwan, 516, Republic of China  
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 E-mail moulded.pulp@msa.hinet.net  
 URL <http://www.greenearth.com.tw>



Available in: Taiwan (Rep. of China)



EP-6-133

Household goods and equipment

other water filtering or purifying equipment

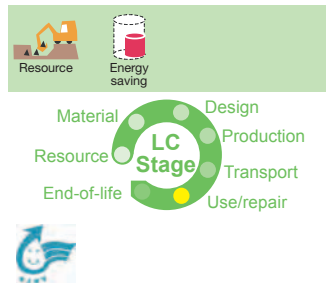
Neo Life Chlorine Filter GS-P60 GF-AB

Environmental performance

\* Received Taiwan's Water Conservation Label. Saves water and energy around 30% ~ 70%. Power consumption is reduced in proportion to the water saved.

Product performance

- \* The patented innovative structure uses the physical principle of natural water flow to create vortices that drive the water stored inside to flow backward. Therefore, water flow will not be hindered by cakes which may otherwise form on the dechlorination material when the dechlorination material is in contact with water or heated. That is to say, the water flow will remain strong enough to activate the tankless water heater.
- \* The upper and lower parts of the dechlorinator housing each have three screw thread starting points 120 degrees apart so that the filter cartridge inside can be easily replaced. The filter cartridge has a foolproof design to facilitate replacement.
- \* International patents and copyrights pending or registered. The entire dechlorinating filter unit has received international food safety certifications.



WANG'S WATER WORLD EASY PRODUCTS SERIES CO., LTD.

No. 32, Yu-Tsai N. Rd., Taichung City, Taiwan, 404, Republic of China  
 Tel +886-4-2222-3998 +886-928-315-108  
 E-mail aneo168@gmail.com  
 URL <http://www.pro-neo.com>



Available in: Asia, Europe, U.S.A.

EP-6-134

Household goods and equipment

manufacturing products

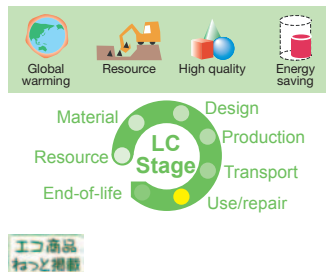
Automage-e : automatic sensor faucet with hydraulic power generation

Environmental performance

Automage-e, a sensor-equipped faucet, supplies water automatically when the user places his or her hands in front of it. This sensor faucet also has a built-in waterpower generator that effectively converts spouting water into electrical energy, enabling it to operate using the energy from this self-power generation. Additionally, the use of a water-saving spray flow for the spout means that less water splashes around the faucet, enabling hands to be washed thoroughly with less water. Automage-e reduces water usage up to 80% compared with two handle faucets (comparison with this company's products).

Product performance

Automage-e automatically supplies water when the user places his or her hands near it thanks to sensor-based detection. This hands-free operation keeps the faucet and the area around the basin clean, thus maintaining the level of hygiene in the washbasin area.



LIXIL Corporation

36F, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-ku, Tokyo, 100-6036, Japan  
 URL <http://global.lixil.co.jp/>



Available in: Japan, Republic of Korea, Taiwan (Rep. of China), China

Automage:AM-91K

EP-6-135

Household goods and equipment

plastic products

L'earth wheat composite Shirt Hanger

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

Product performance

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

L'earth S Pte Ltd

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
608609, Singapore  
Tel +65 90717444 Fax 6565154557  
E-mail sale2@mylearth.com.sg  
URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE I



EP-6-136

Household goods and equipment

plastic products

L'earth Oxo-Biodegradable T-shirt bag

Environmental performance

Degrades with presence of UV, thermal and oxidation. Environmental friendly and good transparency. Support governmental. Member of Oxo-biodegradable plastics institute, USA. [www.biodeg.org](http://www.biodeg.org)

Product performance

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

L'earth S Pte Ltd

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URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE I



EP-6-137

Household goods and equipment

plastic products

**L'earth Oxo-Biodegradable Bag in roll**

**Environmental performance**

Degrades with presence of UV, thermal and oxidation.  
 Environmental friendly and good transparency.  
 Support governmental.  
 Member of Oxo-biodegradable plastics institute, USA.  
[www.biodeg.org](http://www.biodeg.org)

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.



TYPE I

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 608609, Singapore  
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 URL <http://www.mylearth.com.sg>



Available in: Worldwide

EP-6-138

Household goods and equipment

plastic products

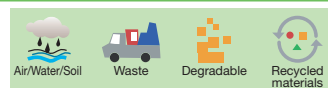
**L'earth Oxo-Biodegradable Die-Cut bag**

**Environmental performance**

Degrades with presence of UV, thermal and oxidation.  
 Environmental friendly and good transparency.  
 Support governmental.  
 Member of Oxo-biodegradable plastics institute, USA.  
[www.biodeg.org](http://www.biodeg.org)

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.



TYPE I

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 E-mail [sale2@mylearth.com.sg](mailto:sale2@mylearth.com.sg)  
 URL <http://www.mylearth.com.sg>



Available in: Worldwide

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Eco-product // Household goods and equipment

EP-6-139

Household goods and equipment

plastic products

### CornBag Carrier Bag

#### Environmental performance

CornBag, disposable carrier bag is 100% biodegradable and carbon neutral. Made of up to 35% corn, it reduces the reliance on fossil fuels and cuts down on the release of toxic/green house gases when incinerated. Certified ISO-14001, ISO-14855, ASTM-6400, ASTM-6866, EN-13432.

#### Product performance

CornBag carrier bags can be made into a variety of designs. Colour and print are customisable. It is water-proof, durable & affordable. Certified ISO-9001, FDA approved.

### Olive Green Marketing Pte Ltd

2 Toh Tuck Link #05-03, 596225, Singapore  
 Tel 65 67671301  
 URL <http://www.olivegreen.com.sg>

Available in: Worldwide



CornBag

EP-6-140

Household goods and equipment

plastic products

### MIAO CHIEH STORAGE FOOD BAGS Small 18cm x 25cm 100 Pieces per Pack

#### Environmental performance

Free of any of the controlled substances as per the Montreal Protocol, and free of any harmful chemical substances. The packing paper box used for the product has a recycled paper-mixing ratio of over 80%.

#### Product performance

Adopting a brand-new leak prevention formula, and also undergoing stringent sealing, it can prevent fluid from leaking out, with specially selected extra thick material offering solidness and durability.

### New Top Corporation

2F., No. 20, Ln. 75, Yongkang St., Da'an Dist., Taipei City, Taiwan, 106, Republic of China  
 Tel +886-2-23931683-47 Fax +886-2-23417819  
 E-mail [tp122a055@mail.newtop.com.tw](mailto:tp122a055@mail.newtop.com.tw)  
 URL <http://www.newtop.com.tw/>

Available in: Taiwan (Rep. of China)



TYPE I



EP-6-141

Household goods and equipment

plastic products

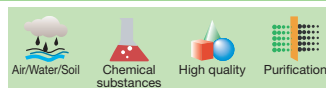
Individually Wrapped Straw 8mm x 22cm

Environmental performance

This product is made 100% from polypropylene (PP) in its original color, without color masterbatch.

Product performance

Proven to be safe by food-grade chemical tests. Consumers can drink from the cup without safety concerns.



0.32kg-CO<sub>2</sub> Inspection Resource/Materials/ Production/Transfer/Use/ End-of-Life

V-IN Industrial Corp.

No. 100-2, Chung-Shan Rd., Shin-Hua Dist., Tainan City, Taiwan, 71243, Republic of China  
 Tel +886-6-5902666 Fax +886-6-5900079  
 E-mail vinind@ms17.hinet.net  
 URL <http://www.vin-straw.com.tw>



Available in: U.S.A., Republic of Korea, Taiwan (Rep. of China)

EP-6-142

Household goods and equipment

recycled paper

Green Card

Environmental performance

Green Card is an innovative eco-friendly uncoated card paper developed by SCG Paper to provide the right solutions to users and concurrently preserve natural resources. With EcoFiber 100%, virgin fiber sourced from trees is no longer required; thus, wood consumption is reduced while quality is maintained equivalent to uncoated card papers made from virgin fiber.

Product performance

Basis weights: 200, 250 gsm  
 Standard sizes: 25x36 inches, 31x43 inches  
 Features:  
 - Good printability  
 - Cream color



Thai Paper Co., Ltd. in SCG Paper

1 Siam Cement Rd. Bangsue, Bangkok, 10800, Thailand  
 Tel +66 2 586 1000 Fax +66 2 586 2070  
 E-mail [nuttavuv@scg.co.th](mailto:nuttavuv@scg.co.th)  
 URL <http://thaipaper.com>  
 URL <http://thaipaper.com/products-and-services/green-series/uncoated-papers/green-card/>



Available in: Thailand

1 Eco-product // Household goods and equipment  
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EP-6-143

Household goods and equipment

recycled paper

**Green Offset**

**Environmental performance**

Green Offset is an innovative eco-friendly uncoated paper developed by SCG Paper to provide the right solutions to users and concurrently preserve natural resources. With EcoFiber 100%, virgin fiber sourced from trees is no longer required; thus, wood consumption is reduced while quality is maintained equivalent to uncoated papers made from virgin fiber.

**Product performance**

Basis weights: 80, 100, 120 gsm  
 Standard sizes: 24x35 inches, 31x43 inches  
 Features:  
 - Good printability  
 - Cream color

**Thai Paper Co., Ltd. in SCG Paper**

1 Siam Cement Rd. Bangsue, Bangkok, 10800, Thailand  
 Tel +66 2 586 1000 Fax +66 2 586 2070  
 E-mail [nuttavuv@scg.co.th](mailto:nuttavuv@scg.co.th)  
 URL <http://thaipaper.com>  
 URL <http://thaipaper.com/products-and-services/green-series/uncoated-papers/green-offset/>

Available in: Thailand



EP-6-144

Household goods and equipment

recycled paper

**Idea Green**

**Environmental performance**

Idea Green is made from EcoFiber and farmed-tree pulp through SCG Paper's Green Process. It contains of 30% EcoFiber and 70% farmed-tree pulp, thus, reduces woods consumption while concurrently offers high whiteness and good printability. EcoFiber is a fiber obtained from used papers and/or agro-waste.

**Product performance**

Idea Green defines a new concept of office paper. It combines ultimate performance properties with ecological values.  
 Basis weight: 80 gsm  
 Available sizes: A4, A3  
 Features: High whiteness and good printability

**Thai Paper Co., Ltd. in SCG Paper**

1 Siam Cement Rd. Bangsue, Bangkok, 10800, Thailand  
 Tel +66 2 586 1000 Fax +66 2 586 2070  
 E-mail [nuttavuv@scg.co.th](mailto:nuttavuv@scg.co.th)  
 URL <http://thaipaper.com>  
 URL <http://thaipaper.com/en/products-and-services/home-and-office-supplies/>

Available in: Thailand



Eco-product // Household goods and equipment

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EP-6-145

Household goods and equipment

recycled paper

**CLEAR LOTUS RECYCLED PAPER (OA)**

**Environmental performance**

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 60% recycled paper content.

**Product performance**

Basis weight: 45~180gsm  
 Format: Rolls/Sheets  
 End-use: Copy paper, Dot matrix printer paper, General Writing and printing, Direct mail.  
 Made in Taiwan.



**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



EP-6-146

Household goods and equipment

recycled paper

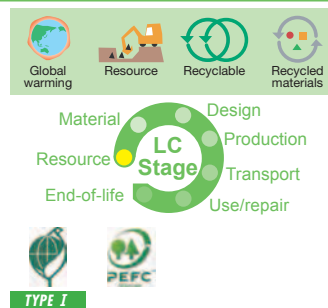
**RECYCLED TWO SIDES COATED SOLID CARD BOARD**

**Environmental performance**

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

**Product performance**

Basis weight: 190~450gsm  
 Format: Rolls/Sheets  
 End-use: Business cards, Calendars, Compliment slips, Covers, Envelopes, text and cover, Folders, General printing, Greeting cards, Inserts, Invitations, Leaflets, Letterheads, Menus, Posters.  
 Made in Taiwan.



**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



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Eco-product // Household goods and equipment

EP-6-147

Household goods and equipment

recycled paper

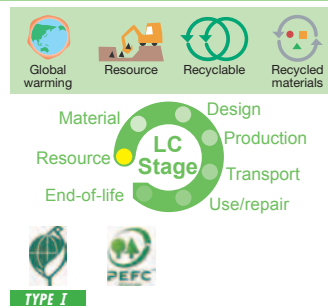
**CLEAR LOTUS RECYCLED PAPER**

**Environmental performance**

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 50% recycled paper content.

**Product performance**

Basis weight: 45~180gsm  
 Format: Rolls/Sheets  
 End-use: Books, Brochures, Business forms, Calendars, Catalogues, Direct mail, General printing, Inserts, Leaflets, Magazines, Posters.  
 Made in Taiwan.



**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



EP-6-148

Household goods and equipment

recycled paper

**CLEAR LOTUS RECYCLED PAPER BOARD**

**Environmental performance**

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

**Product performance**

Basis weight: 160~450gsm  
 Format: Rolls/Sheets  
 End-use: Business cards, Calendars, Clothing tags, Compliment slips, Covers, Envelopes, text and cover, Folders, General printing, Greeting cards, Inserts, Invitations, Leaflets, Menus, Posters, General printing.  
 Made in Taiwan.



**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



Eco-product // Household goods and equipment

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EP-6-149

Household goods and equipment

recycled paper

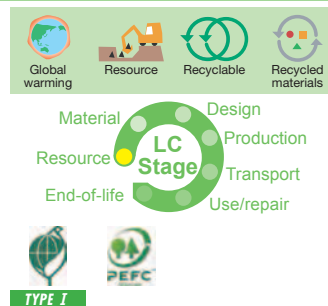
RECYCLED KRAFT PAPER BOARD

Environmental performance

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

Product performance

Basis weight: 60~190gsm  
 Format: Rolls/Sheets  
 End-use: Carrier bags, Flat bags, Wrappers, Gift Wrap, Interleave.  
 Made in Taiwan.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



EP-6-150

Household goods and equipment

recycled paper

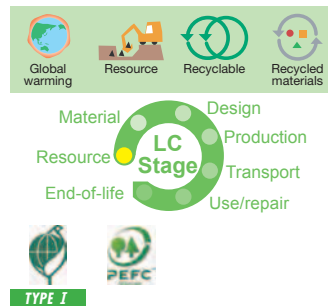
COATED DUPLEX BOARD WITH WHITE/GREY BACK

Environmental performance

This product is certified by PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 80% post-consumer waste paper.

Product performance

Basis weight: 200~550gsm  
 Format: Rolls/Sheets  
 End-use: Packaging, Lightweight packaging, Box lamination.  
 Made in Taiwan.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



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Eco-product // Household goods and equipment

EP-6-151

Household goods and equipment

recycled paper

CHIP BOARD

Environmental performance

This product is certified by PEFC™. Use 100% Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Use 100% post-consumer waste paper.

Product performance

Basis weight: 312~2106gsm  
 Format: Rolls/Sheets  
 End-use: Cover liner, Box lamination, Packaging.  
 Made in Taiwan.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



EP-6-152

Household goods and equipment

recycled paper

CORE BOARD

Environmental performance

This product is certified by PEFC™. Use 100% Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Use 100% post-consumer waste paper.

Product performance

Basis weight: 300~500gsm  
 Format: Rolls/Sheets  
 End-use: High strength chemical fiber tubes, Yarn bobbins, Industrial paper tubes for paper milling and plastic film.  
 Made in Taiwan.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC.4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C.,  
 URL <http://www.yfy.com>



EP-6-153

Household goods and equipment

recycled paper

Coated Duplex Board (Grey Back)

Environmental performance

Produced with recycled waste paper, it contains over 90% of waste paper utilization ratio, and utilizes high levels of waste regenerated bio-matters to replace fossil fuel.

Product performance

It is applied in color printing to supply the manufacturing of packing paper boxes, hang tags and such.

\* with Taiwan Green Mark

\* with FSC certified



TYPE I

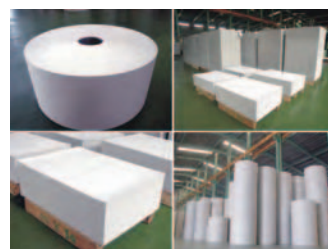
Kuan Yuan Paper Mfg. Co., Ltd.

No.18, Zhaonan, Zhunan Township, Miaoli County, Taiwan, 350, Republic of China

Tel +886-37-477715 Fax +886-37-476668

E-mail [kycm\\_sale@umail.hinet.net](mailto:kycm_sale@umail.hinet.net)

URL <http://www.kyp.com.tw>



Available in: Asia,Oceania,U.S.A.

EP-6-154

Household goods and equipment

manufacturing products

Biodegradable Products

Environmental performance

We developed eco-friendly raw materials with degradable materials to produce applied eco-friendly goods.

Harmless to both nature and human

It does not release harm substances like dioxin and does not cause skin trouble like atopy, and it feels soft when it touches skin.

Back to nature by degradation

It is back to nature after certain period by microorganisms such as bacteria, molds, and so on.



TYPE I

MorningTouch Co., Ltd.

427-2 Jinmok-ri, Pocheon-si, Republic of Korea

Tel 82-31-532-8686 Fax 82-31-532-1723

E-mail [ecorang@yahoo.co.kr](mailto:ecorang@yahoo.co.kr)

URL <http://www.morningtouch.co.kr>



Available in: Central America,Middle and Near East,U.S.A.,Republic of Korea

EP-6-155

Household goods and equipment

printing & writing paper

Sutera

**Environmental performance**

- \* Energy efficiency - reduce 40% of energy (4000 KWh) of electricity
- \* Reduces solid waste disposal - save 14% of landfill space
- \* Forest sustainability to our environment
- \* Reduces water and air pollution
- \* Reduces Carbon Dioxide Emission.

**Product performance**

Basis weight : 45gsm & 48.8gsm (Newsprint)

Format : Rolls

End-usage : Newspaper

**Malaysian Newsprint Industries Sdn Bhd**

Level 3, Block A, Bangunan PanGlobal, 1A Jalan Tandang, Petaling Jaya.,  
46050, Malaysia  
Tel 603 7785 9988 Fax 603 7785 2288  
E-mail JT@mnipaper.com  
URL <http://www.newsprint.com.my>

Available in: Asia,Indonesia,Singapore,Malaysia,China



TYPE I

2.49kg-CO<sub>2</sub>  
not Inspection

Resource/Materials/  
Production/Transfer/Use/End-  
of-Life



Newsprint in Rolls form

EP-6-156

Household goods and equipment

printing & writing paper

Recycled-PrW

**Environmental performance**

- \* Energy efficiency - reduce 40% of energy (4000KWh) of electricity
- \* Reduce Solid Waste disposal - save 14% of landfill space
- \* Forest sustainability to our environment
- \* Reduces water and air pollution
- \* Reduce Carbon Dioxide

**Product performance**

Basis weight: 50gsm - 80gsm

Format : in roll form

End usage : Copy Paper, Book, general printing.

**Malaysian Newsprint Industries Sdn Bhd**

Level 3, Block A, Bangunan PanGlobal, 1A Jalan Tandang, Petaling Jaya.,  
46050, Malaysia  
Tel 603 7785 9988 Fax 603 7785 2288  
E-mail JT@mnipaper.com  
URL <http://www.newsprint.com.my>

Available in: Asia,Indonesia



TYPE I

2.49kg-CO<sub>2</sub>  
not Inspection

Resource/Materials/  
Production/Transfer/Use/End-  
of-Life



Printing & Writing Paper in Roll



EP-6-157

Household goods and equipment

toilet paper

Dandelion Eco-Friendly Interfolded Toilet Paper 814800F

Environmental performance

- Using recycled resources: Dandelion Eco-Friendly Interfolded Toilet Paper is made from 100% recycled pulp. Each ton of paper recycled saves approximately 20 trees from being felled and cuts 9.3 times as much carbon dioxide equivalent (CO<sub>2</sub>e) emissions as when virgin pulp is used (Data source: the Life Cycle Assessment software Gabi4 and database).
- Saving energy and resources: Part of the electricity used in manufacturing Dandelion Eco-Friendly Interfolded Toilet Paper comes from wind power, which is a clean energy source. This reduces the use of fossil fuel and CO<sub>2</sub> emissions.

Product performance

Dandelion Eco-Friendly Interfolded Toilet Paper is high-temperature sterilized and free of fluorescent brightening agent. It is also highly water-absorbent, high-wet strength, hygienic and pollution-free.

Environmental protection certifications received:

- Taiwan Green Mark
- FSC™ Certification

Cheng Loong Corp.

27F., No. 3, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan, 220, Republic of China  
 Tel +886-2-22225131-222 Fax +886-2-22226110  
 E-mail 1004925@mail.clc.com.tw  
 URL <http://www.clc.com.tw/>



TYPE I



Available in: Asia, Oceania, Europe, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)

EP-6-158

Household goods and equipment

toilet paper

Dandelion Eco-Friendly Small Toilet Paper Roll 812800

Environmental performance

- Using recycled resources: Dandelion Eco-Friendly Small Toilet Paper Roll is made from 100% recycled pulp. Each ton of paper recycled saves approximately 20 trees from being felled and cuts 9.3 times as much carbon dioxide equivalent (CO<sub>2</sub>e) emissions as when virgin pulp is used (Data source: the Life Cycle Assessment software Gabi4 and database).
- Saving energy and resources: Part of the electricity used in manufacturing Dandelion Eco-Friendly Small Toilet Paper Roll comes from wind power, which is a clean energy source. This reduces the use of fossil fuel and CO<sub>2</sub> emissions.

Product performance

Dandelion Eco-Friendly Small Toilet Paper Roll is high-temperature sterilized and free of fluorescent brightening agent. It is also highly water-absorbent, high-wet strength, hygienic and pollution-free.

Environmental protection certifications received:

- Taiwan Green Mark

Cheng Loong Corp.

27F., No. 3, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan, 220, Republic of China  
 Tel +886-2-22225131-222 Fax +886-2-22226110  
 E-mail 1004925@mail.clc.com.tw  
 URL <http://www.clc.com.tw/>



TYPE I



Available in: Asia, Oceania, Europe, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)

EP-6-159

Household goods and equipment

toilet paper

Dandelion Eco-Friendly Large Toilet Paper Roll 816800

Environmental performance

- Using recycled resources: Dandelion Eco-Friendly Large Toilet Paper Roll is made from 100% recycled pulp. Each ton of paper recycled saves approximately 20 trees from being felled and cuts 9.3 times as much carbon dioxide equivalent (CO<sub>2</sub>e) emissions as when virgin pulp is used (Data source: the Life Cycle Assessment software Gabi4 and database).
- Saving energy and resources: Part of the electricity used in manufacturing Dandelion Eco-Friendly Large Toilet Paper Roll comes from wind power, which is a clean energy source. This reduces the use of fossil fuel and CO<sub>2</sub> emissions.

Product performance

Dandelion Eco-Friendly Large Toilet Paper Roll is high-temperature sterilized and free of fluorescent brightening agent. It is also highly water-absorbent, high-wet strength, hygienic and pollution-free.

Environmental protection certifications received:

- Taiwan Green Mark

Cheng Loong Corp.

27F., No. 3, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan, 220, Republic of China  
 Tel +886-2-22225131-222 Fax +886-2-22226110  
 E-mail 1004925@mail.clc.com.tw  
 URL <http://www.clc.com.tw/>

Available in: Asia, Oceania, Europe, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)



TYPE I



EP-6-160

Household goods and equipment

toilet paper

Tender Interfold Toilet Paper

Environmental performance

- \* Have 100% recycled paper content
- \* Only FSC or PEFC certified virgin pulp shall be used in the manufacturing of the product.

Product performance

A toilet paper offering environmental yield.



TYPE I



Juei Fong Paper Co., Ltd.

No.345, Sec. 1, Yaofeng Rd., Puxin Township, Changhua County, Taiwan, 513, Republic of China  
 Tel +886-4-8296161 Fax +886-4-8296165  
 E-mail [sunti.jf@msa.hinet.net](mailto:sunti.jf@msa.hinet.net)

Available in: Taiwan (Rep. of China)

EP-6-161

Household goods and equipment

toilet paper

Tender Jumbo Toilet Paper Roll

Environmental performance

- \* Have 100% recycled paper content
- \* Only FSC or PEFC certified virgin pulp shall be used in the manufacturing of the product.

Product performance

A toilet paper offering environmental yield.

Juei Fong Paper Co., Ltd.

No.345, Sec. 1, Yaofeng Rd., Puxin Township, Changhua County, Taiwan, 513, Republic of China  
 Tel +886-4-8296161 Fax +886-4-8296165  
 E-mail [sunti.jf@msa.hinet.net](mailto:sunti.jf@msa.hinet.net)

Available in: Taiwan (Rep. of China)



TYPE I



EP-6-162

Household goods and equipment

towels of paper

Dandelion Hand Towel 874800F

Environmental performance

- Using recycled resources: Dandelion Hand Towel is made from 100% recycled pulp. Each ton of paper recycled saves approximately 20 trees from being felled and cuts 9.3 times as much carbon dioxide equivalent (CO<sub>2</sub>e) emissions as when virgin pulp is used (Data source: the Life Cycle Assessment software Gabi4 and database).
- Saving energy and resources: Part of the electricity used in manufacturing Dandelion Hand Towel comes from wind power, which is a clean energy source. This reduces the use of fossil fuel and CO<sub>2</sub> emissions.

Product performance

Dandelion Hand Towel is high-temperature sterilized and free of fluorescent brightening agent. It is also highly water-absorbent, high-wet strength, hygienic and pollution-free. Environmental protection certifications received:

- Taiwan Green Mark
- FSC™ Certification
- Taiwan Carbon Label.

Cheng Long Corp.

27F., No. 3, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan, 220, Republic of China  
 Tel +886-2-22225131-222 Fax +886-2-22226110  
 E-mail [1004925@mail.clc.com.tw](mailto:1004925@mail.clc.com.tw)  
 URL <http://www.clc.com.tw/>

Available in: Asia, Oceania, Europe, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)



TYPE I

<b>0.85kg-CO<sub>2</sub></b>	Resource/Materials/ Production/Transfer/Use/ End-of-Life
Inspection	



EP-6-163

Household goods and equipment

towels of paper

Dandelion Hand Towel-Jumbo 876800F

Environmental performance

- Using recycled resources: Dandelion Hand Towel-Jumbo is made from 100% recycled pulp. Each ton of paper recycled saves approximately 20 trees from being felled and cuts 9.3 times as much carbon dioxide equivalent (CO<sub>2</sub>e) emissions as when virgin pulp is used (Data source: the Life Cycle Assessment software Gabi4 and database).
- Saving energy and resources: Part of the electricity used in manufacturing Dandelion Hand Towel-Jumbo comes from wind power, which is a clean energy source. This reduces the use of fossil fuel and CO<sub>2</sub> emissions.

Product performance

Dandelion Hand Towel-Jumbo is high-temperature sterilized and free of fluorescent brightening agent. It is also highly water-absorbent, high-wet strength, hygienic and pollution-free.

Environmental protection certifications received:

- Taiwan Green Mark
- FSC™ Certification

Cheng Loong Corp.

27F., No. 3, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan, 220, Republic of China  
 Tel +886-2-22225131-222 Fax +886-2-22226110  
 E-mail 1004925@mail.clc.com.tw  
 URL <http://www.clc.com.tw/>

Available in: Asia, Oceania, Europe, North America, Central America, South America, U.S.A., Taiwan (Rep. of China)



TYPE I

0.85kg-CO<sub>2</sub> Inspection

Resource/Materials/  
Production/Transfer/Use/  
End-of-Life



EP-6-164

Household goods and equipment

towels of paper

Tender Hand Towel

Environmental performance

- \* Have 100% recycled paper content
- \* Only FSC or PEFC certified virgin pulp shall be used in the manufacturing of the product.

Product performance

A hand towel offering environmental yield.



TYPE I



Juei Fong Paper Co., Ltd.

No.345, Sec. 1, Yaofeng Rd., Puxin Township, Changhua County 513, Taiwan, 513, Republic of China  
 Tel +886-4-8296161 Fax +886-4-8296165  
 E-mail [sunti.jf@msa.hinet.net](mailto:sunti.jf@msa.hinet.net)

Available in: Taiwan (Rep. of China)

Eco-product // Household goods and equipment

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EP-6-165

Household goods and equipment

urinal flusher

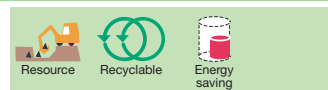
**Urinal Flusher DK-326**

**Environmental performance**

This product is water-saving, and most of the materials used are recyclable and reusable to reduce the use of raw materials.

**Product performance**

Designed for use with urinals, this product begins and stops flushing automatically when pressed. The water release time can be adjusted to save water.



**LIYIH MAKE CO., Ltd.**

No.77-7, Qipan Ln., Lugang Township, Changhua County, Taiwan, 505, Republic of China  
 Tel +886-4-7761759 Fax +886-4-7762552  
 E-mail Liao7778@ms43.hinet.net  
 URL <http://www.duker.com.tw>



Available in: Taiwan (Rep. of China)

EP-6-166

Household goods and equipment

ventilators

**Energy Recovery Ventilator (LOSSNAY) for Commercial Use**

**Environmental performance**

----<< Material / Resource saving >>----  
 Saving industrial resources.

----<< Energy saving >>----  
 Total heat exchange efficiency of over 66%.

----<< Toxicity / Chemical substances reduction >>----  
 Eliminated the use of the six substances specified by the EU's RoHS directive.

**Product performance**

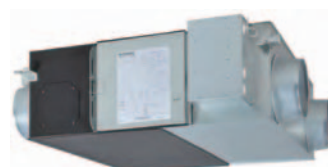
Loaded with the Hyper Eco Element which offers high total heat exchange efficiency, the Energy Recovery Ventilator realizes an energy saving ventilation. Thanks to the new ventilation pattern function, microcomputer type offers more precise control of ventilation to reduce the air conditioning/heating load caused by ventilation.



**TYPE II**

**Mitsubishi Electric Corporation**

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



Available in: Japan,Asia,Europe

LGH-50RX5

EP-6-167

Household goods and equipment

ventilators

Energy Recovery Ventilator: Recycling Air-conditioning Energy by Heat Exchange Ventilation

Environmental performance

----<< Energy saving >>----

- "Lossnay" is an energy-saving ventilation system using a specially treated paper heat exchanger that recycles heat energy which is normally wasted by ventilation.
- DC brushless motors powered by a DC power source, significantly reducing power consumption compared with conventional models.
- "Hyper Eco", our original efficient heat exchanger greatly boosts heat exchange efficiency to realize even further energy savings.

----<< Toxicity / Chemical substances reduction >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.

Product performance

This system is a single unit that ventilates an entire household. The heat exchanger ensures ventilation without sacrificing the comforts of air-conditioning, and its large air flow ensures that even in large housing complexes and cluster housing with numerous rooms, a single system suffices for one floor ventilation.

Mitsubishi Electric Corporation

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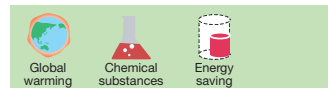
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

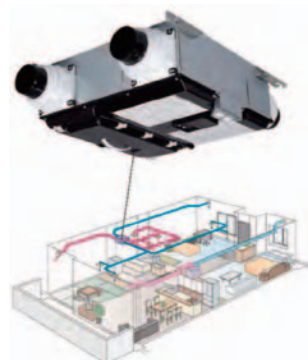
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Available in: Japan



TYPE II



VL-20ZMH3-L/R

EP-6-168

Household goods and equipment

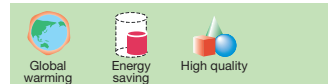
photovoltaic inverter

Photovoltaic Inverter with Industry's Highest Power Conversion Efficiency

Environmental performance

----<< Energy saving >>----

This photovoltaic inverter for house use in Japan realizes the industry's highest 97.5% power conversion efficiency (at rated power input/output of PV-PN40G) in our investigation at September 2011. The industry's first "gradation control inverter method" generates pseudo sine wave nearly the same as alternating current using three inverter units. Newly developed MOSFET module for the gradation control reduces 44% of power conversion loss from conventional models.



TYPE II



PV-PN40G

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Available in: Japan

Eco-product // Household goods and equipment

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EP-6-169

Household goods and equipment

photovoltaic modules

EcoDuo PV Module PM220P00

Environmental performance

- \* EcoDuo PM220P00 directly converts the inexhaustible sun light into clean electric energy, reduces carbon emissions and is therefore helpful in alleviating global warming.
- \* This product is the world's first photovoltaic module that received the "PAS 2050" Product Carbon Footprint Certificate from SGS. Carbon emission percentage in each stage of the manufacturing process is clearly disclosed (with materials taking up 82%, production 17%, and transportation 1%) to serve as a foundation for the improvement of carbon emission reduction of next generation products.
- \* The materials used in this product are free of hazardous elements such as Cd and Te.
- \* AUO's photovoltaic module, when disposed of after 25 or more years of service, can be recycled, free of charge, through PV Cycle collection points all over the world.

Product performance

- \* With a conversion rate approaching 15% and a rated output power ranging from 220W to 250W, AUO's EcoDuo PM220P00 is suitable for large-scale solar power plants, power generation systems of commercial buildings, and small rooftop solar power generation systems for household uses.
- \* This product has received the IEC (Europe), UL (North America), Golden Sun (China), MCS (UK), CEC (State of California, USA), and CEC Australia verifications.
- \* This product conforms to the IEC61215 Standard: operability at high temperature (85°C) and high humidity (85%) for 1000 hours; 200 thermal cycles between -40°C and 85°C; a guaranteed service life of 25 years; module output within 90% of its rated value for ten years and within 80% of its rated value for 25 years.
- \* This product passed the Salt Mist Corrosion Test of IEC61701 and CNS 15196 to ensure optimal module performance under harsh coastal or humid conditions. It also passed the wind pressure (up to 5400 Pa) and snow load tests, which are equivalent to inclement typhoon and heavy snow conditions.



379.22kg-CO<sub>2</sub> Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



AU Optronics Corporation

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Available in: Asia, Europe, Middle and Near East, U.S.A., South Africa

EP-6-170

Household goods and equipment

photovoltaic modules

Highly Efficient Photovoltaic Module

Environmental performance

The high output modules achieve a power output of up to 235W per module, by incorporating four bus-bar cells and a larger module size.

-----<< Energy saving >>-----

By increasing the number of bus bars from two to four, the internal resistance in each PV cell has been reduced, increasing individual cell output by 3% compared to those used in previous Mitsubishi Electric models.

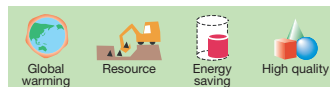
Increasing the number of cells in each module from 50 to 60 has also contributed to the increased output per module.

-----<< Material / Resource saving >>-----

The Width of the new bus bars used in the cells are half that of our previous bus bars, delivering greater efficiency without increasing the amount of material used. A newly designed frame allows the module to pass the IEC static load test of 5400Pa, even with the larger module size.

-----<< Toxicity / Chemical substances reduction >>-----

Uses lead-free solder to lessen impact on the environment.



TYPE II



PV-UJ235GA6

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 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

Available in: Asia, North America

EP-6-171

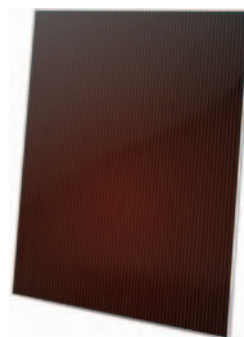
Household goods and equipment

solar module

**SUNGEN Thin Film Amorphous Silicon Solar Module**

**Environmental performance**

- High resistance against shadowing effect;
- High performance stability at high temperature;
- Output at a wider range of light intensity;
- Less sensitive to mounting angle and can achieve over 10% increase of output in any installation alignments;
- Yield 10% higher operating performance over c-Si products.



SUNGEN Thin Film Amorphous Silicon Solar Module

**SUNGEN International Limited**

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Available in: Worldwide

EP-7-001

Building and civil engineering

doors and windows

## Alsace Rhine Fenster Window Cernay

## Environmental performance

An innovative insulation frame having a honeycomb structure to effectively block indoor-outdoor thermal conduction and reduce energy consumption of air conditioning. When used with double Low-E glass, the product's energy saving and acoustic insulation performances are significantly enhanced, and its esthetics and eco-friendliness become more prominent. This product is a certified high-performance Green Construction Material.

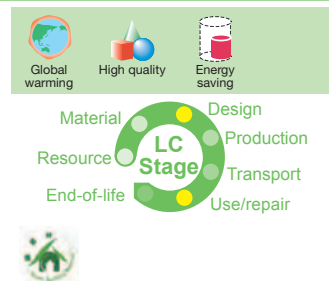
## Product performance

The interconnected multi-lock metal structure provides excellent airtightness and anti-burglar protection. The unique tilt-and-turn opening approach not only allows natural indoor-outdoor air convection to reduce indoor stuffiness, but also facilitates cleaning of the window.

## Vita Manufacturing CO., LTD.

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Available in: Europe,Southeast Asia,Taiwan (Rep. of China),China



EP-7-002

Building and civil engineering

doors and windows

## Alsace Rhine Fenster Window Sliden

## Environmental performance

An innovative insulation frame having a honeycomb structure to effectively block indoor-outdoor thermal conduction and reduce energy consumption of air conditioning. When used with double Low-E glass, the product's energy saving and acoustic insulation performances are significantly enhanced, and its esthetics and eco-friendliness become more prominent. This product is a certified high-performance Green Construction Material.

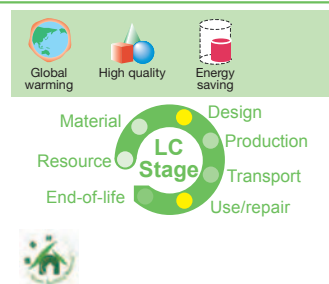
## Product performance

The interconnected multi-lock metal structure provides excellent airtightness and anti-burglar protection. The unique tilt-and-turn opening approach not only allows natural indoor-outdoor air convection to reduce indoor stuffiness, but also facilitates cleaning of the window.

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EP-7-003

Building and civil engineering

doors and windows

**Casement Window YE-661C**

**Environmental performance**

Recyclable aluminum parts and non-toxic metal accessories are used.

**Product performance**

The casement window is one type of aluminum alloy windows that use stainless steel four-bar linkages to facilitate opening. High-quality rainproof strips are used to provide watertightness, air-tightness and acoustic insulation. YE-661C casement window provides at least 35db acoustic insulation and is a high-performance Green Construction Material.

The sash and the frame of the casement window have a hidden drainage system that works despite blowing wind to prevent rainwater from flowing into the room.

The casement window can be opened at the desired angle to keep ventilation and thereby save energy. It also functions as an emergency exit.

**YUANGEE INDUSTRIAL CO , Ltd**

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Available in: Taiwan (Rep. of China)



EP-7-004

Building and civil engineering

doors and windows

**NAN YA PLASTIC-STEEL WINDOW - Casement Window NW08 (White)**

**Environmental performance**

Its heat insulation is able to conserve 30% energy consumption compared with metal windows, with sound insulation rated at 35dB.

**Product performance**

As opening components for the home environment and buildings.



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EP-7-005

Building and civil engineering

doors and windows

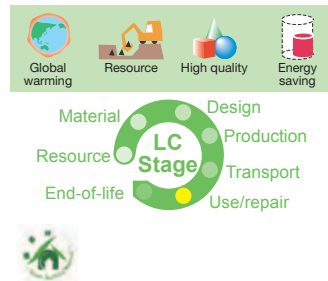
**NAN YA PLASTIC-STEEL WINDOW - Sliding Window NW08**

**Environmental performance**

Its heat insulation is able to conserve 30% energy consumption compared with metal windows, with sound insulation rated at 35dB.

**Product performance**

As opening components for the home environment and buildings.



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EP-7-006

Building and civil engineering

doors and windows

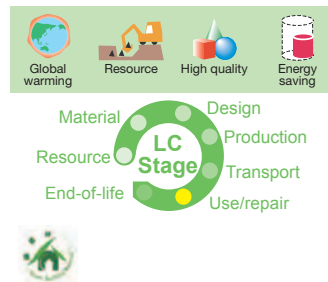
**NAN YA PLASTIC-STEEL WINDOW - Picture Window NW08**

**Environmental performance**

Its heat insulation is able to conserve 30% energy consumption compared with metal windows, with sound insulation rated at 35dB.

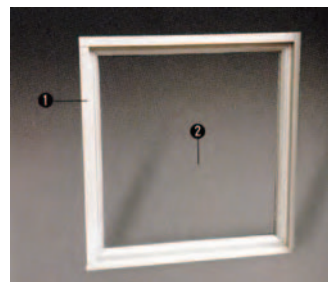
**Product performance**

As opening components for the home environment and buildings.



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1 Eco-product // Building and civil engineering  
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EP-7-007

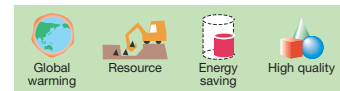
Building and civil engineering

architectural design services

Mirror-duct System "Energy-saving with bright sunlight"

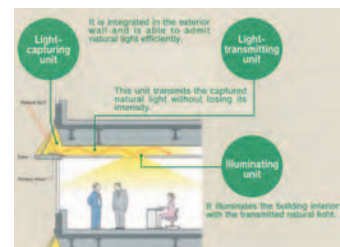
Environmental performance

"Mirror-duct System" can extend daylight deep within interior spaces. The proposed system that we have developed captures natural sunlight from the building exterior and sends it via a highly efficient, light-transmitting ductwork (or tubes) into the building interior, where it is dissipated uniformly and economically throughout the interior. When the exterior light source is deficient due to variations depending on the time of day or seasonal or climatic changes, the system will compensate to 100% requirement by augmenting artificial light with an automatically-controlled dimmer. The proposed system is expected to find widespread application in communal housing, underground spaces, vegetation-cultivating facilities, etc. and above all as a realistic way to drastically cut the energy cost of lighting an office building.



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Mechanism of the Mirror-duct System

EP-7-008

Building and civil engineering

architectural design services

NIKKEN SEKKEI Tokyo Building "Prototype Openings for Next Generation Buildings"

Environmental performance

- Technologies  
 Electric exterior blinds can block solar radiation effectively to reduce a cooling load. Heat-generating double glazing has a transparent metal layer on the inside glass. The glass temperature can be kept warm to prevent cold drafts, and condensation by electric current. Horizontal integration system with Open Network Interface connects automatic controls of the electric exterior blinds, heat-generating glasses and air conditioning on the same floor, and can get interoperability.

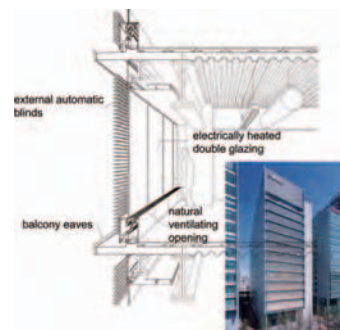
Product performance

- Features  
 This system can reduce energy consumption of air conditioning and electric lighting for perimeter zone. Perimeter air conditioning systems are not needed due to enhanced thermal performance. Further, this system creates comfortable space near the window glass and expands the effective working space. The appearance of facades change by angle of exterior blind slats and moving up and down.



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EP-7-009

Building and civil engineering

architectural design services

## Pola Museum of Art "In harmony with the Existing Topography and Vegetation"

## Environmental performance

Pola Museum of Art nestles among the trees in Fuji-Hakone-Izu National Park. We carried out a ten-year project on the theme of how to protect and coexist with the natural environment. The first year, we surveyed the flora and fauna of the site in detail, the position allowed the conservation of all the beech trees. The substructure is hemispherical to avoid interrupting the flow of aquifers. Only indigenous local plants were planted on the site, to avoid bringing in outside strains. Cypress trees that had been planted on the site were felled and seeds gathered on the site were grown into saplings and planted, in an attempt to restore the forest to its underlying vegetation types. The saplings included a variety of beech that only yields seeds once in seven years. As trees grow, they help prevent global warming by absorbing carbon dioxide from the air, storing carbon in trees and soil.

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Cross section: The hemispherical substructure was designed to avoid interrupting the flow of groundwater.

EP-7-010

Building and civil engineering

architectural design services

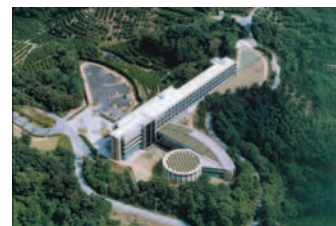
## Toyota Institute Global Learning Center "Blending into nature"

## Environmental performance

This training facility, standing on a small mountain and surrounded by greenery, is the center of the Toyota Institute. The building was situated with the aim of leaving all of the existing trees standing on the site and using the borrowed scenery of the foliage to create a rich interior environment. The T-shaped building layout conforms to the topography of the site. To minimize excavations and reduce fossil-fuel use and emissions of heavy-construction-equipment and dump trucks, the height difference within the site was exploited. So that the accommodation block has five floors on the west side and three above ground level on the east. The training block and the lecture theater have green roofs that acts as insulation from the sun and wind and can decrease energy consumption of air conditioning, to help prevent Global Warming.

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As an environment-themed corporate training facility

EP-7-011

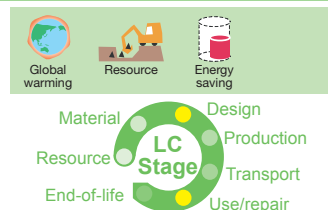
Building and civil engineering

architectural design services

**Nakashibetsu Junior High School "Realizing an eco school at -20°C"**

**Environmental performance**

This is an Eco School, achieved without the burden of initial costs through a concentration of everyday technologies. Nakashibetsu has a wide range of temperatures, from -20deg in winter to 30deg in summer, so the reduction of thermal loads was a major theme. Reduced surface area of exterior walls, external insulation, highly-insulating sash windows were employed to enhance the thermal performance of the skin. Two multipurpose rooms with a three storey height were constructed as a way of letting in the heat and light of the sun while protecting the interior from the bitter cold outside, creating a healthy, open space. It also serves as an environmental device, as a path for wind and light. The students and teachers who attend this school have gained a greater awareness of the environment, and an environmentally-friendly kind of development has begun in the town.



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The simple building form, exterior insulation and highly-insulative sash windows

Available in: Worldwide

EP-7-012

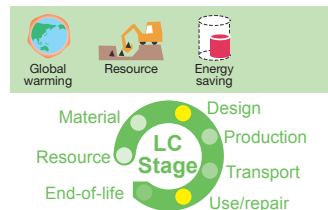
Building and civil engineering

architectural design services

**Amami Hospital for Foundation Jiaikai "The Wind Terrace Draws Breezes into the Wards"**

**Environmental performance**

The typical image of a psychiatric hospital is of sealed windows. The aim of this hospital was to make a "healing building," which would enjoy the benefits of Amami's abundant nature. The climate of Amami is subtropical, but there is a pleasant breeze in the shade of the trees. The building has deep eaves to take the strong sunlight gently into the interior. They allow open windows even on rainy days, so that the breeze flows throughout the building. The four wards have big bay windows, called "Wind Terraces." When the bay windows are opened, a natural breeze moves through the day room. Groundwater at a stable year-round temperature of 21deg is used for drinking, and also for cooling outside air. Roof planting and a solar water heating system are among other measures used, with the combined result that energy consumption is 1/3 of the consumption per unit area in a standard hospital.



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EP-7-013

Building and civil engineering

architectural design services

Nippon Life Insurance Company Marunouchi Building "Pursuit of design for permanent use"

Environmental performance

The extension of building life spans goes beyond structural measures. The designer must take a broader perspective, including consideration for urban scenery, the formation of office spaces able to respond flexibly to social changes, and the pursuit of easy maintenance and efficient replacement of building equipment and services. We wanted to make the exterior appearance of the building something that would be loved long into the future, by considering the historic character of the surrounding urban scenery. The office space on the typical floor has 2,000 m<sup>2</sup> of flexible, columnless space, with some of the floor panels made detachable, ensuring the freedom to link floors as necessary with added staircases and multi-floor openings. Each floor is equipped with two sets of toilets, so that one set can be used as the other is renewed while the floor remains occupied and in use.



The floors slabs have removable portions, and each floor has two sets of toilets.

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EP-7-014

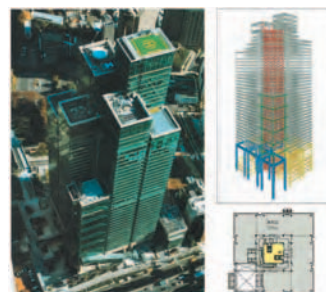
Building and civil engineering

architectural design services

Izumi Garden Tower: "The Vertical void" is ready for future changes

Environmental performance

In an office building it is difficult to reconcile structural elements, which are hard to change, with the routes for a horizontal extension of air conditioning services, and with fast-changing sanitary facilities. There are also limits to the potential for predicting and preparing for future social shifts. This situation led us to propose a new office form, called the "Void Core" for this building. The Void Core takes outside space and inserts it vertically through the center of the office core. This space is used as a route for natural ventilation using the chimney effect, as well as for bringing natural light. It can also be used for future expansion of building service routes, and a temporary elevator route. Thus the Void Core is a sustainable solution for high-rise buildings and can reduce carbon footprints of demolition and new construction.



The Void Core in the center of the building can be used in many ways, extending the service life of the building.

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EP-7-015

Building and civil engineering  
architectural design services

I-Garden Air "Joining together city-center greenery"

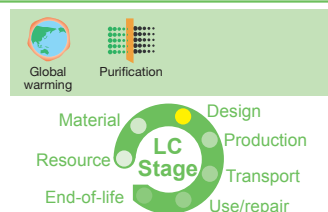
Environmental performance

The government of Japan said that they would promote decarbonization of urban areas through improving the thermal environment by Urban Greening and other heat island countermeasures in the "Kyoto Protocol Target Achievement Plan". The main theme for I-Garden Air, a district developed on the site of the Iidamachi freight station, was to make the new green space of the development into an axis linking the green masses of the nearby Imperial Palace and Koishikawa Korakuen. This attitude to uniting nearby green areas was shared from an early stage with local people, government and businesses as a common development principle, bringing together design concepts for planning and landscaping. As a result, the streets have a unified setback to the building walls, creating a tree-lined pedestrian avenue that extends for 300m.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan  
Tel +81-3-5226-3030 Fax +81-3-5226-3038  
E-mail [webmaster@nikken.co.jp](mailto:webmaster@nikken.co.jp)  
URL <http://https://www.nikken.co.jp/en/>  
URL <http://https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



EP-7-016

Building and civil engineering  
architectural design services

Harumi Island Triton Square "Urban Planning & management to cut environmental loads"

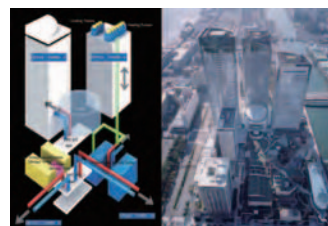
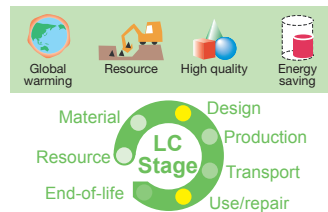
Environmental performance

This large-scale urban redevelopment project opened in April 2001. It has achieved an unprecedented reduction in environmental load by considering such reductions over the area as a whole, not just for individual buildings. In this concentrated business and compound zone, it is easy to deploy large scale, high-efficiency equipment, and the energy required for conveying heat can be reduced. The plant for electrical power and the district heating and cooling (DHC) system are centralized and located to achieve a compact equipment infrastructure with short conveyance distances. At the operating stage, management activities are pursued at the district level to cut environmental loads. The end result is a 23% reduction in primary energy consumption, a 36% reduction in mains water usage and a 48% reduction in waste volume in the business and multi-purpose zone.

Nikken Sekkei Ltd

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E-mail [webmaster@nikken.co.jp](mailto:webmaster@nikken.co.jp)  
URL <http://https://www.nikken.co.jp/en/>  
URL <http://https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



Area energy management achieves a district with high energy efficiency.

EP-7-017

Building and civil engineering  
architectural design services

**R3plas Eco-label Recycled Plastic Resins**

**Environmental performance**

R3plas Recycled Resin from closed-loop system. From collecting post industrial plastics waste to consumer plastics waste to reprocess with our technology from Disassembly, Sorting, Crushing, Pellet extrusion, color compounding (pigments, additives and testing, etc) tooling, manufacturing to export of finished products.

**Product performance**

Good performance as prime virgin resin  
Innovative products and environment friendly  
Awards design for green products  
Green label awards  
Meet ISO14000 and green purchasing policy



**WINRIGO (S) PTE LTD**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre, 608609, Singapore  
Tel +6598715058 Fax +6565154557  
E-mail salewin@singnet.com.sg  
URL <http://www.winrigo.com.sg>



Available in: Worldwide

EP-7-018

Building and civil engineering  
building materials

**Eco-Friendly Beautifying Brick RNST001**

**Environmental performance**

Helps reduce 80% of waste masonry materials.

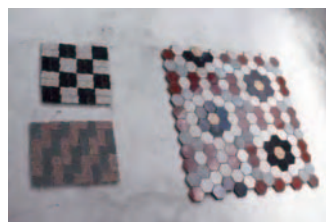
**Product performance**

This product is mass-produced by a stamping machine entirely from 100% recycled waste masonry materials and is available in various shapes.



**CHENG CHUAN MARBLE FACTORY CO., LTD.**

No. 52, Meigong Rd., Hualien City, Hualien County, Taiwan, 970, Republic of China  
Tel +886-3-8233611 Fax +886-3-8223079  
E-mail baoder@baoder.com.tw  
URL <http://www.baoder.com.tw/>



Available in: Taiwan (Rep. of China)

1 Eco-product // Building and civil engineering  
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EP-7-019

Building and civil engineering

building materials

**Compressed Concrete Paving Units**

**Environmental performance**

Adopting recycled stone material scraps, it helps to reduce stone material quarrying, carbon dioxide emissions, and it also reduces waste materials that pollute the environment.

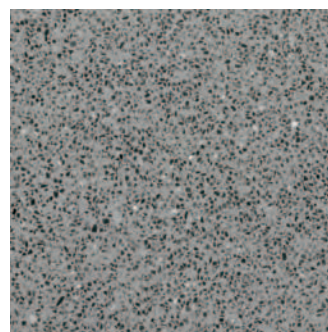
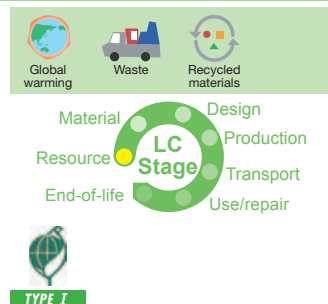
**Product performance**

1. Compressed to shape with ultra high pressure, making it sturdy and durable.
2. A variety of colors with great variations.
3. Having an extremely high density and low moisture absorption ratio.
4. Varied in dimensions and specifications.
5. Same thickness for quickly switch application.
6. Varied in surface treatment methods.

**JING TAY CEMENT PRODUCT CO., LTD.**

No. 37, Xizikou, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5781345 Fax +886-6-5782313  
 E-mail jtccp.ltd@msa.hinet.net

Available in: Taiwan (Rep. of China)



EP-7-020

Building and civil engineering

building materials

**Compressed Concrete Paving Units (JH Black 20x20x3cm)**

**Environmental performance**

Adopting recycled stone material scraps, it helps to reduce stone material quarrying, carbon dioxide emissions, and it also reduces waste materials that pollute the environment.

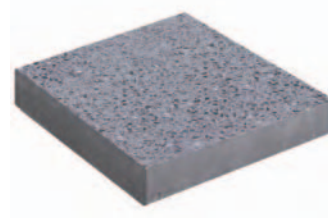
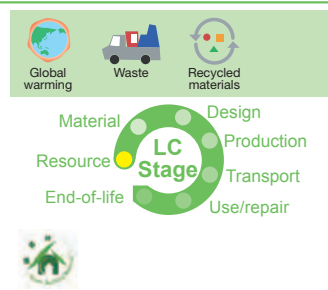
**Product performance**

1. Compressed to shape with ultra high pressure, making it sturdy and durable.
2. Having an extremely high density and low moisture absorption ratio.
3. Same thickness for quickly switch application.

**JING TAY CEMENT PRODUCT CO., LTD.**

No. 37, Xizikou, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
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 E-mail jtccp.ltd@msa.hinet.net

Available in: Taiwan (Rep. of China)





EP-7-021

Building and civil engineering

building materials

### High Pressure Crystallization Brick (J31, J32, J33, J34, J35, J36)

#### Environmental performance

Adopting recycled stone material scraps, it helps to reduce stone material quarrying, carbon dioxide emissions, and it also reduces waste materials that pollute the environment.

#### Product performance

1. Compressed to shape with ultra high pressure, making it sturdy and durable.
2. A variety of colors with great variations.
3. Having an extremely high density and low moisture absorption ratio.
4. Varied in dimensions and specifications.
5. Same thickness for quickly switch application.
6. Varied in surface treatment methods.

### JING TAY CEMENT PRODUCT CO., LTD.

No. 37, Xizikou, Shanshang Dist., Tainan City, Taiwan, 743, Republic of China  
 Tel +886-6-5781345 Fax +886-6-5782313  
 E-mail jtcpc.ltd@msa.hinet.net

Available in: Taiwan (Rep. of China)



TYPE I



EP-7-022

Building and civil engineering

building materials

### Coconut Butt-Jointed Wall Panel

#### Environmental performance

Helps prevent over-exploitation of rainforests. Uses non-toxic, formaldehyde-free latex.

#### Product performance

Coconut decorative panels made from farmed trees in Southeastern Asia. Hard wood with prominent grain and rich colors. 100% developed and made in Taiwan. Available in various types. Durable and highly workable. Featuring artistic beauty and ecofriendliness.

### Pacific Hardwood Company

No.51, Chen Hsing Rd., Heng Shan Vil., Ta-Ya Dist., Taichung City, Taiwan, 428, Republic of China  
 Tel +886-4-25684118 Fax +886-4-25683831  
 E-mail pcfk@ms2.hinet.net  
 URL <http://www.phcwood.com.tw>

Available in: Japan, Oceania, Europe, North America, Central America, South America, U.S.A., China



椰木拼板

EP-7-023

Building and civil engineering

building materials

### Palm Relief Wall Panel

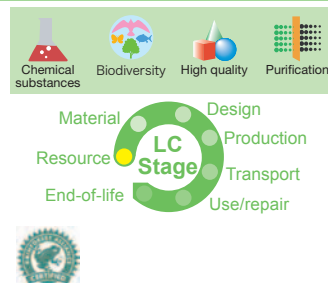
#### Environmental performance

Helps prevent over-exploitation of rainforests. Uses non-toxic, formaldehyde-free latex.

\* FSC certified

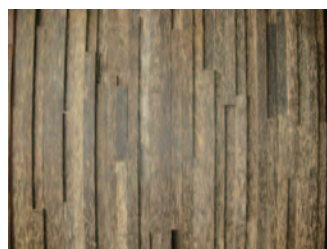
#### Product performance

Palm decorative panels made from farmed trees in Southeastern Asia. Hard wood with prominent grain and rich colors. 100% developed and made in Taiwan. Available in various types. Durable and highly workable. Featuring artistic beauty and ecofriendliness.



### Pacific Hardwood Company

No.51, Chen Hsing Rd., Heng Shan Vil., Ta-Ya Dist., Taichung City, Taiwan, 428, Republic of China  
 Tel +886-4-25684118 Fax +886-4-25683831  
 E-mail [pcfkc@ms2.hinet.net](mailto:pcfkc@ms2.hinet.net)  
 URL <http://www.phcwood.com.tw>



Available in: Japan,Oceania,Europe,North America,Central America,South America,U.S.A.,China

EP-7-024

Building and civil engineering

building materials

### Coconut Integrated Wall Panel

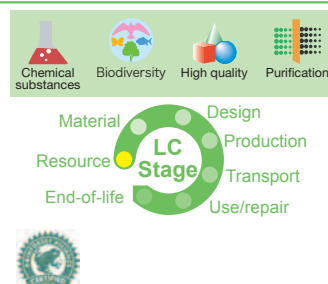
#### Environmental performance

Helps prevent over-exploitation of rainforests. Uses non-toxic, formaldehyde-free latex.

\* FSC certified

#### Product performance

Coconut decorative panels made from farmed trees in Southeastern Asia. Hard wood with prominent grain and rich colors. 100% developed and made in Taiwan. Available in various types. Durable and highly workable. Featuring artistic beauty and ecofriendliness.



### Pacific Hardwood Company

No.51, Chen Hsing Rd., Heng Shan Vil., Ta-Ya Dist., Taichung City, Taiwan, 428, Republic of China  
 Tel +886-4-25684118 Fax +886-4-25683831  
 E-mail [pcfkc@ms2.hinet.net](mailto:pcfkc@ms2.hinet.net)  
 URL <http://www.phcwood.com.tw>



Available in: Japan,Oceania,Europe,North America,Central America,South America,U.S.A.,China

EP-7-025

Building and civil engineering

building materials

### Palm Profiled Wall Panel

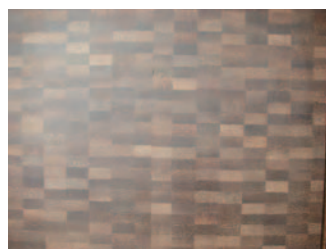
#### Environmental performance

Helps prevent over-exploitation of rainforests. Uses non-toxic, formaldehyde-free latex.

\* FSC certified

#### Product performance

Palm decorative panels made from farmed trees in Southeastern Asia. Hard wood with prominent grain and rich colors. 100% developed and made in Taiwan. Available in various types. Durable and highly workable. Featuring artistic beauty and ecofriendliness.



### Pacific Hardwood Company

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 Tel +886-4-25684118 Fax +886-4-25683831  
 E-mail [pcf@ms2.hinet.net](mailto:pcf@ms2.hinet.net)  
 URL <http://www.phcwood.com.tw>

Available in: Japan, Oceania, Europe, North America, Central America, South America, U.S.A., China

EP-7-026

Building and civil engineering

building materials

### Coconut Woven Wall Panel

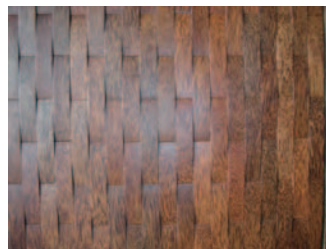
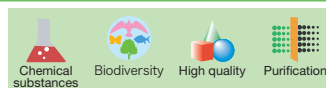
#### Environmental performance

Helps prevent over-exploitation of rainforests. Uses non-toxic, formaldehyde-free latex.

\* FSC certified

#### Product performance

Coconut decorative panels made from farmed trees in Southeastern Asia. Hard wood with prominent grain and rich colors. 100% developed and made in Taiwan. Available in various types. Durable and highly workable. Featuring artistic beauty and ecofriendliness.



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 E-mail [pcf@ms2.hinet.net](mailto:pcf@ms2.hinet.net)  
 URL <http://www.phcwood.com.tw>

Available in: Japan, Oceania, Europe, North America, Central America, South America, U.S.A., China

1 Eco-product // Building and civil engineering  
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EP-7-027

Building and civil engineering

building materials

Recycle Soundproof Plate RPCSW-04-01~05

Environmental performance

The main raw material comprises 100% recycled material. The scraps generated in the production process can all be fully turned into reuse, achieving near-zero pollution in the production process and an ideal state of zero scraps. It does not contain heavy metals, halogens, asbestos, radioactive substances, toxic chemical materials announced by Taiwan's Environmental Protection Administration, or regulated chemical products stipulated by the Montreal Protocol.

Product performance

The product has great diversity, and can be used as soundproof walls, grassplanting ties, and wall surface furnishing, with a soundproof rating as high as 50dB in laboratory testing. It can be rapidly assembled coordinated to the C-shaped steel, steel wedges, or old brick walls, and has optional colors to choose from. It is suitable for various types of configured wall installation applications market.

SUN RUBBER WORKS CO., LTD.

No. 63, Ln.22, Sec.1, Hsin Ren Rd., Taiping Dist., Taichung City, Taiwan, 411, Republic of China  
 Tel +886-4-22781058 Fax +886-4-22780837  
 E-mail shan@rubbers.com.tw  
 URL <http://www.rubbers.com.tw>

Available in: Worldwide



EP-7-028

Building and civil engineering

building materials

Pressurized Concrete Floor Tiles

Environmental performance

By recycling scrapped glass, construction waste, furnace slag and so forth, it helps to reduce waste pollution and environment messiness. The product can be used repeatedly, thereby saving energy and reducing carbon dioxide emissions.

Product performance

The product is durable and can be used repeatedly. With water-percolating surfacing, the floor tiles help to reduce the urban hot island effect and can supplant the groundwater resources.

Team Joy Enterprise Co., Ltd.

No. 17, Ln. 376, Niupu S. Rd., Xiangshan Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5309111 Fax +886-3-5300783  
 E-mail liou5258@cm1.hinet.net  
 URL <http://www.teamjoy.com.tw/>

Available in: Taiwan (Rep. of China)



TYPE I



EP-7-029

Building and civil engineering

building materials

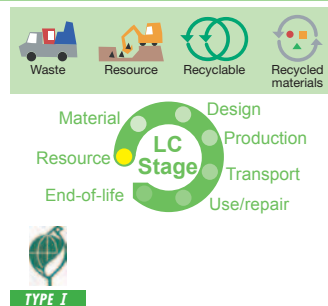
### Grass-Planting Tiles

#### Environmental performance

By recycling scrapped glass, construction waste, furnace slag and so forth, it helps to reduce waste pollution and environment messiness. The product can be used repeatedly, thereby saving energy and reducing carbon dioxide emissions.

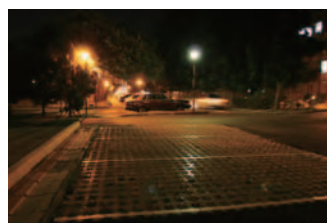
#### Product performance

The product is durable and can be used repeatedly. With water-percolating surfacing, the floor tiles help to reduce the urban hot island effect and can supplant the groundwater resources.



### Team Joy Enterprise Co., Ltd.

No. 17, Ln. 376, Niupu S. Rd., Xiangshan Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5309111 Fax +886-3-5300783  
 E-mail liou5258@cm1.hinet.net  
 URL <http://www.teamjoy.com.tw/>



Available in: Taiwan (Rep. of China)

EP-7-030

Building and civil engineering

building materials

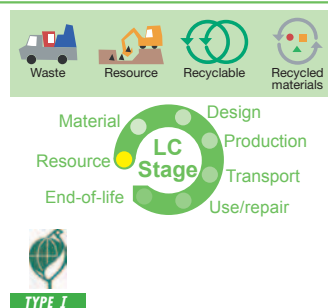
### Fence Wall Tiles

#### Environmental performance

By recycling scrapped glass, construction waste, furnace slag and so forth, it helps to reduce waste pollution and environment messiness. The product can be used repeatedly, thereby saving energy and reducing carbon dioxide emissions.

#### Product performance

The product is durable and can be used repeatedly. With water-percolating surfacing, the floor tiles help to reduce the urban hot island effect and can supplant the groundwater resources.



### Team Joy Enterprise Co., Ltd.

No. 17, Ln. 376, Niupu S. Rd., Xiangshan Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5309111 Fax +886-3-5300783  
 E-mail liou5258@cm1.hinet.net  
 URL <http://www.teamjoy.com.tw/>

Available in: Taiwan (Rep. of China)



EP-7-031

Building and civil engineering

building materials

Slope Protective Tiles

Environmental performance

By recycling scrapped glass, construction waste, furnace slag and so forth, it helps to reduce waste pollution and environment messiness. The product can be used repeatedly, thereby saving energy and reducing carbon dioxide emissions.

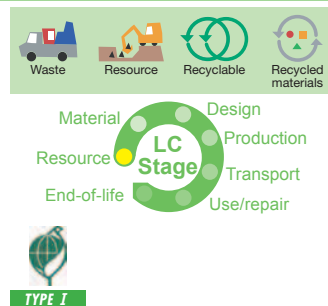
Product performance

The product is durable and can be used repeatedly. With water-percolating surfacing, the floor tiles help to reduce the urban hot island effect and can supplant the groundwater resources.

Team Joy Enterprise Co., Ltd.

No. 17, Ln. 376, Niupu S. Rd., Xiangshan Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5309111 Fax +886-3-5300783  
 E-mail liou5258@cm1.hinet.net  
 URL <http://www.teamjoy.com.tw/>

Available in: Taiwan (Rep. of China)



EP-7-032

Building and civil engineering

building materials

Precast Concrete Edge Stones

Environmental performance

By recycling scrapped glass, construction waste, furnace slag and so forth, it helps to reduce waste pollution and environment messiness. The product can be used repeatedly, thereby saving energy and reducing carbon dioxide emissions.

Product performance

The product is durable and can be used repeatedly. With water-percolating surfacing, the floor tiles help to reduce the urban hot island effect and can supplant the groundwater resources.

Team Joy Enterprise Co., Ltd.

No. 17, Ln. 376, Niupu S. Rd., Xiangshan Dist., Hsinchu City, Taiwan, 300, Republic of China  
 Tel +886-3-5309111 Fax +886-3-5300783  
 E-mail liou5258@cm1.hinet.net  
 URL <http://www.teamjoy.com.tw/>

Available in: Taiwan (Rep. of China)





EP-7-033

Building and civil engineering

building materials

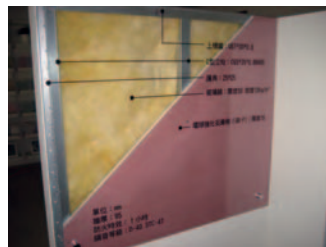
GYPSUM BOARD GB-F

Environmental performance

Contains no controlled substances per the Montreal Protocol, and free of any harmful substances, and does not generate harmful business waste. Adopting recycled paper as the main covering material, it adopts coal power generation plant's by-product flue gas desulfurization (FGD) as the main ingredient; no wastewater is generated in the process, and the rejects derived from the production process can be fully recycled as an additive in the reprocess flow, making it a recyclable, low-pollution process.

Product performance

1. Sound insulation: With good sound insulation reaching D40 or STC50dB or higher depending on the thickness and varied combinations.
2. Fire proof: The unique plaster core material offers excellent fire prevention properties.
3. Heat insulation: With a low heat conductivity ratio, it has excellent heat insulation properties.
4. Workability: Easy and quick to install.
5. Stability: The material is very stable, and does not contract or bend with distortion as affected by temperature or humidity. The seams sealed off with epoxy also do not crack.
6. Shock resistance: With lower rigidity, it is less prone to fracture in earthquakes.
7. Humidity regulating: Utilizing its unique material characteristics, it is able to regulate the home and working environment humidity, creating a comfortable and healthy living space.



UNIVERSAL CEMENT CORPORATION

10F., No. 125, Sec. 2, Nanjing E. Rd., Zhongshan Dist., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-3-3543056 Fax +886-3-3541711  
 E-mail hai-fu@ucctw.com  
 URL <http://www.ucctw.com>

Available in: Singapore, Taiwan (Rep. of China), China

EP-7-034

Building and civil engineering

building materials

GYPSUM BOARD GB-S

Environmental performance

Contains no controlled substances per the Montreal Protocol, and free of any harmful substances, and does not generate harmful business waste. Adopting recycled paper as the main covering material, it adopts coal power generation plant's by-product flue gas desulfurization (FGD) as the main ingredient; no wastewater is generated in the process, and the rejects derived from the production process can be fully recycled as an additive in the reprocess flow, making it a recyclable, low-pollution process.

Product performance

1. Sound insulation: With good sound insulation reaching D40 or STC50dB or higher depending on the thickness and varied combinations.
2. Fire proof: The unique plaster core material offers excellent fire prevention properties.
3. Heat insulation: With a low heat conductivity ratio, it has excellent heat insulation properties.
4. Workability: Easy and quick to install.
5. Stability: The material is very stable, and does not contract or bend with distortion as affected by temperature or humidity. The seams sealed off with epoxy also do not crack.
6. Shock resistance: With lower rigidity, it is less prone to fracture in earthquakes.
7. Humidity regulating: Utilizing its unique material characteristics, it is able to regulate the home and working environment humidity, creating a comfortable and healthy living space.



UNIVERSAL CEMENT CORPORATION

10F., No. 125, Sec. 2, Nanjing E. Rd., Zhongshan Dist., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-3-3543056 Fax +886-3-3541711  
 E-mail hai-fu@ucctw.com  
 URL <http://www.ucctw.com>

Available in: Singapore, Taiwan (Rep. of China), China

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Eco-product // Building and civil engineering

EP-7-035

Building and civil engineering

building materials

**GYPSUM BOARD GB-R**

**Environmental performance**

Contains no controlled substances per the Montreal Protocol, and free of any harmful substances, and does not generate harmful business waste. Adopting recycled paper as the main covering material, it adopts coal power generation plant's by-product flue gas desulfurization (FGD) as the main ingredient; no wastewater is generated in the process, and the rejects derived from the production process can be fully recycled as an additive in the reprocess flow, making it a recyclable, low-pollution process.

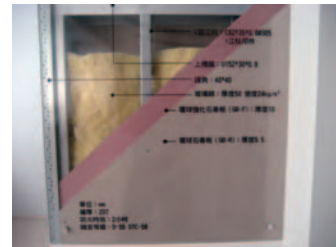
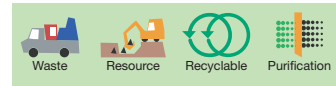
**Product performance**

1. Sound insulation: With good sound insulation reaching D40 or STC50dB or higher depending on the thickness and varied combinations.
2. Fire proof: The unique plaster core material offers excellent fire prevention properties.
3. Heat insulation: With a low heat conductivity ratio, it has excellent heat insulation properties.
4. Workability: Easy and quick to install.
5. Stability: The material is very stable, and does not contract or bend with distortion as affected by temperature or humidity. The seams sealed off with epoxy also do not crack.
6. Shock resistance: With lower rigidity, it is less prone to fracture in earthquakes.
7. Humidity regulating: Utilizing its unique material characteristics, it is able to regulate the home and working environment humidity, creating a comfortable and healthy living space.

**UNIVERSAL CEMENT CORPORATION**

10F., No. 125, Sec. 2, Nanjing E. Rd., Zhongshan Dist., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-3-3543056 Fax +886-3-3541711  
 E-mail hai-fu@ucctw.com  
 URL <http://www.ucctw.com/>

Available in: Singapore, Taiwan (Rep. of China), China



EP-7-036

Building and civil engineering

building materials

**GYPSUM BOARD GB-D**

**Environmental performance**

Contains no controlled substances per the Montreal Protocol, and free of any harmful substances, and does not generate harmful business waste. Adopting recycled paper as the main covering material, it adopts coal power generation plant's by-product flue gas desulfurization (FGD) as the main ingredient; no wastewater is generated in the process, and the rejects derived from the production process can be fully recycled as an additive in the reprocess flow, making it a recyclable, low-pollution process.

**Product performance**

1. Sound insulation: With good sound insulation reaching D40 or STC50dB or higher depending on the thickness and varied combinations.
2. Fire proof: The unique plaster core material offers excellent fire prevention properties.
3. Heat insulation: With a low heat conductivity ratio, it has excellent heat insulation properties.
4. Workability: Easy and quick to install.
5. Stability: The material is very stable, and does not contract or bend with distortion as affected by temperature or humidity. The seams sealed off with epoxy also do not crack.
6. Shock resistance: With lower rigidity, it is less prone to fracture in earthquakes.
7. Humidity regulating: Utilizing its unique material characteristics, it is able to regulate the home and working environment humidity, creating a comfortable and healthy living space.

**UNIVERSAL CEMENT CORPORATION**

10F., No. 125, Sec. 2, Nanjing E. Rd., Zhongshan Dist., Taipei City, Taiwan, 104, Republic of China  
 Tel +886-3-3543056 Fax +886-3-3541711  
 E-mail hai-fu@ucctw.com  
 URL <http://www.ucctw.com/>

Available in: Singapore, Taiwan (Rep. of China), China



EP-7-037

Building and civil engineering

building materials

EP Bricks B2, C2, D2

Environmental performance

The water-permeable bricks are made from recycled glass and waste ceramic materials to reduce the amount of wastes, extend the service lives of waste treatment sites, and reuse recyclable materials.

Product performance

The porous structure of the bricks provides high permeability so that rain water on the brick surface can permeate through the bricks into the underlying soil layer. The bricks prevent people and cars from slipping in the rain, minimize rainwater splashing and fogging, reduce thermal effects, cut energy consumption, relieve the load on drainage facilities, and save the expenses for constructing drainage facilities.

You Bo Environmental Protection Industry Co., Ltd.

No. 1, Ln. 448, Zhongzheng 3rd Rd., Yingge Dist., New Taipei City, Taiwan, 23942, Republic of China  
 Tel +886-2-86781668 Fax +886-2-86781670  
 E-mail youbo.com@msa.hinet.net  
 URL <http://www.youbo.com.tw>

Available in: U.S.A.,Singapore,Taiwan (Rep. of China)



EP-7-038

Building and civil engineering

ceramic wall and floor tile

Pavement block "NOXER" for preventing air pollution by photo-catalysis

Environmental performance

NOXER is a pavement block that has a function to decompose harmful substances by oxidation in the surface layer of concrete blocks. The function is based on the photocatalytic reaction that is caused by titanium oxide.

Formation of active oxygen takes place by the action of photocatalytic reaction when titanium oxide in the surface layer of the block is exposed to ultraviolet rays in sunlight.

The formed active oxygen oxidizes the harmful substances, and decomposes them.

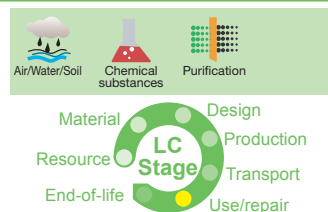
Product performance

1m<sup>2</sup> of "NOXER" removes 1.5mmol of nitrogen oxides (field test result) .

Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-ku, Tokyo, 100-8117, Japan  
 Tel +81-3-5252-5308 Fax +81-3-5252-5344  
 E-mail [kkawabat@mmc.co.jp](mailto:kkawabat@mmc.co.jp)  
 URL <http://www.mmc.co.jp/corporate/en/index.html>  
 URL <http://www.mmc.co.jp/corporate/en/product/construct/10.html>  
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Chigasaki City, Japan

Eco-product // Building and civil engineering

EP-7-039

Building and civil engineering

ceramic wall and floor tile

Freya Series

Environmental performance

- \* Made from recovered wastes
- \* Easy to maintain (no need for cleaning chemicals)
- \* Raw material does not contain any hazardous substance (its gamma dose equivalency shall be equal to or less than 0.2 micro sievert per hour (including cosmic ray dosage))

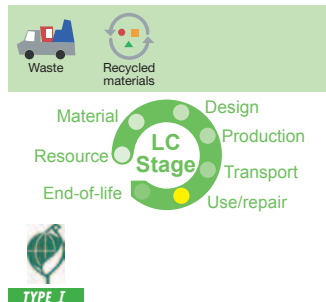
Product performance

Combining technology, environmental conservation and art, it creates value in ceramic tiles by turning flat ceramic tiles into a 3D configuration, and simplifying the maintenance. Consumers can choose to create different styles of patterns on their own. The computer does the universal edge finish with consistent dimensions for easier hanging. The floor tiles adopt a matte finish with special glazing, making the skid-proof index to be higher than most floor tiles, providing a safer living safeguard.

White Horse Ceramic Co., Ltd.

No.27-1, Beigao Shanding, Yangmei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4903111-656 Fax +886-3-4203813  
 E-mail joanliu@devannotile.com  
 URL <http://www.whitehorse.com.tw>

Available in: Japan,Southeast Asia,Taiwan (Rep. of China)



EP-7-040

Building and civil engineering

ceramic wall and floor tile

Demeter Series

Environmental performance

Recycling and reusing plant-scraped raw materials to achieve waste reduction, and mitigate environmental issues.

Product performance

With the product adopting a vintage wood design utilizing the dark and light coordinated lines, coupled with the recessed and relieved pattern design, it creates an ancient vintage wood's look of peeling, discolored grains and a rustic touch. It is a quartz wood-grain tile with glazing, and is characterized as wear resistant, acidity/ alkalinity resistant, and having a low moisture absorption ratio.

Product Series: 13163, 13162 (Special), 13161 (Special), 13160 (Special), 13863, 13862 (Special), 13861 (Special), 13860 (Special)

White Horse Ceramic Co., Ltd.

No.27-1, Beigao Shanding, Yangmei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4903111-656 Fax +886-3-4203813  
 E-mail joanliu@devannotile.com  
 URL <http://www.whitehorse.com.tw>

Available in: Japan,Southeast Asia,Taiwan (Rep. of China)



EP-7-041

Building and civil engineering

ceramic wall and floor tile

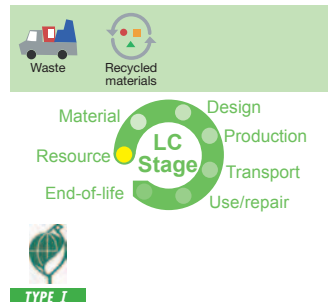
Gaea Series

Environmental performance

Recycling and reusing plant-scraped raw materials to achieve waste reduction, and mitigate environmental issues.

Product performance

The product, a collaboration with Italian technicians, adopts an advanced 3D dry powder coating technology that overcomes the blind spot of incomplete glazing on ceramic tiles' recessed and relieved surfaces to create a ceramic tile that fully manifests the natural texture and dextral feel of the earth's stone material.



White Horse Ceramic Co., Ltd.

No.27-1, Beigao Shanding, Yangmei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4903111-656 Fax +886-3-4203813  
 E-mail joanliu@devannotile.com  
 URL <http://www.whitehorse.com.tw>

Available in: Japan,Southeast Asia,Taiwan (Rep. of China)

EP-7-042

Building and civil engineering

ceramic wall and floor tile

Doris 14110, 14111

Environmental performance

Recycling and reusing plant-scraped raw materials to achieve waste reduction, and mitigate environmental issues.

Product performance

The dry pallet coating technique is used to produce the three-dimensional effect on the ceramic title surface's crisscross lines in relief. The quarter ceramic panels are cured at a high temperature, high pressure has a water absorption rate of less than 0.1%; a sturdy feature for as high as seven on the Mohs scale of mineral hardness, offering more than fine snapping and pressure resistance, but also with great wear resistance.



White Horse Ceramic Co., Ltd.

No.27-1, Beigao Shanding, Yangmei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4903111-656 Fax +886-3-4203813  
 E-mail joanliu@devannotile.com  
 URL <http://www.whitehorse.com.tw>

Available in: Japan,Southeast Asia,Taiwan (Rep. of China)



EP-7-043

Building and civil engineering

ceramic wall and floor tile

### Amazon Wooden

#### Environmental performance

- \* Made from recovered wastes
- \* Easy to maintain (no need for cleaning chemicals)
- \* Raw material does not contain any hazardous substance (its gamma dose equivalency shall be equal to or less than 0.2 micro sievert per hour (including cosmic ray dosage))

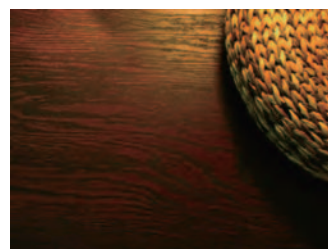
#### Product performance

The product features an ultra low moisture absorption ratio, with advantages of not being prone to expand in heat or contract in cold. It withstands wear and tear, is resistant to acidity and alkalinity, not prone to humidity, resistant to insects and corrosion, and easy to clean and maintain. It is flame retardant, does not corrode or discolor, withstands wear and tear, is easy to clean, and is easier to clean than a wooden floor. Besides, it is also safe, environmentally friendly, durable and convenient.

### White Horse Ceramic Co., Ltd.

No.27-1, Beigao Shanding, Yangmei City, Taoyuan County, Taiwan, 326, Republic of China  
 Tel +886-3-4903111-656 Fax +886-3-4203813  
 E-mail joanliu@devannotile.com  
 URL <http://www.whitehorse.com.tw>

Available in: Japan, Southeast Asia, Taiwan (Rep. of China)



EP-7-044

Building and civil engineering

concrete board

### Woodchip-board 'Artificial soil for re-vegetation'

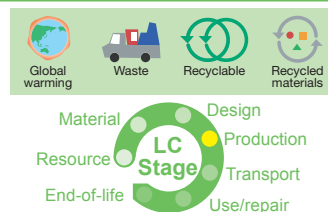
#### Environmental performance

This product recycles woodchips from trees that have been cut down and abandoned after land formation. A grout coating ensures that the chips combine firmly, producing a woodchip board with outstanding durability. It has consecutive voids, providing an environment where plants can grow even in severe conditions such as acid soil or concrete walls.

### Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan  
 Tel +81-3-5769-1006 Fax +81-3-5769-1065  
 URL <http://www.obayashi.co.jp/english/index.html>  
 URL <http://www.obayashi.co.jp/english/csr/>

Available in: Japan



Tip-board (500An X500An X30mm)



EP-7-045

Building and civil engineering

manufacturing environmental friendly products

Energy Saving Lighting Products T5-SL Series Sensor Light

Environmental performance

Intelligent Auto Dimming Circuitry.  
High Efficiency Energy Saving.



Worldwide Support Trading Pte Ltd

Blk 51 #05-07 Ayer Rajah Crescent, Ayer Rajah Industrial Estate, Singapore  
139948, 139948, Singapore  
Tel 65-67794367 Fax 65-67795508  
E-mail tpf0wst@singnet.com.sg

Available in: Singapore

EP-7-046

Building and civil engineering

environmental friendly products

Eco-Pro Paint

Environmental performance

Cost Effective: Saves Money  
Help reduce potential environmental impact.  
Payback is immediate, you will see the saving the following month.  
Once painted, the surface is cool to touch unlike normal paint.  
Prevent cool air loss internally and prevent heat penetration from external heat source.

Product performance

Reduce electricity bills as the air-con needs a shorter time to cool the place.  
Help reduce potential environmental impact.  
Payback is immediate, you will see the saving the following month.  
Once painted, the surface is cool to touch unlike normal paint.  
Prevent cool air loss internally and prevent heat penetration from external heat source.



TYPE I



Worldwide Support Trading Pte Ltd

Blk 51 #05-07 Ayer Rajah Crescent, Ayer Rajah Industrial Estate, Singapore,  
139948, Singapore  
Tel 65-67794367 Fax 65-67795508  
E-mail tpf0wst@singnet.com.sg

Available in: Singapore

EP-7-047

Building and civil engineering

industries unable to classify

Shirasu Balloon Paint - saves energy using the properties of shirasu (volcanic ash sediment), a natural material from Kagoshima

Environmental performance

Shirasu Balloon Paint features multiple levels of thermal conductivity and solar reflectance that enhance its heat-shielding and insulation properties. Coating roofs and walls with this paint reduces the temperatures of surfaces and their reverse sides by 20 and 10 - 15°C, respectively, enabling the maintenance of a comfortable indoor environment throughout the year and helping to reduce air-conditioning costs as well as CO<sub>2</sub> emissions. Its heat-shield performance has been confirmed in test construction as well as by its use in the field, and calculation examples of its heat shield and insulation effects can also be shown based on figures relating to heat-shield performance, such as heat conductivity and solar reflectance. The product has passed a test involving 3,000 hours of accelerated weathering using a xenon lamp (representing 10 years of weathering).

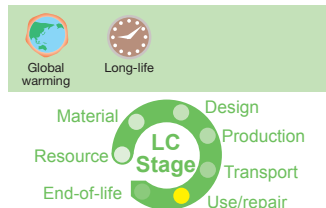
Product performance

Shirasu Balloon Paint is a water-based substance that uses no paint thinner, and is produced by processing Shirasu - a material produced throughout Kagoshima Prefecture - into Shirasu balloons (hollow bodies). The paint shields and insulates against heat, making it friendly to people, the environment, and buildings. It can also be applied to helmets and sheets as well as buildings to take advantage of its characteristics. In addition to the paint itself, the manufacturer also offers a product called Shirasu Wall - an interior/exterior finishing material with the same properties as Shirasu-based paint that requires no maintenance for a period of 20 years. This product won the 2007 Minister of the Environment Award for Global Warming Mitigation Activities in the Category of Mitigation Technology Introduction and Dissemination.

EARTH KAKEN Corporation

2052 MIYAZAKI CYOU SATSUMASENDAI-CITY KAGOSHIMA, 895-0013, Japan

Available in: Japan



EP-7-048

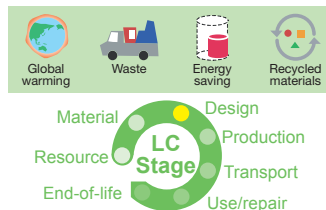
Building and civil engineering

insulation material

Non-Freon spray-on thermal insulating material 'Ceramilite-ecoG'

Environmental performance

In this construction method, we use spray-on thermal insulating material on-site. It does not use Freon-gas, Freon-gas substitute or VOCs which cause 'sickhouse syndrome'. It also contributes to environmental conservation by using recycled products from fractured styrene foam waste as a main material of an insulator. Moreover, because Ceramilite-ecoG (Non flammable) does not cause explosive burning like Polyurethane foam does, it obtained high safety against fire. This method received a prize of Ministry of Land, Infrastructure, Transport and Tourism Government on the 1st Ecoproducts award 2004.



Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan  
 Tel +81-3-5769-1006 Fax +81-3-5769-1065  
 URL <http://www.obayashi.co.jp/english/index.html>  
 URL <http://www.obayashi.co.jp/english/csr/>

Available in: Japan, Asia

Appearance of Ceramilite-EcoG sprayed on wall

EP-7-049

Building and civil engineering

interior building materials

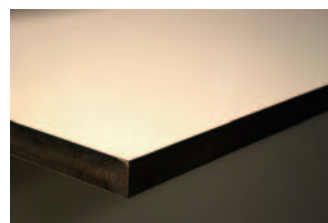
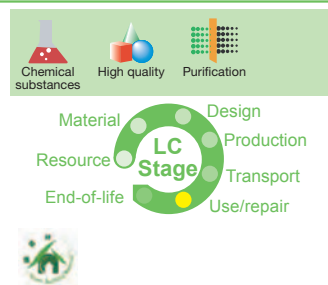
**Thermosetting Resin Decorative Laminates Sheets**

**Environmental performance**

With the product containing low permeation of formaldehyde, its total evaporative organic substances' permeating characteristics help to reduce pollution to the air quality of indoors.

**Product performance**

With enriching surface colors, patterns, and easy to process, it is widely used as a surfacing material in interior decoration.



**Sunflower Corporation**

12F., No.82, Sung Chiang Rd., Taipei City,Taiwan, 104, Republic of China  
 Tel +886-3-469-6296-200 Fax +886-3-469-6300  
 E-mail tqc@sunflower.com.tw  
 URL <http://www.sunflower.com.tw/tc/>

Available in: Japan,Singapore,Taiwan (Rep. of China),China

EP-7-050

Building and civil engineering

interior building materials

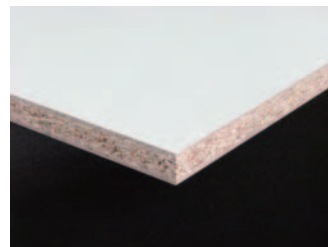
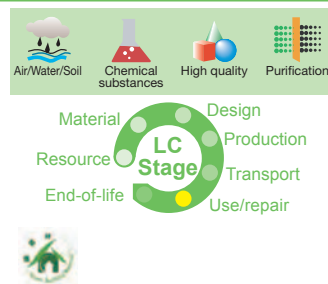
**Decorative Particleboard . 18mm (6510) U-Type F3**

**Environmental performance**

With the product containing low permeation of formaldehyde, its total evaporative organic substances' permeating characteristics help to reduce pollution to the air quality of indoors.

**Product performance**

A material used for indoor furniture.



**Sunflower Corporation**

12F., No.82, Sung Chiang Rd., Taipei City,Taiwan, 104, Republic of China  
 Tel +886-3-469-6296-200 Fax +886-3-469-6300  
 E-mail tqc@sunflower.com.tw  
 URL <http://www.sunflower.com.tw/tc/>

Available in: Japan,Singapore,Taiwan (Rep. of China),China

EP-7-051

Building and civil engineering

manufacturing products

### Coconut Palm Wood Decking

**Environmental performance**

- Made from 100% Solid Coconut Timber
- 100% Eco-friendly and Biodegradable
- High quality & durable
- Natural beautiful texture
- Kiln dried solid hardwood
- Reversible boards: choose between smooth and grooved (anti-slip) surface
- Vacuum Pressure Treated for protection against fungal decay, borers and termites
- Eco-friendly
- 100% Biodegradable
- Termite Free
- Natural beautiful texture
- Kiln-dried solid hardwood
- Highly-Durable and Non-slip

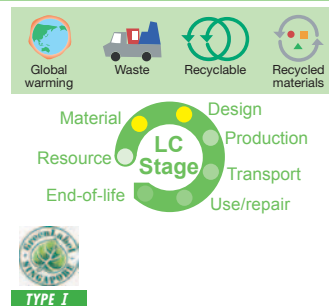
**Product performance**

- Application
- Boardwalks
- Garden Floor Decks
- Patios/Balconies
- Planter Boxes
- Roof Decks

### ENiTo Flooring Pte Ltd

56 Serangoon North Ave 4 #06-04, 555851, Singapore  
 Tel 64884595 Fax 65 6257 6591  
 E-mail [info@enitoflooring.com](mailto:info@enitoflooring.com)  
 URL <http://www.enitoflooring.com>  
 URL <http://www.enitoflooring.com/en/decking/enito-decking>  
 URL <http://www.enitoflooring.com/en/sustainability/sustainability>

Available in: Worldwide



ENiTo Coconut Palm Wood Decking

EP-7-052

Building and civil engineering

moulded or pressed articles of paper pulp

### Grass Brick

**Environmental performance**

Using 100% regenerated pulp for recycling and reuse, the paper molded grass bricks when installed will decompose naturally, without causing secondary public harm.

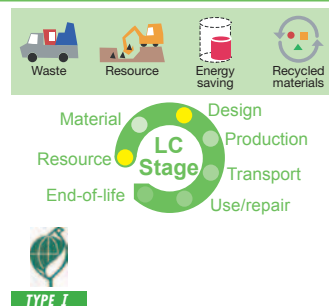
**Product performance**

Economical, time saving, easy installation, environmentally friendly, with good air ventilation and water percolation. It can be used in foundation projects, steep slope projects, general flooring and car park projects.

### CHANG TAI ENVIRONMENTAL .CO., LTD.

No.191, Sec. 2, Zhangshui Rd., Puyan Township, Changhua County, Taiwan, 516, Republic of China  
 Tel +886-4-8653126 Fax +886-4-8657308  
 E-mail [moulded.pulp@msa.hinet.net](mailto:moulded.pulp@msa.hinet.net)  
 URL <http://www.greenearth.com.tw>

Available in: Taiwan (Rep. of China)



Eco-product // Building and civil engineering

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EP-7-053

Building and civil engineering

paints

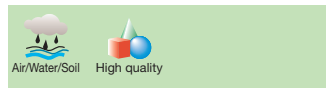
**Nippon Odour-less AirCare**

**Environmental performance**

- Absorbs harmful formaldehyde & refreshes the air

**Product performance**

- Near zero VOC & low odour
- Superior Washability and scrub resistance
- Anti-Bacterial



TYPE I

**Nippon Paint (M) Sdn. Bhd**

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>



Nippon Odour-less AirCare

Available in: Malaysia

EP-7-054

Building and civil engineering

paints

**Nippon Hydro- Gloss**

**Environmental performance**

- Low odour & VOC

**Product performance**

- Fungus Resistant
- Prevent wood from rotting and metal from rusting
- Waterbased



TYPE I

**Nippon Paint (M) Sdn. Bhd**

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>



Available in: Malaysia

Eco-product // Building and civil engineering

EP-7-055

Building and civil engineering

paints

**Nippon Hydro-Matt**

**Environmental performance**

Low Odour & VOC

**Product performance**

- Fungus Resistant
- Prevent wood from rotting and metal from rusting
- Waterbased

**Nippon Paint (M) Sdn. Bhd**

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>

Available in: Malaysia

The image shows a can of Nippon Hydro-Matt paint with a blue and white label. Above the can is a diagram illustrating the product's environmental performance. It features a central 'LC Stage' (Life Cycle Stage) diagram with a green circle and a yellow dot. Surrounding this are icons for 'Global warming', 'High quality', 'Material', 'Design', 'Production', 'Transport', 'Use/repair', 'Resource', and 'End-of-life'. Below the diagram is a 'TYPE I' logo and a 'Colour Creations' logo.

EP-7-056

Building and civil engineering

paints

**Nippon Weatherbond Solareflect**

**Environmental performance**

- Reflect heat and cool your house
- ultra low voc and odour

**Product performance**

- Heat Resistant with Sunblock Technology
- 2X UV resistant
- 2x tougher against dirt, fungus, algae, flaking and efflorescence

**Nippon Paint (M) Sdn. Bhd**

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>

Available in: Malaysia

The image shows a can of Nippon Weatherbond Solareflect paint with a white and orange label. Above the can is a diagram illustrating the product's environmental performance, identical to the one for Hydro-Matt. It features a central 'LC Stage' (Life Cycle Stage) diagram with a green circle and a yellow dot. Surrounding this are icons for 'Global warming', 'High quality', 'Material', 'Design', 'Production', 'Transport', 'Use/repair', 'Resource', and 'End-of-life'. Below the diagram is a 'TYPE I' logo and a 'Colour Creations' logo.

Eco-product // Building and civil engineering

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EP-7-057

Building and civil engineering

paints

### Nippon Vinilex 5200 Wall Sealer

**Environmental performance**

- Low odour & VOC

**Product performance**

- To promote better adhesion
- For interior use



### Nippon Paint (M) Sdn. Bhd

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>

Available in: Malaysia

EP-7-058

Building and civil engineering

paints

### Nippon Vinilex 5100 Wall Sealer

**Environmental performance**

- Low VOC and odour

**Product performance**

- To promote better adhesion
- Good efflorescence resistance
- For Exterior Use



### Nippon Paint (M) Sdn. Bhd

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>

Available in: Malaysia

Eco-product // Building and civil engineering

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EP-7-059

Building and civil engineering

paints

### Nippon Solarroof

#### Environmental performance

- Reflect heat and cools your house
- Low VOC and odour

#### Product performance

- Fungus resistant
- Dirt resistant

### Nippon Paint (M) Sdn. Bhd

Lot 1-17 Taman Perindustrian Subang Utama, Jalan SU 4, 40300 Shah Alam, 40300, Malaysia  
 Tel +603-5125-0888 Fax +603-5191-4849  
 E-mail mlwong@nipponpaint.com.my  
 URL <http://www.nipponpaint.com.my>

Available in: Malaysia

Global warming High quality

Material Design  
 Resource Production  
 End-of-life Transport  
 Use/repair

LC Stage

TYPE I

**NIPPON PAINT**  
**SOLARROOF**

Low VOC  
 Fungus Resistant  
 Dirt Resistant  
 Colour Guard

EP-7-060

Building and civil engineering

paints

### NVIRO Eco-Safe Permaseal Products

#### Environmental performance

AMON Marketing Corporation's brand NVIRO are construction products developed of high quality standards exploiting the company's contribution to the environment as earth-friendly in connection with the global warming issues and the thrust to Go Green Building.

#### Product performance

NVIRO is the first and so far the only paint brand in the Philippines that passed the evaluation and is licensed by the National Ecolabelling Programme by Green Choice Philippines ([www.pcepsdi.org.ph](http://www.pcepsdi.org.ph)) which is accredited by the GLOBAL ECOLABELLING NETWORK ([www.globalecolabelling.net](http://www.globalecolabelling.net)).

### AMON Marketing Corporation

(new address) E. Rodriguez Ave. cor Cpl. Cruz Street, Bagong Ilog, Pasig City, Metro Manila, Philippines  
 Tel +63-2-8196113 Fax +63-2-6710358  
 E-mail nviroproducts@gmail.com  
 URL <http://www.facebook.com/pages/NVIRO-Building-a-Green-World/119516828063355>

Available in: Philippines

Air/Water/Soil Global warming Degradable Purification

Material Design  
 Resource Production  
 End-of-life Transport  
 Use/repair

LC Stage

TYPE I

NVIRO Eco-Safe Permaseal Paint

Eco-product // Building and civil engineering

1  
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9

EP-7-061

Building and civil engineering

paints and related products

Heat ray shielding paint with energy saving and CO<sub>2</sub> reduction effects

## Environmental performance

Due to the characteristics of its good weatherability and radio-wave permeability, as well as high-transparency, our heat-rays shielding paint has been widely applied to glass for automobile, train, and housing windows. This paint contributes significantly to reduce both energy consumption and CO<sub>2</sub> emission as a result of reducing the air conditioning load.

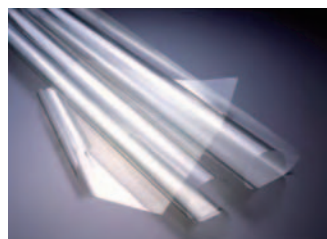
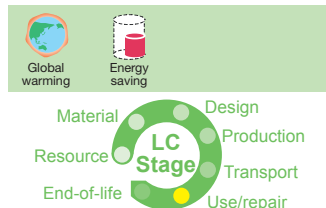
## Product performance

Our heat-rays shielding paint is a clear coating-material containing highly dispersed ultra-fine ceramic particles absorbing heat rays in sun light. Application of this paint as direct glass coating or coated film on glass surface enables glass to reduce insolation permeability ratio to less than 70% while keeping 90% of visible radiation permeability.

## Mitsubishi Materials Corporation

1-6-1 Yokoami, Sumida-ku, Tokyo, 130-0015, Japan  
Tel +81-3-5819-7325 Fax +81-3-5819-7327  
URL <http://www.mmc.co.jp/corporate/en/index.html>  
URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Worldwide



Film coated with IR cutting paint

EP-7-062

Building and civil engineering

paving work

## Photocatalytic road-paving method, Optical Randix Method

## Environmental performance

Optical Randix Method is air purification technology for pavement by using photocatalytic coating. Resin, which is developed for photocatalysis and has excellent durability and adherability, is used as a binder in this construction method, resulting in roads becoming more tolerant against wear from vehicles. Thanks to excellent effect to decrease road temperature, this method can also be utilized as a countermeasure against the heat-island phenomenon.

## Product performance

- 1) Dense grade asphalt concrete pavement, semi-flexible pavement and porous asphalt pavement are available.
- 2) Excellent adhesive strength and durability
- 3) According to the results a year after the test construction, NO<sub>x</sub> removal performance was superior (1.94 μmol\*), having long-term durability.
- 4) The method's remarkable construction property allows traffic to resume more quickly than conventional construction.

\*Test conducted under the air purification test procedure, JIS R1701-1

## Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-ku, Tokyo, 100-8117, Japan  
Tel +81-3-5252-5308 Fax +813-5252-5344  
E-mail [kkawabat@mmc.co.jp](mailto:kkawabat@mmc.co.jp)  
URL <http://www.mmc.co.jp/corporate/en/index.html>  
URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Construction sample for parking lot

EP-7-063

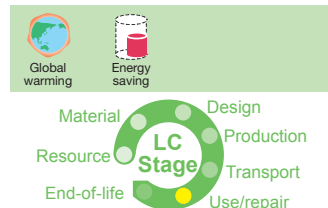
Building and civil engineering

paving work

Sidewalk 'Wet pavement' system to counter heat island phenomenon

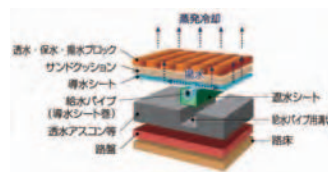
Environmental performance

The 'wet pavement' system (water sprinkling road system), can reduce summer daytime temperature of road surfaces by approximately 20 degree Celsius lower than asphalt pavement. The wet pavement surface reduces radiation heat. A special textile and special bricks provide a continuous cooling effect even if fine weather continues for several days. Water quantity required is 5-6L/m<sup>2</sup> for a typical fine day in summer.



Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan  
 Tel +81-3-5769-1006 Fax +81-3-5769-1065  
 URL <http://www.obayashi.co.jp/english/index.html>  
 URL <http://www.obayashi.co.jp/english/csr/>



Available in: Japan

Wet Pavement System (Uchimizu-Pave)

EP-7-064

Building and civil engineering

plastics

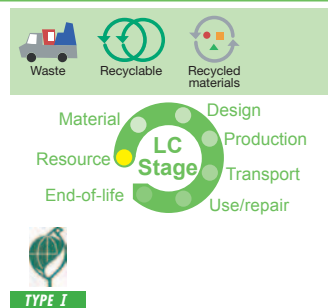
Environmentally Friendly Low Profile Access Floor ECOSeries CA400A/CA500A/CA600A

Environmental performance

Using 100% recycled plastic, the main component used includes plastic steel material that can be recycled and reproduced, where 80~90% of the main components can be used repeatedly.

Product performance

It is applied in a variety of wiring layouts, management and repair for offices and equipment chambers with a host of wiring boxes on offer, where the parts can be easily extended, and is lightweight, with extended operating life cycle, easy to install, providing high efficiency.



NETFLOOR, INC.

7F., No. 214, Sec. 3, Ta-Tung Rd., Hsi-Chih Dist., New Taipei City, Taiwan, 22103, Republic of China  
 Tel +886-2-8647-1849 Fax +886-2-8647-3208  
 E-mail [frank.wang@net-floor.biz](mailto:frank.wang@net-floor.biz)  
 URL <http://www.net-floor.biz>



Available in: Japan, Oceania, Europe, South America, Middle and Near East, U.S.A., Singapore, Malaysia, Republic of Korea, Taiwan (Rep. of China), China

Eco-product // Building and civil engineering

EP-7-065

Building and civil engineering

plastics

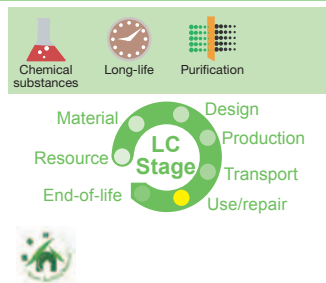
### NAN YA DELUXE VINYL TILE

#### Environmental performance

This product does not contain heavy metals, and is free of any harmful chemical substances.

#### Product performance

With even patterns inside and out, and of identical patterns from the top to the bottom, it offers a superb wear resistant effect, and is suitable for offices, hotels, restaurants, department stores, hospitals, and schools  
 Product Series: 50124, 50224, 50524, 50624, 50724, 50924, 51724, 52224, 53124, 53624, 54224, 54324, 54624, 55224, 56724, 58124, 58424, 58724, 59524, 59824



### Nan Ya Plastics Corporation

Room 289, B-3F, No. 201, Tun Hwa North Road, Taipei City, Taiwan, 105, Republic of China  
 Tel +886-2-27178226 Fax +886-2-25140628  
 E-mail patrick-d@npc.com.tw  
 URL <http://www.npc.com.tw>

Available in: Taiwan (Rep. of China)

EP-7-066

Building and civil engineering

flooring and tile

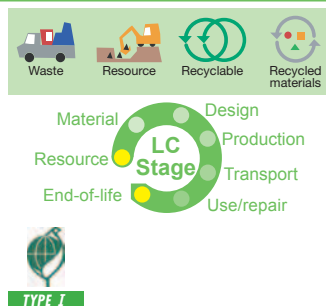
### Rubber Safety Tile DN12

#### Environmental performance

Made of 100% recycled waste rubber pellets, the product can be recycled and reused when replaced.

#### Product performance

Dimensions:  
 50x50x4.5~9cm  
 60x60x4.5~9cm  
 Colors: black, red, green, yellow, blue, purple, orange, and gray.  
 It can be widely applied in various indoor and outdoor space, such as children's playground, garden landscaping, fitness centers, pedestrian walkways and so forth, and comes in multiple colors, dimensions and thicknesses to choose from. The product is accredited with several domestic and foreign certifications, including the ISO9001: 2008, EN1177, ASTM F1292, CNS12634, the safe toy certificate and Taiwan's Green Mark.



### Jun Lung Rubber Industries Co., Ltd.

No. 11, Gong Ye North 2nd Road, Nangang Industrial Park, Nantou City, Taiwan, 54066, Republic of China  
 Tel +886-49-2254236 Fax +886-49-2256432  
 E-mail [jun.lung11@msa.hinet.net](mailto:jun.lung11@msa.hinet.net)  
 URL <http://www.junlung.com.tw>

Available in: Taiwan (Rep. of China)

EP-7-067

Building and civil engineering

flooring and tile

### X-Lock Interlocking Rubber Tile DN70

#### Environmental performance

Made of 100% recycled waste rubber pellets, the product can be recycled and reused when replaced.

#### Product performance

Dimensions:

50x50x2.5~10cm

Colors: black, red, green, yellow, blue, purple, orange, gray.

Product feature:

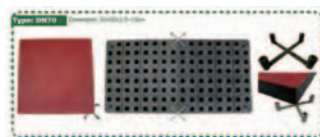
- \* An internally proprietary R&D of an X-shaped pin design.
- \* Quick and simple installation and replacement.
- \* No adhesive is needed when installing the X-shaped rubber pin safely onto soft soil or hard ground surface.



TYPE I

### Jun Lung Rubber Industries Co., Ltd.

No. 11, Gong Ye North 2nd Road, Nangang Industrial Park, Nantou City, Taiwan, 54066, Republic of China  
 Tel +886-49-2254236 Fax +886-49-2256432  
 E-mail jun.lung11@msa.hinet.net  
 URL <http://www.junlung.com.tw>



Available in: Taiwan (Rep. of China)

EP-7-068

Building and civil engineering

flooring and tile

### Rubber Safety Tile DN59

#### Environmental performance

Made of 100% recycled waste rubber pellets, the product can be recycled and reused when replaced.

#### Product performance

Dimensions:

50x50x2~4cm

Colors: black, red, green, yellow, blue, purple, orange, and gray.

It can be widely applied in various indoor and outdoor space, such as children's playground, garden landscaping, fitness centers, pedestrian walkways and so forth, and comes in multiple colors, dimensions and thicknesses to choose from. The product is accredited with several domestic and foreign certifications, including the ISO9001: 2008, EN1177, ASTM F1292, CNS12634, the safe toy certificate and Taiwan's Green Mark.



TYPE I

### Jun Lung Rubber Industries Co., Ltd.

No. 11, Gong Ye North 2nd Road, Nangang Industrial Park, Nantou City, Taiwan, 54066, Republic of China  
 Tel +886-49-2254236 Fax +886-49-2256432  
 E-mail jun.lung11@msa.hinet.net  
 URL <http://www.junlung.com.tw>



Available in: Taiwan (Rep. of China)



EP-7-069

Building and civil engineering

flooring and tile

**Rubber Safety Tile DN11****Environmental performance**

Made of 100% recycled waste rubber pellets, the product can be recycled and reused when replaced.

**Product performance**

Dimensions:

50x50x1~1.5cm

60x60x1~1.5cm

Colors: black, red, green, yellow, blue, purple, orange, and gray.

It can be widely applied in various indoor and outdoor space, such as children's playground, garden landscaping, fitness centers, pedestrian walkways and so forth, and comes in multiple colors, dimensions and thicknesses to choose from. The product is accredited with several domestic and foreign certifications, including the ISO9001: 2008, EN1177, ASTM F1292, CNS12634, the safe toy certificate and Taiwan's Green Mark.

**Jun Lung Rubber Industries Co., Ltd.**

No. 11, Gong Ye North 2nd Road, Nantou City, Nantou County, Taiwan, 54066, Republic of China

Tel +886-49-2254236 Fax +886-49-2256432

E-mail jun.lung11@msa.hinet.net

URL <http://www.junlung.com.tw>

Available in: Taiwan (Rep. of China)



TYPE I



EP-7-070

Building and civil engineering

flooring and tile

**Anti-Slip Interlocking Rubber Tile DN11\_11****Environmental performance**

Made of 100% recycled waste rubber pellets, the product can be recycled and reused when replaced.

**Product performance**

Dimensions:

30x30x1~1.5cm

60x60x1~1.5cm

Colors: black, red, green, yellow, blue, purple, orange, and gray.

Suitable sites: gyms, fitness centers, commercial buildings.

It can be widely applied in various indoor and outdoor space, such as children's playground, garden landscaping, fitness centers, pedestrian walkways and so forth, and comes in multiple colors, dimensions and thicknesses to choose from.

**Jun Lung Rubber Industries Co., Ltd.**

No. 11, Gong Ye North 2nd Road, Nangang Industrial Park, Nantou City, Taiwan, 54066, Republic of China

Tel +886-49-2254236 Fax +886-49-2256432

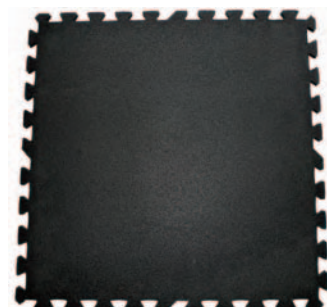
E-mail jun.lung11@msa.hinet.net

URL <http://www.junlung.com.tw>

Available in: Taiwan (Rep. of China)



TYPE I



EP-7-071

Building and civil engineering

tiles and bricks

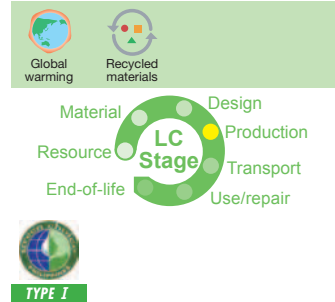
Floor and wall coverings fired from renewable energy and recycled materials

Environmental performance

Glazed ceramic floor and wall tiles are fired/ cooked using renewable energy, thereby reducing the carbon dioxide from fossil fuels by 30%. It is also composed of raw materials from waste of biomass and other recyclable materials, including use of recycled wastewater. These are labeled with the "Type I Eco-label" by Third-Party practitioner.

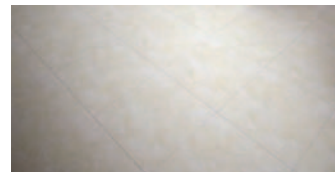
Product performance

Aside from its superior design, the glazed ceramic floor and wall tiles are durable for floor and wall coverings, passing the PNS/ ISO 13006 Standard.



Mariwasa Siam Ceramics, Inc.

Brgy. San Antonio, Sto. Tomas, Batangas, 4234, Philippines  
 Tel +63437782939 Fax +63437782934  
 E-mail hotline@mariwasa.com  
 URL http://www.mariwasa.com



Available in: Japan,Asia,Oceania,Southeast Asia,ASEAN,Thailand,Philippines,South Africa

EP-7-072

Building and civil engineering

tiles and bricks

Eco-Glass

Environmental performance

The strong water permeability of our Eco Glass pavers is effective in flood prevention control and enhances safety for pedestrian / vehicular usage. In addition, the pores also act as air pockets, which help in heat insulation, thus keeping surfaces cool despite the high temperatures in Singapore. Eco Glass pavers meet minimum threshold required by LEED in reducing urban island heat effect.



Cheung Kwong Fine Chemical SG Pte Ltd

150 Orchard Road #08-17, 238841, Singapore  
 Tel 6567321666 Fax 6567336531  
 E-mail jean.chen@ckfcs.com  
 URL http://ckfcs.com



Available in: Worldwide

Eco-Glass Porous Luminous Paver

EP-7-073

Building and civil engineering

tiles and bricks

**Ecocarats: superior health-promoting building materials to support both comfort and health**

**Environmental performance**

Ecocarats, a material produced from waste glass and other recycled materials, controls by itself the humidity of rooms where it is used by absorbing moisture in the air in humid conditions and giving off moisture when the air is dry. The low-temperature firing used in its production means that energy consumption and CO<sub>2</sub> emissions are reduced compared with those of existing tiles.

**Product performance**

Ecocarats, a material that controls by itself the humidity of rooms in a natural way, also works to absorb VOCs (the airborne compounds that cause Sick Building Syndrome), thus providing a comfortable and healthful interior environment. This is Japan's first formaldehyde-reducing building material certified by the Building Center of Japan.

**LIXIL Corporation**

36F, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-ku, Tokyo, 100-6036, Japan  
 URL <http://global.lixil.co.jp/>



Available in: Worldwide

ECOCARAT:ECO-275NET/R01

EP-7-074

Building and civil engineering

tiles and bricks

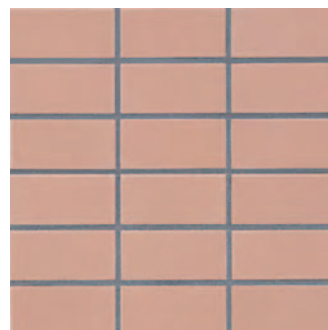
**MICROGUARD, INAX anti-fouling technology for the external wall of housing and building**

**Environmental performance**

Tile that is treated with MICRO-GUARD functions to prevent the fouling of the external walls of houses and buildings and to maintain the beautiful appearance of the wall for a long period.

MICRO-GUARD is a technology to process tiles with INAX's original anti-fouling method in order to maintain and beautify the landscape of urban areas in severe environmental conditions including air pollution.

MICRO-GUARD enhances the surface hydrophilicity of conventional tile. Thereby, the condition of the tile surface is always covered with a water film that absorbs water molecules from the air. As a result, it prevents the generation of static electricity which attracts air-borne dust. Moreover, the tile effectively becomes "self-cleaning" since dust and grime are flushed from tile surface when it rains thanks to the MICRO-GUARD treatment.



**LIXIL Corporation**

36F, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-ku, Tokyo, 100-6036, Japan  
 URL <http://global.lixil.co.jp/>

Available in: Asia

MICROGUARD:COM-255/MGN-14

EP-7-075

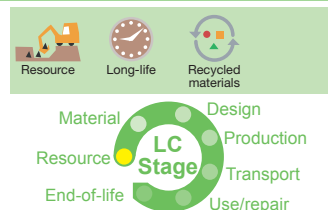
Building and civil engineering

tiles and bricks

Recycled-material Tile: wall and floor materials made from waste resources

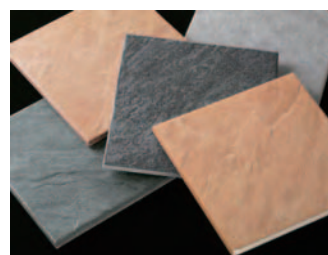
Environmental performance

Recycled-material Tile is a wall/floor tile made from recycled materials. LIXIL makes every effort to use up all materials generated during the various production processes at its factories, ranging from mill ends and waste materials to the clay contained in wastewater. Materials used in large quantities are "ceramic-industry waste-mud" (recovered from the excavation of ceramic raw materials), "Kira" (a material generated during the mining of silica sand - one of the raw materials of glass), and "pottery chips" (formed by crushing ceramic products such as tiles).



LIXIL Corporation

36F,Kasumigaseki Building,3-2-5 Kasumigaseki,Chiyoda-ku,Tokyo, 100-6036, Japan  
 URL <http://global.lixil.co.jp/>



Available in: Japan

Recycled Material:IPF-150

EP-7-076

Building and civil engineering

tiles and bricks

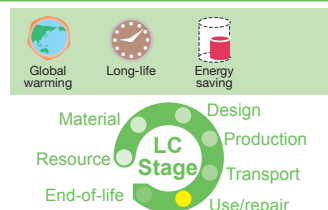
Thermo Tile: saying good-bye to chilly bathroom tiles

Environmental performance

Thermo Tile is a floor tile for bathrooms that offers the function of preventing the chill often felt when walking on tiled floors. It does not need energy sources such as electricity or gas; rather, it works on the principle of forming a heat-insulating layer on the tile surface. Thermo Tile has a surface layer that contains many small hollow balloon-like bubbles, which lowers the thermal conductivity of the tile itself and reduces the heat transfer rate (i.e., the thermal flux value). Consequently, those walking on the tiles do not feel much of a chill.

Product performance

Thermo Tile's rugged surface means that it is not slippery even with wet feet. The coefficient of slip resistance for bathrooms (C.S.R·B) is set at a value suitable for use in large bathhouses.



LIXIL Corporation

36F,Kasumigaseki Building,3-2-5 Kasumigaseki,Chiyoda-ku,Tokyo, 100-6036, Japan  
 URL <http://global.lixi.co.jp/>



Available in: Japan

TERMO TILE:IFT-300/ML-301N

EP-7-077

Building and civil engineering

self-luminous emergency signs

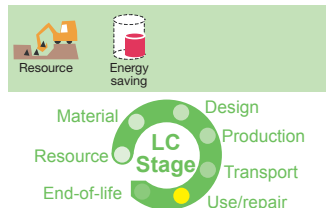
Self-Luminous Emergency Signs (SED4, SED5 & SED6)

Environmental performance

Maintenance Free, Weather Proof, Fire Safety & Emergency Signage. Require No: Bulb, Wiring, Electricity, Battery Pack & Running Cost. Comply with BS5499:Part2:1986 & SS364:1993. Licenced under Radiation Protection Act. Approved by Fire Safety Bureau (FSB). Tested by Singapore Productivity & Standard Board (PSB). Warranty: 10 years Lifespan.

Product performance

Energy Efficiency & Saving.



Worldwide Support Trading Pte Ltd

Blk 51 #05-07 Ayer Rajah Crescent, Ayer Rajah Industrial Estate, Singapore, 139948, Singapore  
Tel 65-67794367 Fax 65-67795508  
E-mail [tpf0wst@singnet.com.sg](mailto:tpf0wst@singnet.com.sg)



Available in: Singapore

EP-7-078

Building and civil engineering

steel pipe materials

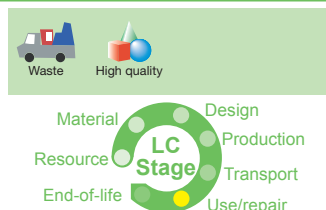
Geo Wing Pile™ II steel pipe pile for the rotary penetration method

Environmental performance

Geo Wing Pile™ II steel pipe pile is an environmentally friendly method which produces no excavation surplus soil and which involves low noise and vibration.

Product performance

Geo Wing Pile™ II, a new-structure steel pipe pile installed by the rotary penetration method and used for the construction of medium-height buildings, has a truncated cone shape wing on the toe of this pile. The product is characterized by its improvement to the workability of the penetration process.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan  
Tel +81-3-4416-6183 Fax +81-3-4416-6793  
E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Geo Wing Pile™ II

EP-7-079

Building and civil engineering

steel pipe materials

**CLEANWELL® DRY, OCTG Premium Connection**

**Environmental performance**

CLEANWELL® DRY is an environmentally-friendly premium connection of VAM® used in connecting oil country tubular goods (OCTG). When a connection is connected to a pipe, the thread surface is coated with grease called "dope". This was necessary to satisfy the specifications for both anti-galling performance and gas-tightness. As the dope contains heavy metals such as lead, there was a concern that heavy metals might result in a detrimental impact on marine creatures or humans. CLEANWELL® DRY is not used of "dope". CLEANWELL® DRY premium connection enables oil and gas development with no discharge of products that are harmful to the environment.

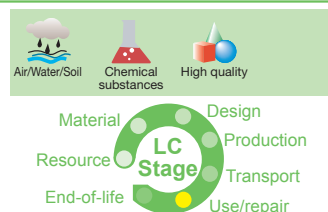
**Product performance**

CLEANWELL® DRY is "dope-free" by using a special surface treatment and coating with an excellent lubricating solid film for both anti-galling performance and gas-tightness. Environmentally-friendly CLEANWELL® DRY is used in the area with the most stringent environmental regulation in the world, and so on with greatly desire.

**Sumitomo Metal Industries, Ltd.**

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan  
 Tel +81-3-4416-6183 Fax +81-3-4416-6793  
 E-mail [chikyu-kan@sumitomometals.co.jp](mailto:chikyu-kan@sumitomometals.co.jp)  
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



CLEANWELL® DRY Structure

EP-7-080

Building and civil engineering

water synthetic resin paints

**Building Exterior Paint Invented with Energy Conservation in Mind "MIRACOOOL"**

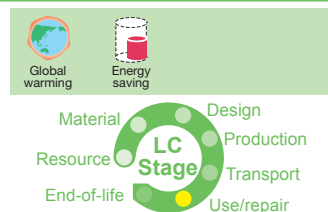
**Environmental performance**

Coating with "Miracool" reflects about 90% of sunlight, which curbs the temperature increases in building walls and roofs. In addition, it drastically reduces the quantity of heat transmission owing to its low coefficient of thermal conductivity and high long-wave emissivity. Because of these functions, "Miracool" can contribute to energy conservation by reducing a building's cooling load. Not only for the energy conservation of a building itself, it can also be helpful for mitigating the heat island phenomenon, extraordinary high temperatures in urban areas as a whole, as it is able to control the absorption of solar energy. We can provide "Miracool way" for asphalt-paved roads, other than "Miracool" for buildings.

**MIRACOOOL Co., Ltd.**

1-11-15-4F, Nihonbashi-horidomecho, Chuo-ku, Tokyo, 103-0012, Japan  
 Tel +81-3-3249-0272 Fax +81-3-3249-0270  
 E-mail [oversea@miracool.jp](mailto:oversea@miracool.jp)  
 URL <http://www.miracool.jp/english/>  
 URL <http://www.miracool.jp/wp-content/uploads/english1.pdf>  
 URL <http://www.miracool.jp/company/>

Available in: Japan, Asia, Southeast Asia, Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China



Miracool Paint



EP-8-001

Machines and equipment

air conditioners

Gas engine heat pump air conditioner equipped with power generator

Environmental performance

High-power EXCEL realizes air conditioning and power generation simultaneously. A compressor driven by a gas engine provides space heating/cooling and an engine generates electricity supplied to air conditioner pumps and buildings. It exercises a maximum rated capacity of 2 to 4 kW and supplies 1 to 3 kW of electricity per outdoor unit in the building. With its high energy-saving features, this system contributes to cutting electricity consumption in the peak hours of electricity demand.

\*Compared to a conventional case using gas heat pump and electricity from the electricity grid, the Hi-power Excel reduces CO<sub>2</sub> emission by approximately 10%.

Product performance

It boasts the industry-leading seasonal efficiency (\*1), reaching 1.86, and the generating efficiency (LHV (\*2)), 44%, exceeds the average generating efficiency at the consuming end of thermal power plants in Japan, 40%.

\*1 Annual Performance Factor (primary energy base): rate of air conditioning capacity of consumed energy on a year-round operation under certain conditions.

\*2 LHV: Lower Heating Value. The amount of heat generated by complete combustion of the combustion gas, minus the latent heat of vaporization of the water vapor generated in the process.

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL <http://ene.osakagas.co.jp/product/conditioning/ghp/hipower-excel.html>

URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



High-power EXCEL

EP-8-002

Machines and equipment

air conditioners

Multi System CDU for Building with All-Inverter Compressor

Environmental performance

- Mitigation of climate change: improvement of efficiency have obtained 5.0 Annual Performance Factor (APF), exceeding the standard value for 2015.
- Efficient use of resources: 7% reduction in quantity compared to our conventional model. As for 14 and 16HP models, 40% reduction in footprint was achieved by making the conventional two-unit connection system into one chassis.
- Management of chemicals: The use of lead-free soldering and chromium-free steel plating have contributed to reducing hazardous chemicals.

Product performance

- Energy-saving: The use of the new DC compressor and the Intelligent VRF control, etc. has contributed to achieve top-line APF in the industry.
- About 40% reduction in footprint in case of connecting 2 outdoor units: Achieved by the new line-up in 14 and 16HP with 3 compressor and 3 inverters.
- Piping design flexibility: About 25% increase in longest piping length and 40% increase in total piping length.

Toshiba Carrier Corporation

3-23-17 Takanawa, Minato-ku, Tokyo, 108-8580, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-aircon.jp/aboutus/environment.htm>



Air conditioning Modular system in business use 'Super Module Multi'

EP-8-003

Machines and equipment  
air conditioning system

OH Saver (Optimized HVAC Control Systems for Energy Saving)

Environmental performance

This system specifies the target setting values for each individual equipment, so that heat sources and various equipment can be operated at the point where the overall air conditioning energy consumption is lowest (the optimal point), while maintaining the thermal environment in the room. A 20% reduction in energy usage was achieved by using enhanced software, which improves the efficiency of the Primary Source System and the Secondary System. (in-house comparison)

\*The figure is based on the optimization test result conducted at our in-house facility (2000RT turbo chiller)

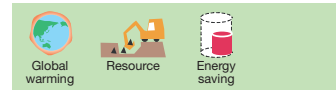
Product performance

During the design stage, total system parameters are simulated to assist in obtaining the high energy saving on any air-conditioning configuration.

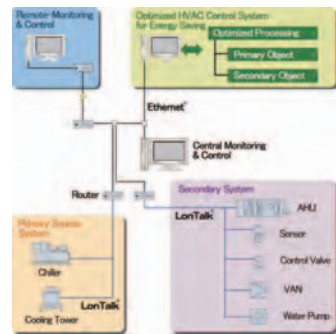
Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
Tel +81-3-5928-8100 Fax +81-3-5928-8701  
URL <http://www.hitachi-pt.com>  
URL <http://www.hitachi-pt.com/products/ac/savingenergy/ohsaver.html>  
URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan,Asia,Southeast Asia,Middle and Near East,ASEAN,Indonesia,Singapore,Thailand,Philippines,Malaysia,China (Except for Iran)



TYPE II



System configuration

EP-8-004

Machines and equipment  
air conditioning system

Energy Saving Heat Source System

Environmental performance

This system is composed of free cooling system enabling long term usage in a year which produces cold water in a cooling tower using cool outdoor air and the technology optimizing heat source system operations depending on outdoor air temperatures and heat load. Furthermore it is capable of reducing energy consumption by 50% (our in-house comparison) when combined with inverters, the highly efficient control equipment.

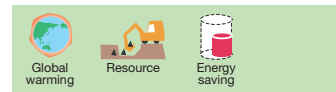
Product performance

It can reduce the circulation power of fans and pumps by controlling chilled water flux and temperatures depending on outdoor air temperatures, heat load conditions and equipment characteristics, in order to optimize heat source system operations. It also can be flexibly installed into existing air conditioning systems.

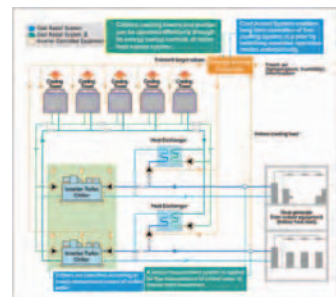
Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
Tel +81-3-5928-8100 Fax +81-3-5928-8701  
URL <http://www.hitachi-pt.com>  
URL <http://www.hitachi-pt.com/products/ac/savingenergy/industrial/coolassist.html>  
URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan,Asia,China



TYPE II



System configuration

EP-8-005

Machines and equipment  
air conditioning system

Energy Efficiency Service for HVAC by using ICT

Environmental performance

- Mitigation of climate change: 10-20% reduction of energy consumption by the reduced consumption of cool water, hot water and fan power and the prevention of excessive cooling and heating.
- Efficient use of resources: Control is executed by software. Minimization of hardware means resource saving in the manufacturing phase.

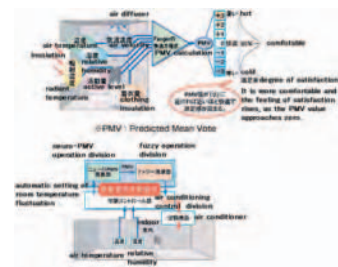
Product performance

- Comfortable environment: Air-conditioning control based on Predicted Mean Vote (PMV) maintains comfortable indoor environment.
- Product spec: Need BACnet/IP used as communication protocol with existing BMS (Building Management System).

TOSHIBA CORPORATION Smart Community Div.

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
Tel +81-3-3457-3043 Fax +81-3-5444-9312  
URL <http://www.toshiba.co.jp/index.htm>  
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Neuro-PMV Control

EP-8-006

Machines and equipment  
air compressor

"AIR ZEUS", HITACHI Oil-Free Screw Compressor

Environmental performance

- New type air block improving efficiency and energy consumption can reduce CO<sub>2</sub> emissions by approximately 31 tons annually\*.
- It is equipped with our unique power saving control systems. End pressure control with active power control can reduce CO<sub>2</sub> emissions by approximately 91 tons annually\* and precision pressure control with power saving control can reduce CO<sub>2</sub> emissions by approximately 24 tons annually\* when average load factor is 70% respectively.

\*Our in-house comparison

Note: Reduction amount of CO<sub>2</sub> emissions (CO<sub>2</sub> emission coefficient: 0.555kg-CO<sub>2</sub>/kWh) is based on the comparison of previous model number SDS-S and current SDS-U280 (motor output: 280kW).

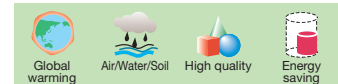
Product performance

Air block fluid analysis applying our advanced computational fluid dynamic technology simulates to assist in optimising shapes of air flow path, inlet, and rotor and as a result improves efficiency and energy consumption.

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
Tel +81-3-5928-8100 Fax +81-3-5928-8701  
URL <http://www.hitachi-pt.com>  
URL <http://www.hitachi-pt.com/products/si/compressor/screw/index.html>  
URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan, Asia, Oceania, Europe, Southeast Asia, Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China



TYPE II



AIRZEUS SDS-U Series

EP-8-007

Machines and equipment

air conditioning and household equipment

Energy- and Money-saving Heat Pump Hot Water Supply Unit Suitable for Buildings in Various Scale.

Environmental performance

- Mitigation of climate change: Compared to conventional hot water supply system, namely, the boiler, this highly efficient Heat Pump hot water supply system generates only half of CO<sub>2</sub> emissions, and reduces its operating cost approximately to one-third.

Product performance

- Simple installation: Drastic improvement in piping and wiring was achieved compared to our conventional model.
- Energy-saving operation: The multi-function remote controller enables different settings required by various industries to achieve energy-saving operation.
- Optimum system: The system allows upto 8-unit connection to satisfy different applications and wide-ranging hot water demands (1 to 27 tons).

Toshiba Carrier Corporation

Shinagawa Center Bldg, 23-17, Takanawa 3-chome, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/environment.htm>



Heat Pump Water Heater for Commercial Use 'Hot Power Eco BIG II'

EP-8-008

Machines and equipment

ballast water purification system

"ClearBallast", Hitachi Ballast Water Purification System

Environmental performance

This ballast water purification equipment is used to protect ocean ecosystems and prevent pandemic spread. It causes no secondary marine pollution and is an environment conscious system, as it does not use any disinfecting agents.

Product performance

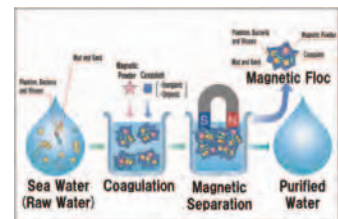
An epoch-making ballast water purification system, which rapidly removes seawater organisms in ballast water on board using coagulant and magnetic separation method.



TYPE II

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
 Tel +81-3-5928-8100 Fax +81-3-5928-8701  
 URL <http://www.hitachi-pt.com>  
 URL <http://www.hitachi-pt.com/products/es/ballast/index.html>  
 URL <http://www.hitachi-pt.com/csr/index.html>



Available in: Japan

Process Outline

EP-8-009

Machines and equipment

biologically treated environment protecting equipment

**Comprehensive Immobilizing Nitrogen Removal Process (Energy saving type)**

**Environmental performance**

This is an advanced treatment system for sewage treatment nitrification promotion type. Polymer gels immobilized nitrifying bacteria comprehensive "Bio-N-cubes" by introducing into the reaction, to enable the processing of advanced treatment systems in less time traditional. We aimed at saving energy based on experience maneuvering data and developed it newly.

As a result, we succeeded in evolving this treatment process more.

- Approximately 20% reduction in the amount of air required by optimizing the design air volume (our ratio).
- Approximately 35% (our ratio) of energy-saving effect is in this way possible than type conventionally.

\*dual-mixer:Energy saving agitator our proprietary.

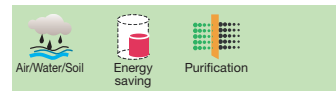
**Product performance**

About 1/2 processing time compared to traditional circulation nitrification denitrification process (comparison) can be, and reactor Space saving can be achieved.

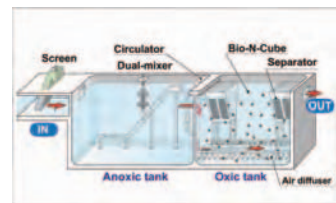
**Hitachi Plant Technologies, Ltd.**

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
 Tel +81-3-5928-8100 Fax +81-3-5928-8701  
 URL <http://www.hitachi-pt.com>  
 URL <http://www.hitachi-pt.com/products/es/water/wastewater/pegasus.html>  
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Worldwide (Except for Iran)



TYPE II



System Flow Diagram

EP-8-010

Machines and equipment

CD-SEM (Scanning Electron Microscope)

**CD-Measurement SEM "CG4100"**

**Environmental performance**

The CD-SEM for from 45nm to 22nm.

Measurement repeatability, throughout and up-time improvement.

Throughput of automatic measuring of microscopic semiconductor circuit patterns on Wafer is enhanced by 17% (36wafers/h→42wafers/h:@under Hitachi's standard evaluation conditions) in comparison with previous model CG4000 (Sales start in March, 2009).



TYPE II



Advanced CD-Measurement SEM "CG4100"

**Hitachi High-Technologies Corporation**

24-14, Nishi-Shimbashi 1-chomem, Minato-ku, Tokyo, 105-8717, Japan  
 Tel +81-3-3504-7562 Fax +81-3-3504-3959  
 E-mail [sugawara-kazunari@nst.hitachi-hitec.com](mailto:sugawara-kazunari@nst.hitachi-hitec.com)  
 URL <http://www.hitachi-hitec.com/global/index.html>  
 URL <http://www.hitachi-hitec.com/global/csr/index.html>

Available in: Japan, Asia, Oceania, Europe, North America, Central America, South America, Southeast Asia, Middle and Near East, ASEAN, U.S.A, Indonesia, Singapore, Thailand, Philippines, Malaysia, Mexico, Republic of Korea, Taiwan (Rep. of China), China, South Africa (Except for Iran)

1 Eco-product // Machines and equipment  
 2  
 3  
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 9



EP-8-011

Machines and equipment

chemically treated environment protecting equipment

High Concentration Organic Wastewater Treatment System (Energy Regeneration System)

Environmental performance

This system consists of a facility where high concentration of organic wastewater and process residue are treated while regenerating energy from the organic matter in the form of biogas which is then converted and effectively used as electric power or steam.

Energy efficiency/ Waste reduction: Utilizing anaerobic microorganisms in the treatment of organic matter results to 80% power consumption reduction and 90% less waste sludge compared to conventional aerobic treatment.

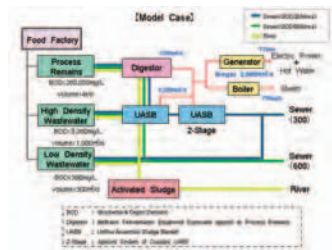
Energy regeneration: biogas obtained from organic wastes can be converted to and used as electric power and/or steam.

Product performance

The system's strong points are the energy efficiency of the treatment process and its waste reduction feature. Upon necessity, pre-treatment, aerobic treatment, and sludge treatment facilities may also be installed as accessory equipment. Moreover, energy efficiency may be increased through the use of the 2-stage UASB and bio-desulphurizer technology original to the company.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-4340  
 URL [http://www.toshiba.co.jp/sis/page/1\\_6\\_01.htm](http://www.toshiba.co.jp/sis/page/1_6_01.htm)



High concentration organic effluent treatment system

EP-8-012

Machines and equipment

chemically treated environment protecting equipment

The solid fuel production system from sewage sludge by pyrolysis

Environmental performance

- Mitigation of climate change: The CO<sub>2</sub> reduction effect is larger than that of the incineration system, because the feeding of extra fuel is unnecessary for the running of process, and because solid carbon is separated owing to the thermal decomposition of the charged organic materials.

Product performance

- The system consists of the main facilities for Dryer, Thermal decomposition furnace, combustion furnace, the equipment of heat-source and gas-cleaning. It is possible to take out carbide (char) of high utility value from the charge, and thereby high recyclability is realized.
- Neighborhood factories using steam can use carbon fuel as a bio-fuel that is neutral for CO<sub>2</sub> discharge.
- As for solid fuel, long-term storage is possible because its main component is stable carbides. Moreover, problems due to bad smell seldom happen.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-4187  
 URL [http://www.toshiba.co.jp/sis/page/1\\_1\\_2\\_10.htm](http://www.toshiba.co.jp/sis/page/1_1_2_10.htm)



Recycle system of sewage treatment sludge

Eco-product // Machines and equipment



EP-8-013

Machines and equipment

chemically treated environment protecting equipment

Toshiba original wastewater treatment system without using coagulants

Environmental performance

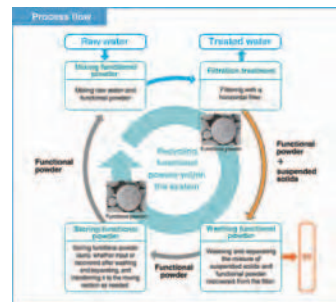
- Toshiba's unique wastewater treatment equipment, which considerably reduces running costs (reducing of chemical and chemical-derived sludge) in the process of inorganic-based effluent treatment at manufacturing equipment plant, etc.
- Conventional coherent filtering and high pressure floating treatment method using coagulants are employed in the past in case size of SS is fine and filtration resistance of wastewater is high. Therefore we have developed chemical-free filtration system employing magnetic functional powder without using coagulants.

Product performance

- Recycling system by using recycling functional powder
- Density of suspended solids with a minimum diameter  $2\mu\text{m}$  over, can be reduced to 20mg/L or less.
- At least 99.9% of functional powder can be recovered per batch by using the magnetic separation unit and washing equipment.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
Tel +81-3-3457-4340



Chemical-Free Filtration System

EP-8-014

Machines and equipment

chiller

High-efficiency absorption chiller with two-stage absorption and evaporation

Environmental performance

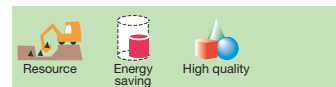
RFW series efficiency reaches steam consumption ratio 3.5 kg/h USRT, by improving approximately 20% from the current running series. Besides, RFW series flow rate of chilled/cooling water is decreased with large temperature head, which contributes to savings of pumping energy.

Product performance

Steam-driven double effect absorption chiller RFW series is awarded "PRESIDENT OF THE JAPAN MACHINERY FEDERATION AWARD" in "IMPLEMENTATION OF ENERGY CONSERVING MACHINERY AWARDS" as high efficient absorption chiller with dual evaporation/absorption cycle. RFW series has steam consumption ratio 3.5 Kg/h USRT, highest efficient ratio in the world, covering in the range of 1,864 kW (530 USRT) to 10,549kW (3000 USRT).

EBARA CORPORATION

11-1 Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan  
Tel +81-3-3743-6111 Fax +81-3-5736-3121  
E-mail webmaster@ebara.com  
URL <http://www.ebara.co.jp/en/>  
URL <http://www.ebara.co.jp/en/csr/>



Ebara Steam Absorption Chiller RFW model

Available in: Japan and 17countries

EP-8-015

Machines and equipment

chiller

Eco Cooling Ace

Environmental performance

Eco Cooling Ace is a cooling support system for many kinds of outdoor units. (refrigerator/remote-condenser/chiller/EHP/GHP)  
 Tap water is sprinkled over the cooling filter, and then intake air gets cooled when it goes through the filter.  
 What the Eco Cooling Ace brings (at EHP 10HP)  
 \*Energy saving:  
 High side pressure reduction and freezing/air cooling-ability increased by through the filter gives a 25% cut.  
 \*CO<sub>2</sub>:  
 2.2 tons/year of CO<sub>2</sub> emissions can be cut. (the electricity conversion value)  
 \*Reducing "Heat-Island Effect":  
 The discharged air is 3-4°C cooler through the cooling filter.

Product performance

The filter also works as a filter for the protection of fins against dust, exhaust gas, etc.

FUJIKOKI CORPORATION

7-17-24, Todoroki, Setagaya-ku, Tokyo, 158-0082, Japan  
 Tel +81-3-3702-5141  
 URL <http://www.fujikoki.co.jp>  
 URL [http://www.fujikoki.co.jp/en/product/ot/pr\\_ot\\_ace.html](http://www.fujikoki.co.jp/en/product/ot/pr_ot_ace.html)

Available in: Japan



EP-8-016

Machines and equipment

chiller

Chiller

Environmental performance

- Innovative technologies are applied for the design and development of the compressor, refrigerant cycle, and chiller itself to realize this R410A screw chiller. R410A refrigerant and optimized design of equipment for R410A achieved COP value dramatically improved to become more than 5.1 for all models.

Product performance

- Hitachi has succeeded to introduce R410A refrigerant in all its range of products, ranging from room air-conditioners, package air-conditioners to currently released SCREW CHILLER. Using R410A refrigerant, the cooling capacity per unit volume were increased. It makes the system compact and achieves less impact on the environment.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan  
 Tel +81-3-3502-2111 Fax +81-3-3506-1442  
 URL <http://www.hitachi-ap.com/>

Available in: Asia (Except for 60Hz Market such as Korea, Philippines and Taiwan )



RCUA-WHYZ

EP-8-017

Machines and equipment

chiller

**Adsorption Chiller making a cold water at a low cost****Environmental performance**

This is a chemical refrigeration compressor using one of the NWFs, H<sub>2</sub>O and adsorbent. It can produce chilled water from the low grade heat source of less than 75 degrees Celsius. Main body does not require electricity. In addition, the maintenance cost is nearly negligible.

**Product performance**

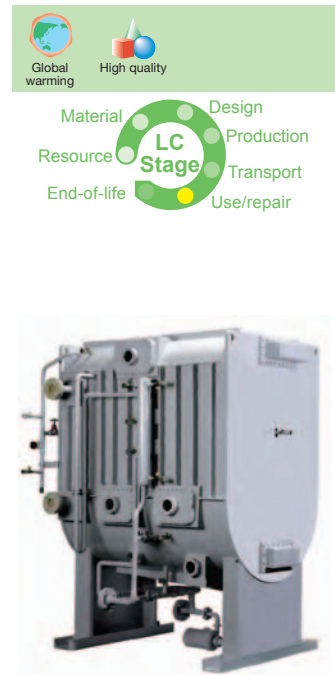
AdrefNoa can produce chilled water 5°C to 15°C using waste water 60°C to 80°C.

This unit is ideal for renewable energy and biomass energy applications and contributes to environmental sustainability through reduced CO<sub>2</sub> emissions. Using water as the refrigerant this next generation chiller boasts a system COP of 10 with extremely low absorbed power.

**Mayekawa Mfg.Co.,Ltd.**

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan  
Tel 81-3-3642-8181 Fax 81-3-3643-7094  
E-mail [pubic@mayekawa.co.jp](mailto:pubic@mayekawa.co.jp)  
URL <http://www.mayekawa.co.jp>

Available in: Japan



Adsorption Chiller

EP-8-018

Machines and equipment

chiller

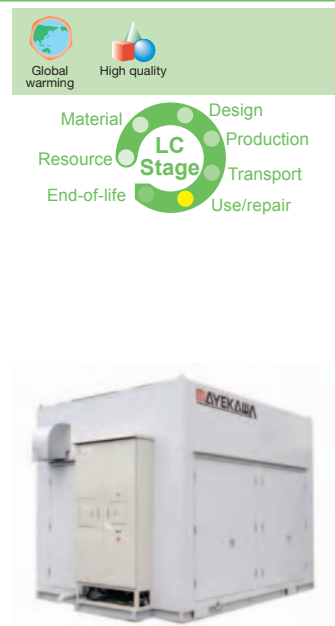
**Air refrigeration system, "Pascal Air"****Environmental performance**

Air is the ultimate NWF from the viewpoint of safety and environment. This is the latest refrigeration system which uses air as a refrigerant. The major feature is to suck the air in the refrigerated room, and to lower the temperature of sucked air by compressing and expanding, and then to burst out into the refrigerated room again. High coefficient of performance is realized by the expander integrated turbo-compressor, and 50% energy saving can be fulfilled compared with the former system.

**Mayekawa Mfg.Co.,Ltd.**

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan  
Tel 81-3-3642-8181 Fax 81-3-3643-7094  
E-mail [pubic@mayekawa.co.jp](mailto:pubic@mayekawa.co.jp)  
URL <http://www.mayekawa.co.jp>

Available in: Japan



Pascal Air

EP-8-019

Machines and equipment

chiller

Hybrid cooling unit

Environmental performance

This is a hybrid cooling unit with one of the NWFs, NH3 which is equipped with a IPM motor and a semi-hermetic type compound screw compressor which is proud of world's best coefficient of performance (COP). It is optimum for the re-modeling and the renewal of the existing refrigerated warehouses and/or the food processing factories.

Product performance

NewTon3000 is a new high efficiency energy saving NH3/CO2 cooling system purpose designed for cold storage refrigeration. We have reduced adsorbed power by 20% in comparison to conventional HFC refrigerators. Safety is improved by using CO2 as the secondary refrigerant and reducing the amount of NH3 refrigerant to 1/6 the amount a conventional ammonia system would use.

Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan  
 Tel 81-3-3642-8181 Fax 81-3-3643-7094  
 E-mail [pubic@mayekawa.co.jp](mailto:pubic@mayekawa.co.jp)  
 URL <http://www.mayekawa.co.jp>

Available in: Japan

NewTon3000

EP-8-020

Machines and equipment

chiller

Highly Efficient, Energy-saving Air-cooled Heat Source Unit for Wide-ranging Temperatures - Only Small Footprint and Installation Work Needed

Environmental performance

- Mitigation of climate change: 65% reduction in CO<sub>2</sub> emissions compared to absorption chillers.
- Efficient use of resources: 15% reduction in the product weight per refrigeration capacity, has contributed to reducing the use of raw materials. 98% of the materials used are recyclable.

Product performance

- High performance: With 6.3 COP for cooling, energy-saving operation in wide-ranging temperatures, such as 25°C hot water or 30°C chilled water, was achieved.
- Modular configuration: Can be connected upto 96 units. The modular connection method for saving space reduces 58% of the footprint.
- Built-in Circulation Pump: Successfully reduced installation work and transportation power by variable flow control depending on the required load.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/environment.htm>

Air-cooled HP Chiller, Universal Smart X :RUA-SP series

EP-8-021

Machines and equipment

chiller

Highly-efficient, Energy-saving, Space-saving Chiller with Greatly Increased Cooling Capacity for Quick Installation

Environmental performance

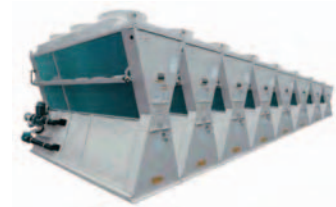
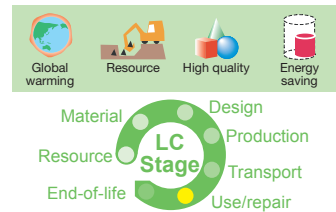
- Mitigation of climate change: 15% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 40% reduction in weight resulting in a reduced amount of materials used. 98.4% of the materials are recyclable.

Product performance

- Large capacity: 60% or 45% improvement in cooling capacity compared with the standard specifications and the high-efficiency specifications, respectively.
- Modular design: 50% reduction in carbon footprint thanks to a space-saving modular structure.
- Built-in circulation pump: Quick installation and reduced transfer power due to variable flow rate control according to the load.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Air-cooled Super Flex ModularChiller, RUA-TBP S series

EP-8-022

Machines and equipment

chiller

Highly-efficient, Compact Chiller with Greatly Increased Cooling Capacity

Environmental performance

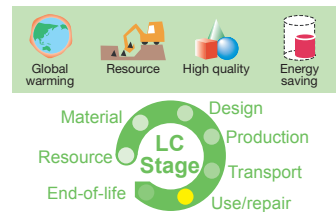
- Mitigation of climate change: 31% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 46% reduction in weight resulting in a reduced amount of materials used. 99.9wt% of the materials are recyclable.
- Management of chemicals: The exterior is largely uncoated, resulting in a reduced use of volatile organic compounds (VOC).

Product performance

- Large capacity: 58% improvement in cooling capacity compared with the previous model of the same size in the series.
- Ease of installation: Modular structure with each module sufficiently compact for transportation in an 11-passenger-class elevator.
- Ease of use: Batch control available using a touch-panel computer.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Water-cooled Super Flex ModularChiller, Type-VRUW-TBP S series

1 Eco-product // Machines and equipment  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9

EP-8-023

Machines and equipment

chip mounter

Compact Premium Modular Mounter  $\Sigma$ -G4/ $\Sigma$ -G5

Environmental performance

- <1> Deep cut in power consumption by 39.6% ( $\Sigma$ -G4), 34.5% ( $\Sigma$ -G5) and realized excellent progress of productivity by 270% comparing to Hitachi standard models (TCM-X210 (\*)).
  - <2> Provides more quiet environment for the operation by 11.8% ( $\Sigma$ -G4), 2.2% ( $\Sigma$ -G5) in noise reduction.
  - <3> Decrease of product mass by 22.7% ( $\Sigma$ -G4), 18.1% ( $\Sigma$ -G5) comparing to Hitachi standard models (TCM-X210 (\*)).
- \*Comparison with our standard model TCM-X210 (2003)

Product performance

- <1> Throughput 140,000cph (Under optimum conditions)
- <2> Wide range component size : 0.4 × 0.2mm~55 × 55mm, 100 × 26mm
- <3> Mounting accuracy 40 μm (3σ)

Hitachi High-Technologies Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan  
 Tel +81-3-3504-7562 Fax +81-3-3504-3959  
 E-mail sugawara-kazunari@nst.hitachi-hitec.com  
 URL <http://www.hitachi-hitec.com/global/index.html>  
 URL [http://www.hitachi-hitec.com/global/i\\_and\\_m/surf/surf\\_index.html](http://www.hitachi-hitec.com/global/i_and_m/surf/surf_index.html)  
 URL <http://www.hitachi-hitec.com/global/csr/index.html>

Available in: Japan,Asia,Oceania,Europe,North America,Central America,South America,Southeast Asia,ASEAN,U.S.A,Indonesia,Singapore,Thailand,Philippines,Malaysia,Mexico,Republic of Korea,Taiwan (Rep. of China), China



Compact Premium Modular Mounter  $\Sigma$ -G4/ $\Sigma$ -G5

EP-8-024

Machines and equipment

composting/fermentation machine

Bio-Mate

Environmental performance

Bio-Mate is a high-speed on-site organic wastes reduce, reuse and recycle fermentation system. It reduces organic waste from going to landfills and help save our environment. Using our enzymes (Inozyme), organic waste can be converted into nutrient-enriched fertilizer or high quality animal feed within 8-48 hours. Organic waste can be continuously fed into Bio-Mate and discharged on a daily or weekly basis resulting in vermin and pathogen free end products. Reduces green house gaseous emission by 4 times when compared to landfill as proven in SIRIM technical report, ETRC257/16/1020 (R150/11) \*



308.31kg-CO <sub>2</sub> Inspection	Resource/Materials/Production/Transfer/Use/End-of-Life
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PROMISE EARTH (M) SDN BHD

48A-1, 1ST FLOOR, LEBUH ENGGANG, OFF JALAN MERU, 41050, Malaysia  
 Tel 03-33448113 Fax 03-33440939  
 E-mail enson@promiseearth.com.my  
 URL <http://en.promiseearth.com.my/home>  
 URL <http://en.promiseearth.com.my/products>

Available in: Asia and Oceania, Malaysia



Eco-product // Machines and equipment

1  
2  
3  
4  
5  
6  
7  
8  
9



EP-8-025

Machines and equipment  
conveyor rubber belts

Energy-saving belt "BEATRON"

Environmental performance

In the operation of a conveyor belt, energy consumption grows by the roll over resistance generated when the belt passes over the rollers. Energy-saving belt "BEATRON" can decrease the roll over resistance by uniting the optimization design of the rubber viscoelasticity and the HELLO theory (the theory of optimized belt design). As a result, about 30% and more energy-saving has been verified when applied to an actual long distance conveyor line.  
 ※The efficiency value depends on the specification of conveyer and term of use.



Bridgestone Corporation

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 Tel +81-3-5202-6851 Fax +81-3-5202-6854  
 URL <http://www.bridgestone.com>  
 URL [http://www.bridgestone.com/products/diversified/conveyorbelt/products/energy\\_saving\\_belt.html](http://www.bridgestone.com/products/diversified/conveyorbelt/products/energy_saving_belt.html)  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Energy-saving belt "BEATRON"

EP-8-026

Machines and equipment  
dc motors

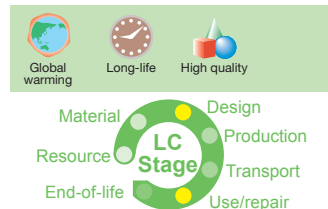
Traction Motor for Rolling Stock which achieved Saving Energy, Reduction of CO<sub>2</sub> and Low-noise by using Permanent Magnet and Totally Enclosed Structure

Environmental performance

- Mitigation of climate change: More than 20% reduction in power consumption through the pursuit of high efficiency.
- Efficient use of resources: Reduced need of maintenance because of little internal contamination thanks to the totally enclosed structure

Product performance

- Reduced loss: Around 5% improvement in efficiency compared with the conventional motor thanks to reduced internal loss.
- High reliability: Enhanced reliability of the motor thanks to the totally enclosed design.
- Reduction operating cost: Reduced running cost thanks to high efficiency.
- Low noise: Noise-reduction of about 6dBA achieved by adopting the totally enclosed structure.



TOSHIBA CORPORATION Social Infrastructure Systems Company

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 Tel +81-3-3457-4573 Fax +81-3-5444-9267  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Permanent magnet synchronous motor

Available in: Japan, Worldwide

EP-8-027

Machines and equipment

deodorizer

Deodorizer

Environmental performance

Deodorizer is a unit attached to Bio-Mate composting/fermentation machine to absorb the smell from releasing into the environment. Foul smell emitted is neutralized through activated carbon to prevent pest and vermin.



PROMISE EARTH (M) SDN BHD

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 Tel 03-33448113 Fax 03-33440939  
 E-mail enson@promiseearth.com.my  
 URL <http://en.promiseearth.com.my/home>  
 URL <http://en.promiseearth.com.my/products>

Available in: Asia and Oceania, Malaysia



EP-8-028

Machines and equipment

dry type transformers

Dry Type of the Amorphous Metal Core Transformer-H

Environmental performance

With a low noise, low heat emissions, super high efficiency, low steel loss design in safety, energy saving and fire prevention, it helps to reduce the power loss on power systems.

Product performance

Used for low-voltage power distribution and high safety demand sites, such as highrise buildings, factories, department stores, hospitals, schools, hotels and so forth.

Incorporating H-grade Dupont Nomex R 220°C high heat-resistant, advanced safety insulation material.

Adopting non-silica steel core and a resonation-resistant design, the excellent heat ventilation design frees any heat aggregation phenomenon. When operating at a high efficiency, the steel core is kept to a low temperature.



TYPE I

Klean Power Energy Technology Co., Ltd.

No. 50-5, Dajuewei, Shuishang Township, Chiayi County, Taiwan, 608, Republic of China  
 Tel +886-5-2601838 Fax +886-5-2601837  
 E-mail [gpr966@gpr.com.tw](mailto:gpr966@gpr.com.tw)  
 URL <http://www.klean-power.com.tw>

Available in: Worldwide



EP-8-029

Machines and equipment

dry vacuum pump

### Super Energy Efficient Dry Vacuum Pump

#### Environmental performance

Unveil innovative dry vacuum pump, EV-M type series for harsh duty applications. EV-M type series equips ambitious on-demand motor torque control function coping with resistance in the pump module. It also reduced an energy consumption during normal operation even for harsh duty application usage.

#### Product performance

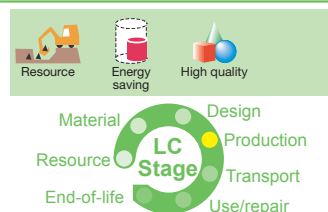
Wide range coverage enables to support from smaller size process chamber to LCD/Photovoltaic CVD applications.

EBARA also offers many types of energy saving dry vacuum pumps for various applications. Please feel free to contact for information.

### EBARA CORPORATION

4-2-1 Honfujisawa, Fujisawa-shi, 251-8502, Japan  
 Tel +81-466-83-7447  
 E-mail nambu.isao@ebaracorp.com  
 URL <http://www.ebara.co.jp/en/>  
 URL <http://www.ebara.co.jp/en/csr/>

Available in: Japan, Europe, U.S.A., Singapore, Republic of Korea, Taiwan (Rep. of China), China



Dry Vacuum Pump EV-M type series

EP-8-030

Machines and equipment

electric measuring instruments

### FTIR Gas Analyzer for Semiconductor and FPD Processes

#### Environmental performance

The FTIR gas analyzers enable the detection and measurement of a wide variety of substances, such as greenhouse gases, whose reduction is required to prevent global warming, PFCs, semiconductor and flat panel display (FPD) process gases. The management of emissions through the quantitative measurement of emitted concentration encourages industries to act to reduce these substances with the appropriate operation of factories and development of productive processes for semiconductors.

\*The compact products can be easily carried and installed in small spaces.

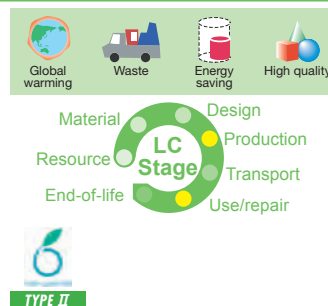
\*Single and dual cell models available.

\*The products are miniaturized by 44% in area occupancy and by 20% in quantity compared with conventional models.

\*Thanks to its energy saving design, power consumption is reduced by 44% (220 VA) compared with conventional models.

### HORIBA, Ltd.

2 Miyahogashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan  
 Tel 81-75-313-8121 Fax 81-75-321-6621  
 E-mail [info@horiba.co.jp](mailto:info@horiba.co.jp)  
 URL <http://www.horiba.com>  
 URL <http://www.horiba.com/uk/semiconductor/products/product-lines/gas-concentration-monitor/details/ftir-gas-analyzer-402/>  
 URL <http://www.horiba.com/us/en/social-responsibility/>



FTIR Gas Analyzer for Semiconductor and FPD Processes

Available in: Worldwide

EP-8-031

Machines and equipment

electric measuring instruments

### Ambient Air Pollution Gas Analyzer

#### Environmental performance

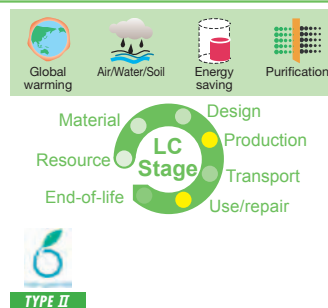
An analyzer to continuously measure critical components (NO<sub>x</sub>, SO<sub>2</sub>, CO, THC, O<sub>3</sub>) in the air as well as a monitor to continually supervise the condition of air pollution based on the Air Pollution Control Law for local or regional governments. The units are set at Ambient Air Pollution Monitoring Stations and Roadside Air Pollution Monitoring Stations to observe the conditions of air pollution.

- A lead-free solder alloy is used for the print substrate.
- Compared with conventional models, the product offers a reduction of nearly 13% in power consumption and roughly 21% in the mass of the analyzer (compared with the average value of the five models in this series).

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 URL <http://www.horiba.com>  
 URL <http://www.horiba.com/process-environmental/products/ambient/>  
 URL <http://www.horiba.com/us/en/social-responsibility/>

Available in: Worldwide



Ambient Air Pollution Monitor

EP-8-032

Machines and equipment

electric measuring instruments

### Continuous Emission Stack Gas Monitoring System

#### Environmental performance

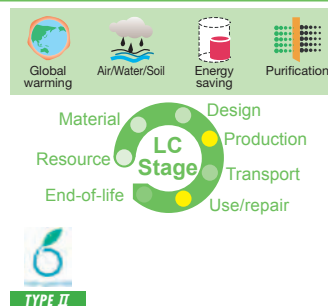
This is a continuous stack gas emission monitoring system to measure up to five components (NO<sub>x</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub>, O<sub>2</sub>) with one system. The facilities having combustion process for power generation and refuse incineration utilize the system not only for environmental pollution control but also to conduct adequate management to meet the total volume control standard by each local or regional government.

- Lead-free solder alloy is used for the print substrate.
- The product is reduced by 52% in volume, by 28% in mass and by 25% (200 VA) in power consumption compared with conventional models.

#### HORIBA, Ltd.

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 E-mail [info@horiba.co.jp](mailto:info@horiba.co.jp)  
 URL <http://www.horiba.com>, [www.horiba.com/us/en/social-responsibility/](http://www.horiba.com/us/en/social-responsibility/)  
 URL <http://www.horiba.com/process-environmental/products/combustion/cems-stack-gas-emission/details/enda-5000-stack-gas-analysis-system-336/>

Available in: Worldwide



Continuous Emission Stack Gas Monitoring System

EP-8-033

Machines and equipment

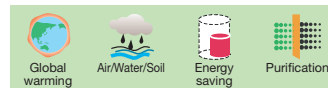
electric measuring instruments

Portable Gas Analyzer PG-300

Environmental performance

Unique Multi Gas Analyzer and Sample Handling/Conditioning in one compact, self-contained unit. Simultaneously measures up to 5 gas components (NOx, SO<sub>2</sub>, CO, CO<sub>2</sub>, and O<sub>2</sub>); availability to measure methane (CH<sub>4</sub>) for biomass, fuel cells, and other applications.

- A lead-free solder alloy is used for the print substrate
- Extremely portable with rugged side guards; unit is 20% lighter than previous models
- Energy efficient with up to 35% reduction in power consumption compared with previous model



HORIBA, Ltd.

2 Miyanohigashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan  
 Tel 81-75-313-8121 Fax 81-75-321-6621  
 E-mail info@horiba.co.jp  
 URL <http://www.horiba.com>  
 URL <http://www.horiba.com/us/en/social-responsibility/>



Available in: Worldwide

EP-8-034

Machines and equipment

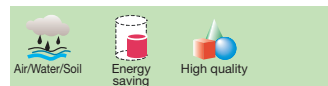
electric measuring instruments

Automatic COD Monitor CODA-500

Environmental performance

Fully automated monitor that measures Chemical Oxygen Demand (COD) in the water as an indicator of the degree to which water is polluted. Depending on the types of samples, either Acid Potassium Permanganate Method or alkaline Potassium Permanganate Method is used, and these methods are based upon Japanese Industrial Standards (JIS).

- A lead-free solder alloy is used for the print substrate
- Enabling the same measurement accuracy with only 1/10 the reagent quantity
- Energy efficient with up to 50% reduction in power consumption compared with previous model
- Direct heating method requires no cooling water



HORIBA, Ltd.

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 Tel 81-75-313-8121 Fax 81-75-321-6621  
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 URL <http://www.horiba.com>  
 URL <http://www.horiba.com/us/en/social-responsibility/>



Available in: Worldwide

EP-8-035

Machines and equipment

electric measuring instruments

Energy Measuring Unit "EcoMonitorPro"

Environmental performance

Following is its environmental performance features compared to our previous model (per 1 circuit).  
 ----<< Material / Resource saving >>----  
 45% reduction of resource consumption and non-recycling resource  
 ----<< Energy saving >>----  
 51% reduction of electricity consumption when used and 82% reduction of electricity consumption on standby  
 ----<< Toxicity / Chemical substances reduction >>----  
 Compliant with EU RoHS Directive

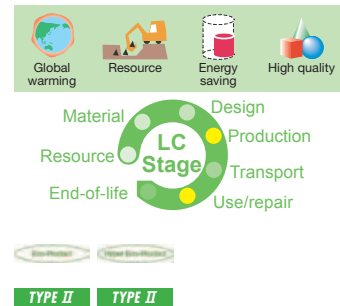
Product performance

"EcoMonitorPro" can support your energy saving activity. It is capable of accurately measuring the electric consumption of each facility or assembling line. The line-up is for 1,3,5, and 7 circuits. It can be connected to our field-network, CC-Link.

Mitsubishi Electric Corporation

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 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



EMU2 - RD7 - B

EP-8-036

Machines and equipment

electric measuring instruments

Breaker with Energy Measuring Function and Display

Environmental performance

Following is its features in environmental conscious design compared to the previous MDU breaker.  
 ----<< Material / Resource saving >>----  
 31% reduction of resource consumption (MDU part only)  
 ----<< Energy saving >>----  
 37% reduction of electricity consumption (MDU part only)  
 ----<< Toxicity / Chemical substances reduction >>----  
 Compliant with RoHS

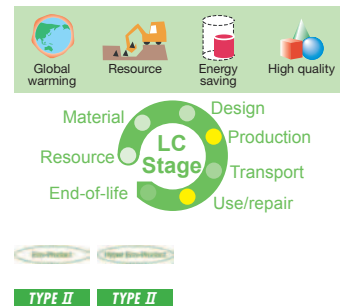
Product performance

MDU breaker (a breaker with measuring function and display) is capable of measuring, displaying and transmitting circuit information with having VT and CT inside of the body and Measuring Display Unit outside of the body. Wide-range line-up of MDU breakers and capability of connecting to our field network, CC-Link, can contribute to your saving energy activity.

Mitsubishi Electric Corporation

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 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



NF400-SEP with MDU



EP-8-037

Machines and equipment

electric measuring instruments

Energy Measuring Unit for MELSEC-Q Series

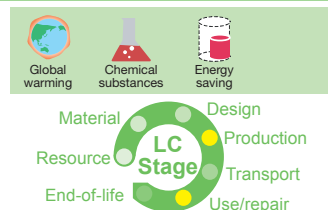
Environmental performance

----<< Energy saving >>----

Reduction of energy and costs can be expected through productivity improvement by connecting this device to the MELSEC-Q Series sequencer to measure the amount of electricity used for each product and production process in production facilities and lines.

----<< Toxicity / Chemical substances reduction >>----

Meets the RoHS Directive of Europe.



TYPE II



Energy Measuring Unit for "MELSEC-Q Series" QE81WH

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide

EP-8-038

Machines and equipment

electric measuring instruments

Demand Controllers, energy saving, peak cut, electricity charge reduction supporting

Environmental performance

[Energy Saving]

Power obtain and control by Demand monitoring, revising the contract power, so electricity charges reduction and peak cut is possible.

[Efficient use of resources]

DM-100CPS: reduce the number of parts by 26%

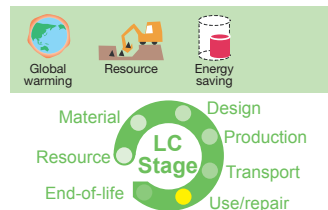
MES-DM1000: reduce the number of parts by 5%

Product performance

With E-Energy Web function, current demand graph display, Auto-load control (Maximum 12circuits) function, the realtime demand monitoring is possible.

And, co-operation with Mitsubishi Web air condition control--[G-150AD], more effective and efficient air conditioning operation will be possible.

[DEMACON Series], data logging and display on mainbody from simple installation and setting, Auto-load control (Maximum 8circuits), so suitable for on-site demand management. And also possible for data management by PC from USB communication.



TYPE II



MES-DM1000 (E-Energy), DM-100CPS (DEMACON)

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide

EP-8-039

Machines and equipment

electric measuring instruments

High performance and crystal clear display supports measuring and monitoring systems

Environmental performance

----<< Material / Resource saving >>----

15% reduction in parts number.

40% less kinds of connection improves ease of dismantling.

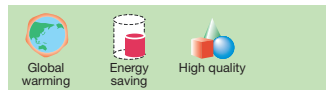
----<< Energy saving >>----

This instrument is installed onto power receiving and distributing equipment in factories, then measures Voltage, Current, Power and Watthour, displays them on itself and sends their data in order to be controled for total energy saving of the factory.

30% less energy is consumed from our previous model.

----<< Toxicity / Chemical substances reduction >>----

RoHS-compliant



TYPE II TYPE II

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

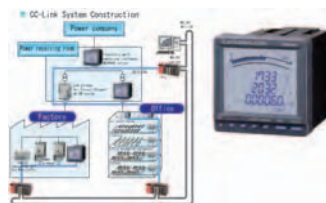
Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>



Available in: Asia,Europe

ME96NSR, ME96NSR-MB

EP-8-040

Machines and equipment

electrical machinery, equipment and supplies

Laser type On-line Thickness Measuring Sytem

Environmental performance

- (1) The laser type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our system. The comparison is more than 100 times with the measurement points \*
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource

\*Comparison with JIS K 7130 3.3.5 b) c)

Product performance

- (1) Range: 3 mm (MAX)
- (2) Resolution: 0.1 μm
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 100 mm/s
- (5) Non-contact

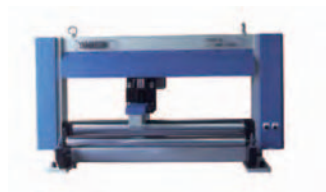
YAMABUN ELECTRONICS CO., LTD.

2-13, Shinjyonishi, Higashiosaka, Osaka, 578-0964, Japan

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E-mail [yamabun@mx.mesh.ne.jp](mailto:yamabun@mx.mesh.ne.jp)

URL <http://www.yamabun-ele.co.jp>



Laser type On-line Thickness Measuring System

Available in: Japan,Asia,Southeast Asia

Eco-product // Machines and equipment

EP-8-041

Machines and equipment

electrical machinery, equipment and supplies

## Desk-top Film- Sheet Thickness Measuring System

## Environmental performance

- (1) Our Desk-top Film- Sheet Thickness Measuring System is the equipment which measures the thickness of the cut piece of plastic films and sheets from products for quality control purpose.
- (2) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our thickness measuring system. The comparison is more than 100 times with the measurement points \*

\* Comparison with JIS K 7130 3.3.5 b) c)

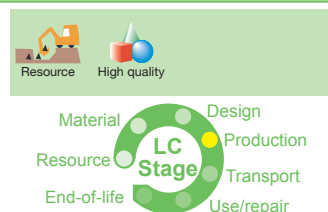
## Product performance

- (1) Measuring range: "TOF-5R" 0.02-0.2 mm, "TOF-4R" 0.03-3 mm
- (2) Measurement resolution: "TOF-5R" 0.1  $\mu\text{m}$ , "TOF-4R" 0.5  $\mu\text{m}$ , 1.0  $\mu\text{m}$
- (3) Measuring pitch: 1 mm
- (4) Films and sheets feed speed: "TOF-5R" 36 mm/s, "TOF-4R" 58 mm/s (With films and sheets automatic feed device)

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 URL <http://www.yamabun-ele.co.jp>

Available in: Japan,Asia,Southeast Asia



Desk-top Film-Sheet Thickness Measuring System (TOF-5R)

EP-8-042

Machines and equipment

electrical machinery, equipment and supplies

## Soft X-ray type On-line Thickness Measuring System

## Environmental performance

- (1) The X-ray type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) Safe operation is ensured by no active radiation source in the system
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource

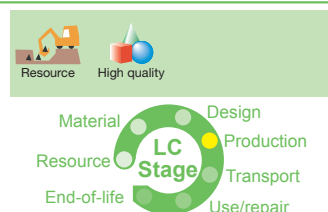
## Product performance

- (1) Range: 1-1000  $\mu\text{m}$
- (2) Resolution: 0.01  $\mu\text{m}$
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 10-350 mm/s
- (5) Non-contact

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Available in: Japan,Asia,Southeast Asia



Soft X-ray type On-line Thickness Measuring System

EP-8-043

Machines and equipment

electrical relay switches

Highly-reliable, Low Power-consumption Protection Relay with Five Times Faster Processing

Environmental performance

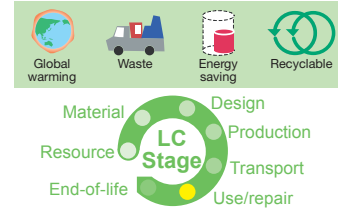
- Mitigation of climate change: 60% reduction in power consumption thanks to a reduced number of printed circuit boards and low-power consumption design.
- Efficient use of resources: 30% reduction in the number of printed circuit boards thanks to the adoption of high performance MPU and high-capacity FPGA.

Product performance

- Enhanced Reliability: Enhanced reliability thanks to a reduced number of printed circuit boards and suppressed temperature increase.
- Improved maintainability: Improved maintainability thanks to enriched guidance functions and simple structure.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Protection Relay D4 Series

EP-8-044

Machines and equipment

electrical relay switches

Compact, Lightweight, Low Power-consumption Protection Relays which Support Stable Operation of Power Distribution Networks

Environmental performance

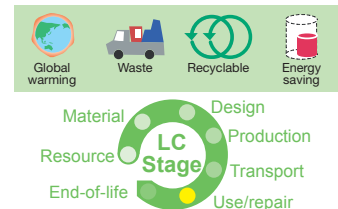
- Mitigation of climate change: 50% reduction in power consumption compared to the conventional product, due to optimizing of circuitry by applying one-chip microcomputer etc.
- Efficient use of materials: 60% reduction in weight compared to the conventional product, due to employment of plastic molded case, optimization in structure and weight reduction of parts.

Product performance

- The line-up is enhanced to accommodate with various power distribution apparatus.
- Compliant with international standards (e.g. IEC-60255 series) and other overseas standards.
- Dual ratings are supported in the same model (current input 1A/5A, auxiliary supply and BI 110V/220V, etc.)
- Various communication protocols are supported.

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 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Medium Voltage Protection Relay: GRE series

EP-8-045

Machines and equipment

electronic indicators

Operation ease and viewable pursuing electronic multi-measuring instrument -- ME110Super-S

**Environmental performance**

[Efficient use of resources]

ME110SSR-B: reduce the number of parts by 16%

[Emissions avoidance of environmental risk material]

Compliant with European RoHS.

**Product performance**

[Efficient use of energy]

Mounting at receiving and distributing equipment of building and factory, for understand of powered situation, measuring voltage, current, power, energy and other items, displaying these measuring data on meter mainbody, and transferring these data remotely by communication function.



TYPE II TYPE II



**Mitsubishi Electric Corporation**

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URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan, Asia, Europe

ME110SSR, ME-RS01

EP-8-046

Machines and equipment

elevators

TOSHIBA MACHINE-ROOM-LESS ELEVATORS "New SPACEL-EX"

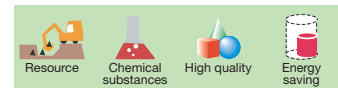
**Environmental performance**

- Mitigation of climate change: The new LED system realizes a lifespan 8 times longer than that of conventional fluorescent lights. Its down light provides energy saving around 85% per light and 20 times longer lifespan in comparison with the conventional system.
- Management of chemicals: The new LED system reduces approximately 90% of the mercury usage in 10 years due to longer lifespans and less replacements. Elevator floor is made of resin that generates no harmful incinerated gas and lead is no longer used for wire rope terminals.

**Product performance**

- Earthquake countermeasures: The countermeasure against long-period ground motion is equipped as a standard feature. Emergency operation works simultaneously with the Earthquake Early Warning.
- Safe and easy: A liquid-crystal display is employed for in-car and hall indicators. It provides easy-to-understand displays by using larger displays and animations based on the concept of universal design. The antibacterial elevator buttons and the antibacterial resin in-car operating panel are employed to put user comfort first.

\* Press release in Oct. 2010, and as of Oct. 2011



**TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION**

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URL <http://www.toshiba-elevator.co.jp>

Available in: Japan

Machine-room-less Elevator New SPACEL-EX

EP-8-047

Machines and equipment

elevators

Quick Elevator Refurbishment Thanks to Addition of New Control Panel

Environmental performance

- Mitigation of climate change: Reduction in power consumption due to the change from conventional control to inverter control.
- Efficient use of resources: Possible to perform refurbishment work without removing the existing motor, hoist, car, and platform facilities. Elimination of unnecessary replacement for the efficient utilization of existing resources.

Product performance

- Short work period: Reduced time required for transport and replacement work because of the division of the control panel into compact units.
  - Reduced frequency of trouble: Change from a relay system to a microcomputer controlled system brings enhanced reliability as there are fewer replacement parts.
  - Remote surveillance: Remote surveillance for 24 hours x 365 days.
- \*Press release in Aug. 2008, and as of Oct. 2011

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Available in: Japan



Elevator Control Board Refurbishment  
 Note: Covers are taken off for reference

EP-8-048

Machines and equipment

elevators

TOSHIBA COMPACT MACHINE ROOM ELEVATORS "ELCOSMO" (for Global)

Environmental performance

- Mitigation of climate change: The newly developed LED system provides energy savings up to 90% over incandescent bulbs and 50% over fluorescent lights for the same illuminance.
- Management of chemicals: The new LED lighting system is mercury free. (Adopted in new car design SL-1, SL-2, SL-3, and TL-1)

Product performance

The top class compact-machine-room elevator ELCOSMO has been developed based on Toshiba's accumulated experience in high-end PMSM technology as typified by the world's fastest elevator\*. It offers layout flexibility, space saving, energy saving and wide line-ups. ELCOSMO is well-suited to all type of buildings as the elevator with compact machine room.  
 \* Press release in Dec. 2004 , and as of Dec. 2011

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

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Available in: Asia, Middle East



TOSHIBA COMPACT MACHINE ROOM ELEVATORS "ELCOSMO"



EP-8-049

Machines and equipment

elevators

**TOSHIBA MACHINE-ROOM-LESS ELEVATORS "SPACEL-UNI" (for Global)**

**Environmental performance**

- Mitigation of climate change: The newly developed LED system provides energy savings around 90% over incandescent bulbs and 50% over fluorescent lights for the same illuminance.
- Management of chemicals: The new LED lighting system is mercury free. (Adopted in new car design SL-1, SL-2, SL-3, and TL-1)

**Product performance**

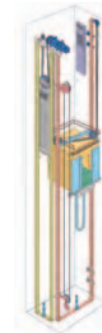
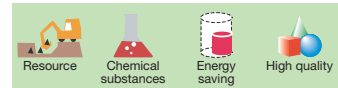
The top class machine-room-less elevator SPACEL-UNI has been developed based on Toshiba's accumulated experience in high-end PMSM technology as typified by the world's fastest elevator\*. It offers layout flexibility, space saving, energy saving and wide line-ups.

\* Press release in Dec. 2004 , and as of Oct. 2011

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Available in: Asia, Middle East



TOSHIBA MACHINE-ROOM-LESS ELEVATORS "SPACEL-UNI"

EP-8-050

Machines and equipment

escalators

**Eco Conscious Designed Escalator**

**Environmental performance**

- << Material / Resource saving >>----
  - Scale down of the truss chords and other parts has resulted in overall weight reduction.
  - Recyclable thermoplastic polyurethane handrails and rollers were installed.
- << Energy saving >>----
  - The adoption of an automatic operation function helps make the escalator more energy efficient. A line of VVVF inverter-based products that stop or slow down when not in use has been prepared. And variable speed functionality results in expanded application for automatic operation functions.
- << Toxicity / Chemical substances reduction >>----
  - ROHS-compliant parts and materials are positively used. (hexavalent chromium-free plating are used.)
  - Reduced usage of toluene, xylene, and other atmospheric and soil contaminants.

**Mitsubishi Electric Corporation**

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 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



TYPE II



Escalator ZJ-S

EP-8-051

Machines and equipment

escalators

**TOSHIBA Escalator "Kindmover" (for Global)**

**Environmental performance**

- Mitigation of climate change: The LED system realizes mercury free, energy-saving and long life. It reduces energy consumption by 70%, provides 8 times longer lifespan, and lowers CO2 emission. (Adopted for a balustrade lighting, skirt guard lighting, step lighting, and comb lighting)
- Mitigation of climate change: The automatic operation system is equipped as a standard feature which shifts the escalator automatically to the energy saving mode with a lower operation speed only when no user is present. Such standby mode operation reduces energy consumption by 30% and lowers CO2 emission.

**Product performance**

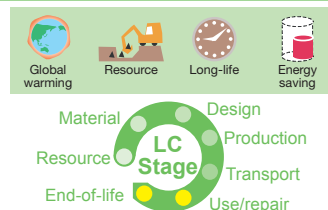
The Kindmover escalator incorporates numerous universal design features based on the concepts of "Kind to passengers and Kind to maintenance-persons" for the materialization of a new escalator that is easy for people to use and to maintain. It provides a standby mode with a low operation speed and a variety of LED lightings for energy saving, and also a skirt brush deflector to prevent shoes and sandals from being caught in and an inlet brush deflector to prevent fingers from touching the inlet for safety improvement.

\* Press release in Oct. 2010, and as of Oct. 2011

**TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION**

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 URL <http://www.toshiba-elevator.co.jp>

Available in: Japan,Asia,Middle East



TOSHIBA Escalator "Kindmover"

EP-8-052

Machines and equipment

embedded system

**Fanless Embedded Controller AEC-6872**

**Environmental performance**

- \*The eco-friendly, energy-saving AEC-6872 embedded controllers received the ENERGY STAR certification of USA.
- \*AEC-6872 uses low-power consumption processors, an internationally patented nofan design, green production processes and environmentally friendly packaging, with a view to reducing greenhouse gas emissions.

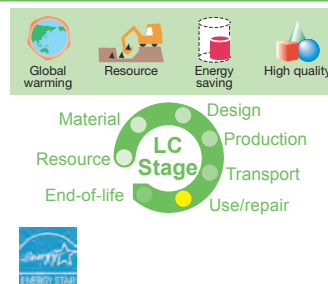
**Product performance**

- \*AEC-6872 has an internationally patented heat dissipating housing that is formed with rectangular aluminum fins. It works on Intel's D510 1.6GHz processor and supports two 200-pin DDR2 SODIMM RAM, the maximum capacity being 4GB.
- AEC-6872 can be used with one 2.5" SATA I hard drive and is built-in with a type 2 CF card slot.
- \*In I/O, AEC-6872 includes two Gigabit Ethernet LAN ports for network connection; and one VGA connector, one Line-out connector and one Mic-in connector for AV applications. It also has three RS 232 connection ports, one RS 232/422/485 connection port and one PCI or PCIe interface for expansion. The input power range is 9~30V DC, and the operating temperature spans from -10 to 55°C.

**AAEON Technology Inc.**

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 E-mail [efenchung@aaeon.com.tw](mailto:efenchung@aaeon.com.tw)  
 URL <http://www.aaeon.com>

Available in: Asia,North America,Central America,South America,U.S.A.



Eco-product // Machines and equipment

1  
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9

EP-8-053

Machines and equipment

embedded system

## Green Embedded Fanless Controller AEC-6625

## Environmental performance

\*The eco-friendly, energy-saving AEC-6625 embedded controllers received the ENERGY STAR certification of USA.

\*AEC-6625 uses low-power consumption processors, an internationally patented nolan design, green production processes and environmentally friendly packaging, with a view to reducing greenhouse gas emissions.

## Product performance

\*AEC-6625 has an internationally patented heat dissipating housing that is formed with rectangular aluminum fins. It works on Intel's P4500 1.86GHz processor and supports one 204-pin DDR3 SODIMM RAM, the maximum capacity being 4GB.

AEC-6625 can be used with one 2.5" SATA II hard drive and is built-in with a type 2 CF card slot.

\*In I/O, AEC-6625 includes two Gigabit Ethernet LAN ports for network connection; and one VGA connector, one DVI-D connector, one Line-in connector and one Lineout connector for AV applications. It also has three RS 232 connection ports (or one RS 232/422/485 connection port), one PCI-104 interface, and four or six USB 2.0 connectors for expansion. The input power range is 9~30V DC, and the operating temperature spans from -20 to 50°C.

## AAEON Technology Inc.

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URL <http://www.aaeon.com>

Available in: Asia, Europe, North America, Central America, South America, U.S.A.



EP-8-054

Machines and equipment

embedded system

## Green Embedded System GES-1100F

## Environmental performance

\*The eco-friendly energy-saving GES-1100F embedded controllers received the ENERGY STAR verification of USA.

\*GES-1100F uses low-power consumption processors, green production processes and eco-friendly packaging, with a view to reducing greenhouse gas emissions.

## Product performance

\*Working on Intel's Atom N270 1.6G processor and supporting one 240-pin DDR2 400/533/667 DIMM as system memory (1GB). Featuring low power consumption and a no-fan design.

\*Including one super high speed Ethernet connector and one 2.5" SATA II hard drive.

Supporting VGA and DVI-D single-screen display. Providing four COM ports, six USB 2.0 ports and one 8-bit digital I/O.

\*Providing one 12V DC power input for transportation industry applications. Desk-top or wall-mounted installation as appropriate.

## AAEON Technology Inc.

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URL <http://www.aaeon.com>

Available in: Asia, Europe, North America, Central America, South America, U.S.A.



EP-8-055

Machines and equipment

embedded system

Flexible Embedded System FES-5130

Environmental performance

\*The eco-friendly energy-saving FES-5130 embedded controllers received the ENERGY STAR verification of USA.

\*FES-5130 uses low-power consumption processors, green production processes and eco-friendly packaging, with a view to reducing greenhouse gas emissions.

Product performance

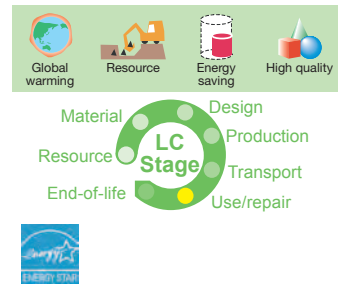
\*FES-5130 features a no-fan design and possesses a powerful heat dissipation mechanism. Working on Intel's Atom N270 1.6GHz processor, equipped with Intel's 945GSE+ICH7M chipset, and supporting 200-pin DDR2 400/533 SODIMM as system memory (max. capacity: 2GB).

\*FES-5130 supports one 10/100/1000Base-TXsuper high speed Ethernet port and is optionally provided with one 802.11b/g Mini-PCIe module for wireless network transmission.

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 E-mail efenchung@aaeon.com.tw  
 URL <http://www.aaeon.com>

Available in: Asia,Europe,North America,Central America,South America



EP-8-056

Machines and equipment

embedded system controller

Green Embedded System Controller GES-3300F

Environmental performance

\*The eco-friendly energy-saving GES-3300F embedded controllers received the ENERGY STAR verification of USA.

\*GES-3300F uses low-power consumption processors, green production processes and eco-friendly packaging, with a view to reducing greenhouse gas emissions.

Product performance

\*GES-3300F uses Intel's Celeron M processor and supports two 240-pin DDR2 400/533/667 DIMMs as system memory, the maximum capacity being 4GB. Intel's 945GME+ICH7M chipset is also used.

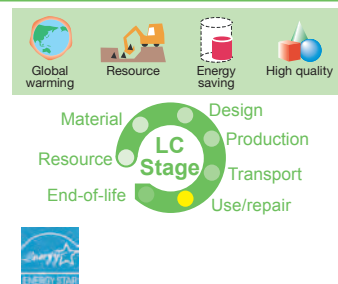
\*Including two super high speed Ethernet connectors, one 2.5" SATA II hard drive, and one CF card. Supporting VGA and DVI-D single-screen display. Providing four COM ports, six USB 2.0 ports and one 8-bit digital I/O.

\*Providing one 12V DC power input for transportation industry applications. Desk-top or wall-mounted installation as appropriate.

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Available in: Asia,Europe,North America,Central America,South America,U.S.A.



EP-8-057

Machines and equipment

engine generators

**Cogeneration system with micro-gas engine: GENELIGHT**

**Environmental performance**

GENELIGHT is an energy-saving gas cogeneration system which generates electricity with a gas engine and heats water utilizing generated exhaust heat. This system is ideal for small and mid-sized hotels, hospitals and restaurants because of its energy-saving features and capacity to supply a large amount of hot water.

CO<sub>2</sub> emission reduction: 30% or more\*

\*Compared with the amount of CO<sub>2</sub> emitted under conditions where the same amount of electricity is drawn from the grid and the same amount of heat is produced by the boiler.

**Product performance**

Generation efficiency of 35 kW: 34% (the highest in the capacity class)\*

\*Achieved by employing the newly-developed Miller cycle gas engine, inverter and generator, as well as reducing pump loss.

When the power source is suspended, some models can supply electricity according to predetermined loads.

**Osaka Gas Co., Ltd.**

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL [http://ene.osakagas.co.jp/product/cogeneration/cat\\_genelite.html](http://ene.osakagas.co.jp/product/cogeneration/cat_genelite.html)

URL [http://www.osakagas.co.jp/csr\\_e/index.html](http://www.osakagas.co.jp/csr_e/index.html)

Available in: Japan



GENELIGHT 35kW

EP-8-058

Machines and equipment

equipment for prevention of air pollution

**Air-Curtain Fume Hood ACFH**

**Environmental performance**

1. It can effectively prevent toxic gas contamination in laboratory-operated air curtain ventilation cabinets to achieve zero leakage, helping to protect the safety of the operators and the laboratories.
2. It adopts the inverter control design to reduce electricity consumption.
3. It is produced by adopting voluminous recyclable metal, allowing the product to achieve a 99% resource-recycling ratio.

**Product performance**

By utilizing fluid dynamics' " tied-load "theory through the adoption of concurrent air blowing and air suctioning, an air curtain is formed at the air cabinet opening to shield off the mass exchange between the air cabinet and the ambient environment to greatly reduce the leakage volume. As tested by flow range analysis and tracking the gas leak concentration, all inert and interactive test results come to a near zero level of leakage, helping to enhance the air cabinet's performance and reduce any personnel's exposure, thereby maintaining health.

**HUNG-TAI STEEL CO., LTD.**

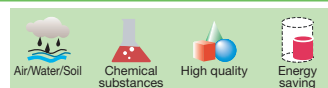
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Tel +886-5-2767308 Fax +886-5-2754289

E-mail [htsc@ms4.hinet.net](mailto:htsc@ms4.hinet.net)

URL <http://www.htsc.com.tw>

Available in: Taiwan (Rep. of China)





EP-8-059

Machines and equipment

fatigue testing machine

ECU1/ECU2 Energy-Conservation Units for Shimadzu Servopulser Fatigue Testing Machines

Environmental performance

Fatigue tests run continuously over long periods. Testing machines rarely exceed 70 % maximum performance. Electro-hydraulic fatigue testing machines are hydraulically driven and the hydraulic power supply runs at maximum performance even when the machine is not at full capacity. The ECU series matches the hydraulic power supply motor speed and supply pressure to the test conditions to achieve up to 50 % energy savings.

ECU1 Series: Variable hydraulic power supply motor speed  
25 % to 40 % max. power savings

ECU2 Series: Variable hydraulic power supply motor speed and supply pressure  
45 % to 50 % max. power savings

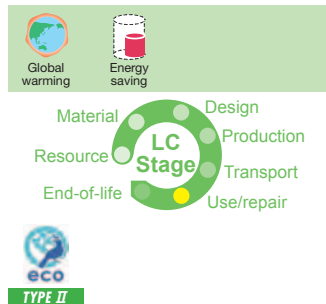
Product performance

The hydraulic power is minimized during test setup. After testing starts, software automatically controls the hydraulic power supply by determining optimal motor speed and hydraulic pressure from the test conditions and operating status. Series includes 5.5 kW to 37 kW models.

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
Tel +81-75-823-1113 Fax +81-75-823-2062  
URL <http://www.shimadzu.com/index.html>  
URL <http://www.shimadzu.com/an/test/fatigue/index.html>  
URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Countries not subject to the CE marking



ECU Series

EP-8-060

Machines and equipment

food waste recycling

Eco-Wiz Wet System

Environmental performance

Eco-Wiz System:  
Eco-Wiz™ Wet System rapidly decomposes all food waste into crystal-clear usable water that is virtually odourless for multiple applications like watering plants and washing floor

ECO-WIZ™ technology increases the speed of the natural decomposition process through biological means like maintaining optimal levels of aeration, moisture and temperature. Under these controlled conditions, microorganisms safely decompose food waste at a rate much faster than under natural conditions which are subjected to soil and groundwater contamination. Our leading-edge technology provides a sustainable eco-friendly environment. It eliminates onsite food waste storage which attracts vermin and reduces carbon footprints as trucking of food waste to landfills is eliminated, thus totally revolutionizing the waste management industry.

Product performance

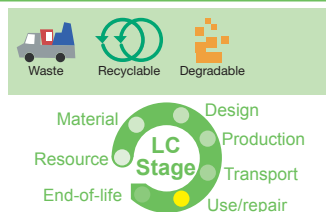
The "ECO-WIZ™" is a totally self-contained, continual feed, organic waste disposal system designed to biologically recycle solid food waste materials into crystal-clear usable water. Using a process perfected by nature, it decomposes food waste, and through advanced technology perfected by Eco-Wiz R&D Team, turning them into crystal-clear water that is virtually odourless for multiple applications like watering plants and washing floor.

The "ECO-WIZ™" safely and quickly decomposes any kind of food waste including vegetable/fruit scraps, raw and cooked meats, fishes, poultrys and dairy products.

Eco-Wiz Group

No. 1 Bukit Batok Crescent, WCEGA Plaza, Singapore  
Tel 65-65700500 Fax 65-65700900  
E-mail [info@eco-wiz.com](mailto:info@eco-wiz.com)  
URL <http://www.eco-wiz.com>  
URL <http://www.eco-wiz.com/products.html>

Available in: Worldwide



Eco-Wiz Wet System

Eco-product // Machines and equipment

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EP-8-061

Machines and equipment

food waste recycling

### Eco-Wiz Dry System

**Environmental performance**

Eco-Wiz™ Dry System recycles all food waste into compost which is a soil-amendment and a key ingredient in organic farming. It can also be applied for landscaping or disposed off with ordinary wastes.

ECO-WIZ™ technology increases the speed of the natural decomposition process through biological means like maintaining optimal levels of aeration, moisture and temperature. Under these controlled conditions, microorganisms safely decompose food waste at a rate much faster than under natural conditions which are subjected to soil and groundwater contamination. Our leading-edge technology provides a sustainable eco-friendly environment. It eliminates onsite food waste storage which attracts vermin and reduces carbon footprints as trucking of food waste to landfills is eliminated, thus totally revolutionizing the waste management industry.

**Product performance**

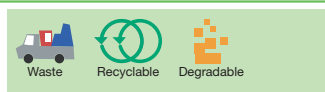
The "ECO-WIZ™" is a totally self-contained, continual feed, organic waste disposal system designed to biologically convert solid food waste materials into compost. Composting your organic wastes not only keeps them out of the landfills, but when applied back into your lawn or garden, it also improves the health of your soil. Nutrients are stored in the decaying organic matter but Compost holds these nutrients in a form that is readily absorbed by plant roots.

The "ECO-WIZ™" safely and quickly decomposes any kind of food waste including vegetable/fruit scraps, raw and cooked meats, fishes, poultrys and dairy products.

### Eco-Wiz Group

No. 1 Bukit Batok Crescent, WCEGA Plaza, Singapore  
 Tel 65-65700500 Fax 65-65700900  
 E-mail [info@eco-wiz.com](mailto:info@eco-wiz.com)  
 URL <http://www.eco-wiz.com>  
 URL <http://www.eco-wiz.com/products.html>

Available in: Worldwide



EP-8-062

Machines and equipment

FR-F700PJ

### FR-F700PJ Designated for fans and pumps

**Environmental performance**

----<< Material / Resource saving >>----  
 - The principal consumables - the condenser and cooling fan - are designed to last for 10 years.

----<< Energy saving >>----  
 - More energy savings through flow control (RPM control) than on/off flow control.  
 - Better motor efficiency with optimal excitation control than with regular V/F control.  
 - The IPM motor can be regulated in an energy-saving mode.

----<< Environmental burden reduction >>----  
 A filter pack, which is attached with a unit including a power factor improving DC reactor, a zero phase reactor (line noise filter) and a capacitive filter (radio noise filter) as standard, is equipped. The filter pack reduces the harmonic outflow current and noise, leading to a reduction in environmental burden. In addition, multiple connections can now be avoided when using optional add-on functions.

**Product performance**

This product's space-saving fewer-connection merits are in compliance with the Japanese Guideline for the Reduction of Harmonic Emission, and correspond to the Specifications for Public Works Construction (power equipment work in electrical construction) and the Specifications for Public Works Construction (power equipment work in machine construction) supervised by the Ministry of Land, Infrastructure, Transport and Tourism. As with FREQROL-F700P, this device can control both general purpose motors (squirrel cage motors) and Interior Permanent Magnet (IPM) motors.

### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



TYPE II TYPE II



FR-F700PJ Designated for fans and pumps

Eco-product // Machines and equipment

EP-8-063

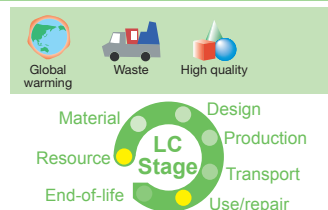
Machines and equipment

furnace construction work

**Babcock & Wilcox Volund Wood Biomass Gas-fired Power Generation System**

**Environmental performance**

Combining gasification furnace and gas engine, this system efficiently generates power from carbon-neutral biomass. It has realized a comprehensive energy utilizing efficiency rate as high as 80% or more by not only generating power but also utilizing heat.



**JFE Engineering Corporation**

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan  
 Tel +81-3-3516-7300 Fax +81-3-3516-7345  
 URL <http://www.jfe-eng.co.jp/>



EP-8-064

Machines and equipment

gas abatement unit

**High Efficiency Fired Thermal Abatement Unit G6 type series**

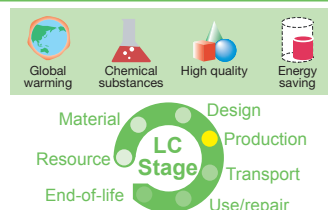
**Environmental performance**

Brand new large scale fired thermal abatement for high flow PFCs gases and Hydrogen.

Extension from robust G5 technology lives in G6 in terms of maintenanceability, lower utility consumption.

**Product performance**

G6 type series is launched to cope with Photovoltaic PE-CVD, TCO, LED MO-CVD and Semiconductor Epitaxial processes which customers are facing DRE issue, lower uptime issue.



**EBARA CORPORATION**

4-2-1 Honfujisawa, Fujisawa-shi, 251-8502, Japan  
 Tel +81-466-83-7447  
 E-mail [nambu.isao@ebara.com](mailto:nambu.isao@ebara.com)  
 URL <http://www.ebara.co.jp/en/>  
 URL <http://www.ebara.co.jp/en/csr/>



Fired Thermal Gas Abatement Unit G6 type series

Available in: Japan, Europe, U.S.A, Singapore, Republic of Korea, Taiwan (Rep. of China), China

EP-8-065

Machines and equipment

gas chromatograph

**"GC-2025" Energy-Saving Capillary Gas Chromatograph****Environmental performance**

Power consumption can be reduced by at least 30 % by replacing the currently used capillary GC with the "GC-2025" because its column oven can be heated with less power and power loss during cooling is reduced. Power and carrier gas consumption at night and during standby can also be reduced because of the function to save gas consumption during analysis, except during sample injection, and also the function to automatically start/stop controlling temperature or the carrier gas, both of which are effective to reduce running costs.

**Product performance**

The "GC-2025" incorporates a high-accuracy digital flow controller to achieve high reproducibility for the retention time and peak area. The highly-sensitive FID with the minimum detection limit of 2 pgC/s enables high-sensitivity analysis of trace components. Space-saving design enables 30 % smaller installation area to achieve higher performance for the price.

**SHIMADZU CORPORATION**

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
 Tel +81-75-823-1113 Fax +81-75-823-2062  
 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/an/gc/index.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide

GC-2025



EP-8-066

Machines and equipment

gas chromatograph-mass spectrometer

**GCMS-QP2010 Ultra/GCMS-QP2010 SE Equipped with Ecology Mode****Environmental performance**

Equipped with Ecology mode where analysis standby status is automatically recognized by software to turn OFF unnecessary power or start sleep mode. Power consumption during analysis standby is 36 % (277 W) less than former Shimadzu instruments. Under normal use, annual power consumption is 26 % less and CO<sub>2</sub> emissions are 1.1 tons less (evaluated by Shimadzu specifications). Using Ecology mode in production process, CO<sub>2</sub> emissions are reduced by 30 % and He carrier gas consumption by 51 %. Annually, CO<sub>2</sub> emissions are 28 tons less and He gas is at least 300 cylinders less.

**Product performance**

Gasifies target samples and performs qualitative/quantitative analysis on trace amounts of organic compounds from several nanograms to several femtograms. Applicable for various purposes such as monitoring minute compounds related to pollution, human health, development/evaluation of highly-functional new materials and chemical products.

**SHIMADZU CORPORATION**

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 Tel +81-75-823-1113 Fax +81-75-823-2062  
 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/products/lab/ms/oh80jt0000001r9g.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>



GCMS-QP2010 Ultra / GCMS-QP2010 SE

EP-8-067

Machines and equipment

generators

Environmentally-friendly System Generating Electricity and Heat Using City Gas or LP Gas

Environmental performance

- Mitigation of climate change: 48% reduction in CO<sub>2</sub> emissions per year (equivalent to about 1.5 ton) for a typical household with Fuel Cell System.
- Efficiency use of resources: Weight reduction of Fuel Cell package to about 95kg. Easy to handling.

Product performance

- High efficiency: Overall efficiency, combining electric efficiency and heat recovery efficiency of more than 94%.
- Low noise: Quiet operation: 38dB or less. Silence is similar in a library.
- Maintenance saving: Maintenance twice in ten years; Reduced to visit customer.
- Clean: Emissions consist of only water and CO<sub>2</sub>.

Toshiba Fuel Cell Power Systems Corp.

2-4, Suehiro-Cho, Tsurumi-Ku, Yokohama, 230-0045, Japan  
 Tel +81-45-510-5920 Fax +81-45-500-2564  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Residential fuel cell co-generation system

EP-8-068

Machines and equipment

hand dryer

JET TOWEL, Environmentally Friendly Hand Dryer

Environmental performance

It eliminates paper waste and fewer natural resources are consumed.

----<< Material / Resource saving >>----

DC brushless motor has the durability of seven years by 1,000 times\* of use per one day, which realizes its longer life.

\*Depending upon environment and usage conditions.

----<< Energy saving >>----

Approximately 15% lower power consumption compared to previous Mitsubishi Electric model\*.

It is equipped with a newly developed "hyper nozzle" that blows off drops of water on hands with a filmy jet blow at a stretch and improves its drying efficiency.

\*JT-SB116D

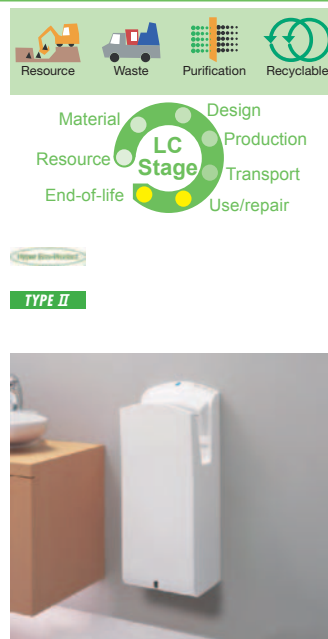
----<< Toxicity / Chemical substances reduction >>----

EU RoHS-compliant parts and materials are used.

Mitsubishi Electric Corporation

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 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia, Europe, North America, Oceania



JT-SB116GN / JT-SB216GSN

Eco-product // Machines and equipment

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EP-8-069

Machines and equipment

hand dryer

**JET TOWEL, Environmentally Friendly Hand Dryer**

**Environmental performance**

Jet Towel eliminates paper waste and cuts down on natural resource consumption. -----<< Material / Resource saving >>-----

The DC brushless motor has a lifespan of seven years based on a usage of 400 times (\*1) a day, which realizes the product's longer life.

-----<< Energy saving >>-----

Approximately 2% lower power consumption and 50% less standby energy compared to the previous Mitsubishi Electric model (\*2).

A newly-developed corrugated wavy nozzle has been adopted. The shape of the air outlet allows curled jet blow to be diffused to effectively reduce the noise generated due by jet blow.

-----<< Toxicity / Chemical substances reduction >>-----

EU RoHS-compliant parts and materials are used.

\*1: Depending upon environment and usage conditions.

\*2: Comparing the new model, JT-SB216KSN, and the former one, JT-SB216GSN.



TYPE II



**Mitsubishi Electric Corporation**

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E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia, Europe, Oceania

JT-SB216JSH / JT-SB216KSN

EP-8-070

Machines and equipment

industrial machinery and equipment

**PSA type nitrogen gas generator BELLSWING™**

**Environmental performance**

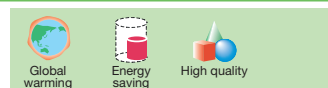
<Summary> Air Water Inc. has developed the energy saving type PSA (Bellswing™). New NSP series inherits the design philosophy of our popular SP series, which retains the smallest set up space while increasing the energy saving performance.

<Characteristics> A newly developed; high-performance MSC (Molecular Sieving Carbon: adsorbents for gas separation) has been adopted. Power consumption by up to 33% reduction available that means the electricity cost reduction and low CO<sub>2</sub> emission. Maintenance cycle has been extended to 1.5 times. Operation can be made by using the compressor for general purpose. Customers having over 0.7MPaG air sources need no compressor.

<Effect> When introducing KN4-60NSP, annual electricity costs will be sliced by about 1,350,000 in JPY, and suppress CO<sub>2</sub> emissions 50ton per year.

**Product performance**

New PSA (KN4-20NSP, KN4-40NSP, KN4-60NSP) attained to generate N<sub>2</sub> of 99.99%, 0.5MPa and 20 to 60Nm<sup>3</sup>/H by using general compressor of 11 to 30KW.



100000kg-CO<sub>2</sub> not Inspection Resource/Materials/Production/Transfer/Use/End-of-Life

**AIR WATER BELLPEARL INC.**

2-12-8, Minamisemba, Chuo-ku Osaka, 542-0081, Japan

Tel +81-6-6252-1803 Fax +81-6-6252-1750

E-mail yamashita-mas@awi.co.jp

URL <http://www.awi.co.jp/english/>

URL <http://www.awi.co.jp/bp/e/pg/03.html>

URL <http://www.awi.co.jp/english/environment/index.html>



PSA type nitrogen gas generator BELLSWING™ NSP series

Available in: Japan, Asia

Eco-product // Machines and equipment



EP-8-071

Machines and equipment

inverter condensing unit

Energy-saving Condensing Unit Suitable for Various Refrigeration Systems

Environmental performance

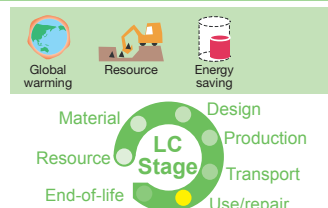
- Mitigation of climate change: 40% improvement in COP compared with the conventional non-inverter model.
- Efficient use of resources: 11% reduction in the weight of raw materials: 15% reduction in steel sheet and 8% reduction in copper tubing.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel sheet plating.

Product performance

- Optimum operation: Combination of a rotary compressor and inverter achieves all-around high efficiency operation from the low-rotation to high-rotation range.
- Low noise: Noise value is reduced by 4dB from the previous model and operation is extremely quiet. Standard features include four control modes to suit different systems.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-8580, Japan  
 Tel +81-3-6409-1735 Fax +81-3-5447-8101  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Out-door Inverter Condensing Unit  
 TAM131AM-SV TAM201AM-SV  
 TAM351AM-SV

EP-8-072

Machines and equipment

machine and equipment installation work

Energy-conserving air conditioning system for data centres "Ref Assist"

Environmental performance

This air conditioning system combines a cooling system using outdoor air and a natural refrigerant circulation system without transport power. Spot cooling units (Rear Door and Ceiling Unit Type) cool the heated air down and reduce the consumed power by over 60%\* compared to a conventional system. (in-house comparison)

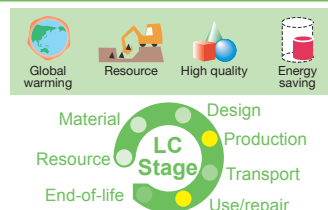
\*For using a combination of the basic system (chilled water-refrigerant heat exchanger, spot cooling units) and optional equipment (high-efficiency heat sources, free cooling system).

Product performance

Type	Cooling Capacity	Air-Volume	flow Power Consumption	Width	Height	Depth	Weight
Rear Door	10kW	2000m <sup>3</sup> /h	230w	594mm	1,995mm	164mm	85kg
Ceiling	15kW	3000m <sup>3</sup> /h	600w	565mm	600mm	1,400mm	120kg

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
 Tel +81-3-5928-8100 Fax +81-3-5928-8701  
 URL <http://www.hitachi-pt.com>  
 URL <http://www.hitachi-pt.com/ref/index.html>  
 URL <http://www.hitachi-pt.com/csr/index.html>



TYPE II



Available in: Japan,Asia,Europe,Middle and Near East (Except for Iran)

A natural refrigerant circulation system

Eco-product // Machines and equipment

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EP-8-073

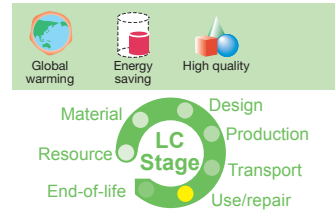
Machines and equipment

machine and equipment installation work

## Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System

## Environmental performance

Using clathrate hydrate slurry instead of water, the Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System is a cooling system with excellent energy saving effects. This system substantially reduces power consumption and thereby contributes to global warming prevention. The Kawasaki shopping mall "Azalea" is one of our major clients who have adopted this system. As a form of energy conservation technology created in Japan, it was awarded the Prime Minister Prize in 2006 and the Nikkei Global Environment Technology Prize in 2007.



## JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan  
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URL <http://www.jfe-eng.co.jp/>



EP-8-074

Machines and equipment

manufacturing products

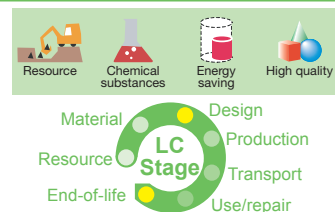
## Nikon Total Station "Nivo Series"

## Environmental performance

- (1) Compact and light body  
Reduces 33% of the weight and 35% of the volume compared to the previous series
- (2) Power consumption efficiency  
Improves 35% in angle measurement and 35% in precise distance measurement compared to the previous series (under the Nikon's same test condition)
- (3) Reduction of hazardous substances  
\*Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive  
\*Eco-Glass (lead and arsenic-free optical glass) usage: 100%

## Product performance

"Nivo series" designed for all surveying and construction measurement users. The Nivo series are supported with Nikon optics to see clear images in both bright and low light conditions. Operated by an easy to use interface all day long, with assistance from hot swappable batteries providing endless power in the field. The Nivo series are compact in size and light weight, making them convenient to carry over long distances.



## NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
Tel +81-3-3214-5311  
URL <http://www.nikon-trimble.com/>  
URL <http://www.nikonpositioning.com/>  
URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>



Nikon Total Station "Nivo Series"

Available in: Worldwide

EP-8-075

Machines and equipment  
manufacturing products

The WINPRO hybrid street light

Environmental performance

The WINPRO hybrid street light feature clean hybrid power generation systems incorporating both wind and solar power generation modules. The WINPRO hybrid street light is a clean power generation systems that doesn't exhaust CO<sub>2</sub> that causes global warming. As long as the hybrid power generation system can produce electricity by utilizing such natural energies as wind and sunlight, it can supply sustainable electric power. Therefore, it will be a suitable power supply system for disasters and the like.

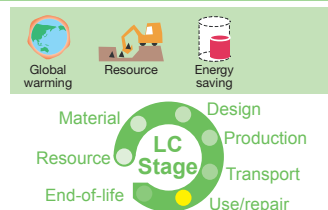
Product performance

WINPRO vertical axis three blades can start rotation at the lowest wind velocity of 1 m/s, and the blades can continue stable rotation with the wind coming from any direction. The WINPRO wind power generator produces almost no noise at low speeds and thus will not cause any noise pollution. In addition, it will not cause such trouble as vibration, resonance, and electromagnetic interference.

WINPRO CO.,LTD.

Publicity Flex Building, Shinko-cho 19-8, Chuo-ku, Niigata-shi, Niigata-ken, 950-0965, Japan  
Tel +81-25-284-2240 Fax +81-25-2251  
E-mail winpro@winpro.co.jp  
URL <http://www.winpro.co.jp/english>

Available in: Worldwide



"SAIL" "LANCE"

EP-8-076

Machines and equipment  
measuring instruments

Online Dioxin Precursor Monitor "CP-2000"

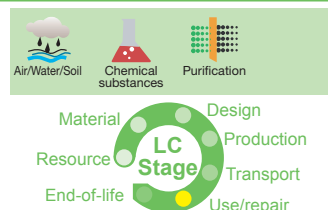
Environmental performance

The CP-2000 Dioxin Precursor Monitor is an online real-time monitor of chlorophenol which is one of the dioxin precursors (intermediates of dioxin formation). It is known that chlorophenol and dioxin have a high correlation of concentration in flue gas. This monitor can measure with high sensitivity up to a few tens of ppt of chlorophenols in flue gas. And the concentration is automatically calibrated under of the changes in flue gas components and the combustion conditions by continuous automatic calibration. So it can be stable measurement. The CP-2000 can continuously monitor transient emission of chlorophenol, so that the parameters of the incinerator and the combustion conditions can be controlled to reduce the emission of dioxin. It prized "Nikkei Earth Environment Technical Award in 2000" and "R&D 100 Award in 2001"

Hitachi High-Tech Trading Corporation

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Tel +81-3-3504-7311 Fax +81-3-3504-7363  
E-mail [htr-keisou@htr.hitachi-hitec.com](mailto:htr-keisou@htr.hitachi-hitec.com)  
URL <http://www.hitachi-hitec-trading.com/english/index.html>

Available in: Worldwide (Except for Iran)



TYPE II



Online Dioxin Precursor Monitor CP-2000

EP-8-077

Machines and equipment

medical electronic instrument and equipment

### MR Imaging System APERTO Lucent

#### Environmental performance

1. This system consumes less electric power than superconducting MRI equipment because it uses the magnetic field of permanent magnets. Its power consumption power is 4KW, about 1/8 of superconducting MRI equipment (compared to our ECHELON Vega [2006 model]).

#### Product performance

1. A vertical field system we have developed since early stage. Widely open to the left and right, the characteristic of open MRI system, will give ease to claustrophobic patients.
2. Has various types of receiver coils which will fit respective part of human body, image measurement software, and image processing function.

### Hitachi Medical Corporation

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 URL <http://www.hitachi-medical.co.jp/english/index.html>

Available in: Worldwide (Except for Iran)



Appearance of APERTO Lucent

EP-8-078

Machines and equipment

medical electronic instrument and equipment

### Ultrasound Diagnostic Scanner HI VISION Preirus

#### Environmental performance

This ultrasound diagnostic scanner "HI VISION Preirus" has reduced the unit size, cut weight by 14% (Standard configuration. Compared to our ultrasound diagnostic scanner "HI VISION 900"[2006 model]) and decreased the power consumption by 27% (Standard configuration. Compared to our ultrasound diagnostic scanner "HI VISION 900"[2006 model]), by adopting software based back-end and ASIC.

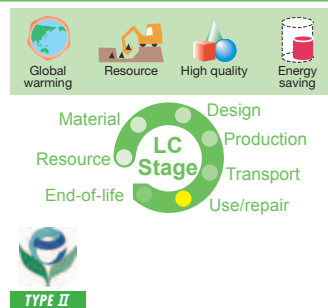
#### Product performance

HI VISION Preirus has the world's top class performance as middle class ultrasonic diagnostic equipment and is accepted by wide range of customers as of December 2010. It is accepted by the customer in a wide layer.

### Hitachi Medical Corporation

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 URL <http://www.hitachi-medical.co.jp/english/index.html>

Available in: Japan, Asia, Europe, Southeast Asia, U.S.A, China



Appearance of HI VISION Preirus

EP-8-079

Machines and equipment

medical electronic instrument and equipment

Ultrasound Diagnostic Scanner HI VISION Avius

Environmental performance

This ultrasound diagnostic scanner "HI VISION Avius" has reduced the unit size adopting software based back-end and ASIC, cut weight by 4% (Standard Configuration. Compared to our ultrasound diagnostic scanner "EUB-5500" [2003 model]) and decreased the power consumption by 5% (Standard Configuration. Compared to our ultrasound diagnostic scanner "EUB-5500" [2003 model]).

Product performance

HI VISION Avius has the performance of a top class as ultrasonic diagnostic equipment of a low-end class in the world as of December 2010. It is efficient ultrasonic diagnostic equipment accepted by the customer in a wide layer.

Hitachi Medical Corporation

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 URL <http://www.hitachi-medical.co.jp/english/index.html>

Available in: Japan,Asia,Europe,Southeast Asia,U.S.A,China



TYPE II



Appearance of HI VISION Avius

EP-8-080

Machines and equipment

medical electronic instrument and equipment

Biochemical Analyzer for medical institutions offering improved operability, resource saving

Environmental performance

- Efficient use of resources: Test efficiency is enhanced through sample carry-over reduction technology. Use of blood collection tubes is halved for resource saving.
- Management of chemicals: Reduction in reagent consumption due to a reduction of the minimum reaction volume.

Product performance

- Enhanced test accuracy: The world's lowest impact on the carry-over of samples by a dispensing nozzle ensures data reliability.
- Improvement in operability :Inheritance of the satisfactory operability in high end model "TBA-C series".
- Shorter test time: Optimum operation is possible, such as the function that the priority subject according to urgency can be set up.

TOSHIBA MEDICAL SYSTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan  
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 URL <http://www.toshiba-medical.co.jp/tmd/english/index.html>

Available in: Japan,Europe,North America



Biochemical Analyzer TBA-c4000

EP-8-081

Machines and equipment

medical electronic instrument and equipment

**MRI System offering diagnostic efficiency and superior image quality**

**Environmental performance**

- Mitigation of climate change: 44% reduction in energy consumption per scan thanks to the adoption of a variety of dedicated coils etc.
- Efficient use of resources: A common platform enables the use of many standardized parts.
- Management of chemicals: Major reduction of non-recyclable items as a result of redesigned structure around the magnet.

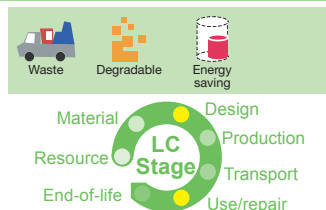
**Product performance**

- superior image quality: Improved sensitivity and resolution made possible by combining cutting edge technology and a variety of dedicated coils.
- Simple diagnosis: A coil with a wide acquisition range for simple setting and diagnosis.
- Shorter examination time: Fast imaging made possible by combining dedicated coils and a high-speed processing system.

**TOSHIBA MEDICAL SYSTEMS CORPORATION**

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 URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>

Available in: Worldwide



Magnetic Resonance Imaging System "EXCELART Vantage Powered by Atlas" MRT-2003

EP-8-082

Machines and equipment

medical electronic instrument and equipment

**X-ray CT system offering cutting-edge technology , superior image quality and low environmental impact**

**Environmental performance**

- Mitigation of climate change: 75% reduction per examination in energy consumption thanks to the development of a new detector and increased processing speed. And Development of the first regeneration technology for electric power in a diagnostic CT system

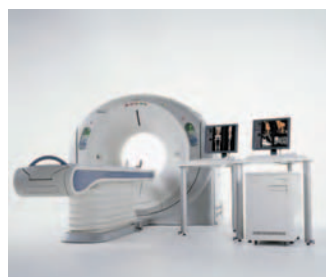
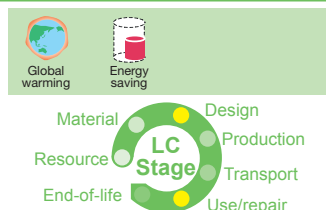
**Product performance**

- Superior image quality: Development of 160mm-wide area detector enables scanning in a single rotation achieves high-definition images of the heart and cardiovascular organs.
- Patient friendly: More detailed examination in a shorter time greatly reduces the burden on the patient ( less than 1/10 (As compared to earlier models) ).
- Minimizing the exposure dose: Exposure reduced by about 75% with the adoption of cutting-edge dose reduction technologies.

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 URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>

Available in: Worldwide



Area Detector CT AquilionONE TSX-301A



EP-8-083

Machines and equipment

medical electronic instrument and equipment

Ultrasound System offering superior diagnostic precision in a small, environmentally friendly unit

**Environmental performance**

- Efficient use of resources: An impressive 50% reduction in main body volume and extremely lightweight ( 35% reduction) .The consistent use of electronic documentation and option software licensing help save valuable resources
- Management of chemicals: 75% reduction in use PVC (polyvinyl chloride) provides environmentally friendly unit.

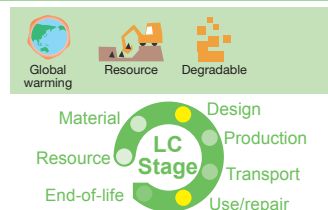
**Product performance**

- Excellent Image Quality: Simply stunning performance, improving both the contrast and the spatial resolution across all applications thanks to original Imaging technology.
- More portability and better patient access: Extremely lightweight , impressive reduction in main body volume ,and adoption of operator comfortable hand grip enables easy to move.
- Superior diagnostic precision: Premium clinical performance and high-end features thanks to wide array of probes and Advanced imaging applications.

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 URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>

Available in: Worldwide



Diagnostic Ultrasound System;Aplio MX; SSA-780A

EP-8-084

Machines and equipment

medical system and equipment

“SDR-100” Digital Imaging System (Component of FLEXAVISION General Purpose R/F Table)

**Environmental performance**

The system configuration is simplified. Images can be managed and processed using a general PC which is used to be done by special hardware. As a result, energy consumption can be reduced by 44 % as compared to the Shimadzu conventional product (DAR-8000I) .

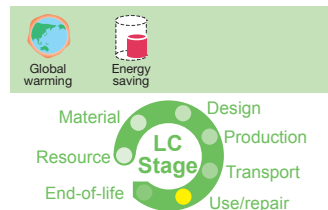
**Product performance**

The FLEXAVISION is a general-purpose R/F table designed based on the concepts (1) Flexibility, (2) Simple & Compact, and (3) User friendly. The introduction cost can be minimized by configuring a system with only the necessary functions such as the table elevation function and the oblique X-ray projection function. Only two units are places in the examination room to satisfy the need to use limited space more efficiently. One of the components, SDR-100 enables simplified and easy radiography.

**SHIMADZU CORPORATION**

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 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/products/medical/fluoro/index.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



FLEXAVISION SDR-100

Eco-product // Machines and equipment



EP-8-085

Machines and equipment  
medical X-ray equipment

Symmetrical open multipurpose imaging system "EXAVISTA"

Environmental performance

The number of composition units is reduced from 7 to 5, and space-saving is realized.

The packaging material is reduced for the efficient use of transport equipment. This equipment also maintains the installation capability at the same level as conventional ones. (compared to "medites CREA" [2003 model])

Product performance

It is possible to see through and take upper part of the top board and even lower side up to 15cm at the edge by the wide stroke 150cm, thus patients in wheel chairs can easily come to examine test of lower legs and urinary organs.

It is possible to recorded in high resolution fluoroscopy option to add fluoroscopy recorder (including external inputs such as endoscopes, ultrasound).

The total number of systems can be reduced by multiple-purpose use of this system as well as a multi-modality image display function. (compared to our multipurpose imaging system "medites CREA" [2003 model])

Hitachi Medical Corporation

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URL <http://www.hitachi-medical.co.jp/english/index.html>

Available in: Japan,Asia



TYPE II



Appearance of EXAVISTA System

EP-8-086

Machines and equipment  
medical X-ray equipment

Whole-body X-ray CT system SCENARIA

Environmental performance

· The electric power consumption per examination \*1 has been reduced to less than 1/2. \*2

\*1 Assumption of the chest-abdomen examination

\*2 Comparison with our X-ray CT system "ECLOS" [2007 model].

Product performance

· The maximum X-ray beam width is 40mm per scan, doubled in comparison with the ordinary system\*1. The system allows the 64-slice image at 0.625mm width by one rotation. The maximum speed 0.35s/rotation is achieved during the whole-body examination.

· The diameter of the semi-large bore is enlarged by 50mm than that of the ordinary aperture \*1 gives sufficient space to the subject and gives relief to the child during the examination.

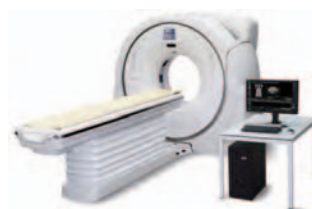
\*1 Comparison with our X-ray CT system "ECLOS" [2007 model].

Hitachi Medical Corporation

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URL <http://www.hitachi-medical.co.jp/english/index.html>



TYPE II



Appearance of SCENARIA

EP-8-087

Machines and equipment  
medical X-ray equipment

X-ray CT system offering state-of -the-art dose reduction technology and powerful performance in a compact and affordable design

Environmental performance

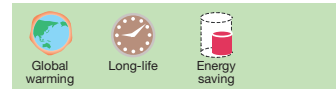
- Mitigation of climate change: 48% reduction in energy consumption in active mode,40% in standby mode thanks to the adoption of energy-saving techniques, and small but high performance X-ray tube as standard, etc.
- Efficient use of resources: More than 20% reduction in space as compared to conventional systems. It fits easily just in the same space as most conventional single slice CT systems

Product performance

- Minimum space & Quick installation: Delivering powerful performance in a compact system, it has been designed to have a footprint of just 10.4m2. And Customer can be up and running in less than 3 days.
- Minimizing the exposure dose: It incorporates the state-of-the-art dose reduction technologies that can eliminate up to 50% of image noise, resulting in a dose reduction of up to about 75%.
- Advanced applications: It supports many of the advanced applications for Toshiba premium level CT systems.

TOSHIBA MEDICAL SYSTEMS CORPORATION

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URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>



multislice CT system Alexion TSX-032A

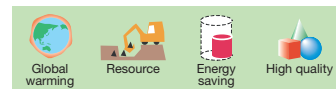
EP-8-088

Machines and equipment  
metal working machinery

Next Generation WEDM: Realizing High-precision Machining and Reduced Running Costs

Environmental performance

- << Material / Resource saving >>----  
Larger size can be handled than the previous model without increasing the amount of cost.  
Reduces the number of component parts.  
Electrical instruction manual reduces paper consumption.
- << Energy saving >>----  
Machining time is shortened 30% from previous model by newly developed power unit.  
Newly added "Wake-up mode" saves standby power requirement, saves almost 69% of total energy.
- << Toxicity / Chemical substances reduction >>----  
The use of lead is drastically restricted.



TYPE II TYPE II



NA series

Mitsubishi Electric Corporation

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Tel +81-3-3218-9024 Fax +81-3-3218-2465  
E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
URL <http://global.mitsubishielectric.com/index.html>  
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

EP-8-089

Machines and equipment

moisture analyzer

**“MOC63u” Moisture Analyzer****Environmental performance**

Moisture analyzers feature an electronic balance below a sample pan and drying chamber. The sample is heated and dried on the pan. Moisture content is calculated as the weight difference before and after drying and moisture percentage is the weight difference divided by the weight before drying. High-capacity heaters were used as the heat source for heating rate, sample quantity and temperature uniformity considerations. MOC63u can efficiently dry samples with one lamp due to a compact drying chamber and reflector plate to reduce temperature irregularities. 32% lower power consumption.

**Product performance**

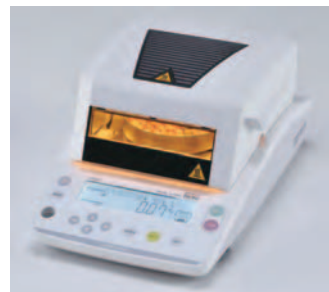
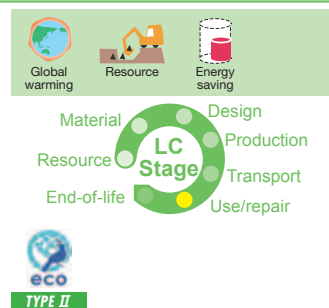
The Unibloc aluminum weight sensor is little affected by temperature variations to ensure accurate weight measurements.

- Capacity: 60 g
- Minimum readability: 0.001 g
- Temperature range: 50-200 °C (1 °C increments)
- Heat source: Straight halogen lamp
- Pan size: 95 mm dia.
- Rated power: 430 VA

**SHIMADZU CORPORATION**

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 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/an/balance/moisture/moc63u.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



“MOC63u” Moisture Analyzer

EP-8-090

Machines and equipment

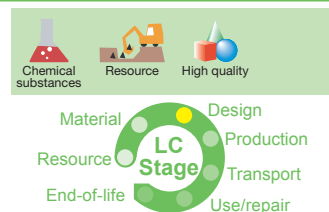
monitor and control equipment

**Next-generation remote terminal unit applicable in an IP network environment equipped with fault detection and waveform recording****Environmental performance**

- Management of chemicals: Use of lead-free printed circuit boards (partial use). Elimination of the use of hexavalent chromium and other hazardous substances.
- Efficient use of resources: Change of the casing material from Sheet Moulding Compound to recyclable polycarbonate.

**Product performance**

- High performance and functionality: Equipped with distribution line fault detection, sampled-date recording, and quantitative measuring functions.
- Simple maintenance: Enhanced maintainability thanks to IT.



Remote Terminal Unit for Distribution Automation Systems TOSDAC-D24E

**TOSHIBA CORPORATION Social Infrastructure Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-8-091

Machines and equipment

numerical control equipment

Mitsubishi CNC M700VS Series, Best Controller for Top-level Manufacturing

Environmental performance

The longevity of parts such as HDD and the cooling fans is improved. Maintenance and the waste of the machine tool are reduced.

----<< Material / Resource saving >>----

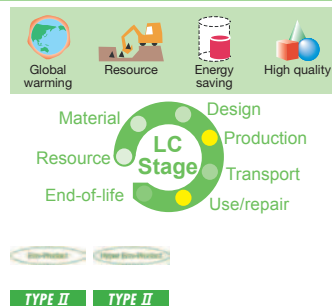
It is a saving resource design which is small and lighter. (Volume:13% reduction Mass: 29% reduction)

----<< Energy saving >>----

We have developed the high-efficiency and electric power saving graphic circuit, which reduces power consumption by approximately 66% compared to the previous model.

----<< Toxicity / Chemical substances reduction >>----

Conforming to EU RoHS Directive, the occurrence of six regulated substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBB, and PBDE) is controlled.



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URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>



M700VS Series

Available in: Worldwide

EP-8-092

Machines and equipment

optical emission spectrometer

"PDA-8000" Energy-Saving High-Resolution Optical Emission Spectrometer

Environmental performance

With the "PDA-8000", circuit design was done to significantly reduce power loss and heat generation to strengthen the shield for reducing the noise due to electrical discharges. When 15 samples were analyzed for 1 hour, 43% energy savings were achieved compared with our previous product. The argon gas consumption was also reduced by about 45%.

Product performance

This product is used for quantitatively analyze components and impurities in solid metals such as steel, copper, and aluminum alloy. By adding a function to monitor in real-time discharge energy consumed between the electrodes and the sample and reviewing the high-voltage generation / discharge energy control circuit design of the optical emission power supply, optimum discharge conditions now can be configured for various analytes with significant improvements in the optical system performance, detection sensitivity and analysis accuracy.



Optical Emission Spectrometer "PDA-8000"

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URL <http://www.shimadzu.com/index.html>

URL <http://www.shimadzu.com/an/elemental/oes/pda8000/8000.html>

URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide

Eco-product // Machines and equipment

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EP-8-093

Machines and equipment

optical fiber cord, including core wire

GE-PON system uses optical fiber to realize high-speed broadband communications

Environmental performance

----<< Material / Resource saving >>----

Significant reduction in use of virgin material through product size reduction and elimination of metal as a material.

Reductions from our previous model are following.

Iron components: 0.046kg to 0kg

Aluminum: 0.306kg to 0kg

Plastic: 0.5kg to 0.133kg

----<< Energy saving >>----

Reduced electricity consumption approximately 65% compared to previous product by eliminating use of a high-electricity-consumption part (FPGA).

----<< Toxicity / Chemical substances reduction >>----

Complies with RoHS Directive adopting lead-free solder.

Product performance

The GE-PON system uses optical circuits to realize high-speed broadband communications. The GE-PON-ONU is installed in households and attached to an optical fiber cable as a terminal device.

Mitsubishi Electric Corporation

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URL <http://global.mitsubishielectric.com/index.html>

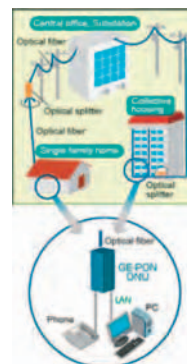
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan,Thailand,South Africa



TYPE II TYPE II



GE-PON ONU

EP-8-094

Machines and equipment

parts of chemical machinery and its equipment

High Concentration Ozone Generation Systems, Contributing to the Reduction of Life Cycle Cost

Environmental performance

----<< Material / Resource saving >>----

40% of weight is reduced by downsizing compared to that of our previous model.

----<< Energy saving >>----

10% lower energy consumption compared to that of our previous model.

----<< Toxicity Environmental clean-up products >>----

Different from sterilization and oxidation by chlorine, that by ozone does not pollute the environment because it turns into oxygen after treatment.

Product performance

Ozone is used at water treatment plants, wastewater treatment plants and factories, owing to its ability of disinfection, decolorization and deodorization.

Our product can generate high concentration ozone gas efficiently.It realizes maximum ozone concentration of 240g/m<sup>3</sup> (cf.150g/m<sup>3</sup> by our previous product)

Mitsubishi Electric Corporation

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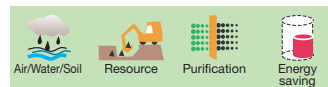
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan,North America,China



1 Eco-product // Machines and equipment  
2  
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7  
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EP-8-095

Machines and equipment

parts of electrical relay switches

Hybrid "Dry Air" and Solid Insulation SF6-free Switchgear

Environmental performance

----<< Greenhouse gas free Global warming prevention >>----  
 The adoption of a composite insulation of solid materials and low pressure, dry air (at 0.15 MPa-g with moisture removed) realizes a 72 kV C-GIS free from SF6 gas.  
 ----<< Material / Resource saving >>----  
 The number of components was greatly reduced (to 70% from our previous type) applying a simple structure vacuum circuit breaker (VCB) with an electric magnetic operating mechanism.  
 ----<< Energy saving >>----  
 The VCB operating energy is reduced to 70%. The power dissipation (heat loss) was reduced to 60% by optimizing device arrangement and minimizing conductor lengths that reduces the resistance of the main circuit.

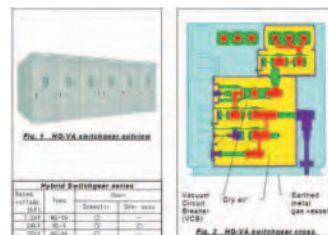
Product performance

Mitsubishi Electric developed a series of 7.2 to 72 kV switchgear for power distribution featuring a composite insulation of solid materials and low-pressure dry air, and has been placing them on the market since 2000.

Mitsubishi Electric Corporation

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 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan,Asia,Central America



HG-VA switchgear

EP-8-096

Machines and equipment

parts of electrical relay switches

Completely new type SF6 gas-free solid insulated switchgear

Environmental performance

- Mitigation of greenhouse effect: SF6 gas free contributes 62% reduction in CO<sub>2</sub> emissions compared with conventional C-GIS<sup>(\*)</sup>.
- Effective utilization of resources: 50% reduction in mass, 40% in volume and 50% in the number of parts compared with conventional C-GIS<sup>(\*)</sup>.

Product performance

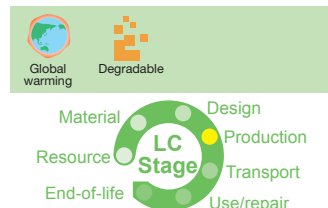
- Easy to dispose: Insulated by combination of vacuum and epoxy mold-casting without SF6 gas.
- Compact & light-weight: Its compactness provides easy floor planning.
- Labor-saving: Compared with conventional C-GIS<sup>(\*)</sup>, parts number is significantly reduced by the adoption of newly developed operating mechanism and it makes maintenance work to be easier.

(\*)1) : C-GIS (Cubicle-type Gas Insulated Switchgear, type:GFB-20M25)

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Solid insulated switchgear, KA-20M25



EP-8-097

Machines and equipment

parts of steam engines, turbines and water wheels

Small-scale Hydro-power Generation System Hydro-eKIDS™ Using Renewable Energy

Environmental performance

- Mitigation of climate change: In comparison with fossil-fuel power generation, the consumption of resources and the discharge of CO<sub>2</sub> are suppressed. Because of small-scale hydraulic power generation, the system can be applied to places where hydraulic energy is available. Considered is the utilization of water and sewage, agriculture water, factory waste water, and water discharged from river dams, resulting in the reduction of greenhouse gases and the saving of energy. The system can be used as a dispersed power source, and it can contribute to the reduction of greenhouse gas and the saving of energy.
- Efficient use of resources: The system does not need a conventional large-scale dam, so the river environment and the natural ecosystem are not influenced.

Product performance

Brief specifications are as follows: the flow rate, 0.03m<sup>3</sup>/s~3.5m<sup>3</sup>/s; the head, 2~15m; the output, 1~200kw. Five kinds of standard units cover wide application ranges. Because of a small, lightweight pipe-in structure, the units are easily placed even in a small space. The features are a cheaper running cost and longer life than other large-scale power sources, so the economical efficiency will be displayed for long-term use.



Hydro-eKIDS S type

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

36-5, Tsurumichuo 4-chome, Tsurumi-Ku, Yokohama, 230-8691, Japan  
 Tel +81-45-500-7342 Fax +81-45-500-7599  
 URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-8-098

Machines and equipment

physical and chemical instruments

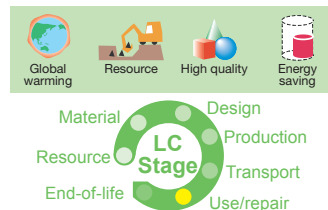
Highly advanced transmission electron microscope HT7700

Environmental performance

Turbo molecular vacuum system consumes less energy and provides a 30% reduction in CO<sub>2</sub> emissions, making the HT7700 a green, eco-friendly instrument. (comparison with H-7650, production in 2010)

Product performance

- \* TEM (Transmission Electron Microscope) operations and viewing are integrated into one user interface, allowing for operation of the TEM in ambient room lighting.
- \* A high sensitivity digital screen camera allows for effortless viewing of samples even at ultra-low intensities on the LCD monitor.
- \* Hitachi's unique Double-gap objective lens provides high contrast, high resolution, low magnification and wide field of view imaging modes.
- \* Functions for taking and creating combined panoramic image using Hitachi's original algorithms are included as standard.



Transmission electron microscope HT7700

Hitachi High-Technologies Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan  
 Tel +81-3-3504-7562 Fax +81-3-3504-3959  
 E-mail [sugawara-kazunari@nst.hitachi-hitec.com](mailto:sugawara-kazunari@nst.hitachi-hitec.com)  
 URL <http://www.hitachi-hitec.com/global/index.html>  
 URL <http://www.hitachi-hitec.com/global/em/tem/ht7700.html>  
 URL <http://www.hitachi-hitec.com/global/csr/index.html>

Available in: Japan, Oceania, Europe, North America, Middle and Near East, ASEAN, Republic of Korea, Taiwan (Rep. of China), China (Except for Iran)

EP-8-099

Machines and equipment

physical and chemical instruments

### Tabletop Micro Ultracentrifuge

#### Environmental performance

Requires 20% less space on the desk and 8% lighter. ( comparing to the smallest product of the tabletop ultracentrifuges in the world, 737 (W) × 584 (D) × 409 (H) 105kg ( started to sell in 2007) --> 590 (W) × 582 (D) × 408 (H) 97kg)

- Makes the quietest noise in the world as a small sized ultracentrifuge, 45dBA. (as of Sep. 2011.)
- Has thermo-module cooling system ( HFC free)
- Has regenerative brake system

#### Product performance

The CS150NX Tabletop Micro Ultracentrifuge generates the centrifugal force that is hundreds of thousands times stronger gravity by the high velocity revolution, and is used to separate micro-particles like DNA\*. \*DNA:Deoxyribonucleic acid (genetic instructions)

- The largest RCF: 1,050,000 × g. (Versus other similar ultracentrifuge, as of Sep. 2011.) \*RCF; Relative Centrifugal Force.
- Max. speed: 150,000min<sup>-1</sup>
- Max. capacity: 180mL

### Hitachi Koki Co., Ltd.

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 E-mail kankyo@hitachi-koki.co.jp  
 URL <http://www.hitachi-koki.com/>  
 URL <http://www.hitachi-koki.com/himac/centrifuges/cs150nx/cs150nx.html>  
 URL [http://www.hitachi-koki.co.jp/env/environmental-report/2011\\_e.pdf](http://www.hitachi-koki.co.jp/env/environmental-report/2011_e.pdf)

Available in: Worldwide (Except for Iran)



TYPE II



Tabletop Micro Ultracentrifuge "CS150NX"

EP-8-100

Machines and equipment

PLA Production Plant

### PLA Production Plant (FINE-PLA)

#### Environmental performance

PLA (means "Poly-lactide" or "Polylactic Acid") is one of bioplastics, which is effective to reduce the emission of CO<sub>2</sub>, because PLA is produced from lactic acid as a raw material made of fermented corn, sugar cane or other grains. It is also known as environmental friendly plastic to the earth because of its bio-degradable character at the time of disposal.

#### Product performance

FINE-PLA is Hitachi proprietary process to produce PLA based on unique technologies for the processing ultra-high viscous polymer. PLA made by FINE-PLA has world-class qualities which can be applicable to molded products or fibers etc.

[Qualities of PLA]

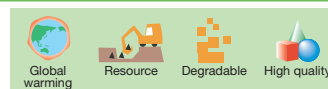
- Molecular weight: 50,000 - 200,000
- Optical purity: Ultra-high
- Transparency: Excellent

Hitachi provide license for the production of PLA and various services based on the process license, including engineering, design, fabrication, procurement, construction and commissioning of the plant.

### Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
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 URL <http://www.hitachi-pt.com/products/ip/process/pla.html>  
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Worldwide (Except for Iran)



TYPE II



PLA Production Plant

EP-8-101

Machines and equipment

power tools

Electronic Pulse Driver

Environmental performance

- Adoption of the electronic pulse system\*2, which is the first in the power tool industry\*1, has realized 68dB of noise.
- \*1 Among power tools as of May 2010, surveyed by Hitachi Koki.
- \*2 Electronic pulse system; The electronic pulse system generates powerful tightening torque by rotating the brushless motor in regular and reverse directions at high speed repeatedly via electronic control.
- The battery adopted lithium-ion type (cadmium free) for less environmental load.

Product performance

- The operation mode can be easily switched to another by operating the mode selection dial. The tool can efficiently provide a variety of operations by itself. The advanced electronic control allows for an optimal screw/bolt tightening or drilling operation for each application.
- Work efficiency is improved thanks to the brushless motor that reduces electrical loss. Maintenance becomes easier because replacement of carbon brush is no required.

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 URL <http://www.hitachi-koki.com/>  
 URL [http://www.hitachi-powertools.com.ar/powertools/products/li\\_ion/wm14dbl/wm14dbl.html](http://www.hitachi-powertools.com.ar/powertools/products/li_ion/wm14dbl/wm14dbl.html)  
 URL [http://www.hitachi-koki.com/about/environment/report\\_es/2008\\_es/2008\\_es.html](http://www.hitachi-koki.com/about/environment/report_es/2008_es/2008_es.html)

Available in: Japan,Asia,Oceania,Europe,North America,Singapore,Thailand,Republic of Korea



Electronic Pulse Driver WM14DBL

EP-8-102

Machines and equipment

power transformers

A More Advanced Energy-Saving Premium Inverter "FRQROL-F700P Series"

Environmental performance

- << Material / Resource saving >>----  
 The principal consumables - the condenser and cooling fan - are designed to last for 10 years.
- << Energy saving >>----  
 - Energy savings through RPM control (flow control) instead of on/off flow control.  
 - Optimal excitation control instead of regular V/F control.  
 - IPM motor can be regulated.
- << Toxicity / Chemical substances reduction >>----  
 Compliant with European RoHS Directive.

Product performance

The FREQROL-F700P is an upgrade to the FREQROL-F700, which was awarded the fiscal 2006 Electrical Manufacturers Technology Prize by the Japan Electrical Manufacturers' Association. It can control both a general-purpose motor (three-phase induction motor) and an interior permanent magnet (IPM) motor, which enables it to meet enhanced energy-saving needs.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
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 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Inverter FREQROL-F700P Series

EP-8-103

Machines and equipment

power transformers

**MR-J3W-B (2-axis servo amplifier)**

**Environmental performance**

Two motors are operated by common power supply. Thus, the regenerative energy can be effectively used. (189 to 256% compare to single axis servo amplifier)

**Product performance**

MR-J3W-B servo amplifier has MR-J3 series servo amplifier's high performance, functionality and usability for satisfying machine needs. One unit of MR-J3W-B can operate any combination of rotary/linear servo motors or direct drive motor.

**Mitsubishi Electric Corporation**

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 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



TYPE II



MR-J3W-B (2-axis servo amplifier)

EP-8-104

Machines and equipment

power transformers

**The VF-PS1 inverter which increase fan and pump efficiency even in the low speed.**

**Environmental performance**

- More energy saving by Advanced energy-saving mode
- 88% of materials used on the VF-PS1 are recyclable, which meets European WEEE (Waste Electrical and Electronic Equipment) Directive of 70%.

**Product performance**

- High-frequency noise reduction and harmonics reduction
- Built-in special softwares for fan and pump application.



Variable torque Inverter TOSVERT™ VF-PS1

**TOSHIBA CORPORATION Social Infrastructure Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-3846 Fax +81-3-5444-9368  
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 URL [http://www.toshiba.co.jp/sis/en/ind\\_sys/inverter/index.htm](http://www.toshiba.co.jp/sis/en/ind_sys/inverter/index.htm)  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-8-105

Machines and equipment

programmable logic controllers

MELSEC-L General-purpose PLC: equipped with various functions, flexible and simple to use, and Compact

Environmental performance

1. Direct connection among units. Connectors located on the sides of the units allow units to connect directly to each other without using base units. Systems can be installed with minimal required space.
2. CC-Link Function, Ethernet, USB, I/O functions are equipped as standard. These functions can be freely used as necessary, requiring no special units for each function and allow for space reduction and various control.
3. The cubic volume is reduced by nearly 75% and the weight by roughly 70% compared with conventional models. By adopting the universal designs, visibility and operability are improved even with a small chassis.

Product performance

1. I/O points: 4,096 I/O device points: 8,192 Program capacity: 260k steps Processing speed (LD Instruction): 9.5 ns Program memory capacity: 1,040k bits Peripheral Ports: USB, Ethernet SD Memory Card I/F: equipped. CC-Link Master/Local stations are equipped.
2. I/O function is equipped as standard, and every function can be freely used as necessary, requiring no special units for each function and allowing various control.
3. PC-less operations using display units and simple programming environments can improve efficiency of developing, manufacturing and maintenance.

Mitsubishi Electric Corporation

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 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



TYPE II



L26CPU-BT

EP-8-106

Machines and equipment

pumps

Energy-saving canned motor pumps

Environmental performance

8-steps controlled energy-saving drive can be done with the internal inverter carried on the pump. Further, it has an automatic variable speed control function by external signal input and trouble caution signal output function as standard.

Product performance

Application of the canned motor and inverter enable the pump to be compact. Because of the leakage-free design, the sealing device is maintenance free.



Hz-free pump model MMF

EBARA CORPORATION

11-1 Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan  
 Tel +81-3-3743-6111 Fax +81-3-5736-3100  
 E-mail [webmaster@ebara.com](mailto:webmaster@ebara.com)  
 URL <http://www.ebara.co.jp>



EP-8-107

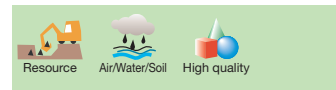
Machines and equipment

reactors, generators, carbonizers and electrolytic cells

Biomass Boiler System

Environmental performance

This system uses a circulating fluidized bed boiler to efficiently generate power and supply heat from carbon-neutral biomass. The biomass boiler system has been adopted and used mainly by wood biomass power plants and paper-manufacturing companies and contributes to the reduction of CO<sub>2</sub> emissions.



JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan  
 Tel +81-3-3516-7300 Fax +81-3-3516-7345  
 URL <http://www.jfe-eng.co.jp/>



EP-8-108

Machines and equipment

reactors and induction voltage transformers

Automatic three-phase capacitance switching equipment

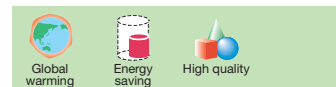
Environmental performance

----<< Energy saving >>----

This equipment is installed on electric power receiving and distributing equipment in factories, and controls association or shut off electric power capacitors in order to obtain the ideal power factor by picking up reactive power for efficient and energy saving operation.

Product performance

Automatic capacity grasping function enables easier installation. Larger LCD display improves visibility.



TYPE II TYPE II

Mitsubishi Electric Corporation

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 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



VAR-12A

Available in: Japan,Asia



EP-8-109

Machines and equipment

renewable energy utilization system

Multistage Deep Sea Water utilization system

Environmental performance

This system conserves more than 60% of electricity consumption for air-conditioning by utilizing cold heat of deep sea water. And the cleanliness of deep sea water lessens pre-treatment process of desalination system to remove contamination, and reduce water production cost. This is an eco-friendly infrastructure which contributes not only to energy conservation but also to securement of safe water resource and promotion of industries.

Product performance

More than 60%\* of electricity conservation for air-conditioning by utilizing the stable low temp.

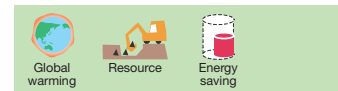
Approx. 20%\* of desalination cost reduction because of the cleanliness.

\*In-house comparison: Compared with our conventional system

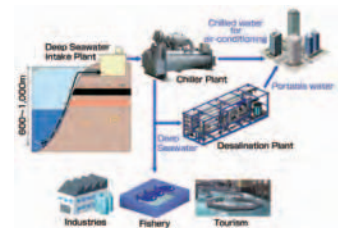
Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan  
 Tel +81-3-5928-8100 Fax +81-3-5928-8701  
 URL <http://www.hitachi-pt.com>  
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan, Asia and Oceania, Southeast Asia, Middle and Near East, ASEAN, Philippines (Except for Iran)



TYPE II



System configuration

EP-8-110

Machines and equipment

room dryers

Bathroom Ventilation Dryer for Drying Clothing with Reduced Power Consumption

Environmental performance

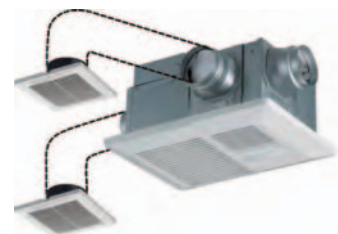
- Mitigation of climate change: Includes an eco-drying mode that minimizes the time that electricity is supplied to the heater for drying clothes. This is controlled by changing the temperature of the air sent to the bathroom. The amount of electricity used has been reduced to 1/3 in comparison with that of the standard drying mode.

Product performance

Since the revised Building Standards Act, which considered sick-house syndrome, was executed in July 2003, the role of ventilation systems has varied from local ventilation to ventilation of the whole house. The carrier group in Toshiba developed the bathroom ventilation drier, "Bath Dry" which can ventilate not only bathrooms, but also other rooms.

Toshiba Carrier Corporation

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 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba-aircon.jp/aboutus/environment.htm>



DVB-18STD2

1 Eco-product // Machines and equipment  
 2  
 3  
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EP-8-111

Machines and equipment

slurry pumps

High-efficiency energy-saving slurry pump e-Performance

Environmental performance

High pump efficiency has been realized by adopting e-e (efficiency-enhancing) impeller developed using Computational Fluid Dynamics analysis. As a result, this product requires a smaller electric motor and enables an impeller with larger diameter and lower rotation speed, which leads to a reduction of energy consumption. For example, the efficiency SPL3-50 is improved over 22% at the maximum efficiency point, cutting more than 12 ton of carbon emissions per year. The extended life-performance of impellers and the e-l-p (extended-life-performance) adjustment mechanism contributes to reducing waste load.

Product performance

The improved pump efficiency ensures lower rotation speed than conventional models when compared at the same pump head, and the energy costs are reduced. In addition, the abrasion resistance is increased. Since the Required Net Positive Suction Head (an important matter of pump equipment) is low, superior suction performance and steadier transportation of slurry liquid are possible.

FURUKAWA INDUSTRIAL MACHINERY SYSTEMS CO., LTD.

2-3, MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKYO, Japan  
 Tel +81-3-3212-7803 Fax +81-3-3231-6557  
 URL <http://www.furukawa-sanki.co.jp>

Available in: World wide



e-Performance Photo: SPL-80

EP-8-112

Machines and equipment

solar cooling system

Hitachi Solar Cooling System

Environmental performance

[Reduction of discharging]  
 In the feasibility design of 20,000USRT solar cooling plant.  
 (Direct Normal Irradiation is 850W/m<sup>2</sup>, Cooling water temperature is 34°C, in the NEDO project)

CO<sub>2</sub>: 80.985t/y  
 SO<sub>x</sub>: 1.138t/y  
 NO<sub>x</sub>: 180.9t/y

Corresponding to preserve oil: 248,085 Barrel/y

Product performance

[Technical Features]

- (1) System
  - High performance process: Annual System COP>5.4 (20,000USRT)
  - Fully integrated optimum process control: to minimize the energy consumption from hourly conditions
- (2) Components
  - High efficient original solar collector (Enhanced Parabolic Type): η >0.65
  - Parallel flow cycled triple effect absorption chille: COP>1.91

Hitachi offers not only this original system but also combined system with energy conservation technology and water purification system. Furthermore, solar thermal energy by the collector of this system is able to be applied for any heating process for the every kinds of industrial plants.

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo,  
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 URL <http://www.hitachi-pt.com/index.html>  
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Oceania, Europe, North America, Central America, Middle and Near East, U.S.A (Except for Iran)



TYPE II



System Flow Diagram of Hitachi Solar Cooling

EP-8-113

Machines and equipment

standard transformers

Energy-saving, compact new series of transformers

Environmental performance

- Mitigation of greenhouse effect: Energy consumption is reduced by apprx. 40% <sup>(1)</sup> compared with the previous series (comply with JIS C 4306-1999) <sup>(1)</sup>. Moreover CO<sub>2</sub> emissions is reduced by approx. 4.0 tons <sup>(2)</sup>.

Product performance

- Reduction of load loss: 120% of "Top Runner" achievement value <sup>(3)</sup> is met by the adoption of high performance iron-core and highly conductive copper for the coil conductor.
- Space-saving: Reduced footprint thanks to high-density coil technology makes installation easier.

NOTES:

- \*1: In case of three-phase 500kVA model operated with 40% of load factor for 24 hours a day, 365 days a year.
- \*2: CO<sub>2</sub> emission coefficient: 0.555 [kg-CO<sub>2</sub>/kWh] according to an ordinance of the Environment Ministry (April, 2006)
- \*3: According to JIS C 4306-2005

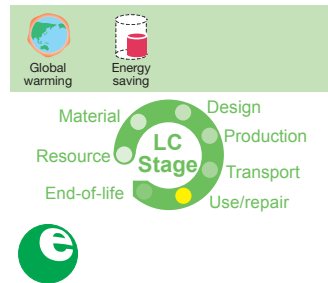
TOSHIBA CORPORATION Social Infrastructure Systems Company

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 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Super high efficiency Eco type Cast Resin transformer RCT-N22E



EP-8-114

Machines and equipment

steam turbines

Most-advanced steam turbine for thermal power station

Environmental performance

- High efficiency with ultra super critical steam condition makes CO<sub>2</sub> emission reduce.
- More effective use of the limited fossil fuel.
- Reduction in emissions of chemical substances (SO<sub>x</sub>, NO<sub>x</sub>, etc) with low fuel consumption.
- To downsize, heavy equipments less work for its moving or overhaul.

Product performance

- Steam temperature (620°C) to the highest level in the world makes it improve thermal efficiency and steam turbines are supplied all over the world.
- To downsize, it is easy to maintain and reduce running cost.

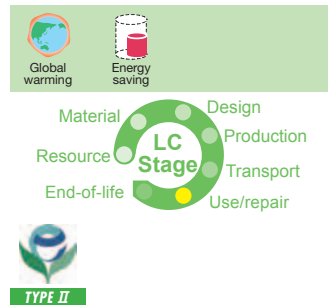
Hitachi, Ltd. Power Systems Company

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 URL <http://www.power-hitachi.com/products/ffp/st/index.html>  
 URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



Most-advanced steam turbine for thermal power station



1 Eco-product // Machines and equipment  
 2  
 3  
 4  
 5  
 6  
 7  
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 9

EP-8-115

Machines and equipment

switchboards and electrical control equipment

Electronic Hybrid Functional Control Panels Bring Water Treatment Plants Simplicity and High Performance

Environmental performance

In power instrumentation and control at water purification plants or sewage-treatment plants, each function is installed in each control panel. Electronic Hybrid Functionnal Control Panel gathers all these circuits into fewer panels which enables reduction of space, hard-wiring and interconnection, and reduced energy consumption in electrical installation.

----<< Material / Resource saving >>----

Previous 3 control panels are able to be incorporated in 2 hybrid panels.

----<< Energy saving >>----

Almost 40% in energy saving is realized (compared to our previous model)



TYPE III

6,251kg-CO<sub>2</sub>  
Inspection

Resource/Materials/Production/  
Transfer/Use/End-of-Life

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



MACTUS 30LCB

EP-8-116

Machines and equipment

switches

Resource Saving & Energy Saving through the Pursuit of Compactness and Space Saving

Environmental performance

- Mitigation of climate change: 25% reduction in the consumption of SF6 gas compared with the benchmark model thanks to downsizing. Down sizing and less weight led to a reduced consumption of raw materials and a 20% reduction in CO<sub>2</sub> emissions.

Product performance

- Space saving: Downsizing slashes the space required for installation.
- Enhanced operability and maintainability: The operation panel and inspection unit are almost entirely positioned on the front of the switchgear for enhanced operability and maintainability.
- Reduced manufacturing period: As the construction of the foundation for the housing involves less work, projects can be executed faster.



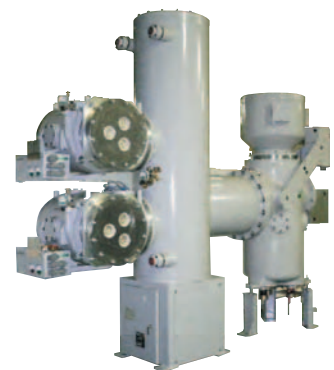
TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



145kV Gas-insulated switchgear (GIS) G3A-b

EP-8-117

Machines and equipment

switchgear

24kV Vacuum Insulated Switchgear

Environmental performance

C-VIS mainly consists of vacuum insulated switch and grease-free hybrid type electro-magnetic actuator. It has features of compactness & reliability of GIS (Gas Insulated Switchgear) and accessibility of AIS (Air Insulated Switchgear) based on Hitachi's vacuum technologies.

<Design concepts>

- Environment-friendly Design
- Vacuum insulation technique eliminates the risk of greenhouse gas emission (SF6 gas free).
- Minimum maintenance Design
- Solid lubricant technique contributes to eliminating periodical lubrication maintenance.
- Safety Design
- Outer surface of the modeled sheath has an earthed layer to keep contact safety.

Product performance

Rated Voltage: 24kV  
 Rated Frequency: 50/60Hz  
 Rated short circuit breaking current: 25kA  
 Rated normal current: 630/800/1250A  
 Dimension: W (Width) : H (Height) : D (Depth) = 600:2000:1300

Hitachi, Ltd. Power Systems Company

Akihabara Daibiru Building 18-13, Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Tel +81-3-3258-1111

URL <http://www.hitachi.com/>

URL <http://www.hitachi-rail.com/products/powersupply/powersupplyequipment/vis/>

URL <http://www.hitachi.com/csr/>

Available in: Worldwide (Except for Iran)



External appearance of C-VIS

EP-8-118

Machines and equipment

terminal units

Energy saving data collecting server "EcoServer II"

Environmental performance

Features in environmental conscious design compared to the previous model.

----<< Material / Resource saving >>----

66% reduction of resource consumption

----<< Energy saving >>----

54% reduction of electricity consumption.

Product performance

EcoServer II collects energy data from MDU breaker (a breaker with energy measuring unit and display) and EcoMonitorPro (Energy measuring equipment) and transmit the data to the Internet/Intranet through Ethernet (10BASE-T). The transmitted data is graphed and can be seen on the Web browser.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

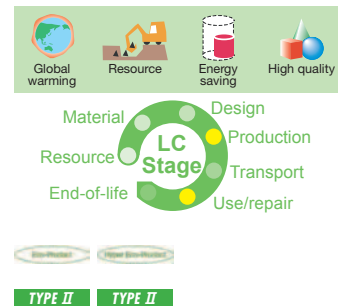
E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



MES-255BR-A



EP-8-119

Machines and equipment

three-phase induction motors

"High efficiency motor which meet or exceed Premium efficiency of NEMA standards. (NEMA premium is same as IE3 (premium efficiency) of the IEC standard.)"

Environmental performance

- Mitigation of climate change: Annual power consumption reduced by about 5% compared with the standard efficiency (IE1) model. CO<sub>2</sub> emissions reduced by 0.3 tons.
- Efficient use of resources: Reduction 2% in weight, 21% in the number of parts. (in the case of 4pole-10HP)

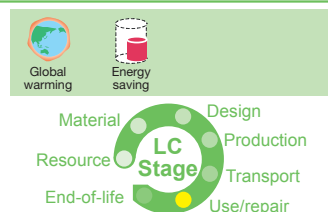
Product performance

- Economical: Energy saving through lower loss design
- Low noise, Long life and High reliability
- High efficiency and Lower starting current are achieved by the adoption of the most suitable slot shape at the same time.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
Tel +81-3-3457-3846 Fax +81-3-5444-9368

Available in: North America



Low Voltage Three phase High Efficiency Induction Motor (NEMA Premium® efficiency motors)

EP-8-120

Machines and equipment

total organic carbon analyzer

"TOC-L Series" Total Organic Carbon Analyzer Largely Reducing Standby Electricity

Environmental performance

The "TOC-L" incorporates functions to go into standby within a certain period after measurement and automatically restart at the preset time. Power consumption during standby (standby electricity) has been largely reduced; 36 % less in general use conditions as compared to Shimadzu conventional products.

- Power consumption reduced by 36 % (100 V) and 43 % (200 V)

Product performance

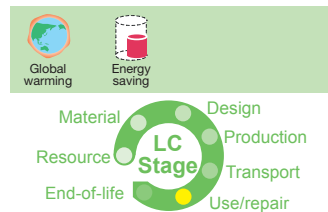
This analyzer measures organic impurities and organic contamination by measuring CO<sub>2</sub> generated due to oxidative decomposition of organic matter in the sample. By using the 680°C combustion catalytic oxidation/NDIR methods, powerful oxidative decomposition capability and high-sensitivity measurement are achieved. TOC of various samples can be measured over a wide range from 4 μg/L to 30,000 mg/L from purified water to heavily polluted water with suspended solids.

- TOC: Total Organic Carbon

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
Tel +81-75-823-1113 Fax +81-75-823-2062  
URL <http://www.shimadzu.com/index.html>  
URL <http://www.shimadzu.com/an/toc/lab/toc-l.html>  
URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



TOC-LcSH



EP-8-121

Machines and equipment

turbine generators

Large Capacity and High Efficiency Hydrogen Indirectly Cooled Turbine Generator for Thermal Power Plant

Environmental performance

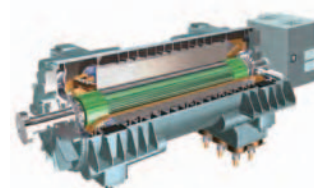
- Mitigation of climate change: The emissions of carbon dioxide is reduced by application of large capacity and high efficiency hydrogen indirectly cooled turbine generator.
- Efficient use of resources: Reduction of materials for generator by application of hydrogen indirectly cooled turbine generator. Development of new materials and methods. Reduction of waste and environmental load by the reuse of parts / materials at the time of repair.

Product performance

- High-reliability: High-reliability realized by advanced analysis and verification experiments.
- Reduced manufacturing period: reduction in the manufacturing period by an easy-to-manufacture structure.

TOSHIBA CORPORATION Power Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
 Tel +81-3-3457-3613 Fax +81-3-5444-9238  
 URL <http://www.toshiba.co.jp/index.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Large Capacity and High Efficiency Hydrogen Indirectly Cooled Turbine Generator

EP-8-122

Machines and equipment

universal testing machine

“UH-Xh” and “UH-FXh” Series Universal Testing Machines Consuming 50 to 80 % Less Power

Environmental performance

The “UH-Xh” and “UH-FXh” Series units consume 50 % less hydraulic oil and about 50 to 80 % less power as compared to conventional products because they have a hybrid hydraulic supply unit providing efficient control by the combination of an AC servo motor and hydraulic pump

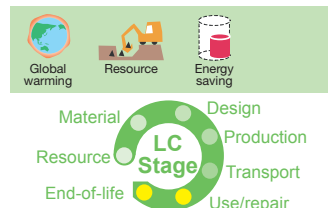
Product performance

The color LCD touch panel helps to set test conditions and display test results and graphs easily. Gains necessary for control can be automatically adjusted based on the test force and strain data obtained during the test by the semi-auto tuning function.

Model	Max. Test Force(kN)	Grip	Stroke Speed(mm/min)	Energy-Saving Rate(%)
UH-F300/500kNXh	300/500	Hydraulic	0.1 to 100	54.3
UH-F1000kNXh	1000	Hydraulic	0.1 to 90	61.6
UH-200/300/500kNXh	200/300/500	Manual	0.1 to 100	81.9
UH-1000kNXh	1000	Manual	0.1 to 90	81.8

SHIMADZU CORPORATION

1, Nishinokyo-Kuwaracho, Nakagyo-ku, Kyoto, 604-8511, Japan  
 Tel +81-75-823-1113 Fax +81-75-823-2062  
 URL <http://www.shimadzu.com/index.html>  
 URL <http://www.shimadzu.com/an/test/universal/index.html>  
 URL <http://www.shimadzu.com/about/environmental/index.html>



TYPE II



UH-Xh/UH-FXh Series

Available in: Worldwide

Eco-product // Machines and equipment

EP-8-123

Machines and equipment

vending machine

Vending Machine: N-EV1120

Environmental performance

The model can reduce the electric power consumption. It has the super-insulated cabinet and the 2-Comp inverter heat pump system. During the periods of peak demand for electricity in summer (9:00-20:00), it stops the cooling operation with keep proper temperature of drinks. The annual electric power consumption is reduced 35% compared with the previous year's model. And it achieves the regulation of 2012 established by Japanese government.

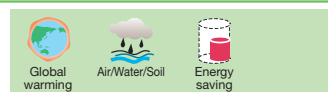
Product performance

The model contains a wide range of drinks and its easy-to-find color promotes sales.

Panasonic Corporation, Appliances Company

3-4-74 Noji-higashi Kusatsu City Shiga, 525-0058, Japan  
 Tel +81-77-566-4805 Fax +81-77-566-4843  
 URL <http://panasonic.net/>  
 URL <http://panasonic.net/csr/>

Available in: Japan



TYPE II



N-EV1120

EP-8-124

Machines and equipment

water conservation equipment accessory

UB-FINE Hands Free Water Conservation System UB5N

Environmental performance

It does not need the installation of an electric leak device, and it is energy efficient and environmentally friendly. It instantly stops the water without any delay problems. It easily controls the water volume. SGS report approves that the product is RoHS compliant (Restriction of the use of certain hazardous substance).

Product performance

It does not require you to touch the faucet, making it easier to avoid bacterial crosscontamination as well as making it safe and sanitary. It does not require power, making it energy saving and environmentally friendly, as it controls the water volume effortlessly. The unique patented design offers an exceeding water-saving ratio of 65.5%. Tested by Japan's JIS standards, it does not percolate or leak after stepping on it 500,000 times.

Business Zone Ltd.

1F., No.137, Chi Lin Rd., Lu Jhu Township, Taoyuan County, Taiwan, 33850, Republic of China  
 Tel +886-3-311 6767 Fax +886-3-311 6565  
 E-mail [business@ub-fine.com](mailto:business@ub-fine.com)  
 URL <http://www.ub-fine.com>

Available in: Taiwan (Rep. of China), China



TYPE I



EP-8-125

Machines and equipment

weaving machinery for air jet loom and water jet loom

### Air Jet Loom "JAT710"

#### Environmental performance

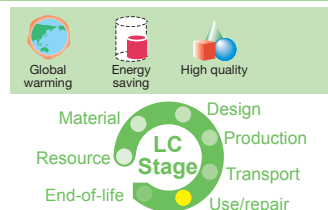
Less air consumption -20% down. New technology offers even further energy saving.

#### Product performance

The JAT710 is designed with the same concept as the JAT610: "weaving the highest quality fabric at the lowest possible cost," and boasts improved features such as higher speed, lower vibration and lower energy consumption. Plus it is equipped with the latest electronics technology such as a new Internet-capable color function panel, taking today's weaving mill into a new dimension.

### Toyota Industries Corporation

2-1 Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan  
 Tel +81-566-22-2511 Fax +81-566-27-5650  
 URL <http://www.toyota-industries.com/>  
 URL <http://www.toyota-industries.com/product/textile/textile/textile.html#textileJ710>  
 URL <http://www.toyota-industries.com/csr/library/>



JAT710

EP-8-126

Machines and equipment

elevators

### Machine Room-Less Elevator AXIEZ

#### Environmental performance

- << Material / Resource saving >>----
- By simplifying elevator shafts and car structure, including the pulley, machine foundation, car frame and car floor and safety gear, the weight of this elevator has been reduced by up to approximately 400 kg (approximately 1,200 t per year).
- Utilized plastic materials made from reclaimed resin for part of the car operating panel.
- << Energy saving >>----
- Switched to LED for the lighting in the car to extend lamp life, and has reduced electricity consumption by up to 50%.
- Used and stored regenerative electric power during elevator operation to reduce electricity consumption by about 25%. The environmentally-friendly electric double layer capacitor (EDLC) is adopted on the electricity storage device. (When equipped with the optional "Ele-charge" package)
- << Toxicity / Chemical substances reduction >>----
- RoHS-compliant parts and materials are used. (Pb-free substrates and hexavalent-chromium-free plating are used.)
- Reduced usage of toluene, xylene and other atmospheric and soil contaminants.
- In compliance with sick-house laws and regulations. Reduced substances regarded as being harmful to below standard levels in an elevator. Reduced formaldehyde concentrations to levels below the standard of 100 µg/m<sup>3</sup>.

#### Product performance

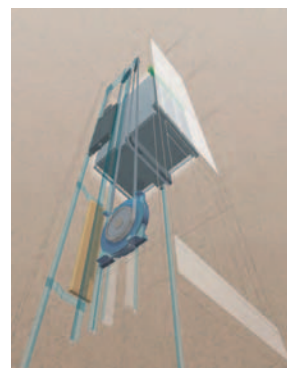
This is a machine room-less resource- and space-saving elevator. The conventional model is sophisticated and enhanced to meet diversified needs. In addition, to provide greater construction and design flexibility, we reduced the amount of space necessary for elevator shafts.

### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail [eqd.eco@pj.MitsubishiElectric.co.jp](mailto:eqd.eco@pj.MitsubishiElectric.co.jp)  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



TYPE II



AXIEZ P9-CO-60,6stop

Available in: Japan

EP-9-001

Others

anti-pollution device

### AERONOX Nitrocharger

#### Environmental performance

The AERONOX Nitrocharger has been tested and proven to reduce harmful exhaust emissions in all types of internal combustion engines using gas, diesel and/or LPG, in many countries.

#### Product performance

AERONOX Nitrocharger is easy to install, compact and durable. It increases engine power, reduce harmful emissions and increase fuel efficiency and mileage. No regular maintenance required. Full replacement warranty.



### AERONOX TECHNOLOGY CORPORATION

903 Epifanio delos Santos Ave., Philam, Quezon City, Philippines  
 Tel 63-2-7035851 Fax 63-2-3326072  
 E-mail sales@aeronox.net  
 URL <http://www.aeronox.net>

Available in: Philippines

AERONOX Nitrocharger

EP-9-002

Others

biodegradable plastics

### 100% Biodegradable & Compostable Plastic Bag GB200, GB100, GB090

#### Environmental performance

- \* Produced using natural cornstarch, making the source of raw material dependable.
- \* Fully biodegradable through microbes, returning to nature in the form of carbon, water, bio-matter and such in a matter of a few months.

#### Product performance

- \* Does not generate toxic gas when burned, and the heat energy released is only one-half of conventional plastic materials, such as polyethylene.
- \* The product conforms to EN 13432 and ASTM D 6400 international compost standard, and it can be processed into industrial compost with kitchen scraps and leaves without requiring any additional processing. It can be completely broken down without leaving any toxic matter in a matter of three months.
- \* The processing method is the same as the general low-density LDPE, and can be processed on LDPE injection molding machines without having to modify the equipment.



TYPE 1



### Grabio Greentech Corporation

No. 91, Guangfu N. Rd., Hsinchu Industrial Park, Hukou Township, Hsinchu County, Taiwan, 30351, Republic of China  
 Tel +886-3-598-6496 Fax +886-3-598-6491  
 E-mail tony@grace-bio.com.tw  
 URL <http://www.grabio.com.tw>

Available in: Europe, North America, South America

EP-9-003

Others

adsorption - removal device

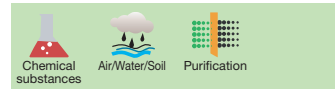
Sumiley and Copla

Environmental performance

- (1) Adsorbs, filters and purifies oil spilling into rivers and the ocean as well as floating dust particles and mousse-like oil, which is formed by untizing the oil and dusts.
- (2) Adsorbs and filters saturated and dissolved HNS (hazardous and noxious substances), such as benzene, in rivers and the ocean.
- (3) Efficiency is greatly improved by allowing users to refill the activated charcoal, which is the heart of this device.

Product performance

Product Name: Sumiley (Patent number: 3534553)  
 Sumiley is a floating activated charcoal made with the lees of ground coffee beans strained, and its adsorption strength surpasses that of other oil adsorbents by 500 - 1,000 times. Thanks to its light specific gravity of 0.11, it will adsorb oil only and not adsorb water.  
 In addition, since it is carbide, no age deterioration is witnessed.  
 Product Name: Copla (Patent number: 4261608)  
 Assembly and disassembly are simple. Sumiley is used with this adsorption-removal device for oil and floating dust.  
 Copla consist of inhalation and adsorption filtration systems. The inhalation system adsorbs only floating oil and dust on the water's surface that is flowed to the buoyant basal plate and will not adsorb any excessive water whatsoever. Since the adsorption filtration system is equipped with Sumiley in bags and dust filtration bags, floating dust and oil are adsorbed separately.



TYPE I

TANIGUCHI SHOKAI CO.,LTD

338-31 FUJITA MINAMI-KU OKAYAMA CITY, 701-0221, Japan  
 Tel (+81)86-296-5906 Fax (+81)86-296-6507  
 E-mail info@taniguti.co.jp  
 URL http://www.taniguti.co.jp/



Available in: Japan,Asia

Sumiley and Copla

EP-9-004

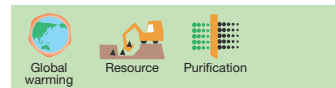
Others

beers

Can beer using "green energy"

Environmental performance

Asahi Breweries, Ltd. is making efforts to realize a "low-carbon society" through the promotion of natural energy and energy conservation.  
 This product is produced by using "green power," the electrical power produced by natural energy, including solar and wind power, as well as biomass.  
 The Green energy Mark is put on the packaging of products produced using green power.  
 Also this is the first such effort in the food industry to use green power during self-manufacturing.  
 The Green energy Mark indicates that the product is produced using green power. Under the system, companies pay to register their mark to support the generation of electricity by natural energy.  
 Asahi Breweries is committed to developing environmentally-friendly products.



Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan  
 Tel +81-3-5608-5195 Fax +81-3-5608-5201  
 URL http://www.asahibeer.co.jp/english/



Asahi Super Dry 350ml

Eco-product // Others

EP-9-005

Others

drinkable water

## I LOHAS

## Environmental performance

"I LOHAS" is delicious spring (soft) water that is harvested from seven select locations nationwide. The amount of material used per container (resin) has been reduced by adopting "the lightest PET bottle in Japan. Not only does this lighten the environmental load, but one can easily crush the bottle after drinking its contents to make the waste more compact.

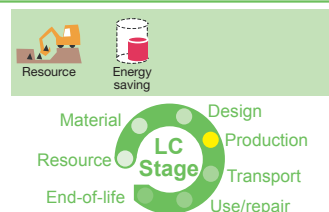
We are proposing an environmentally conscious action that one can easily take part in by "drinking delicious water harvested in Japan, squeezing (crushing) and recycling the container". In addition, starting in 2009 we have introduced the next generation PET bottle, the "plant bottle", which partly uses (5% to 30%) renewable materials derived from plants. "Plant bottles" are no different in shape, weight and strength, and has a characteristic of being able to be 100% recyclable in existing recycling factories.

\*555ml: 12g, 1,020ml: 18g, (Source: Coca-Cola (Japan), October 2011)

## Coca-Cola (Japan) Company, Ltd.

4-6-3 Shibuya Shibuya-ku Tokyo, 150-0002, Japan  
Tel 0120-308509  
URL <http://cocacola.jp>  
URL <http://i-lohas.jp/>  
URL <http://www.cocacola.co.jp/positively/>

Available in: Japan,Asia,Mexico



I LOHAS 555ml PET

EP-9-006

Others

biodegradable hydraulic oil

## HYDROSYN BIO 46

## Environmental performance

Universal Hydrosyn BIO is a biodegradable hydraulic fluid made from the Synthetic Ester with more than 90% in high-end eco-friendly and harmless to the human body.

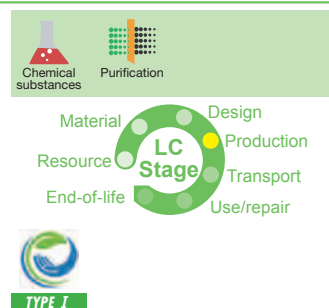
Universal Hydrosyn BIO is unique product with excellent stability and lubricating properties and excellent shear stability, especially in the hydraulic system of the pump to increase volumetric efficiency.

In addition, CEC-L-33-T-82 biodegradability tests to 93 percent depending on how the microbial decomposition of biodegradable lubricant and high-speed, high pressure hydraulic fluid that accompanies the machine's various industries and is widely available as a bearing oil.

## Universal Oils Co., Ltd.

238-5 Saengcheul-ri, Saenglim-myun, Kimhae-city, Kyungnam, 621-827, Republic of Korea  
Tel +82-55-338-7255 Fax +82-55-338-7254  
E-mail [universaloils@hanmail.net](mailto:universaloils@hanmail.net)  
URL <http://www.universal-oils.com>

Available in: Worldwide





EP-9-007

Others

engine oil

### AGIP Extra HTS Engine Oil

#### Environmental performance

Petroleum garbage is a mixture of many different kinds of petroleum and chemical wastes dominated by used engine oil. To reduce the amount of spent engine oil, Veredium recommends high-quality oils that can be used twice as long as the regular oils. Agip Extra HTS is one such high-quality engine oil. Furthermore, Veredium has adopted a recycling and retrieval system for 25% of its sold engine oil.

#### Product performance

Agip Extra HTS is a very high-performance synthetic lubricant of the latest generation to meet the requirements of the newest automobile engines. It is especially recommended for high-output engines operating under severe conditions. Under ordinary use, it can last twice as long as a regular engine oil.

#### Veredium Energy Ventures, Inc.

EPC Complex 2074 J.B. Miguel Street Bambang, Pasig City, Metro Manila  
1600, Philippines  
Tel (+632) 5711102 Fax (+632) 5711101  
E-mail [inquiry@veredium.com](mailto:inquiry@veredium.com)  
URL <http://www.veredium.com>



EP-9-008

Others

engine oil

### XTEC Fully Synthetic Engine Oil

#### Environmental performance

Petroleum garbage is a mixture of many different kinds of petroleum and chemical wastes dominated by used engine oil. To reduce the amount of spent engine oil, Veredium recommends high-quality oils that can be used twice as long as the regular oils. X-TEC Fully Synthetic Engine Oil is one such high-quality engine oil. Furthermore, Veredium has adopted a recycling and retrieval system for 25% of its sold engine oil.

#### Product performance

X-TEC Fully Synthetic Engine Oil delivers maximum protection for gasoline and diesel engines by retaining its viscosity even during high-temperature and severe service conditions. It is formulated from new synthetic base stocks and an advanced additive package to provide excellent soot control, to protect against wear and deposits, to inhibit rust and corrosion, and to prevent foaming.

#### Veredium Energy Ventures, Inc.

EPC Complex 2074 J.B. Miguel Street Bambang, Pasig City, Metro Manila  
1600, Philippines  
Tel (+632) 5711102 Fax (+632) 5711101  
E-mail [inquiry@veredium.com](mailto:inquiry@veredium.com)  
URL <http://www.veredium.com>



EP-9-009

Others

educational and learning support services

**PET SOLAR CAR****Environmental performance**

Another clean-energy product from ELEKIT-PET SOLAR CAR! The kit contains the solar battery panel with the stand and the motor and tire sets to which you can set a PET bottle, a milk carton, or whatever around you to make your original eco-car! A perfect kit for a handicraft for summer.

**Product performance**

[Specifications]

Power source: Solar battery, Max.1.4V-350mA

Driving method: Front-wheel drive

Circular driving: OK

Gearshift: 2 shifts

Estimated assembly hour: Approx.1.5 hours

Target age: 10 and up

\*PET bottle is not supplied.

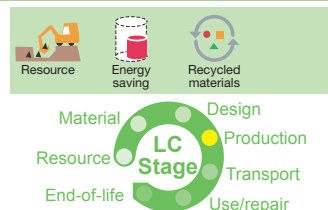
**EK JAPAN CO.,LTD.**

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail [info@elekit.co.jp](mailto:info@elekit.co.jp)URL <http://www.elekit.co.jp>URL [http://www.elekit.co.jp/material/english\\_product\\_html/JS-690.php](http://www.elekit.co.jp/material/english_product_html/JS-690.php)

Available in: Worldwide



EP-9-010

Others

educational and learning support services

**SOLAR HYBRID CAR****Environmental performance**

SOLAR HYBRID CAR that can run on land and water with its paddle wheels.

The well-designed body made of styrofoam, free from chlorine gas emission, is a remarkable feature of the model.

**Product performance**

[Specifications]

Power source: Solar Battery, Max.1.4V-350mA

Size: W166 x H79 x L240 (mm)

Weight: 140g

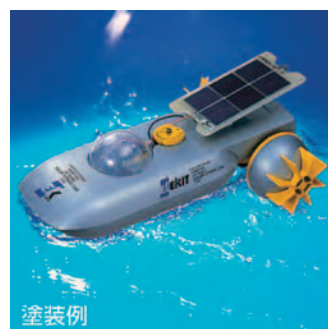
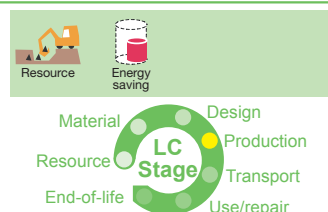
**EK JAPAN CO.,LTD.**

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail [info@elekit.co.jp](mailto:info@elekit.co.jp)URL <http://www.elekit.co.jp>URL [http://www.elekit.co.jp/material/english\\_product\\_html/JS-688.php](http://www.elekit.co.jp/material/english_product_html/JS-688.php)

Available in: Worldwide



塗装例

EP-9-011

Others

educational and learning support services

**Environmental radiation Monitor PA-1000****Environmental performance**

A handy type monitor which measures minute amounts of environmental radiation. Pressing a button enables even non-specialists measure gamma rays in the ranges from 0.001 to 9.999  $\mu$  Sv/h in the air.

- Designed with plant-based plastic material helping to reduce petroleum consumption.
- High performance detection with a CsI (TI) scintillator.
- Compact and lightweight (175 g/6.2 oz)
- Uses two AA batteries.
- Splash resistant construction.

**HORIBA, Ltd.**

2 Miyahigashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan

Tel 81-75-313-8121 Fax 81-75-321-6621

E-mail [info@horiba.co.jp](mailto:info@horiba.co.jp)

URL <http://www.horiba.com>

URL <http://www.horiba.com/process-environmental/products/environmental-radiation-monitor/>

URL <http://www.horiba.com/us/en/social-responsibility/>

Available in: Worldwide



EP-9-012

Others

educational and learning support services

**L'earth wheat composite golf tees****Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food safe plastic used. This helps in lowering of greenhouse emission and slowdown of global warming. Less toxic gases are being emitted when incinerated. Product can also be oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and certification for wheat composite material:

1. Singapore Green Label certified.
2. SEC- Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012.

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.

**L'earth S Pte Ltd**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609, 608609, Singapore

Tel +65 90717444 Fax 6565154557

E-mail [sale2@mylearth.com.sg](mailto:sale2@mylearth.com.sg)

URL <http://www.mylearth.com.sg>

Available in: Worldwide



TYPE 1



EP-9-013

Others

toys

Toys, Educational Toys, Green Toys, Sustainable Toys

Environmental performance

PlanToys is a leader in green manufacturing. We were the first toy company in the world to use natural recycled rubberwood from trees that no longer produce latex. Our Green Concept Design means we use only eco-friendly materials to manufacture our products and so produce minimal waste. Only recycled and recyclable non-toxic materials are used, including soy-based inks for packaging and printing. Our factories operate on integrated energy sources using biomass and solar cells.

Product performance

Our Eco-product design concept is a systematic approach that always takes the environment into consideration during manufacturing and the end-of-life cycle for all our toys.



TYPE I

0.973kg-CO <sub>2</sub>	Resource/Materials/ Production/Transfer/Use/End- of-Life
Inspection	

Plan Creations Co., Ltd.

114/1 Sathorn 10, North Sathorn Rd., Bangkok, 10500, Thailand  
 Tel +66 2237 9070 Fax +66 237 5790  
 E-mail [mktg@plantoy.com](mailto:mktg@plantoy.com)  
 URL <http://www.plantoy.com>  
 URL [http://www.plantoy.com/about\\_sustainability.php](http://www.plantoy.com/about_sustainability.php)



Available in: Worldwide

Sustainable Play

EP-9-014

Others

electronic paper

Electronic Paper Product "AeroBee"

Environmental performance

Bridgestone's electronic paper product "AeroBee" provides paper like appearance. Such as paper white, wide viewing angles and comfortable reading under all lighting conditions including bright sunlight. We supply ultra-low power display solutions for Electronic Paper markets (ESL, Information board, E-reader and so on). Bridgestone's electronic paper product "AeroBeeTM" aims to become a new standard display technology for electronic paper applications and is expected to contribute the reduction of paper resources.

Product performance

- Quick Response Liquid Powder Display technology
- keep display in power-off
- wide viewing angles and comfortable like a paper
- varied fonts and color photos
- speedy change of display
- enable to use under low temperature such as a refrigerator
- the biggest size, the thinnest size, flexibility, low cost



Bridgestone Corporation

10-1, kyobashi 1-chome, chuo-ku, Tokyo, 104-8340, Japan  
 Tel +81-3-3563-6343 Fax +81-3-3563-6341  
 URL <http://www.bridgestone.com>  
 URL <http://www2.bridgestone-dp.jp/global/adv-materials/QR-LPD/index.html>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Electronic Paper Product "AeroBeeTM"

Eco-product // Others

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EP-9-015

Others

energy saving solutions

**Thermal plaster**

**Environmental performance**

Reduce CO2 by absorbing it from the atmosphere. Keeping atmosphere cooler by reflecting sun's heat from structure surfaces.  
Used more than 80%'Recycled wastes'(from coal burning plants)

**Product performance**

Low conductivity  
High Total Solar Reflection (TSR) performance  
Durability  
Sustainability



**reicom pte. ltd**

No. 530 Balestier Road, #01-08, Singapore  
Tel +6596697487  
E-mail stevehantk53@gmail.com  
URL <http://under construction>

Available in: Middle and Near East, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China, South Africa

EP-9-016

Others

binders

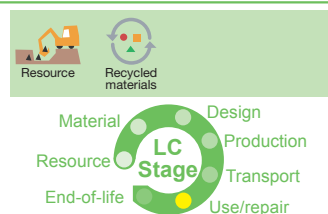
**Waste wood from construction sites can be reused onsite**

**Environmental performance**

This method uses conventional construction machinery to achieve excellent rooting on and base-layer stability of bedrock and slopes under severe conditions, by just replacing the spray-on material paste with our MC binder. As a result, work periods can be shortened and costs reduced. The method also contributes to zero emission by making use of wood chips processed from trees cut on site.

**Product performance**

With conventional methods using waste wood chips from construction sites, problems such as the high cost of on-site mixing with composted chips, UV damage caused by the use of polymer pastes in curing compounds, and deterioration caused by frost heaving and foundation erosion often occurred. These problems can be avoided by using this product.



**Alfa Green, ltd**

99-1-207, Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023, Japan

1 Eco-product // Others  
2  
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EP-9-017

Others

binders

A recycled inorganic material manufactured from fly ash (coal ash) and paper sludge ash

Environmental performance

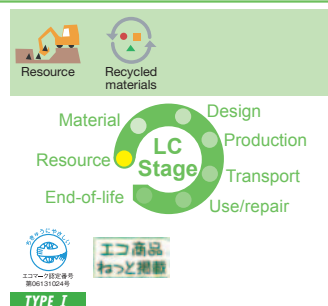
Construction costs are reduced and the construction period is shortened thanks to the omission of the conventional foundation work involved in afforestation. This reduces CO<sub>2</sub> emissions from the construction machines used in foundation work.

Product performance

Alpha Green stabilizer for slope afforestation is a recycled inorganic material produced primarily from fly ash (coal ash) and paper sludge ash, unlike the conventional cementing material (paste) made of synthetic polymeric resin. It contains minerals (such as magnesium, which promotes plant growth) and brings variety of secondary effects such as enabling the active utilization of inorganic basic vegetation materials, improved water permeability of vegetation bases, promotion of organic matter decomposition, and mitigation of aluminum-related damage.

Alfa Green, Ltd

99-1-207 Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023, Japan



EP-9-018

Others

fertilizers

Glomus 100% Organic Fertilizer

Environmental performance

As an alternative for chemical fertilizer that can be harmful to the environment. Our product contains only ingredients that occur in nature thereby will not damage plants, soil and helps to reduce global warming as its a biodegradable Product. Due to nutrients in our product, high salt soil due to long term usage of chemical fertilizer has improved significantly. We contribute waste management in preventing environment pollution by treating organic waste. Our product is produced by Rapid Thermophilic Digestion technology, researched in Singapore a composting machine that uses specially formulated enzyme to shorten the composting process. We recycle such as organic dung, sawdust, food waste, fish waste, dead chicken, empty fruit bunch supplied from factories which helps in waste management. Our product is biodegradable after application and no waste disposal process is needed.

Product performance

Glomus Ecology Sdn Bhd was incorporated in August 2010 company number 912992U. The company was set up primarily to venture into the production and sale of organic fertilizer. We recycle, pack and distribute 100% pure organic fertilizer which is suitable for landscaping, home gardening and commercial farming. At the moment we feel that there is no pure organic fertilizer in the market. Most of the available products in the market are either chemical based or a mixture of chemical and organic compost. It is a known fact that chemical fertilizers will not improve the structure of the soil. In fact, because they are composed of high concentrations of mineral salts, they are capable of killing off many of the soil organisms that are responsible for decomposition, and soil formation. When chemicals are added, the soil gradually loses its organic matter and microbiotic activity. As this material is used up, the soil structure breaks down, becoming lifeless, compact and less able to hold water and nutrients. The result is pretty clear, you will have to use more and more fertilizer.

Our very own Glomus 100% organic fertilizer is differ from chemicals, in fact they feed your plants while building the soil's structure. A soil with high organic matter, remain loose and airy, are better able to hold nutrients and moisture, foster growth of soil organisms, including earthworms, and promotes healthier root development. Building a healthy soil is the key to successful sustainable farming. Our product will not percolate through the soil and contaminate surface and ground water. It is known fact that high nitrate levels in drinking water can cause serious illness in humans. We can ensure our product is an important contribution to the sustainability of organic agriculture.

Product Specification	>6
Total macronutrients/NPK	6.5 - 7.5
pH	7.5
Organic contain	>20cmol/kg
Cation Exchange Capacity	15 - 22
C:N Ratio	

Glomus Ecology Sdn Bhd

Lot 9, EOIZ Phase 1, KKIP, Jalan Sepanggar Menggatal, Kota Kinabalu, 88540, Malaysia

Tel +60168306929 Fax +6088433889

E-mail glomuskk@gmail.com

URL <http://www.glomusecologygroup.com.my>



25 kgs

Available in: Malaysia

Eco-product // Others



EP-9-019

Others

fertilizers

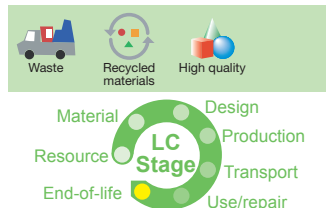
## Environment-friendly fertilizer made from beer yeast

## Environmental performance

Our company Asahi Food & Healthcare Co., Ltd. sells the liquid fertilizer "Housakumonogatari (the good harvest story)" to agricultural producers. The fertilizer is made from the cell wall of brewer's yeast by enzymatic reaction. "Housakumonogatari" is based on the hydrolysate of the cell wall of brewer's yeast. It increases the plant's intrinsic immunity power by the activity of the  $\beta$  - glucan that exists in cell walls, and it promotes thereby the healthy growth of the plants. Since our raw material is natural yeast which is safe and secure to both humans, and the crops, we have received high evaluation from the users. Our company will continue development of the safe and secure goods by making use of the superior characteristics given by the hydrolysate made from the cell wall of brewer's yeast, such as "growth acceleration", "improvement of immunity", etc.

## Asahi Food &amp; Healthcare Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan  
Tel +81-3-5608-2771 Fax +81-3-5608-2773



Good Harvest Story

EP-9-020

Others

fertilizers

## GI SAN FA Miscellaneous Organic Fertilizer

## Environmental performance

Adopting natural animal/plant or agricultural by-products, scraps, deteriorated agricultural products, it offers long-lasting, gentle, even fertilization, buffering and harmless characteristics.

## Product performance

Leaf vegetable type:

1. It excels in growth, budding, thick flesh, aroma enhancement, and aggregate production output.
2. The plants are solid, full, lustrous and crisp in quality.

Fruit tree type:

1. Blossoming with subtle fragrance, it improves the fruit coloration, and the fruits fuller and more lustrous.
2. It enhances the sweetness and production output.

Floral type:

1. Flowers stay fresh with a prolonged flowering period.

## SINLONFA INDUSTRIAL CORPORATION

No. 38-2, Jiangshi Rd., Jushan Township, Nantou County, Taiwan, 55767, Republic of China

Tel +886-49-2631234 Fax +886-49-2632221

E-mail slf.com@msa.hinet.net

URL <http://www.twsif.com>



TYPE I



Available in: Taiwan (Rep. of China)

EP-9-021

Others

fertilizers

YI TONG FA Miscellaneous Organic Fertilizer

Environmental performance

Adopting natural animal/plant or agricultural by-products, scraps, deteriorated agricultural products, it offers long-lasting, gentle, even fertilization, buffering and harmless characteristics.

Product performance

Leaf vegetable type:

1. It excels in growth, budding, thick flesh, aroma enhancement, and aggregate production output.

2. The plants are solid, full, lustrous and crisp in quality.

Fruit tree type:

1. Blossoming with subtle fragrance, it improves the fruit coloration, and the fruits fuller and more lustrous.

2. It enhances the sweetness and production output.

Floral type:

1. Flowers stay fresh with a prolonged flowering period.

SINLONFA INDUSTRIAL CORPORATION

No. 38-2, Jiangshi Rd., Jushan Township, Nantou County, Taiwan, 55767,

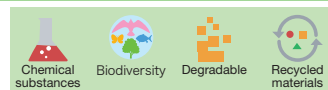
Republic of China

Tel +886-49-2631234 Fax +886-49-2632221

E-mail slf.com@msa.hinet.net

URL <http://www.twslf.com>

Available in: Taiwan (Rep. of China)



TYPE I



EP-9-022

Others

exit indicator lights and evacuation indicator lights

Exit Indicator lights SH-123CSF-EX

Environmental performance

A high-brightness LED light source and a high-power circuit board are enclosed in an aluminum alloy housing. Energy-saving, eco-friendly, highly durable, low-pollution.

Product performance

Certified by Taiwan Fire Technology Foundation. Suitable for use in all places.

SHIAN HUEI INDUSTAIAL CO., LTD.

No.28, Ln. 159, Sec. 1, Chang'an Rd., Luzhu Township, Taoyuan County,

Taiwan, 338, Republic of China

Tel +886-3-3248528-212 Fax +886-3-3248450

E-mail [lin32.lin32@msa.hinet.net](mailto:lin32.lin32@msa.hinet.net)

URL <http://www.sh119.com.tw>

Available in: Taiwan (Rep. of China)



Eco-product // Others

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EP-9-023

Others

exit indicator lights and evacuation indicator lights

Evacuation Indicator lights SH-123CSF

Environmental performance

A high-brightness LED light source and a high-power circuit board are enclosed in an aluminum alloy housing. Energy-saving, eco-friendly, highly durable, low-pollution.

Product performance

Certified by Taiwan Fire Technology Foundation. Suitable for use in all places.

SHIAN HUEI INDUSTAIAL CO., LTD.

No.28, Ln. 159, Sec. 1, Chang'an Rd., Luzhu Township, Taoyuan County, Taiwan, 338, Republic of China  
 Tel +886-3-3248528-212 Fax +886-3-3248450  
 E-mail lin32.lin32@msa.hinet.net  
 URL <http://www.sh119.com.tw>

Available in: Taiwan (Rep. of China)



EP-9-024

Others

fire extinguisher

ABFFC Water Solution Fire Extinguisher

Environmental performance

Especially Halon replacement fire extinguisher agent. ABFFC water solution fire extinguisher is high performance. It can put out the fire without contaminating to environmental of dry powder. ABFFC agent can biodegradable.



TYPE I

Nippon Chemical Co., Ltd.

1831/5-7 New Petchburi Road Bangkapi Huaykwang Bangkok, 10310, Thailand  
 Tel 66-2652-7831 Fax 66-2652-7839  
 E-mail [marketing@nippon.co.th](mailto:marketing@nippon.co.th)  
 URL <http://www.nippon.co.th>  
 URL <http://www.nippon.co.th/abffc.htm>

Available in: Thailand



ABFFC water solution fire extinguisher

Eco-product // Others

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EP-9-025

Others

## facility cultivated plants (ornamental plants)

## Phalaenopsis

## Environmental performance

Orchids are grown in greenhouses equipped with automatic cultivation systems configured for saving energy, reducing CO<sub>2</sub> emissions, and thereby preventing the Earth from premature aging. These systems include a water curtain cooling system, a thermal pump heating system, an intelligent inner/outer net lighting control system, a high-efficiency movable cultivation bed system (an energy-saving thermal insulation system, an indoor ventilation fan system, an outdoor insect screen control system), an operation and monitor system for production and cultivation, an automatic greenhouse control system, a spray cooling system, etc.

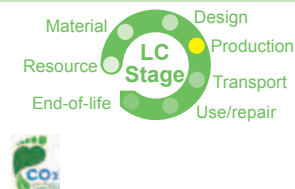
## Product performance

Known as "queen of orchids" in Taiwan, phalaenopsis has butterfly-shaped that appear from an arcuate hanging stem and flutter in the breeze like real butterflies.

## Taiwan Orchid Professionals Co., Ltd.

No 325, Wushulin, Wushu Village, Houbi Township, Tainan County, Taiwan, 731, Republic of China  
Tel +886-6-6840788-205 Fax +886-6-6840787  
E-mail [clair@taiwanorchids.com](mailto:clair@taiwanorchids.com)  
URL <http://www.taiwanorchids.com.tw>

Available in: Taiwan (Rep. of China)



1.6kg-CO <sub>2</sub>	Resource/Materials/ Production/Transfer/Use/ End-of-Life
Inspection	



EP-9-026

Others

## grain and soybean farming

## IBUKI Grade LD\_Seed coating and soil improving agent

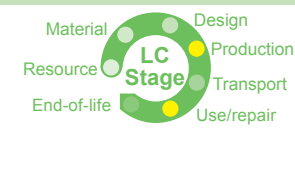
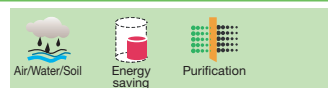
## Environmental performance

Agricultural soil improvement requires large amounts of compost, time and effort. This product is a soil-improving material composed mainly of natural plant-based fibers. The IBUKI Grade LD is a capable of providing a sense of hope for traditional farming techniques by bringing about major changes and progress. Properties of use: when seeds are coated with a small application of 3kg per 10 ha, definite effects can be expected; can also be used efficiently on rhizospheres, and easily over large-scale areas. Example: to be used simultaneously with repellent coating. Substantial effects: both productivity and quality of products are greatly improved; harvest quantities, flavor and freshness improve simultaneously. Other: no harmful effects from continuous use. Effective under conventional fertilization plans and management.

## HANYO SCIENCE CO.,LTD.

OFFICE 3-58-5 NOBATA AKUTAMI, GIFU-CITY, 501-3145, Japan  
Tel +81-58-241-2401 Fax +81-58-241-2287  
E-mail [ibuki@hanyokagaku.com](mailto:ibuki@hanyokagaku.com)  
URL <http://www.hanyokagaku.com/>  
URL <http://www.hanyokagaku.com/ld.html>

Available in: Worldwide



EP-9-027

Others

manufacturing products

## Nikon fieldmicroscope "Fabre Photo EX"

## Environmental performance

Nikon fieldmicroscope "Fabre Photo EX" has the following characteristics, considering the environment.

- (1) Use of plant-based plastic: Five microscope body parts are made from plant-based plastic, so we can save petroleum resource
- (2) Reduction of hazardous substances (comply with the EU RoHS Directive)
  - \* Eliminate polyvinyl chloride (PVC) from body, case, strap, etc.
  - \* Use of lead-free solder: achieve for the parts, such as electro circuit of illumination equipment
  - \* Eco-Glass (lead and arsenic-free optical glass) usage: 100%

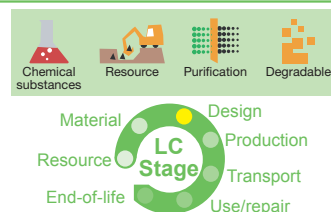
## Product performance

"Fabre Photo EX" enables microscopic observation of insects, plants and minerals at 20x magnification and digital photography during observation by the dedicated photographic light path. Nikon digital SLR cameras and digital compact cameras can be attached by optional camera attachments.

## NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
 Tel +81-3-3214-5311  
 URL <http://www.nikon.com/>  
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Japan



Nikon fieldmicroscope "Fabre Photo EX"

EP-9-028

Others

manufacturing products

## Nikon Laser rangefinder " Laser 350G "

## Environmental performance

"Laser 350G" has the following characteristics, considering the environment.

- (1) Extended product life: achieve the long life by adopting waterproof mechanism, which filled body inside with nitrogen gas to prevent raindrops from soaking inside
- (2) Reduced mass: 14% mass reduction compared with Laser 500G
- (3) Reduction of hazardous substances (comply with the EU RoHS Directive)
  - \* Eliminates polyvinyl chloride (PVC) from body, case, strap, etc.
  - \* Use of lead-free solder: achieve for the parts, such as electro circuit
  - \* Eco-Glass (lead and arsenic-free optical glass) usage: 100%

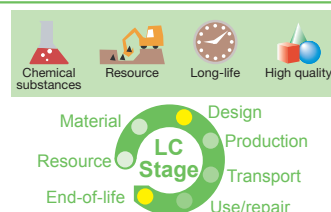
## Product performance

Laser rangefinder measures a distance by projecting laser beams to a target and measuring the traveling time taken by the beams to be reflected off the target and returned to the instrument. This "Laser 350G" is compact and high-performance laser rangefinder specially designed for golf.

## NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
 Tel +81-3-3214-5311  
 URL <http://www.nikon.com/>  
 URL <http://www.nikon.com/products/sportoptics/lineup/laser/350/index.htm>  
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon portable rangefinder "Laser 350G "

EP-9-029

Others

manufacturing products

**Nikon Binocular "4x10D CF"**

**Environmental performance**

Nikon binocular "4x10D CF" has the following characteristics, considering the environment.

- (1) Reduction of weight
  - Reduces 50% of the total weight by cutting 31% of the total number of parts compared to the previous model "6x15 CF". Contributes to waste reduction and resource saving.
- (2) Reduction of hazardous substances
  - \* Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
  - \* Non-use of Pb, Cd, Hg, Cr6+, PBB, PBDE
  - \* Eco-Glass (lead and arsenic-free optical glass) usage: 100%

**Product performance**

- \* The thinnest and lightest model in Nikon binoculars having been released so far
- \* Convenient to carry by virtue of the flat body without protuberances
- \* Easy to use, only needs to adjust eye width and focus
- \* Provides the high quality of view, namely bright and razor-sharp images, by multi-coated lenses and prisms

**NIKON CORPORATION**

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan  
 Tel +81-3-3214-5311  
 URL <http://www.nikon.com/>  
 URL <http://nikon.com/products/sportoptics/lineup/binoculars/highclass/4x10dcf/index.htm>  
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Japan mainly



Nikon Binocular "4x10D CF"

EP-9-030

Others

mechanical rubber products

**eco-friendly Rubber Track "ECO<sup>2</sup>-TRACK"**

**Environmental performance**

Bridgestone manufactures developed high durability rubber under hard environment. The durability rubber enabled to protect steel codes more, prolong use phase, and improve comfortability and strong grip. In addition, Bridgestone has more technologies: anti-rust steel code, prevention to flow off (high-stiff design) or crack (pro-edge). The eco-friendly rubber track "ECO<sup>2</sup>-TRACK" is made by these technology and got much durability. "ECO<sup>2</sup>-TRACK" will contribute to cost down and reduce waste by the durability.

**Product performance**

- improvement silently
- less vibration in driving.
- lightweight
- low damage the road surface
- shorter hours of maintenance

**Bridgestone Corporation**

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan  
 Tel +81-3-5202-8203 Fax +81-3-5202-6719  
 URL <http://www.bridgestone.com>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



eco-friendly Rubber Track "ECO<sup>2</sup>-TRACK"

Eco-product // Others

1  
2  
3  
4  
5  
6  
7  
8  
9



EP-9-031

Others

odour absorber

### Purifie Odour Absorber

#### Environmental performance

- 100% organic
- Non-toxic
- Odourless
- 5 times more adsorptive than charcoal
- Safe
- Eliminates Odour
- Reduce moisture
- Absorbs chemical
- Can last up to 6 months
- Compact size and unique to be used in various places, such as: shoe rack, toilet, cabinet, fridge, pet litter corner, rubbish bin and more.



### MTE Corporation Sdn Bhd

J-8-11 Solaris Mont Kiara, No 2 Jalan Solaris, Kuala Lumpur, 50480, Malaysia  
 Tel 03-6204 9001 Fax 03-6204 9003  
 E-mail [info@mtecorp.com.my](mailto:info@mtecorp.com.my)  
 URL <http://www.mtecorp.com.my>  
 URL <http://www.purifie.com.au>

Available in: Singapore, Malaysia, Australia, Thailand

Purifie Odour Absorber

EP-9-032

Others

reclaimed yarn

### Eco-Friendly Reclaimed-Yarn Trademark Cloth (R Series) (White)

#### Environmental performance

Recycling the discarded PET bottles to reduce the amount of wastes and to fulfill the appeal of reuse so that the wastes can be reduced.

#### Product performance

The manufacturing process of eco-friendly reclaimed-yarn begins by collecting waste PET bottles. Then, a complicated cleaning, high-temperature sterilizing, and melting procedure is performed on the collected PET bottles to produce PET chips. The chips are extruded by a yarn extrusion machine to form PET yarn, which is sent to a weaving factory and woven into eco-friendly reclaimed cloth. Waste PET bottles are reused through the above processes to reduce pollution.



TYPE I



### Best Label Enterprise Co., Ltd.

15F., No. 229, Hsin Tai Rd., Hsin Chuang Dist., New Taipei City, Taiwan, 242, Republic of China  
 Tel +886-2-2997-3778 Fax +886-2-2997-2738  
 E-mail [katie@best-label.com](mailto:katie@best-label.com)  
 URL <http://www.best-label.com>

Available in: Asia, Singapore, Thailand, China

EP-9-033

Others

**solid surface materials**

**Staron**

**Environmental performance**

- Low-emitting interior building materials, furnishings and finish systems.
- Recyclable materials. Could be reuse and repair.



**Evershine Corporation Pte. Ltd.**

19 Gul Way, 629195, Singapore  
 Tel (65) 6897 8888 Fax (65) 6897 8138  
 E-mail info@evershine.com  
 URL <http://www.evershine.com>  
 URL <http://www.evershine.com/index.php?do=toProductListing&id=5>



Staron Solid Surfaces

EP-9-034

Others

**straws**

**L'earth Oxo-Biodegradable Drinking Straws**

**Environmental performance**

Degrades with presence of UV, thermal and oxidation.  
 Environmental friendly and good transparency.  
 Support governmental.  
 Member of Oxo-biodegradable plastics institute, USA.  
[www.biodeg.org](http://www.biodeg.org)

**Product performance**

With L'earth it is simple, enjoyable and sustainable embracing an eco-conscious and modern lifestyle.



**L'earth S Pte Ltd**

No. 21 Toh Guan Road East #04 - 09 Toh Guan Centre Singapore 608609,  
 608609, Singapore  
 Tel +65 90717444 Fax 6565154557  
 E-mail sale2@mylearth.com.sg  
 URL <http://www.mylearth.com.sg>



Available in: Worldwide

Eco-product // Others  
 1  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9

EP-9-035

Others

surfacing materials

World of Laminates

Environmental performance

- Environmentally improved low emission and low toxicity.
- Scrap materials are burned in environmentally safe furnaces to create energy for factory which reduces the consumption of oil and natural gas by 60% to 70%.



TYPE I



World of Laminates

Evershine Corporation Pte. Ltd.

19 Gul Way, 629195, Singapore  
 Tel (65) 6897 8888 Fax (65) 6897 8138  
 E-mail info@evershine.com  
 URL <http://www.evershine.com>  
 URL <http://www.evershine.com/index.php?do=toProductListing&id=1>

EP-9-036

Others

water-base farming (hydroponics)

Grow vegetables & fruit plants the insecticide-free way

Environmental performance

Water Based farming (Hydroponics) is incrementally seen as an alternative to organic method as a mean to farm vegetables and fruity plants.

- Key selling points:
- Insecticide-free
  - Eliminate soil-borne diseases in plants
  - Grow plants using fertilizer made from natural elements on earth.
  - Quality of produces are based on predictable practices of farming

All pointers remove the life- threatening factors that may affect food for people.

Product performance

Packed into a turn-key hobby-kit system, fertilizer, seeds, small tools and instruction manual are all available out-of-the-box. Because of it portability, people can begin producing healthy vegetables and fruity plants both in urban and non-urban settings.



Beats And Pulses Pte Ltd

20 Maxwell Road, 069113, Singapore  
 Tel 65-9671-4908  
 E-mail pengyeow@beatsandpulses.com  
 URL <http://www.BeatsAndPulses.com>  
 URL <http://www.HighValueCrops.com>

Available in: Southeast Asia

EP-9-037

Others

water boilers

Industrial hot water supply equipment "Eco-cute" contributing to CO<sub>2</sub> emission reduction

**Environmental performance**

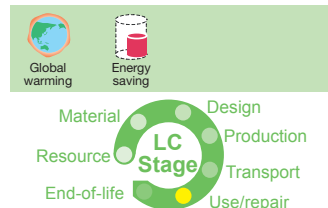
Unimo A/W is a high efficiency heat pump hot water using natural refrigerant CO<sub>2</sub>.

Unimo's ecological footprint is minimal compared to a combustion boiler type hot water unit, the cost generating hot water is one third, saving energy and reducing CO<sub>2</sub> emissions to almost half. This versatile unit has various commercial and industrial applications with its built-in control system operating the hot water storage, heat retention and hot water supply to achieve high efficiency across various operating conditions and throughout the year.

**Mayekawa Mfg.Co.,Ltd.**

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan  
 Tel 81-3-3642-8181 Fax 81-3-3643-7094  
 E-mail [pubic@mayekawa.co.jp](mailto:pubic@mayekawa.co.jp)  
 URL <http://www.mayekawa.co.jp>

Available in: Japan





# Eco-services



## 1 Product-related services

(maintenance, upgrading, repair/reform)

## 2 Reuse and recycling services

(collection, etc.)

## 3 Outsourcing services

(waste disposal, control of hazardous items, chemical treatment, facility management)

## 4 Management-related services

(consulting, accreditation, analysis, evaluation, etc.)

## 5 Others

(e-commerce, eco-tourism, hotels, information transfer, etc.)

In the *Eco-products Directory 2012*, “eco-services” refer not only to “technological improvements” but also to “ways to use products” and “environmental management” as well as “mechanisms that enable environmental impact reduction through financial products.” Typical eco-services include vehicle sharing, where, for example, 10 people share one vehicle instead of each driving his/her own. This results in fewer vehicles on the road, thus reducing the environmental impact of travel considerably. As another example of eco-service, regular maintenance and upgrading can be performed on conventional products so that they can be used longer. In this directory, “eco-services” also refer to “eco-funds where investments are made in business firms with excellent performance in caring for the environment.”

The technological development of eco-products normally requires time and money. However, eco-services often only require good ideas to promote environmental impact reduction. Eco-services have not yet been widely recognized by consumers. A system should be developed to publicize the availability and advantages of eco-services so that they permeate society, encouraging further environmental impact reduction.





ES-1-001

Product-related

monitor and control equipment

Mitsubishi Factory Automation Energy Management Solution

Environmental performance

The solution introduced e&eco-F@ctory realizes production efficiency in the standpoint of energy consumption with four merits.

- (1) Detection of waste of industrial operation
- (2) Detection of variation in Quality
- (3) Preventive maintenance of productive facilities
- (4) Calculation of detailed manufacturing costs

Product performance

e&eco-F@ctory proposes four solutions for productivity improvement with Energy information.

- (1) Measurement products
- (2) Visualizing products
- (3) Energy saving products
- (4) Energy saving application products

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan  
 Tel +81-3-3218-9024 Fax +81-3-3218-2465  
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp  
 URL <http://global.mitsubishielectric.com/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>  
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



The solution for Productivity improvement and Cost reduction with Energy information

ES-1-002

Product-related

package software

A COMPACT EASY-TO-USE CARBON FOOTPRINT ANALYSIS SOFTWARE FOR PACKAGING

Environmental performance

Carbon footprint analysis software for packaging (CFPack) can be applied for the designer and producer to indicate where the hotspot is, and subsequently to select the proper GHG reduction strategies.

Product performance

Carbon footprint analysis software for packaging (CFPack) is developed by using MS Excel Visual Basic and the user can either select default data or manually enter data relating to raw materials and energy consumption, transportation and disposal type in order to calculate the total CO2 equivalent (kg CO2eq).

Mahidol University and National Metal and Materials Technology Center

114 Thailand Science Park, Phahonyothin Rd. Klong 1, Klong Luang, Pathumthani, 12120, Thailand  
 Tel 6625646500 Fax 6625646400  
 E-mail [premrudk@mtec.or.th](mailto:premrudk@mtec.or.th)  
 URL <http://mtec.or.th>  
 URL <http://thaigdn.net>

Available in: Thailand



Carbon footprint analysis software for packaging can evaluate carbon footprint of 4 types of packaging which consist of glass beverage containers, aluminium beverage containers, corrugated boxes and plastic containers for food packaging.

## ES-1-003

## Product-related

## parts, attachments and accessories of bicycles

## emeters

## Environmental performance

By cyclometer "emeters" and cycling SNS "emeters web" consumer may become more consciously aware of eco - a part of daily life. "Emeters web" converts bicycle running distance to "eco point". It means CO<sub>2</sub> emitted from vehicle per each 4.3km is about 1kg which is equivalent to 1 LEAF obtained by bicycle for the same distance. The amount of LEAF reflects contribution to global environment quantitatively.

\*In case that fuel consumption of a vehicle is 10 km/L.

## Product performance

Japan first cycling SNS "emeters web" is a service used together with cyclometer "emeters". Daily running distance and time, speed, accumulated distance, calories consumed can be measured and recorded by "emeters". User of this service may manage data obtained from "emeters", and also communicate with other registered user.

As of January 25, 2012, over 11,200 people have registered to this site, totaling a mileage of 29.4 million km. This distance is equivalent to traveling around the globe 700 times by bicycle, a means of transportation without CO<sub>2</sub> emissions, basically contributing to the environment.

Communities built within the site now exceed over 430, and customers are actively broadening their activities.

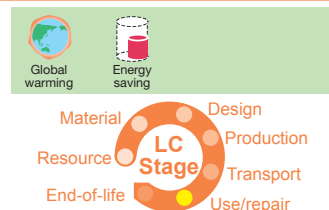
## Bridgestone Cycle Co., Ltd.

1-1 Nakazuma 3-chome, Ageo, Saitama Pref, 362-0072, Japan

Tel +81-48-773-2221 Fax +81-48-775-2299

URL <http://www.bscycle.co.jp/>

URL <http://www.bridgestone.com/responsibilities/csr/index.html>



emeters+PC

## ES-1-004

## Product-related

## services

## Solar Power Generation System Integration

## Environmental performance

Compared to other renewable energy sources, solar power systems have made the most progress technologically and commercially, and play an important role in the creation of a low carbon society. ORIX offers one-stop service covering solar power system procurement, installation, maintenance and recycling.

Specific examples include:

- Solar panel and peripheral device procurement
- Direct sales to corporate clients or distributors by capitalizing on ORIX's sales network
- Offering leases, hire-purchase and rental
- Creation of a network of contractors for installation and construction
- Promoting the reuse and recycling of used panels
- Program to promote the popularization of solar power systems in conjunction with local governments in Japan

## ORIX Corporation

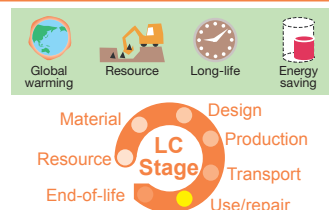
12-15 Nihombashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan

Tel +81-3-6667-2263 Fax +81-3-3249-1792

URL <http://www.orix.co.jp/grp/en/>

URL [http://www.orix-eco.jp/en/eco\\_service/detail/reproduce.htm](http://www.orix-eco.jp/en/eco_service/detail/reproduce.htm)

URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)



Available in: Japan,Asia

ES-1-005

Product-related

treatment of metal surface

### High-Performance Surface Treatment Technology "TRIBEC™" Series

#### Environmental performance

Various surface treatment technologies are applied to molds for extending their lives. Recently growing environmental awareness has resulted to change the type of lubricants along with other drastic modifications and has shortened the operating lifetime of molds. In an effort to improve their lifetime, Hitachi Tool Engineering developed "the TRIBEC™ Series". By identifying the necessary performance attributes of each application based on extensive analysis on mold abrasion over many years, Hitachi Tool Engineering has achieved high-performance surface treatment of molds that is operating-environment specific. "The TRIBEC™ Series" provides protection for molds used even in harsh conditions where environmentally conscious lubricating methods are used. In addition, because "the TRIBEC™" can suppress with minimal abrasion, the mold enables reuse by applying it again after polishing.



TYPE II

#### Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan  
 Tel +81-3-6858-2204 Fax +81-3-6858-2229  
 URL <http://www.hitachi-tool.co.jp/e/index.html>  
 URL [http://www.hitachi-tool.co.jp/j/products/index\\_e.html](http://www.hitachi-tool.co.jp/j/products/index_e.html)  
 URL <http://www.hitachi-tool.co.jp/e/environment/index.html>



Products with TRIBEC™ applied

Available in: Worldwide (Except for Iran)

ES-2-001

Reuse and recycling

chemically treated environment protecting equipment

Remediation system of PCB contaminated soil

Environmental performance

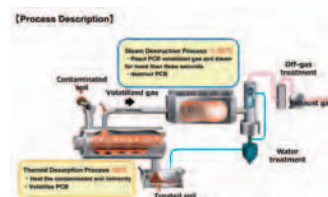
- Remediation plant of PCB contaminated soil operates as it meets the demand of society to contribute its safety.
- The treated soil is recycled as cement materials.

Product performance

- GEOSTEAM™\*1 method is received evaluation of Practical level by the public proof examination of the Ministry of the Environment.
- Equipment : 11,000t/year
- In July, 2010 : Permission was acquired as certified contaminated soil treatment plant in compliance with Japan's Soil Contamination Countermeasures Law.
- Supports it in total from Investigation and Analysis to Purification.
- \*1 :GEOSTEAM is a registered trademark of Toshiba.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan  
Tel +81-3-3457-4844



Remediation system of PCB contaminated soil

ES-2-002

Reuse and recycling

industrial waste disposal business

Gasification Furnace

Environmental performance

ORIX Environmental Resources Management operates the core zero-emission plant at the Sai-no-kuni Resources Recycling Facility in Yorii-machi, Saitama Prefecture through a PFI partnership. Using the latest thermal decomposition and gasification methods, it recycles waste without releasing soot or airborne ash.

The plant processes both industrial waste and household and non-industrial waste for local governments. Waste is processed and converted into recyclable slag, metal, metallic hydroxides, industrial salt and synthetic gas, which is used as an efficient fuel to generate electricity. Processing 450 tons of waste daily, it has one of the largest private-sector volumes in Japan. The defining feature is processing waste at roughly 2,000°C for near total recycling. In addition, the surrounding area is protected by self-regulations to control dioxin emissions to 1/10 of the legal limit.

ORIX Environmental Resources Management Corporation

12-15 Nihombashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan  
Tel +81-3-6667-2280 Fax +81-3-3249-1975  
URL <http://www.orix.co.jp/grp/en/>  
URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)



The zero-emission plant at the Sai-no-kuni Resources Recycling Facility

Available in: Japan

ES-2-003

Reuse and recycling  
campaign

**MOTTAINAI Campaign**

**Environmental performance**

The "MOTTAINAI" Campaign got its start when Kenyan Nobel Peace Prize laureate Wangari Maathai proposed that the Japanese expression "mottainai" be used as the keyword for environmental conservation throughout the world. The movement focuses on putting the 3R's into practice: reducing waste, reusing limited resources efficiently and recycling resources. In keeping with the MOTTAINAI business philosophy, corporate partners will donate part of the profits earned from the sale of licensed products to the pro-afforestation Green Belt Movement founded by Maathai to prevent desertification caused by the destruction of forests.



MOTTAINAI logo and products

**Mottainai Campaign**

Minamiazabu Minatoku Tokyo, 106-0047, Japan  
E-mail [info@mottainai.info](mailto:info@mottainai.info)  
URL <http://mottainai.info/>  
URL <http://mottainai-shop.jp/>  
URL <http://mottainai.info/english/>

Available in: Japan

ES-2-004

Reuse and recycling  
recycling systems

**"ECO CIRCLE™" World's first totally closed-loop recycling system for polyester**

**Environmental performance**

The closed-loop recycling system of ECOCIRCLE™

- will produce no waste
- will suppress petroleum consumption
- will significantly reduce CO<sub>2</sub> emissions and energy consumption

**Product performance**

ECOCIRCLE™ is an advanced system that turns polyester products back into highly pure polyester raw material (99.99%). By separating additives and coloring agents, purity equivalent to raw material produced from petroleum can be achieved. ECOCIRCLE™ is a trademark of Teijin Fibers.



Closed-loop recycling system

**Teijin Fibers Limited**

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan  
Tel 0088-22-0175  
E-mail [tfj0604@teijin.co.jp](mailto:tfj0604@teijin.co.jp)  
URL [http://www.ecocircle.jp/index\\_e.html](http://www.ecocircle.jp/index_e.html)

Eco-services // Reuse and recycling



ES-2-005

Reuse and recycling

regenerated non-ferrous pig metals and non-ferrous alloys

Tungsten Recycling System for Carbide Cutting Tools

Environmental performance

Tungsten is a refractory metal in its property, and tungsten carbide has high hardness at high temperature and is used for the cemented carbide cutting tools which are indispensable to metalwork a variety of parts and components in automobiles, household electric appliances, and other industries. Tungsten is also known as one of the rare metals, and its resource in the world is very limited. Tungsten materials processed by the conventional recycling method are used in limited application areas because of its insufficient quality. MITSUBISHI MATERIALS group has developed a new recycling method to recycle tungsten, while ensuring the high quality of recycled tungsten.

Product performance

At present, we are the only manufacturer that can recycle used cemented carbide by metallurgical refining process. We recycle tungsten from used cemented carbide tools and alloys collected in the manufacturing process.

JAPAN NEW METALS CO.,LTD

1-6-64 Sennari-cho, Toyonaka, Osaka, 561-0829, Japan  
 Tel +81-6-6333-1171 Fax +816-6331-5358  
 URL <http://www.jnm.co.jp/eng/index.html>  
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Carbide Cutting Tool

ES-2-006

Reuse and recycling

retreaded tires

Retread tires for trucks and buses

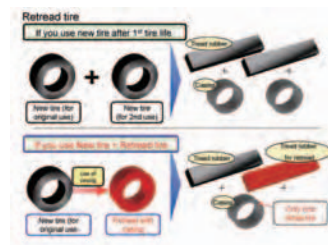
Environmental performance

With the Bridgestone Bandag retreading method, the CO<sub>2</sub> emission and energy consumption during tire manufacturing process can be significantly reduced along with scrap tire reduction. In order to maximize the value of casing and reusing efficiency, Bridgestone provides high quality durable new tire which can be reused as retread casing. Bridgestone will make continuous effort by expanding retread tires which will contribute in reducing the transportation costs for trucking industry and environmental conservation for the society. Furthermore Bridgestone provides ECOPIA lineup in retread products reduces the CO<sub>2</sub> emission and energy consumption at the tire manufacturing stage and at tire operation.



Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan  
 Tel +81-3-3563-6082 Fax +81-3-3563-1165  
 URL <http://www.bridgestone.com>  
 URL <http://www.bridgestone.com/responsibilities/csr/index.html>



Available in: Worldwide

Retread tires image

ES-2-007

Reuse and recycling

reuse and recycling services

### Area Recycling Systems

#### Environmental performance

The prices of metal resources, including rare metals used in electronics and batteries, are rising due to shortages in supply. This has increased the need for recycling, highlighting so-called urban mines. In order to conduct effective recycling of such resources, it is first necessary to develop systems through which these resources can be recovered from across Japan in an appropriate and affordable manner.

ORIX Eco Services Corporation (OESC) assumes a central role in providing these services, supporting customers by selecting processing companies, arranging transportation, appraising items to be sold, proposing cost reductions and offering assistance with complex filling processes associated with proper waste disposal. Through these efforts, OESC is working to smooth the collection process for unnecessary items and help to promote recycling and prevent improper waste processing.

#### ORIX Eco Services Corporation

12-15 Nihombashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan  
 Tel +81-3-6667-2300 Fax +81-3-3249-1971  
 URL <http://www.orix.co.jp/grp/en/>  
 URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)



Available in: Japan

Area Recycling Systems Framework

ES-3-001

Outsourcing

building maintenance services

Water-saving flushing system for newly built hot and cold water pipes

Environmental performance

The amount of wash water used in the flushing for newly made hot and cold water pipes is significantly reduced using a transmission barrier filter. At the same time, the number of working hours involved in filling pipes with water are also reduced by using a vacuum pump. The flushing method for hot and cold water pipes conserves resources by significantly reducing the volume of wash water used as well as the number of working hours involved. The technique is expected to be used in cogeneration systems for district cooling and heating and for pipes to cool large-sized machinery.

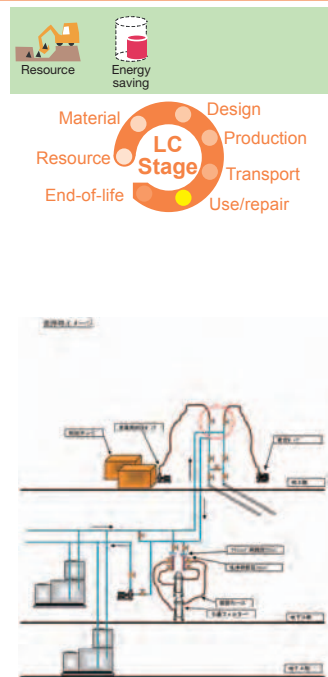
Product performance

Fewer frequencies of water changes needed: conventionally, 50 to 100 t of wash water are required to flush a pipe with a capacity of 10 t, but the new method takes only about 20 t to complete washing.

NIHON MIZU-SHORI KOUGYOU CO., LTD.

8-14 Sugahara-chou, Kitaku, Osaka, 530-0046, Japan  
 Tel +81-6-6363-6330 Fax +81-6-6363-6372  
 E-mail mizushori@nifty.com  
 URL <http://www.mizu-shori.com>

Available in: Japan, Asia



ES-3-002

Outsourcing

other products

An environmentally friendly, reliable data erasure service

Environmental performance

- This is an environmentally friendly data erasure service with the following characteristics:
- (1) Data media are heated and carbonized and the data is then erased.
  - (2) Combustion does not occur since oxygen is not used, thereby significantly reducing CO<sub>2</sub> emissions (compared with crushing and combustion after data erasure using strong magnetism).
  - (3) The original materials (e.g., metal) and fuel (carbide) are both recycled.
  - (4) External air pollution is prevented through the use of exhaust gas detoxification and deodorization devices.
  - (5) Carbon offsets are purchased to compensate for the CO<sub>2</sub> discharged during the operation of this service.
  - (6) Carbon offset and work completion certificates are issued.

Product performance

Completely erases data on magnetic tapes, optical discs, floppy disks and hard disks at a location designated by the client, enabling protection of information, the environment and customers.

Imation Corp. Japan

Aoyama Oval Building, 52-2, Jingumae 5-chome, Shibuya-ku, Tokyo, 150-0001, Japan

Available in: Japan



Truck put on the equipment & Carbonized cartridge

ES-3-003

Outsourcing

professional services

Environmental Due Diligence

Environmental performance

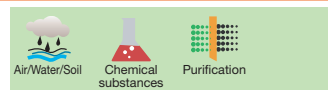
E&E Solutions has conducted more than 1,000 environmental due-diligence projects worldwide.

We also conduct site assessments to evaluate project-site conditions in accordance with protocols established by the America Society for Testing and Materials (ASTM). Our engagements range from standard methods to custom-designed investigations.

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU  
 TOKYO, 101-0021, Japan  
 Tel +81-3-6328-0080 Fax +81-3-5295-2051  
 URL <http://www.eesol.co.jp/en>

Available in: Worldwide



ES-3-004

Outsourcing

professional services

Energy Solutions and GHG Consulting

Environmental performance

We provide kind of services on Green House Gas (GHG) management and carbon offset, including technical support in development of renewable energy, survey on planning and proposing GHG emission reduction strategies and solutions, support in registration of Clean Development Mechanism (CDM) and Joint Implementation (JI) projects.

Product performance

Feasibility study of renewable energy project, Investigation of Wind-Energy, simulation, Technical/ Market research on GHG reduction technologies, Support for CDM/JI project, business climate regarding post-Kyoto Protocol, Support for NAMA (Nationally Appropriate Mitigation Action) / bilateral credit, Survey on GHG emission sources, GHG monitoring and reporting services

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU  
 TOKYO, 101-0021, Japan  
 Tel +81-3-6328-0080 Fax +81-3-5295-2051  
 URL <http://www.eesol.co.jp/en>

Available in: Worldwide



ES-4-001

Management-related

data processing and information services

Data Collection, Operation and Analysis Support Software SLIMOFFICE/SLIMOFFICE EX

**Environmental performance**

Software to support the collection, operation and analysis of data on the environmental performance (environmental performance results) of organizations. This product is useful in creating ISO 14001 support, environmental accounting, environmental report and initiative promotion plans to prevent global warming. Since various ordinances, regulations and controls (revised Law Regarding the Rationalization of Energy Use is covered) are also available, this software has functions to make environmental information visible in order to increase the value of the company by making reduction plans and conducting environmental analysis management.

**Product performance**

Environmental management information system "SLIMOFFICE EX" is software exclusively for the total management and analysis of companies. The software supports everything from the collection of environmental-performance data to the environmental accounting of organizations. Environment-related information is collected and analyzed efficiently from various bases to highlight the environmental performance of organizations. Template-ledger sheets for environmental accounting are fitted as standard, enabling users to introduce environmental management easily. This product can be utilized to create ISO 14001 support, environment accounting, environmental reports and initiative promotion plans to prevent global warming. Various ordinances, regulation and controls (revised Law Regarding the Rationalization of Energy Use supported) are also available.

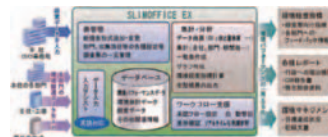
**Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



TYPE II



ES-4-002

Management-related

data processing services

PLEMIA/ECODUCE

**Environmental performance**

The product makes it possible to save energy for the enormous works which relate to the business: designing, supplying, information collecting and offering. The main feature is as follows. (1) "Design for Environment (DFE)" is realized. Constituent chemical substances are summarized every product, every unit, on the basis of the parts data table. Compliance with the acts of RoHS, REACH, ELV, etc and with the regulation of company is possible. (2) The efficiency of the inquiry-answer business has been enhanced. The process from the inquiry request to the answer has been unified. It has become possible to carry out the survey business for clients step by step, while confirming the progress. Input-output by JPG, AIS data files and output by IDMS (XMS) data file is possible.

**Fujitsu Limited**

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 Tel +81-44-754-3413 Fax +81-44-754-3326  
 URL <http://www.fujitsu.com/global/>  
 URL <http://jp.fujitsu.com/group/fns/services/plm/ecoduce/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



TYPE II



ES-4-003

Management-related

data processing services

Chemical-material information management system, McConcierge

Environmental performance

McConcierge is a business package produced for companies in the processing industry, which totally manages raw and component materials of chemical goods, physical-chemical data and safety-related information on laws and regulations. Since 2001 it has been compulsory to attach MSDS (Material Safety Data Sheet) to chemical products, and MSDS and labels have been required to correspond to GHS since 2007. In addition, the PRTR Law (Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management), Industrial Safety and Health Act and Poisonous and Deleterious Substances Control Act were strengthened in 2007, forcing companies to follow the laws and acts. This system allows companies to conduct total management of GRC on the safety of chemical products as part of their CSR activities.

Product performance

\*Information on the dangerousness and harmfulness of chemicals contained in chemical material products to people and the environment are totally managed.  
 \*Chemical material products are automatically classified according to their dangerousness and harmfulness based on the international rules on classification and indication on chemicals, the Globally Harmonized System of Classification and Labeling of Chemicals.  
 \*Information required to use products safely is outputted in the form of the Chemical Material Safety Data Sheet, etc.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



TYPE II



ES-4-004

Management-related

data processing services

Total Building Management System Futuric/SX Series

Environmental performance

The building management system Futuric/SX series is building automation (BA) systems to collectively manage and control information about electricity supply, air-conditioning, lighting, and crime/disaster prevention, while sharing information with users.

For the protection of the environment and conservation of energy, facility data, such as air-conditioning data, are transmitted to servers and remote PCs in cooperation with BEMS (Building and Energy Management System) to maintain the optimum operating conditions. The system is used to tally up accumulated energy data in order to visualize the amount of CO<sub>2</sub> and environmental load with the aim of supporting efforts to reduce CO<sub>2</sub> emissions.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://fenics.fujitsu.com/products/futuric/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



TYPE II





ES-4-005

Management-related

document management system

Document Solution "LIBINITY"

Environmental performance

"LIBINITY" is an unified brand of the document solution of Hitachi Solutions, Ltd. It reduces the consumption of the paper, which leads to the reduction of the CO<sub>2</sub> emission associated with the transportation of the paper by 42.3%. This reduction is achieved by replacing distribution of the conventional paper with information sharing on the network.

\*It is a value calculated in our model case.

Product performance

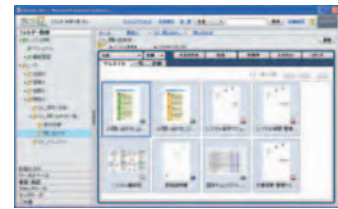
"LIBINITY One" is next-generation document management system. It adopted Rich client technology with realizing high user interface, and it greatly improved usability.

"LIBINITY Millemasse" is a high-performance filing system to keep a large quantity of documents and images for unification. It easily realizes high document management at a low cost.

Hitachi Solutions, Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan  
 Tel +81-3-5780-2111  
 URL <http://www.hitachi-solutions.com>  
 URL <http://www.hitachi-solutions.co.jp/libinity/>  
 URL <http://www.hitachi-solutions.com/company/csr/communication/#report>

Available in: Japan,China



Screen image of "LIBINITY One"

ES-4-006

Management-related

energy savings

Energy management system "ECOPOMPA"

Environmental performance

"ECOPOMPA" is the partner-service that can save energy on manufacturing operations and business management by IT technology. There are three elements to efficiently provide support services of energy-saving for offices, factories and retail stores; visible, understandable and improvable.

Product performance

3 elements :

- Visible :makes it easier to understand and to act for energy-saving by collecting and analyzing the power consumption in each branches with wireless sensors, which are shared between head office and branches.
- Understandable :indicates the alert signal when power consumption exesses the target level. At the same time, it shows successful examples cases and the problems of branches, which helps to reduce power consumption.
- Improvable :By using "ECOPOMPA", it helps to raise employees' energy-saving awareness and you can get knowhow and effective cases for energy-saving.

Hitachi Consumer Electronics Co.,Ltd.

Shin-Otemachi Bldg. 2-1,Otemachi 2-chome,Chiyoda-ku,Tokyo, 100-0004, Japan  
 Tel +81-3-4232-5622 Fax +81-3-4232-5660  
 URL <http://www.hitachi-ce.co.jp/en/index.html>  
 URL <http://www.hitachi-ce.co.jp/en/product/index.html#eco-pom-pa>

Available in: Japan



Energy management system "ECOPOMPA"

ES-4-007

Management-related

energy savings

ecoFORTE Global (Environment Energy Management Service)

Environmental performance

The Carbon Disclosure Project (CDP) has been increasing the number of scores disclosed of the top global companies, and the laws and regulations is becoming tightend every year globally. This background has been pushing forward global companies to higher their level of environment and energy data management, and companies are struggling to find their way to manage their data with efficiency and accuracy. ecoFORTE Global enables global companies to lower their risk in the management workflow, and higher their corporate value.

Product performance

ecoFORTE Global is a cloud based solution, which supports global companies and municipals to manage their environment and energy related data by facility units, and enables to forecast their emissions and manage initiatives.

ITOCHU Corporation

5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107-8077, Japan  
 Tel +81-3-3497-2408 Fax +81-3-3497-4181  
 E-mail support01@ecoforte.jp  
 URL <http://www.itochu.co.jp/en/>  
 URL <http://www.ecoforte.jp/>  
 URL <http://www.itochu.co.jp/en/csr/>

Available in: Japan,Asia,Oceania,ASEAN,Indonesia,Singapore,Thailand,Philippines,Malaysia,Mexico,China,Tokyo Metropolitan Area



ES-4-008

Management-related

energy savings

ecoFORTE EMS (Energy Management Service)

Environmental performance

ecoFORTE EMS use computer-aided tools to monitor the energy consumption (electricity, gas and other utilities) of manufacturing plants, office buildings or stores, and to propose business solutions to manage and reduce energy consumption and achieve energy savings.

ITOCHU is using software development technology and telecommunication technology built up in its ICT business to develop more sophisticated center systems capable of offering wholly integrated EMS, covering the measurement and control of air-conditioning, lighting and ICT equipment power consumption and the proposal of energy-saving solutions.

Product performance

ecoFORTE EMS is a cloud type energy saving support service which makes it possible to measure the energy consumption of an entire building and control air-conditioning and lighting equipment easily.

By implementing the expertise in the measurement and control of air-conditioning systems and other equipment into ecoFORTE EMS, it improves and accelerates the development of extendible cloud-type center systems that can be adapted to suit diverse customer equipment and energy-saving requirements.

ITOCHU Corporation

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 URL <http://www.itochu.co.jp/en/>  
 URL <http://www.ecoforte.jp/>  
 URL <http://www.itochu.co.jp/en/csr/>

Available in: Japan,Asia,Oceania,Southeast Asia,Middle and Near East,ASEAN,Indonesia,Singapore,Thailand,Philippines,Malaysia,Mexico,Republic of Korea,Taiwan (Rep. of China),China,Tokyo Metropolitan Area



ecoFORTE EMS  
 -Energy Management Service-

ES-4-009

Management-related  
energy savings

ecoFORTE Streetlight (Energy Management Service)

Environmental performance

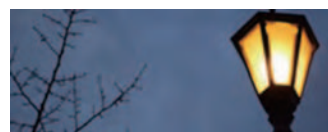
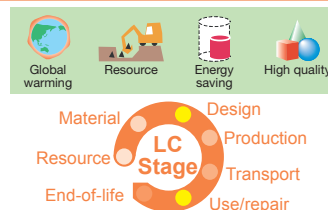
Currently, the majority of streetlights, outdoor security lights, park lights, etc. in widespread use in Japan can only be switched on and off using a timer or illuminance sensor. Illumination cannot be finely adjusted to the surrounding environment, weather, or seasons, and so such lights remain switched on continuously with a fixed illuminance. Further, since a timer or illuminance sensor is required to switch the lights on and off, and a late stage of the lamp life time may result in the lights being left on even during the daytime, which is an issue that needs to be resolved. Recently in particular, as part of the current energy saving measures, initiatives to thin street lighting have been proposed. However, there are those who question this approach from the perspective of safety and security. ecoFORTE Streetlight utilizes the IT technology to answer these questions.

Product performance

The ecoFORTE Streetlight solution consists of a power line communications (hereinafter "PLC") compatible communications apparatus that has PLC capability installed on each streetlight, which transmits and receives data through the already established power line infrastructure. This enables the remote fine-tuned adjustment and control of streetlights according to the environment, without laying a new communications network, helping to reduce the amount of energy consumed. Not only by accurately measuring power consumption, accumulated lighting time, but also by automatically identifying lamp failures and monitoring, and so forth, the system can also suppress power consumption and the volume of carbon dioxide emissions, as well as operate, maintain, and control street lighting more efficiently (smart street lighting).

ITOCHU Corporation

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 Tel +81-3-3497-2408 Fax +81-3-3497-4181  
 E-mail support01@ecoforte.jp  
 URL <http://www.itochu.co.jp/en/>  
 URL <http://www.ecoforte.jp/>  
 URL <http://www.itochu.co.jp/en/csr/>



ecoFORTE Streetlight  
-Energy Management Service-

Available in: Japan,Asia,Oceania,ASEAN,Indonesia,Singapore,Thailand,Philippines,Malaysia,Mexico,Republic of Korea,Taiwan (Rep. of China),China,Tokyo Metropolitan Area

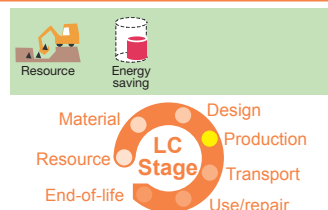
ES-4-010

Management-related  
energy savings

Digital Climate Controller

Environmental performance

This device control the temperature, Humidity of air and soil, condition of outdoor of green house, light and water for the best condition.



Oranj Data Mining Co.

No. 135 -Sheikh Bahaei Building - Isfahan Science & Technology Town (ISTT)  
 - Isfahan University of Technology Blvd. - Isfahan, Islamic Republic of Iran  
 Tel 0098-311-3869516 Fax 0098-311-3869516  
 E-mail oranj-co@istt.ir  
 URL <http://www.oranj.ir>

Available in: Middle and Near East

ES-4-011

Management-related  
energy savings

Greater "Visibility" and Automatic Control of Electric Power

Environmental performance

Ubiteq offers comprehensive energy conservation solutions that make electric power usage data more "visible" and offer automatic power control through Ubiteq Green Services (UGS). These solutions link an office's lighting, air-conditioning and security and equipment to its IT systems to provide greater "visibility" of electric power usage data. At the same time, they offer automatic control functions in which an email notification is sent to related managers when energy usage approaches a level predetermined by the customer, and even include a function that allows lighting and air-conditioning to be shut down automatically in the event that energy usage exceeds this level. The settings for these systems can be adjusted via the internet or manually.



Ubiteq, INC.

6th Floor, Gotanda Nt Building 1-18-9 Nishigotanda, Shinagawa-ku, Tokyo ,  
141-0031, Japan  
Tel +81-3-5487-5560 Fax +81-3-5487-5561  
URL <http://www.ubiteq.co.jp/index-e.html>  
URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)



ES-4-012

Management-related  
library systems

A library system "Livre"

Environmental performance

By using "Livre", paperless of the books card and the management ledger and efficiency improvements of the clerical work are achieved. Compared with the system unavailable (operation with paper), we can reduce CO<sub>2</sub> of 66.6%.

Product performance

"Livre" is library system, which Hitachi Solutions, Ltd. offers. The characteristics of "Livre" are as follows.  
- Enable easy operation for the loan and the return of the library book.  
- Enable quick search for books.  
- Provide variety of statistics associated with the library operation.



TYPE II

Hitachi Solutions, Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan  
Tel +81-3-5780-2111  
URL <http://www.hitachi-solutions.com>  
URL <http://www.hitachi-solutions.co.jp/livr/>  
URL <http://www.hitachi-solutions.com/company/csr/communication/#report>



Available in: Japan

Main Menu of "Livre"

ES-4-013

Management-related

package software

**Bioinformatics Software for DNA/RNA/ Amino Acid Sequence Analysis****Environmental performance**

DNASIS Pro reduces the man-hour by 78% by adding the coordinated function with the reagent order site, and contributes to energy saving.

**Product performance**

Life science research is making great advances in such broad applications as drug discovery, food safety and environmental conservation. DNASIS Pro bioinformatics software contributes to life science research by helping scientists be more productive. DNASIS Pro lets researchers edit, annotate and analyze DNA, RNA and amino acid sequences. It includes a comprehensive set of analytical tools that can be expanded with optional homology search, multiple alignment, and base calling and sequence assembly modules. Its unique, customizable features are designed to save researchers time and accelerate life science research.

**Hitachi Solutions, Ltd.**

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

Tel +81-3-5780-2111

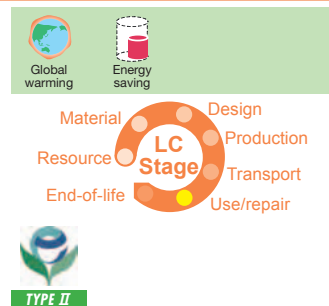
URL <http://www.hitachi-solutions.com/>

URL <http://www.miraibio.com/dnasis-max/dnasis-max-overview.html>

URL <http://www.hitachi-solutions.com/company/csr/communication/#report>

Available in: Japan, North America

DNASIS Pro



ES-4-014

Management-related

package software

**Agricultural Information Management System: GeoMation Farm****Environmental performance**

Remote sensing technology can judge the percentage of dryness of the ears of wheat. By using this information, farmers can harvest the enough dry wheat according to the priority and this lead to the energy-saving drying. According to the evaluation result by SI-LCA index, saved energy for drying wheat and increasing efficiency of production control by using GeoMation Farm is equivalent to reduction of CO<sub>2</sub> emission by 33%.

**Product performance**

- 1) By analyzing the relation between fertilizer and quality/quantity of the crop, farmers can judge the suitable amount of fertilizer. This leads to the low environmental load.
- 2) By plotting scattering of the outbreak of disease or harmful insect on the farmland map, farmers can prevent and exterminate these pest with low agricultural chemical.

**Hitachi Solutions, Ltd.**

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

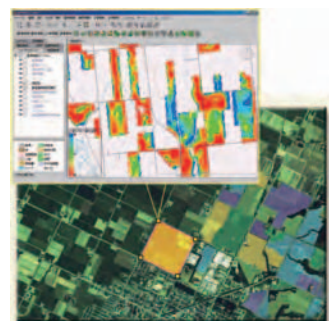
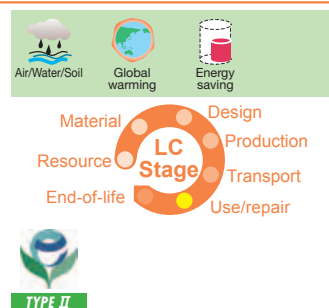
Tel +81-3-5780-2111

URL <http://www.hitachi-solutions.com/>

URL <http://www.hitachi.com/environment/showcase/solution/it/geomation.html>

URL <http://www.hitachi-solutions.com/company/csr/communication/#report>

Available in: Worldwide (Except for Iran)



Agricultural Information Mgmt: GeoMation Farm



ES-4-015

Management-related  
package software

## Interactive Whiteboards Software : StarBoard Software

## Environmental performance

- (1) Reduce environmental load on people's transportation to distant place.
- (2) Reduce paper usage and increase the efficiency of business meeting or school teaching by making written documents on whiteboard reusable as PC data.

## Product performance

- Improve the PC operation and handwritten input on interactive whiteboard (StarBoard). Enable remote communications between interactive whiteboards by sharing data, interactive writing.
- Express presentation in variegation by many kinds of pens and cooperation with another application. Support Windows 7 64bit and Windows Touch newly. DDC (Digital Data conference) function is available. Three users can annotate simultaneously.

## Hitachi Solutions, Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan  
 Tel +81-3-5780-2111  
 URL <http://www.hitachi-solutions.com/>  
 URL <http://www.hitachi-solutions.com/starboard-asia-oceania/sp/>  
 URL <http://www.hitachi-solutions.com/company/csr/communication/#report>

Available in: Worldwide (Except for Iran)



StarBoard

ES-4-016

Management-related  
package software

## Life Cycle Assessment Software : Easy-LCA for WEB V5.0

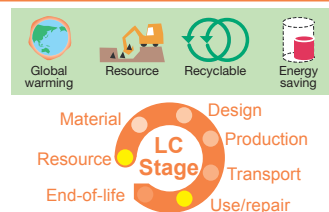
## Environmental performance

Easy-LCA is a supporting tool to conduct life cycle assessment (LCA) effectively. It evaluates quantitatively the influence of the product on the environment at the stage of design, and combines scientifically the results with the analysis and improvement of the product. Main features

- The latest database based on the economical statistics table of fiscal year 2000 (published in 2004) has been included.
- Assessment of the discharge of environmental loading is possible according to the distinction of units and parts.
- Comparison of an old product and the new one is possible
- Impact evaluation
- Inventory evaluation of 30 kinds of products including CO<sub>2</sub> / NO<sub>x</sub> / SO<sub>x</sub> is possible.

## TOSHIBA PLANT SYSTEMS &amp; SERVICES CORPORATION

Muza Kawasaki Central Tower, 1310, Omiya-cho, Saiwai-ku, Kawasaki-Shi, 212-8551, Japan  
 Tel +81-44-548-7711 Fax +81-44-548-7884  
 E-mail [eco.master@toshiba-tpsc.co.jp](mailto:eco.master@toshiba-tpsc.co.jp)  
 URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Easy-LCA screens



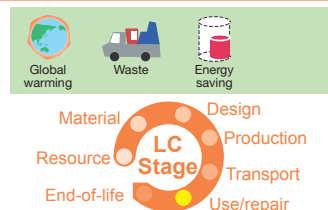
ES-4-017

Management-related  
package software

Environment Education Contents Series :Environmental Communication Club

Environmental performance

"Environmental Communications Club" is an environmental educational package for understanding global environmental problems and the negative environmental impact, and for considering the environment. Contents include animation and games. Users can enjoy and learn about environmental issues. These contents are used for study by school children's class trips to the garbage incinerator and the recycling plaza of the municipality.



TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

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 E-mail [eco.master@toshiba-tpsc.co.jp](mailto:eco.master@toshiba-tpsc.co.jp)  
 URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>  
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Various Contents

ES-4-018

Management-related  
package software services

Interstage XWand

Environmental performance

Resource Saving:  
 - With the storage of financial documents in XBRL (\*1) format, you can move toward paperless office environment. Making your business activities more efficient.  
 - Business rules created with XBRL Formulae ensure that reporting organizations can fully validate their documents before filing. This reduces time and cost for business reports submission.  
 - Information can be automatically extracted from XBRL filings in your business systems. This reduces re-typing errors and makes efficient use of financial information.

(\*1) The Extensible Business Reporting Language (XBRL) is a royalty-free, open specification to describe financial information for public and private companies and other organizations.

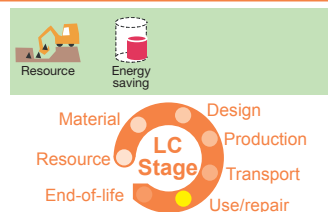
Product performance

FINANCIAL REPORTING AND XBRL  
 eXtensible Business Reporting Language (XBRL) is fast becoming the standard for financial reporting throughout the world. It allows financial regulators, central banks and government bodies to define the data they require from companies and organizations in a clear and concise fashion as XBRL taxonomies. Using these taxonomies businesses can submit their data in machine readable format as XBRL instance documents.

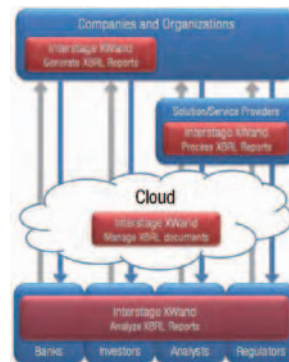
PRODUCT DETAILS  
 Interstage XWand provides support for all the phases in the financial information lifecycle including the preparation, validation, analysis and dissemination of XBRL reports. A key component of Interstage XWand is its flexible programming interfaces allowing organizations to make XBRL an integral part of their reporting process at the application level. Interstage XWand consists of an integrated set of easy to use tools that allow users to quickly create, analyze, and view XBRL reports.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/services/software/interstage/solutions/xbrl/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>



TYPE II



Available in: Japan,Asia,Oceania,Europe,North America,U.S.A,Indonesia,Singapore,Thailand,Philippines,Malaysia,Republic of Korea,Taiwan (Rep. of China),China,South Africa

1 Eco-services // Management-related  
 2  
 3  
 4  
 5

ES-4-019

Management-related  
package software services

Systemwalker Desktop Patrol V14g

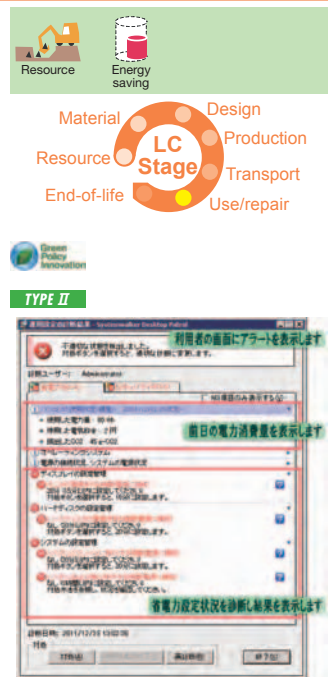
Environmental performance

Systemwalker Desktop Patrol V14g raises PC user's awareness of environment (reduce power consumption) by displaying the estimated amount of consumed power. It also provides functions to encourage PC power saving settings and force users to do it consistently, and allow administrator (management server) to compel the power saving setting without depending on user's moral. Moreover, effects and contribution to environmental conservation by power-saving efforts in organization-wide can be confirmed by auto-created reports. This supports to take new measures in response to situation and business of each branch.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ES-4-020

Management-related  
package software services

Systemwalker Runbook Automation V14g

Environmental performance

In ICT Systems such as data centers where the energy saving measures are crucial, automatically stopping the servers which are not being used will result in considerable reduce in the energy consumption of entire center. However, stopping the servers safely requires various and specific procedures for each server type (E.g. temporarily stop monitoring the server before turning it off, etc...). Runbook Automation offers the ability to stop and start servers of a data center by automation of workflow. Workflows can have various execution day patterns and flexible schedules for each execution day. As a result, the required manpower for stopping and starting operation of a data center server is reduced by 95% (Fujitsu trial).

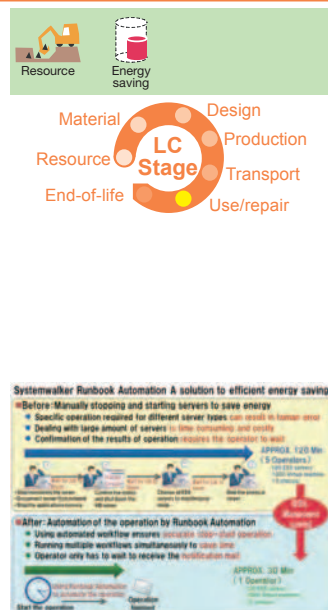
Product performance

Systemwalker Runbook Automation enables you to create more flexible workflow by including manual confirmation and decision making along with automated procedures on OS, middleware.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/services/software/interstage/solutions/xbrl/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan,Europe,North America



Systemwalker Runbook Automation

ES-4-021

Management-related

package software services

Server Management Software ServerView Resource Coordinator VE

Environmental performance

ServerView Resource Coordinator VE realizes the optimum arrangement of virtual servers tailored to business execution status. Approximately 17% of power consumption is reduced with intensive virtual servers by turning off the free servers at night when CPU utilization rates are low.

Product performance

\* Consolidated operation of multiplatform  
Standardized operation and observation that differs by virtual environment and platform prevents complications. Daily operation, such as the starting, rest and rebooting of servers, and indication of server information, can be operated on a single display.

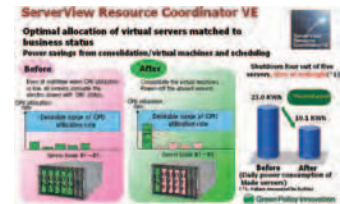
Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL [http://ts.fujitsu.com/products/standard\\_servers/system\\_management/serverview\\_rcve.html](http://ts.fujitsu.com/products/standard_servers/system_management/serverview_rcve.html)  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



TYPE II



Power savings by ServerView Resource Coordinator VE

ES-4-022

Management-related

package software services

Storage Management Software ETERNUS SF

Environmental performance

The Eco Mode function of ETERNUS disk storage systems provides power saving facilities for the disk drives. ETERNUS SF AdvancedCopy Manager and Storage Cruiser apply the power saving features to greatly reduce the power consumption of disk storage system for backup drives that are used infrequently.

For example, about 18% of power saving of an ETERNUS DX80 S2 D2D backup environment is possible.

In addition to that, ETERNUS SF Storage Cruiser can visualize power consumption and temperature of disk storage system.

Product performance

ETERNUS SF AdvancedCopy Manager provides fast backup/restore and replication by using Advanced Copy Function of ETERNUS disk storage system.

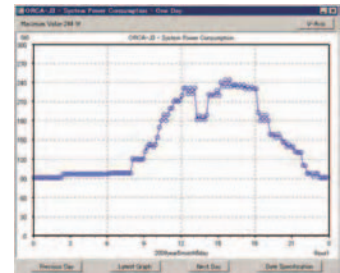
Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan  
 URL <http://www.fujitsu.com/global/>  
 URL <http://www.fujitsu.com/global/services/computing/storage/eternus/products/eternus-sf/>  
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



TYPE II



graphical presentation of power consumption of ETERNUS disk storage system

ES-4-023

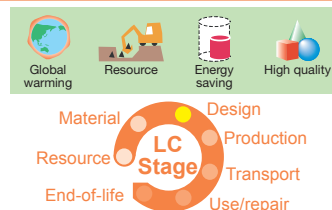
Management-related

package software services

LCA software "MiLCA:Multiple Interface Life Cycle Assessment"

Environmental performance

MiLCA is the LCA software developed by Japan Environmental Management Association for Industry (JEMAI). The previous version of the MiLCA, JEMAI-LCA software, has been available since 2000, and over 1000 copies have been sold, occupying the largest share in Japan's LCA software market. The software is equipped with the following functions: -A modifiable inventory database containing a wide range of processes with resource consumption and emissions. -New data adding through a process sheet or visual input output sheet. -Process tree management. -Estimation of environmental impact in overseas countries using electricity data and an import model of 200 countries/regions. -Inventory analysis and impact assessment including the Japanese method. -Report writing support based on the format outlined in the ISO 14040s specifications.



Japan Environmental Management Association for Industry (JEMAI)

2-1 Kajicho 2-chome, Chiyoda-ku, Tokyo, 101-0044, Japan  
 Tel +81-3-5209-7708 Fax +81-3-5209-7716  
 E-mail jemai-lca@jemai.or.jp  
 URL <http://www.jemai.or.jp/>  
 URL <http://www.milca-milca.net/english/>



MILCA

Available in: Worldwide

ES-4-024

Management-related

wastewater management

Wastewater Treatment Technology-MSABP™, HiPOx™ and ELCAT™

Environmental performance

Comprehensive Waste Water Treatment Solutions for water recycle/reuse though our environmentally friendly and advanced technologies

Product performance

- 1) MSABP™:Multi-Stage Activated Biological Process with micro-organism food chain
  - \*No excess sludge, nor its disposal cost (less energy&CO<sub>2</sub>)
  - \*Capable for treating highly concentrated effluent without dilution
  - \*Decomposes hard to decompose effluents; detergents, antiseptics etc
  - \*Applicable to food/petro/chemical/pharma industries
- 2) HiPOx™:Innovative Advanced Oxidation Process (AOP) with hydrogen peroxide & multiple ozone injection
  - \*Less ozone injection compared to treatment with ozone alone, reducing running costs
  - \*Decomposes 1,4-Dioxane, PPCPs and EDCs, chlorine-based solvents etc
- 3) ELCAT™:Consists of 2stages, Electrolytic and Catalyzed reaction
  - \*High treatability for toxic, non-biodegradable materials; dye, detergent, phenols etc



Teijin Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan  
 Tel +81-3-3506-4593  
 E-mail [wpt@teijin.co.jp](mailto:wpt@teijin.co.jp)  
 URL <http://www.teijin.co.jp/english/index.html>



Eco-services // Management-related

1  
2  
3  
4  
5

ES-5-001

Others

financial services

ESCO Business

Environmental performance

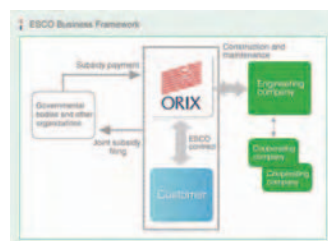
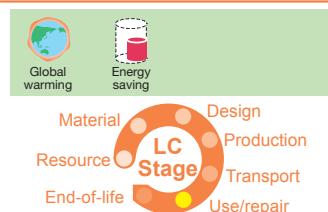
ESCO (Energy Services Company) provides comprehensive services pertaining to building energy efficiency and conserving energy without compromising existing use. ESCO energy cost reductions cover various costs, such as installation of energy-efficient equipment, maintenance and assessment of conservation benefits. Private-sector companies and local governments have embraced ESCO as a means of conserving energy while reducing running costs.

ORIX offers one-stop services from customer energy usage assessments to proposal and implementation of energy conservation solutions. ORIX also provides services tailored to a wide variety facilities. In order to maximize conservation benefits, ORIX selects the best equipment, without being limited to a single manufacturer. ORIX provides ongoing support, such as equipment operation, maintenance, energy conservation assessment and operations consulting.

ORIX Corporation

12-15 Nihombashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan  
 Tel +81-3-6667-2261 Fax +81-3-3249-1985  
 URL <http://www.orix.co.jp/grp/en/>  
 URL [http://www.orix-eco.jp/en/eco\\_service/detail/esco.htm](http://www.orix-eco.jp/en/eco_service/detail/esco.htm)  
 URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)

Available in: Japan



ESCO Business Framework

ES-5-002

Others

financial services

SMBC Environmental Assessment Loan

Environmental performance

This Loan provides an environmental assessment for customers. Diagnosis sheets will be presented to customers after the financing to help their effort for environment. This Loan will support customers' environmental management.

Product performance

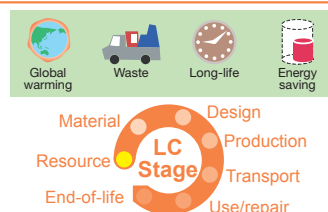
The Environmental Assessment Loan uses a proprietary standard defined by SMBC and Japan Research Institute Limited, the think tank of SMFG, and they directly assesses customers based on the standard. The assessment has seven grading levels, and interest rates for companies that achieve a top-three grading, may be reduced. For more information, please contact the nearest SMBC Corporate Business Office.

- \*1. Other designated investigations besides the Environmental Assessment are required for this financing.
- \*2. The composition of finances and mortgages as well as the results of the Environmental Assessment will be taken into consideration for the decision of interest rates.

Sumitomo Mitsui Banking Corporation

1-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-0005, Japan  
 URL <http://www.smbc.co.jp/global/>  
 URL <http://www.smbc.co.jp/investment/english/>

Available in: Japan





ES-5-003

Others

general goods rental and leasing

Mannequin Rental Service

Environmental performance

The Mannequin reusable rental service controls the amount of production, extending the life spans of products and decreasing the environmental burden while promoting "Reuse".

The company's nationwide network allows products to be delivered and returned by the shortest distance to customers, reducing the environmental burden in the phase of commodity distribution.

Product performance

Mannequins are produced after many processes using clay models. They are produced not only to sell but also to be rented for repeated use.

HEIWA MANNEQUIN CO.,LTD

1-22-3 Kitaotuka Toshimaku Tokyo, 117-0004, Japan  
 URL <http://www.heiwa-mq.co.jp/>

Available in: Japan

The infographic for Mannequin Rental Service includes icons for Global warming, Resource, Recyclable, and Long-life. It features a central 'LC Stage' diagram with categories: Material, Design, Production, Transport, Use/repair, End-of-life, and Resource. Below this is a 'TYPE III' logo and a detailed '製品環境情報' (Product Environment Information) sheet with a bar chart and a line graph.

MANNEQUIN Rental Service

ES-5-004

Others

new year's cards

Eco Green New Year's Cards (name-printing service)

Environmental performance

In 2008, we initiated a carbon offset business through afforestation and launched Green Eco New Years Cards as part of the business. Using part of the proceeds from these sales, we plant trees in Nenga-no Mori (The New Years Cards Forest) in Hokkaido Bihoro town, thereby offsetting approximately five kilograms of CO<sub>2</sub> for every 10 cards. In 2008, 95,000 cards were sold with a projected offset of about 89 tons of CO<sub>2</sub> by the autumn of 2009. In 2009, 200,000 cards were sold with a projected offset of about 200 tons of CO<sub>2</sub> by the November 2010. In 2010, 215,000 cards were sold with a projected offset of about 208 tons of CO<sub>2</sub> by the autumn of 2011.

Product performance

We develop environmentally friendly products. In 1988 in Hokkaido, we introduced an on-demand printer that uses only the amount of paper absolutely necessary to print New Year's cards. In 2004, we launched Cardbox - an e-commerce website for greeting cards and New Year's cards. Through these efforts, we have extricated ourselves from the conventional flow of business, which is characterized by significant print loss, and succeeded in labor savings.

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan  
 URL <http://www.pripress.co.jp/>

Available in: Japan

The infographic for Eco Green New Year's Cards includes icons for Chemical substances, Resource, Purification, and Recycled materials. It features a central 'LC Stage' diagram with categories: Material, Design, Production, Transport, Use/repair, End-of-life, and Resource. Below this are several examples of New Year's cards with green and white designs.

Green Eco New Year's Cards



ES-5-005

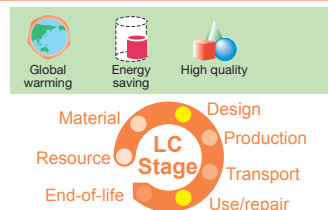
Others

railways

The series N700 with enhanced energy efficiency

Environmental performance

The Tokaido and Sanyo Shinkansen can be regarded as a transportation mode with more energy-efficient performance (e.g. lower CO<sub>2</sub> emissions per unit carriage of passengers) compared with other transportation modes such as airplanes. The Series N700, newly developed with the three concepts of "The fastest cutting edge rolling stock", "Superior comfort", and "Superior environmental performance", realized further energy efficiency, for example, by reducing air resistance by developing a new nose shape and cover-all hood, and by introducing the body inclining system. The introduction of the Series N700 will improve the environmental superiority and service of the Shinkansen so as to allow more passengers to select and use the Shinkansen thereby contributing to suppressing the burden that the transportation sector as a whole puts on the environment.



Central Japan Railway Company / West Japan Railway Company

Central Japan Railway Company  
 JR Central Towers, 1-1-4, Meieki, Nakamura-ku, Nagoya, Aichi, 450-6101, Japan  
 URL <http://jr-central.co.jp>  
 West Japan Railway Company  
 4-24, Shibata 2-chome, Kita-ku, Osaka, 530-8341, Japan  
 URL <http://www.westjr.co.jp>



Available in: Japan

Series N700

ES-5-006

Others

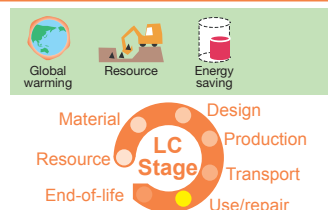
railways

Operation of the world's first diesel hybrid railcar

Environmental performance

In July 2007, the world's first diesel hybrid railcars, the Kiha E200 Type, entered service on the Koumi Line. Diesel hybrid railcars operate efficiently by using electricity generated by a diesel engine to charge a battery which reduces emissions and by regenerative brakes, which charge the battery when braking. Efficiency in tests was approximately 20% better than a standard diesel railcar\*. The diesel hybrid railcar is quiet when idling at a station (approx. 30dB). Hazardous substances in the exhaust, such as NOx and graphite, are reduced approximately 60%.

\*Results are based on test runs on level ground. On the Koumi Line, which has steep grades, efficiency improved by approximately 10%.



Product performance

\*maximum running speed:100km/h  
 \*passenger capacity:117 (seating capacity 46)

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan  
 Tel +81-3-5334-1122  
 URL <http://www.jreast.co.jp/eco/>



The world's first diesel hybrid railcar Kiha E200 Type

Available in: Japan

ES-5-007

Others

railways

Environmentally Friendly E231 Series

Environmental performance

The E231 series reduces operational energy consumption by 50% compared to that of the 103 series, measured between Sep. 1985 and Sep. 1986 on Yamanote line, and in terms of weight, 90% of the E231 series railcar can be recycled. Servicing the Yamanote, Takasaki, Utsunomiya, and other metropolitan lines, the E231 series currently realizes the most environmentally friendly design.

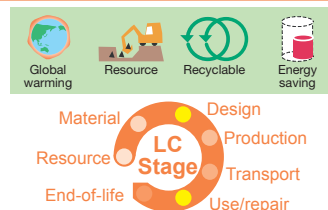
Product performance

E231-500 series for Yamanote line  
 \*maximum running speed:120km/h  
 \*passenger capacity in a train set:1752 (seating capacity 502)

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan  
 Tel +81-3-5334-1122  
 E-mail [eco@jreast.co.jp](mailto:eco@jreast.co.jp)  
 URL <http://www.jreast.co.jp/eco/>

Available in: Japan



E231 series run on the Utsunomiya Line

ES-5-008

Others

railways

Series E5 Shinkansen

Environmental performance

Series E5 Shinkansen trains running at 320km/h realized the same level wayside environmental performance of E2-series trains running at 275km/h which are main Shinkansen trains currently in use. The reasons of them are the smooth body surface by cover-all hood and 15m long nose shape. Due to reducing air resistance by those reasons, the electric consumption of E5-series running at 320km/h is the same that of E2-series at 275km/h.

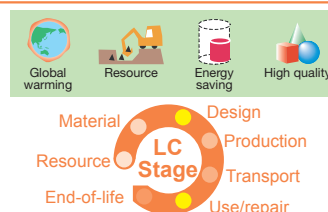
Product performance

Series E5 (10-car sets)  
 · maximum running speed:320km/h (after 2012 spring)  
 · passenger capacity in a train set:731

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan  
 Tel +81-3-5334-1122  
 E-mail [eco@jreast.co.jp](mailto:eco@jreast.co.jp)  
 URL <http://www.jreast.co.jp/eco/>

Available in: Japan



Series E5 Shinkansen trains

ES-5-009

Others

renewable energy

developing the culture of using renewable energy

**Environmental performance**

Major activity of our company is developing culture of using solar energy in Iran instead of fossil fuels sources. For implantation of this purpose: We have gathered the researchers and students (Bachelor, Master and PhD) in the field of renewable energy in an association with more than 300 members. Cooperation with other associations in holding seminars, conferences and workshops in the field of renewable energy. Correspondence with organizations to encourage them to use renewable energy. Plan a project for encourage the luxuriant apartments and skyscrapers to using renewable energy sources for daily consumption energy.

**Product performance**

Also we are marketing the solar and wind products like as solar panle, wind turbine, solar light and especially the advertising solar lights and windturbines.

**Mehr Sun Riders**

No.10, Aj Alley, Sharyati Ave., Tehran, Islamic Republic of Iran  
 Tel 098-21-22238999 Fax 098-21-22238998  
 E-mail info@msr-iran.com  
 URL http://www.msr-iran.com

Available in: Asia, Middle and Near East



Mehr Sun Riders

ES-5-010

Others

services

Wood Chip Biomass Power Plant Business

**Environmental performance**

ORIX Group Subsidiary Agatsuma Bio Power Co., Ltd. operates the Agatsuma Biomass Power Plant, a wood chip-fired thermal power station located in Gunma Prefecture. Wood chips are used as fuel to heat a boiler for steam that powers a turbine to generate electricity. Using biomass instead of fossil fuels reduces CO<sub>2</sub> emissions and enables more eco-friendly power generation through thermal recycling technology. The use of biomass also promotes the optimal use of waste wood materials. The generation facilities of this plant have been certified as a green power facility by the Green Energy Certification Center, Japan (GECCJ) of the Institute of Energy Economics, Japan. Electricity generated at the power plant will be certified as green power produced from renewable energy sources. Part of the environmental value added will be converted into certificates and sold as Tradable Green Certificates.

**Product performance**

The Agatsuma Biomass Power Plant has a power generation capacity of 13,600 kW, with annual power transmission of 85 million kWh. Converted to ordinary household electricity use, this equates to the annual power consumption of approximately 24,000 households.

**Agatsuma Biopower Co., Ltd.**

460-1 Okazaki, Higashiagatsuma-machi, Agatsuma-gun, Gunma, 377-0302, Japan  
 URL http://agatsuma.orix-eco.jp/  
 URL http://www.orix.co.jp/grp/en/env\_soc/environment/report.html

Available in: Japan



Agatsuma Biomass Power Plant

ES-5-011

Others

services

Car Sharing

Environmental performance

"Car Sharing" is a membership-based car rental system where many individuals share the use of several cars. Car Sharing is cost effective as users pay a fee based on time and distance driven. Car Sharing is expected to reduce the total number of vehicles on the road, leading to lower CO<sub>2</sub> emissions, less traffic and other benefits.

ORIX Car Sharing Benefits

●Linking Car Sharing With Trains

CO<sub>2</sub> emissions is reduced by using trains for long distance travel and using Car Sharing from the nearest station.

●Facilitating "Eco Drive" with onboard Car Sharing Device

Each Car Sharing vehicle has an in-vehicle device indicating "fuel consumption" and "CO<sub>2</sub> emission" on the car navigation system after a drive. This promotes drivers' awareness of "Eco Drive" and helps change driving behavior.

●Active Implementation of Electric and Hybrid Vehicles

Japan's largest EV Car Sharing fleet with 25 EVs.

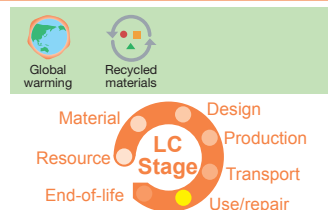
ORIX Auto Corporation

3-22-8 Shiba, Minato-ku, Tokyo, 105-8589, Japan

Tel +81-3-6436-6000 Fax +81-3-6436-6901

URL <http://www.orix.co.jp/grp/en/index.html>

URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)



Available in: Japan

An electric vehicle for Car Sharing

ES-5-012

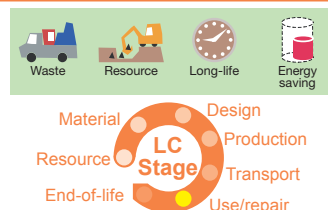
Others

services

Rentals of Environment-related Analytical Equipment

Environmental performance

ORIX Rentec has enhanced its product lineup and offers rental and used equipment sales of environment-related analytical equipment to be compatible with chemical safety related RoHS and REACH, calls for food safety including pesticide residue, airborne particulates (PM2.5), asbestos, dioxins and PCBs. ORIX Rentec is also aiming to expand equipment for the new energy market such as solar power generators and rechargeable batteries for electric automobiles to reduce the burden on the environment.



ORIX Rentec Corporation

2-28-8 Shiba Minato-ku, Tokyo, 105-0014, Japan

Tel +81-3-3473-7561 Fax +81-3-3473-7549

URL <http://www.orixrentec.jp/cgi/en/>

URL [http://www.orix.co.jp/grp/en/env\\_soc/environment/report.html](http://www.orix.co.jp/grp/en/env_soc/environment/report.html)

Available in: Japan, Singapore, Republic of Korea, China

Gas chromatograph mass spectrometer compatible with chemical safety regulation REACH



# **Classified index of goods and services**





# Classified index of goods and services

## ■ Eco-materials

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White Horse Ceramic Co., Ltd. ....	EP-7-039, EP-7-040, EP-7-041, EP-7-042, EP-7-043
Winpos System Co., Ltd. ....	EP-3-047
WINPRO CO.,LTD. ....	EP-8-075
WINRIGO (S) PTE LTD ....	EM-2-008, EM-7-005, EP-7-017
Worldwide Support Trading Pte Ltd.....	EP-7-045, EP-7-046, EP-7-077

## Y

YAMABUN ELECTRONICS CO., LTD.....	EP-8-040, EP-8-041, EP-8-042
Yon Chun Ho International Co., Ltd. ....	EC-1-015, EC-1-016, EC-1-017, EC-1-018
You Bo Environmental Protection Industry Co., Ltd. ....	EP-7-037
YOULIGHT TECHNOLOGY INC.....	EP-1-050
YUANGEE INDUSTRIAL CO , Ltd.....	EP-7-003
YUEN FOONG YU PAPER MFG. CO., LTD.....	EP-6-145, EP-6-146, EP-6-147, EP-6-148, EP-6-149, EP-6-150, EP-6-151, EP-6-152



# Members list





# APO Green Productivity Advisory Committee

(as of February 2012)

## ■ Chairperson

Mr. Teisuke Kitayama  
Chairman of the Board  
Sumitomo Mitsui Banking Corporation

## ■ Vice-Chairpersons

Mr. Yukio Yanase  
Senior Advisor  
ORIX Corporation

Mr. Hajime Bada  
President and CEO  
JFE Holdings, Inc.

Mr. Takashi Yamagishi  
Senior Executive Advisor  
Teijin Limited

Prof. Ryoichi Yamamoto  
Emeritus Professor  
University of Tokyo

Mr. Tsuneaki Taniguchi  
Special Adviser  
Japan Productivity Center

## ■ Advisers

Mr. Yoichi Morishita  
Corporate Counsellor  
Panasonic Corporation

Mr. Masatoshi Yoda  
Former President of Ebara Corporation

Mr. Etsuhiko Shoyama  
Chairman Emeritus  
Hitachi, Ltd.

Mr. Kazuyoshi Terashima  
Former Vice President of Ebara Corporation

## ■ Members

Mr. Takeshi Kurashige  
Manager  
Corporate Social Responsibility Section, Head Office  
Asahi Group Holdings, Ltd.

Ms. Chieko Ishijima  
General Manager  
Environment & Safety Department  
Ajinomoto Co., Inc.

Mr. Toshiroh Ikegami  
Director  
Urban Gauss Inc.

Mr. Katsuhiko Sugie  
General Manager  
East Japan Sales Division  
Sales Department  
Resource Management Department  
Amita Corporation

Mr. Seiichi Ueyama  
Managing Director  
Aeon Retail Co., Ltd.

Mr. Shinichi Iwai  
General Manager  
Administrative Division, Environmental Management Office  
Itoki Corporation

Mr. Ryoji Suzuki	Corporate Environmental Management Department Ebara Corporation
Mr. Yoshimasa Tanaka	General Manager, Sustainable Management Office, Global Warming Affairs Office Environmental Management Division, Environmental Management Department Oji Paper Co., Ltd.
Dr. Yuichiro Yamaguchi	Manager CSR & Environment Department Osaka Gas Co., Ltd.
Ms. Miki Mitsuoka	Environmental Planner as Earth Republic General Manager Energy and Eco Services Business Headquarters Administration Management Department ORIX Corporation
Mr. Koichi Yanagita	Vice President Environment and Safety Kao Corporation
Mr. Kazuo Ochiai	General Manager Responsible Care Department, Production Technology Division Kaneka Corporation
Mr. Yasuhiko Imai	General Manager Environment Department Kikkoman Corporation
Mr. Kazuki Miyajima	Manager Environment Communications Department, Environment Planning Center, Environment Headquarters Canon Inc.
Mr. Keiji Matsuura	General Manager CSR Promotion Division, Corporate CSR Promotion Division Kyocera Mita Corporation
Ms. Mizue Tsukushi	Founder and CEO The Good Bankers Co., Ltd.
Mr. Takashi Hongo	Special Advisor Head, Environment Finance Engineering Department Japan Bank for International Cooperation
Mr. Shinichi Saitou	Section Chief Corporate Management Division Kokuyo Co., Ltd.
Mr. Yusuke Saraya	President Saraya Co., Ltd.
Mr. Ryo Sasaki	President Sun Ace Corporation
Dr. Masamitsu Takaya	Executive General Manager Environmental Sustainability Strategy Division Suntory Holdings Limited

Mr. Shingo Sumi	General Manager, Environment Management Department Corporate Environment Center, Environmental Management H.Q., Innovation Group Sanyo Electric Co., Ltd.
Mr. Futoshi Abe	Staff Deputy General Manager Corporate Planning Department JFE Holdings, Inc.
Mr. Kiyoshi Osaki	General Manager Environmental Sustainability Office JVC KENWOOD Corporation
Mr. Takeshi Nishibori	CSR Manager General Planning Department The Shiga Bank, Ltd.
Dr. Tatsumi Sato	General Manager Global Environmental Management Department Shimadzu Corporation
Mr. Tetsuroh Muramatsu	Executive Officer, Group General Manager Environmental Protection Group Sharp Corporation
Mr. Teruo Furuyama	Senior Manager Technical Group, Environmental Affairs Division Nippon Steel Corporation
Mr. Yasuhito Hirashima	Manager Global Environmental Policy Department Seiko Epson Corporation
Mr. Teruyuki Hayashi	President Seibu Landscape Co., Ltd.
Mr. Masayasu Taniguchi	General Manager Environmental Management Group, CSR Department Sekisui Chemical Co., Ltd.
Mr. Masaaki Sasaki	Senior Manager Environment Improving Department Sekisui House Ltd.
Mr. Masaru Ihara	Senior Manager Environment Center Sony Corporation
Mr. Satoru Fujimoto	Manager Global Environment Department Daikin Industries, Ltd.
Mr. Shou Kurasaki	Executive Officer Green-Innovation Business Promotion Department Taiheiyo Cement Corporation
Mr. Souichi Miyadou	General Manager, Corporate Strategic Marketing Office Corporate Strategy Division Teijin Limited

Mr. Kyoji Tomita	Manager Environment Department Tokyo Gas Co., Ltd.
Mr. Yoshihiro Kageyama	General Manager Environment Department Tokyo Electric Power Company
Mr. Kiyoshi Sanehira	General Manager Corporate Environment Management Division Toshiba Corporation
Mr. Motoshi Yasuda	Marketing Planning Division, Product Planning Promotion Department Toto Ltd.
Mr. Tetsuo Miyazawa	General Manager Environment Department Toyo Seikan Kaisha, Ltd.
Mr. Kazuaki Takabayashi	General Manager Corporate Marketing Planning Department Toray Industries, Inc.
Mr. Hiroshi Inanaga	President Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.
Mr. Takamori Kawaguchi	Project General Manager, Consolidated Environmental Management Group Environmental Affairs Department, Environmental Affairs Division Toyota Motor Corporation
Mr. Hideki Yuzawa	Executive General Manager Principal Consultant Nikken Sekkei Research Institute
Mr. Masahiko Iwasaki	Manager Environment Management Group, Global Government Affairs Department-Environmental and Safety Technologies, Planning and Advanced Engineering Development Division Nissan Motor Co., Ltd.
Ms. Megumi Tsukamoto	Governmental Programs Executive Manager of Governmental Programs IBM Japan, Ltd.
Mr. Ryuji Takagi	Vice President CSR Division Japan Tobacco Inc.
Mr. Masayuki Saita	General Manager, Environmental Management Division NEC Corporation
Dr. Narito Shibaiki	Senior Strategy Director Deputy Head of Environmental Strategy Development Office Corporate Environmental Affairs Division Panasonic Corporation
Mr. Yoshinobu Shizukuishi	Biznet Corporation
Mr. Yoichi Takahashi	Deputy General Manager Environmental Strategy Office Hitachi, Ltd.

Mr. Shuji Kato	Adviser Bic Camera, Inc.
Mr. Hiroshi Takano	Group Manager Environment Management & Corporate Citizenship Group, Corporate Social Responsibility Department Fuji Xerox Co., Ltd.
Mr. Mitsugu Sato	General Manager LCM Service Group Fujitsu FIP Corporation
Mr. Masahiro Fukuoka	General Manager Ecology and Quality Management Division CSR Division FUJIFILM Corporation
Mr. Choiku Yoshikawa	Assistant General Manager Mayekawa Research Institute Mayekawa Mfg. Co., Ltd
Mr. Seiichi Jo	General Manager CSR Department Sumitomo Mitsui Banking Corporation
Mr. Koji Yamashita	General Manager Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Yukio Yamamoto	General Manager Environment & Resources Division Mitsubishi Materials Corporation
Mr. Takashi Akita	Director Corporate Planning Division Mitsubishi Rayon Co., Ltd.
Mr. Yoshitaka Moriide	Manager Marketing Department Ministop Co., Ltd.
Mr. Shinji Hirano	General Manager for Special Task Corporate Environmental Policy Planning Office Meidensha Corporation
Mr. Takashi Masuda	Vice Department Manager, Corporate Social Responsibility Department, Department Manager Environment Promotion Office, CSR Planning Office/Corporate Ethics Office Unicharm Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation



# **APO Green Productivity Advisory Committee for the Establishment of the Eco-products Database**

(as of February 2012)

## ■ **Chairperson**

Prof. Ryoichi Yamamoto      Emeritus Professor  
University of Tokyo

## ■ **Members**

Mr. Takeshi Kurashige      Manager  
Corporate Social Responsibility Section, Head Office  
Asahi Group Holdings, Ltd.

Mr. Yoshimasa Tanaka      General Manager  
Sustainable Management Office, Global Warming Affairs Office,  
Environmental Management Division,  
Environmental Management Department  
Oji Paper Co., Ltd.

Ms. Miki Mitsuoka      Environmental Planner as Earth Republic  
General Manager  
Energy and Eco Services Business Headquarters  
Administration Management Department  
ORIX Corporation

Mr. Koichi Yanagita      Vice President  
Environment and Safety  
Kao Corporation

Mr. Kazuki Miyajima      Manager  
Environment Communication Department, Environment Planning Center,  
Environment Headquarters  
CANON INC.

Mr. Shinichi Saitou      Section Chief  
Corporate Management Division  
Kokuyo Co., Ltd

Mr. Tetsuroh Muramatsu      Executive Officer, Group General Manager  
Environmental Protection Group  
Sharp Corporation

Mr. Teruo Furuyama      Senior Manager Technical Group,  
Environmental Affairs Division  
Nippon Steel Corporation

Mr. Yoshitane Hirata	Chief Specialist Global Environment Management Group, Corporate Environment Management Division Toshiba Corporation
Mr. Hiroshi Inanaga	President Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd
Mr. Masahiko Iwasaki	Manager Environment Management Group, Global Government Affairs Department-Environmental and Safety Technologies, Planning and Advanced Engineering Development Division Nissan Motor Co., Ltd.
Mr. Ryuji Shimono	Councilor Corporate Environmental Affairs Division, Environmental Planning Group Panasonic Corporation
Mr. Shuji Kato	Adviser Bic Camera, Inc.
Mr. Seiichi Jo	General Manager CSR Department Sumitomo Mitsui Banking Corporation
Mr. Koji Yamashita	General Manager Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation

# Eco-products Directory 2012 Working Group

(as of March 2012)

## ■ Chairperson

Dr. Norihiro Itsubo  
Associate Professor  
Faculty of Environmental and Information Studies,  
Tokyo City University

## ■ Members

Ms. Emiko Aoyanagi  
Advisory Specialist for Consumer's Affairs  
Environment Committee,  
Nippon Association of Consumer Specialists (NACS)

Mr. Gakuji Fukatsu  
Vice-Director at secretariat  
Secretariat  
Green Purchasing Network (GPN)

Dr. Keijiro Masui  
Senior Research Scientist,  
System Functional Design Research Group  
Advanced Manufacturing Research Institute  
National Institute of Advanced Industrial Science and Technology(AIST)

Dr. Tateki Mizuno  
Special Researcher  
Society of Non-Traditional Technology (SNTT)

Mr. Katsuyuki Nakano  
Project Leader  
LCA Development Office  
Japan Environmental Management Association for Industry (JEMAI)

Ms.Hanako Negishi  
EcoLeaf type III environmental labeling program Office  
Japan Environmental Management Association for Industry(JEMAI)

Ms. Takako Tsuzaki  
Eco Mark Office,  
Japan Environment Association (JEA)

Ms. Yumiko Yamashita  
Program Officer  
Industry Department  
Asian Productivity Organization (APO)

# Environmental Label Management Organizations

(as of March 2012)

## ■ OK compost : vincotte



<http://www.vincotte.com/en/home/>

## ■ Energy Label : Bureau of Energy, Ministry of Economic Affairs



[http://www.energylabel.org.tw/index\\_en.asp](http://www.energylabel.org.tw/index_en.asp)

## ■ China Environmental Labeling : China Environmental United Certification Center Co., Ltd.



<http://www.sepacec.com/cecen/>

## ■ water conservation certification : China Standard Certification Center (CSC)



<http://www.cecp.org.cn/english/domestic.html>

## ■ Green Mark / Taiwan Carbon Label / Water Conservation Label : Environmental Protection Administration, R.O.C.(Taiwan)



83, Zhonghua Rd. Sec. 1, Zhongzheng District, Taipei City 10042, Taiwan (R.O.C.)

Tel: +886-2-23117722

<http://greenliving.epa.gov.tw/GreenLife/eng/english.aspx>



## ■ Green Building Material : The green building material



<http://www.cabc.org.tw/gbm/en/HTML/website/index.asp>

## ■ The Blauer Engel : RAL-German Institute for Quality Assurance and Certification



<http://www.blauer-engel.de/>

## ■ Eco Mark (Japan) : Eco Mark Office, Japan Environment Association (JEA)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN

Tel: +81-3-5643-6255 Fax: +81-3-5643-6257

E-mail: [ecomark@japan.email.ne.jp](mailto:ecomark@japan.email.ne.jp)

<http://www.ecomark.jp/english/>

## ■ Registered in the GPN Database : Green Purchasing Network (GPN)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN  
Tel: +81-3-5642-2030 Fax: +81-3-5642-2077  
E-mail: gpn@net.email.ne.jp

## ■ BiomassPla / GreenPla : Japan BioPlastics Association (JBPA)



6F Universal Bldg, 5-11Nihonbashi, Hakozaicho, Chuo-ku, 103-0015 Tokyo  
Tel: +81-3-5651-8151 Fax: +81-3-5651-8152  
E-mail: nfojbpa41@jbpaweb.net  
<http://www.jbpaweb.net/english/english.htm>



## ■ J-Moss green marks : Japan Electronics and Information Technology Industries Association (JEITA)



Chiyoda First Bldg. South Wing, 3-2-1, Nishi-Kanda, Chiyoda-ku, Tokyo, 101-0065 JAPAN  
<http://www.jeita.or.jp/english/>

## ■ Eco Leaf (Japan) / Carbon Footprint :

### Japan Environmental Management Association for Industry (JEMAI)



Mitsui-sumitomo Building 6F/7F, 2-1, Kaji-cho 2 chome, Chiyoda-ku, Tokyo, 101-0044 JAPAN  
E-mail: webmaster@jemai.or.jp E-mail: cfp-team@jemai.or.jp  
<http://www.jemai.or.jp/english/> <http://www.cfp-japan.jp/english/>



## ■ Thinned Wood Mark : J Forest



Corp Bldg.4F, 1-1-12, Uchikanda, Chiyoda-ku, Tokyo, 101-0047, JAPAN

## ■ Butterfly Mark : Japan Waterless Printing Association (WPA)



2-31-14 Kohinata, Bunkyo-ku, Tokyo, 112-0006 JAPAN

## ■ Fuel economy sticker / Low emitter vehicle sticker :

### Ministry of Land, Infrastructure, Transport and Tourism (MLIT)



2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8918 JAPAN



## ■ Environmental Technology Verification : Ministry of the Environment of Japan



<http://www.env.go.jp/policy/etv/>

## ■ PEFC Forest Certification : PEFC Asia Promotions



20 Sankyo Bldg 904 3-11-5 Iidabashi, Chiyoda-ku, Tokyo, 102-0072 JAPAN

E-mail: [info@pefcasia.org](mailto:info@pefcasia.org)

<http://www.pefcasia.org/>

## ■ PET bottle reclaimed product : The Council for PET Bottle Recycling



<http://www.petbottle-rec.gr.jp/english/>

## ■ Energy-Saving Label / Energy star labels / Uniform Energy-Saving Label : The Energy Conservation Center, Japan



GEO Hatchobori Bldg. 5F, 3-19-9, Hatchobori, Chuo-ku, Tokyo, 104-0032 JAPAN

<http://www.asiaeec-col.eccj.or.jp/>



## ■ Green Energy Mark : The Institute of Energy Economics, Japan (IEE JAPAN)



Sumitomohudusan Higashiikebukuro Bldg 2F, 3-13-2, Higashiikebukuro, Toshima-ku, Tokyo, 170-0013 JAPAN

## ■ Fuel-efficient tires : The Japan Automobile Tyre Manufacturers Association, Inc. JATMA



<http://www.jatma.or.jp/english/about/>

## ■ Korea Eco-Label: Korea Environmental Industry & Technology Institute (KEITI)



Korea National Environmental Information Center, 215 Junheung-ro, Bulgwang-dong, Eunpyeong-gu, Seoul, 122-040 Republic of Korea

## ■ MALAYSIA ECO-Label : SIRIM QAS International Sdn. Bhd.



Mohd Hamim bin Imam Mustain Block 25, SIRIM Complex No.1, Persiaran Dato' Menteri, Section 2, P.O. Box 7035 40700 Shah Alam, Selangor Darul Ehsan, Malaysia

Tel: +6-03-55446409 Fax: +6-3-55446466

E-mail: [hamim@sirim.my](mailto:hamim@sirim.my)

<http://www.sirim-qas.com.my/>

## ■ Global Recycle Standard : Textile Exchange.



<http://textileexchange.org/>

## ■ Green Choice Philippines: The Philippine Center for Environmental Protection and Sustainable Development, Inc. (PCEPSDI)



Development Academy of the Philippines Building, San Miguel Avenue, Pasig City, 1600 Philippines

<http://www.pcepsdi.org.ph/>



■ **The Singapore Green Building Council : Singapore Green Building Council (SGBC)**



<http://www.sgbc.sg/index.php/green/>

■ **Oeko-Tex® Label : Secretariat of the Oeko-Tex® Association**



Internet: [www.oeko-tex.com](http://www.oeko-tex.com)

■ **Thai Green Label : Thailand Environment Institute**



16/151-154, Muang Thong Thani, Bond Street, Pakkred District, Nonthaburi 11120

E-mail: [pathom@tei.or.th](mailto:pathom@tei.or.th) (Mr. Pathom Chaiyapruksaton)

<http://www.tei.or.th/>

■ **ARCAT green : ARCAT, Inc.**



<http://www.arcat.com/>

■ **The Compostable Label : Biodegradable Products Institute, Inc.**



<http://www.bpiworld.org/>

■ **CRRC : COOL ROOF RATING COUNCIL**



<http://www.coolroofs.org/index.html>

■ **Greenguard : GREENGUARD Environmental Institute (GEI)**



<http://www.greenguard.org/en/index.aspx>

■ **rainforest-alliance : Rainforest Alliance**



<http://www.rainforest-alliance.org/>

## Related Organizations

(as of March 2012)

### ■ National Productivity Council

5-6, Institutional Area, Lodi Road New Delhi, 110003, India  
<http://www.npcindia.org/>

### ■ International Green Purchasing Network

Cosmos Aoyama, 5-53-67, Jingumae Shibuya-ku, Tokyo 150-0001, Japan  
<http://www.igpn.org>

### ■ Federation of Malaysian Manufacturers

Wisma FMM, No.3 Persiaran Dagang, PJU 9, Bandar Sri Damansara, Kuala Lumpur, 52200 Malaysia  
<http://www.fmm.org.my/>

### ■ Green Purchasing Network Malaysia

23-1, Jalan PJU 1/3B, Sunway Mas Commercial Centre, 47301 Petaling Jaya  
Selangor Darul Ehsan, Malaysia  
<http://www.gpnm.org/e/>

### ■ Enterprise Promotion Centres Pte Ltd

1003 Bukit Merah Central #02-10 Inno. Centre Singapore 159836  
<http://www.epc.com.sg/>

### ■ Central Environmental Authority

104, Denzil Kobbekaduwa Mawatha, Battaramulla, Sri Lanka  
<http://www.cea.lk/index1.php>

### ■ National Metal and Materials Technology Center

114 Thailand Science Park, Paholyothin Road, Klong 1, Klong Luang Pathumthani 12120, Thailand  
<http://www.mtec.or.th/en/index.php>

### ■ The Industrial Environment Institute

#### The Federation of Thai Industries

60 New Rachadapisek Road, Klongtoey Bangkok 10110, Thailand  
<http://www.fti.or.th/2011/thai/index.aspx>

