# Environmental 2013 Report 2013



### Message from the Management

# Working with zeal to create a brighter future for SMK

**Ecology and Economy** 

I do not recognize these two words as conflicting concepts. In addition, both the word "economy" and the word "ecology" come from "oikos", the ancient Greek word for "house." Eliminating MUDA (waste), MURA (inconsistency) and MURI (overburden) from our daily corporate activities, or in other words, pursuing the ultimate economic efficiency will lead us to become a company with the best environmental sustainability.

I hope our company, SMK, will be a company like that.

It goes without saying that our mission is to serve the advancement of mankind through our cutting-edge technology. For that very reason, we are investing our economic resources in, for example, the natural, renewable energy market to replace atomic power, the home energy management systems (HEMS) market and other energy-saving fields, as well as the low-carbon field, symbolized by electric cars. We're doing everything we can to produce products that ease the way into decreasing or controlling the environmental burden and recycling.

Every year, these kinds of activities earn SMK high marks from the Environmental Management Rankings of the Nikkei Inc., which provide comprehensive rankings of corporate environmental programs. We are aware that this ranking is nothing more than the cumulative result of low-key programs and changes in awareness. Even so, we need to have the humility to accept the facts about our areas of weakness and strive to turn them into areas of strength.

In May of 2013, the United Nations announced that levels of CO2 in the atmosphere had reached the critical level of 400 President and Chief Operating Officer

### Yasumitsu lkeda



ppm. This means that global warming now affects more than just the interests of nations and corporations but has become a concern that humanity as a whole must deal with. SMK is no exception in this crisis. There are immense numbers of issues involved, including introduction of Scope 3, the new criteria for calculating greenhouse gas emissions; creation of schemes to maintain biological diversity; and efforts to achieve zero emissions. However, it is also true that our businesses themselves cannot survive without global environmental sustainability. For that reason, what is required of us is to keep facing up to those issues, taking small but steady steps. I want employees to increase their enthusiasm further. I hope that all our stakeholders will help us out. Then you'll see great things coming from SMK in the future.

July 2013

### Contents

Message from the Management	1
Message from Vice President of Environment Div.	2
Environmental Management	3
Environmental Preservation Activities	4
Material Balance	4
Energy and Resource Saving Results	5
Environmental Accounting	7
Contribution: The anniversary marked a decade for the SMK Environmental Report	7
Energy and Resource Saving Activities	8
Creation of Environmentally Friendly Products	9

### **About This Report**

Reporting period

FY2012 (April 1, 2012 - March 31, 2013)

Scope of calculations -

### Sites in Japan

- · Head Office (Togoshi) Gate City Office (Osaki)
- · Osaka Branch
- · Nagoya Branch
- · Ibaraki Sales Office
- · Hokuriku Sales Office
- · Fukuoka Sales Office
- · Toyama Works and Toyama Technology Center
- · Hitachi Works
- · Ibaraki Works

### Subsidiaries in Japan

- · Toyama Showa Co., Ltd.
- · Showa Denshi Co., Ltd.

### Overseas Sites

### ASIA

- · SMK High-Tech Taiwan Trading Co., Ltd.
- · SMK Electronics (H.K.) Ltd.
- · SMK Trading (H.K.) Ltd.
- · SMK Electronics (Dongguan) Co., Ltd.
- · SMK Electronics (Shenzhen) Co., Ltd.
- · SMK Electronics Trading (Shanghai) Co., Ltd. · SMK Electronics Singapore Pte. Ltd.
- · SMK Electronics (Malaysia) Sdn. Bhd.
- · SMK Electronics (Phils.) Corporation
- **EUROPE**
- · SMK Europe N.V.
- · SMK (U.K.) Ltd.
- · SMK Hungary Kft.
- **NORTH AMERICA**
- · SMK Electronics Corporation U.S.A
- · SMK Manufacturing, Inc.
- SMK Electronica S.A. de C.V.

### CO<sub>2</sub> emissions

Conversion coefficients are subject to the standards of the Federation of Electric Power Companies of Japan for domestic sites, and the GHG Protocol for overseas sites

### Access to corporate information

Our website discloses data profiling our company, IR information, product descriptions, and past environmental reports

http://www.smk.co.jp/

Contact: Environmental Protection Department, SMK Corporation TEL: +81-3-3785-5058 FAX: +81-3-3785-0517

# Reconfirm our own strengths and brush up our Core Competence

What is the source of strength?

In order to make SMK more competitive, it will be essential to understand ourselves thoroughly; that is, to figure out our strengths.

We aim to contribute to the environment even when designing products. We offer products that save energy, create energy, and store energy. We believe that meeting the world's needs is one of the tasks required of SMK as a manufacturing industry. Furthermore, the products themselves must save energy, serve as energy sources, and feature high efficiency. SMK has introduced these criteria for its "eco products." It is also constructing systems to highlight the contributions of its programs to the environment. These programs are evaluated objectively by quantitative methods, and the evaluations serve as indices to help SMK improve its products.

Now, the fields that we need to pay attention to are not limited to manufacturing processes.

We look at the total volume of greenhouse gas emissions across the entire supply chain, working to save energy in our offices, in the transport and storage of raw materials and products, and in the work delegated to outside suppliers. The GHG protocol Scope 3, the enforcement of new international standards, has been issued to deal with these matters. We will introduce these standards to our company in sequence.

Ever since the Great East Japan Earthquake of 2011, we have felt a stronger sense of social and moral responsibility than ever before. The Doha Conference of Parties to the UN Climate Change Treaty (COP18), held in 2012, was the beginning of substantive negotiations about plans for the post-2020 frame-

Vice President of Environment Div.

Yoshiyuki Kaku



work. For SMK, which has manufacturing sites in the Americas, EU, Asia, and other countries around the world, the key words "environment" and "sustainable development" will take on greater significance.

We will set higher goals for ourselves without fear of failure and manage the company in harmony with the global environment.

The report that you have in your hand may be called a touchstone for mutual confirmation of goals. We hope that you will read it and will not hesitate to contact us with your opinions. Thank you.

July 2013

## Corporate Profile (as of March 31, 2013)

Name SMK Corporation
Established April 1925
Registered January 15, 1929

Primary

Manufacturing and sales of electronic components for use in electrical equipment, communications equipment, electronic equipment, industrial machinery, IT equipment and other

applications.

Capital 7,996 million yen Number of 9,850 (in the Group)

Employees

Head office 5-5, Togoshi 6-chome, Shinagawa-ku, Tokyo 142-8511, Japan

TEL: +81-3-3785-1111 FAX: +81-3-3785-1878

URL: http://www.smk.co.jp/

Major Switches / Remote control units / Keyboards /

Products Control panel units / Electret condenser microphones / Earphone-microphone assemblies / Camera modules / AC adaptors / Antennas / Crimp connectors /

FPC and FFC connectors / Board-to-board connectors /

RF coaxial connectors / Interface connectors / Card connectors / Power connectors /

Jacks and pin jacks /

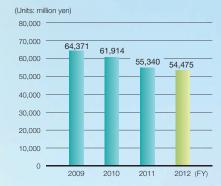
DC power supply plugs and jacks / Fuse holders / Connectors for photovoltaic modules / LED connectors

Resistance sensitive touch panels /

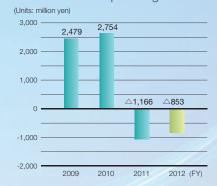
Optical touch panels / Capacitive touch panels /

Bluetooth modules

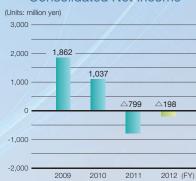
### Consolidated Net Sales



### Consolidated Operating Income



### Consolidated Net Income



# **Environmental Management**

# SMK Environmental Charter

# 1. Basic Philosophy

The SMK Group pursues environmental preservation as well as economic development, by integrating its current technological strengths and creating advanced technology. As a good corporate citizen, every one of us will contribute to the promotion of sustainable global development.

### 2. Action Guidelines

- (1) Develop environmentally friendly products
- (2) Reduce waste by using everything to its fullest extent
- (3) Preserve natural resources and saving of energy
- (4) Encourage 3R (reduce, reuse and recycle)
- (5) Realize waste-free procurement and manufacturing

### Organization to Promote Environmental Preservation

In SMK, the Group policies, targets, and initiatives related to environmental preservation are deliberated upon and determined by the Corporate Environmental Preservation Committee, which is chaired by the Vice President of the Environment Division. Major items are subject to deliberation and determination at the Executive Officer's Meeting. Upon determination, they are deployed at all Japan and overseas works. At each business site, the local Environmental Preservation Committee decides local policies, targets, and initiatives in accordance with the Group policies, targets, and initiatives taking locally specific issues into consideration and puts them into practice.

### **Environmental Management Systems**

SMK's environmental management systems are in accordance with ISO 14001, the international standard for FMS.

We have obtained ISO 14001 certification for all of our Japan sites and overseas works. Since fiscal 2007, in addition to individual activities at each site, we have been setting targets and themes to be shared by all members of the SMK Group, reinforcing linkage among our sites, and working to strengthen group-wide systemic arrangements.

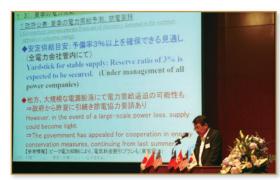
SMK's environmental preservation activities are not limited to our Group. The Green Procurement Guidelines that we published in 2004 also make demands on our suppliers. Specifically, we request our suppliers to pledge not to use any environmentally hazardous substances prohibited by SMK, and to put in place ISO 14001-based systems. We visit suppliers who have not obtained ISO 14001 certification to check on the status of their environmental preservation activities, and to suggest any necessary improvements.

### **Environmental Education**

SMK implements environmental education by levels of employees throughout the Group, and as a part of the professional education curriculums. In addition, each business site makes its own annual education plans. We also encourage our employees to take the Certification Test for Environmental Specialists (Eco Test) administered by the Tokyo Chamber of Commerce and Industry. We have set a goal of having 5% of the employees in each division obtain certification, and every year since the first test in 2006, we have recruited candidates, purchased textbooks, and provided assistance with the burden of exam fees.

### Organizational Structure for Environmental Preservation





A speech by the Vice President of the Environment Div. SMK Business Partner Conference



Training of internal auditors (Head Office)

# **Environmental Preservation Activities**

All of SMK's Japan and overseas works have formulated targets for environmental preservation activities, and are pushing ahead with realization of improvements. The table below presents the actual results of SMK's major activities in fiscal 2012, as well as targets for this fiscal year.

### Preventing Global Warming

To reduce CO<sub>2</sub> emissions, SMK has installed energy-saving air-conditioning systems for clean-rooms and tried to achieve maximum efficiency through elimination and consolidation of our domestic production works. On the other hand, our overseas works have seen an increase in the production of touch panels requiring clean room manufacturing and an increase in the operating ratio for molding process, leading to an increase in our CO<sub>2</sub> emissions per unit of production, and our total CO<sub>2</sub> emissions are about the same as during the previous fiscal year. In addition to introducing energy-efficient equipment, we will promote ways to make visual control of the current status of energy usage as part of our energy management system.

### Preserving Biodiversity

SMK looked at possibilities for cooperation on biological diversity programs with members of the electronic parts industry supply chain, including our suppliers, but no measures were implemented. We plan to determine the future direction of its programs and formulate Green Procurement Guidelines in fiscal 2013.

### Effective Use of Resources

Programs aimed at eliminating MUDA in manufacturing

processes led to a slight reduction in our total amount of industrial waste discharge, but the effects of the previously mentioned elimination and consolidation of the domestic production facilities generated the disposal of worn-out equipment and excess materials. This brought about a slight increase in figures for industrial waste discharge per unit of production. The amount of landfill waste led to an increase in the operating ratio of wastewater process, bringing about a significant increase.

# Effective Responses for the Management of Environment-related Substances

Since SMK is enhancing its ability to comply with the EU-REACH regulations for more efficient management, it aims to manage information on product components with a more effective system and is continually considering the introduction of new software.

### Promote More Eco-Friendly Design Approach

During the current fiscal year, SMK has started to operate a system that will manage items to be considered in environmentally friendly design by all parameters.

Nature of initiative	FY2012		Self-
Nature of Illitiative	Target	Achievement	assessment
	$CO_2 \ emissions \ per \ unit \ of \ production \ value^{\star_1}: 11\% \ reduction \ relative \ to \ FY2011 \ Target: \ 0.52 \ t-CO_2/million \ yen$	7% increase 0.62 t-CO <sub>2</sub> /million yen	С
Preventing global	Total CO <sub>2</sub> emissions: 5% reduction relative to FY2011 Target: 30,249 t-CO <sub>2</sub>	±0% no change 31,931 t	С
warming	Review and introduction of energy management systems	Try to introduce the Energy Monitoring System	А
	Review of SMK standards for LCA (including carbon footprint)	Obtaining and analyzing information on trends in the industry (including Scope 3).	С
Preserving biodiversity	Review of activities related to purchasing with preservation of biological diversity in mind	Looking at programs to maintain biological diversity within the electronic parts industry	В
	Industrial waste discharge per unit of production value*2: 1% reduction relative to FY2011 Target: 0.029 t/million yen	3% increase 0.031 t-CO <sub>2</sub> /million yen	С
Effective use of resources	Total industrial waste discharge amount: 6% increase relative to FY2011 Target: 1,762 t	2% decrease 1,603 t	А
	Landfill waste amount: ±0% no change relative to FY2011 Target: 92 t	23% decrease 113 t	С
Effective responses for the management of environment-related substances	Register parts composition information, launch a system to deal with the EU-REACH regulations	Review and introduction of software towards the realization of a more sophisticated management system	
Promote more Eco-friendly design approach	Enhancement of product assessments	Develp and start (Building and starting up a) the management system for eco-products through Eco-friendly design	А

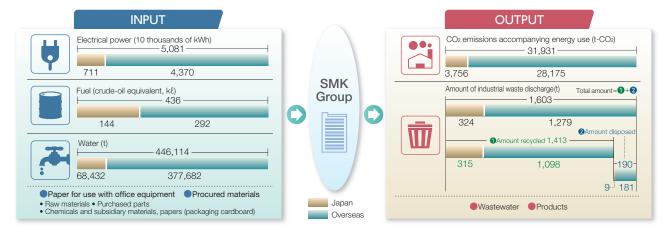
 $<sup>^{\</sup>star}1$ : CO<sub>2</sub> emissions per unit of production value = CO<sub>2</sub> emissions divided by production value

Self-assessment

A: attained B: insufficiently-attained C: not attained

# Material Balance

At SMK, we are attempting to analyze and understand the material balance (environmental footprint) for each of our processes, from product design and development to manufacture and sales, and to realize highly efficient business activities.



<sup>\*2:</sup> Industrial waste discharge per unit of production value = industrial waste discharge divided by production value

# Energy and Resource Saving Results

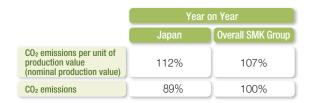
SMK positions responses to global warming as an important management agenda, and is implementing and constantly enhancing initiatives to conserve energy.

We are also working to reduce industrial waste discharge amount and to realize zero emissions (zero landfill waste), in an attempt to use our resources more efficiently.

### **Energy-Saving Results**

- SMK recorded an increase in CO<sub>2</sub> emissions per production when viewed in terms of unit of nominal production value (112% against the previous fiscal year), while the amount of CO<sub>2</sub> emissions recorded a slight decrease (96% against the previous fiscal year) for fiscal 2011, as indicated under the heading Environmental Preservation Activities. (See page 4)
- We have been working to progressively increase our level of in-house processing of parts (molding, stamping, etc.) rather than outsourcing since our base year (FY2005) towards the achievement of greater efficiency through integrated manufacturing. If we analyze trends in our total CO<sub>2</sub> emissions (trends in substantive CO<sub>2</sub> emissions) except the amount of increase due to this in-house processing by unit of actual production value (calculated with the effect of commodity prices and exchange

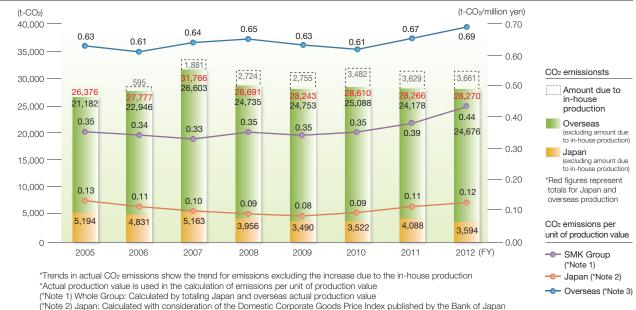
rate change minimized), levels are almost equivalent to those for our base year. When we take into consideration the fact that we have expanded our production of touch panels, which requires the use of energy-intensive clean rooms, we can actually point to an improvement in our emissions trends. (See graphs below)



### Trends in CO<sub>2</sub> emissions and CO<sub>2</sub> emissions per unit of nominal production value



# Trends in CO<sub>2</sub> emissions and CO<sub>2</sub> emissions per unit of actual production value



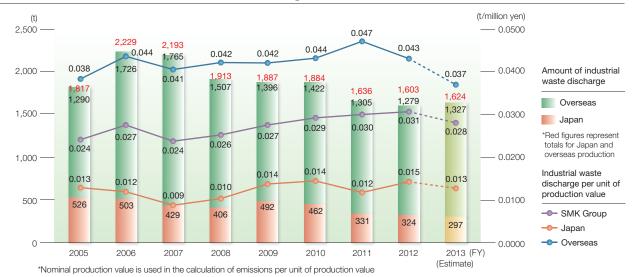
(\*Note 3) Overseas: Calculated by conversion into yen amounts using 2005 (base year) exchange rates

### **Resource-saving Results**

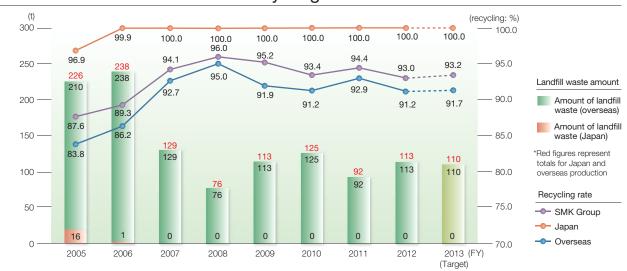
- Industrial waste per unit of production value increased slightly (105% of the previous year), while the amount of industrial waste discharge decreased slightly (98% of the previous year). The results of a comprehensive analysis are as discussed in "Environmental Preservation Activities" on page 4.
- © For the reasons explained above, volume of landfill waste increased markedly (123% of the previous year). However, even though there was some concern about glass scraps from SMK Philippines, it became possible to recycle these scraps.

	Year on Year					
	Japan	Overall SMK Group				
Industrial waste discharge per unit of production value (nominal production value)	123%	105%				
Overall industrial waste discharge amount	98%	98%				
Recycling amount	97%	92%				
Landfill waste amount	_	123%				

### Amount of industrial waste discharge



### Amount of landfill waste and recycling rate



# **TOPICS**

### SMK Electronics (Phils.) Corporation

# Recycling glass scraps

The glass scraps generated in the process of manufacturing touch panels are collected by a recycling company, a new business partner, which crushes the glass into cullet shapes, washes it, takes it through a few other processes, mixes it with raw materials, and recycles it as flat glass to be distributed in the marketplace.

By developing ties with a capable recycling company and doing business with it, SMK Philippines has reduced the amount of landfill waste and increased its recycling rate to 59.4%.



# **Environmental Accounting**

### **Environmental Preservation Costs and Benefits**

(Units: million yen)

				Environmental Preservation Costs			Economic Benefits Accrued		Environmental Preservation Benefits (Quantity)	
Category		Major Activities	Investments		Expenses					
			Amount	YoY	Amount	YoY	Amount	YoY	Consumption/Output Savings	YoY
Business area costs	Pollution prevention	Operation and maintenance of facilities used to prevent pollution	0	_	21.0	92%	0		Use of Environmentally Hazardous Substances: 30.3 t	105%
	Global environmental preservation	Efficient operation and maintenance of equipment, such as air-conditioners, daily efforts to save energy, etc.	105.4	358%	37.6	88%	7.9	82%	CO <sub>2</sub> emissions per unit of production value: -0.04 t-CO <sub>2</sub> /million yen	_
	Resource circulation	Appropriate processing and recycling promotion of industrial waste discharge	0	_	27.6	101%	97.5	102%	Landfill waste amount:20.0 t Industrial waste discharge per unit of production value: -0.001 t /million yen	_
	Sub-total	_	105.4	216%	86.2	93%	105.4	100%	_	_
Upstream/ downstream		Green procurement	0	_	0.1	9%	0	$\overline{}$	_	_
Administration		Elimination of environmentally hazardous substances / Environmental management education, activities for the achievement of certification, etc.	0	_	166.6	96%	0		_	
R&D		Development of environmentally friendly products	0		34.1	68%	0		_	_
Social activity		Initiatives to expand green areas at works	0	_	7.9	107%	0	-	_	_
Environmental remediation		_	0		0		0		_	
Total		_	105.4	216%	294.9	91%	105.4	100%	_	_

### **Accounting Procedure:**

SMK's environmental accounting practices adhere to the Environmental Accounting Guidelines 2005 published by Japanese Ministry of the Environment

### Environmental Preservation Costs

In terms of our environmental preservation costs in fiscal 2012, investment increased markedly against the previous year, but expenses decreased.

Investment costs increased due to the renewal of air-conditioning systems in clean rooms with the newest energy-efficient models.

### Economic Benefits

Economic benefits for fiscal 2012 were in line with those for the previous year.

### Environmental Preservation Benefits

All four categories in environmental preservation benefits showed an increase.

The use of environmentally hazardous substances increased due to their increased use in the etching process for producing touch panels. The reason for the increases in the other three categories is shown in "Environmental Preservation Activities."

# The anniversary marked a decade for the SMK Environmental Report

How fast the years go by: ten years have passed since SMK issued its first Environmental Report in 2003

Publishing this report has brought about changes in SMK's environmental protection programs.

Since 2007, all of SMK's production and sales works in 13 countries, including Japan, have pursued common goals, and the contents of this report are now a global concern.

SMK has been publishing its reports in English since 2004 and in Chinese since 2009.

In 2012, SMK constructed a mechanism for determining

how its products are contributing to protection of the global environment, with the criterion being the percentage of eco products sold each month.

At the same time, the system was able to check our present sales amount, and also allows it to perceive the degree to which its core business, manufacturing electronic products, is contributing to the environment and to society, and to use that information as the basis for further refinement of its efforts (See page 10).

SMK will move forward with its environmental preservation programs and its environment-oriented businesses and will do its best to publicize detailed information through its environmental reports.

Mitsuhiko Goto, General Manager, the Environmental Protection Dept.



# **Energy and Resource Saving Activities**

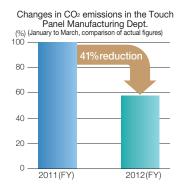
# Toyama Group (Toyama Works, Hokuriku Sales Office, Toyama Showa Co., Ltd., Showa Denshi Co., Ltd.

In the summer of 2012, the Toyama Works renewed the air-conditioning system and made environmental improvements in the clean-room of Touch Panel Division.

Renewal of the air-conditioning system allowed a reduction in power consumption of 291,045 kWh per year and in A-heavy oil use of 34,911 liters per year. Converted into CO2 emissions, this is a reduction of 196.3 tons per year.

The renewal construction brought about big changes, controlled the variations in temperature and humidity, improved the movement of operators and products, and led to major improvements in material yield.

Toyama Works is working to use its resources more effectively by saving energy and reducing defects.



### SMK Electronics (Dongguan) Co., Ltd. (SMK Dongguan)

Continuing from the previous year, SMK Dongguan conducted "the Family Factory Tour." The children learned that SMK's products were used in such familiar items as cell phones. The tours left them proud of and interested in the place where their parents work every day.

After the factory tour, the children were shown a cartoon dealing with the subject of environmental preservation. We would like to think that the enjoyable atmosphere helped the children gain a sense of the importance of environmental protection.

SMK Dongguan will place great importance on communication with employees and their families and with local communities as it continues with its social contribution programs.



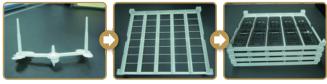
Experience the Family Factory tour wearing same SMK caps

### SMK Electronics (Malaysia) Sdn. Bhd. (SMK Malaysia)

In July 2012, SMK Malaysia began reusing the waste plastic from injection molding to create product trays for transporting from process to process.

Due to the effects of this program, plastic waste was greatly reduced to only 53.2% of the previous year.

Efforts go beyond waste reduction. Producing trays that match the sizes of molded products also reduced problems Spool runner such as damage and scratches during transport.



A transport tray made of recycled materials

Molded materials made into tray packaging

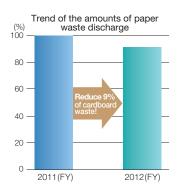
### SMK Electronics (Shenzhen) Co., Ltd. (SMK Shenzhen)

Many of the packing materials of products delivered by our suppliers ended up being discarded, with up to half of the waste being cardboard.

SMK Shenzhen switched the use of plastic reels and plastic cardboard returnable boxes for frequently shipped products in August 2012.

In 2012, industrial waste increased along with an increase in production, but these efforts led to a 9% reduction in the use of cardboard and inhibited the increase of the total amount of industrial waste discharge.

Together with our valued suppliers, SMK Shenzhen will increase the use of returnable boxes for packaging and further efforts to reduce the amount of industrial waste.



### SMK Electronica S.A. de C.V. (SMK Mexico)

SMK Mexico participated in a government program FIDE,\* aimed at promoting energy savings and the propagation of a sustainable energy culture.

One part of this program has employees bringing in the incandescent light bulbs that they used at home and exchanging them for 1,100 energy-saving light bulbs. This program resulted in a reduction of 51.7 t of CO<sub>2</sub> emissions per year.

SMK Mexico will cooperate with the government, local communities, and employees to help construct an economy and society that offer sustainable development.

\*FIDE:FIDEICOMISO PARA EL AHORRO DE ENERGÍA ELÉCTRICA



Switching to energy-saving light bulbs

# Creation of Environmentally Friendly Products

### Connector for Photovoltaic Modules

These connectors link photovoltaic modules with cables. The original multi-point contact structure assures and excellent contact performance. The original water-tightness structure (top and bottom cover system) facilitates cable waterproofing with easy operation without tools. The connectors have UL and TÜV certifications. Available in a wide variety of configurations, such as splitters.



# Connector for LED Lighting (COB type) LT-10/LT-11 Series

Connector for LED lighting, a type of illumination that offers energy-saving benefits. SMK developed a socket for the COBLED package and added it to its product inventory.

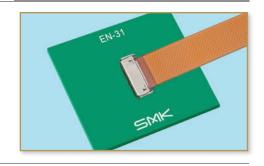
This product is composed of two parts, a top cover and a bottom cover, which radiate heat from the LED into a heat sink. This structure contributes to overall improvements in ease of assembly and in reliability.



### FPC connectors for High-Speed Transmission: EN-31 Series

0.3-mm pitch FPC connectors compatible with products such as digital home electronic equipment and IT devices in which signal transmission speeds are increasing.

The connectors are compatible with the MIPI / D-PHY standard for high-speed interfaces, and are ideally suited to realizing high-speed transmission in mobile devices. The product design and the material selection take RoHS Directive and halogen-free into account.



### Micro USB Connectors (Spring Contact Terminal)

Micro USB connectors for use in smart phones, mobile telephones, etc.

The spring terminals allow these to be pushed to the PWB without using solders. The product design and the material selection take RoHS Directive and halogen-free into account.



### Wireless Modules for Remote Control Unit

This is the ZigBee®RF4CE Module used in wireless remote control unit. It offers a 42% reduction in power consumption and a 15% reduction in size without sacrificing any functions.

This contributes to a reduction in the frequency of battery replacements and allows a smaller product.



### Horizontal Push Switch Series

- (1) Small Horizontal III Push Switch
- (2) Thin Horizontal Push Switch

This kind of switch has found wide acceptance in the smartphone and cell phone markets.

The plastic parts of the case and key stem are environmentally friendly products, made using 25% recycled materials. In addition, consideration for the environment begins with the design stage of SMK products, with smaller and thinner products leading to less need for materials and reducing wasteful use of materials.

SMK is working on creating a full line of switch batteries using recycled materials.



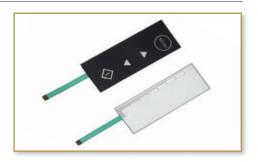
(1) Small Horizontal III Push Switch



(2) Thin Horizontal Push Switch

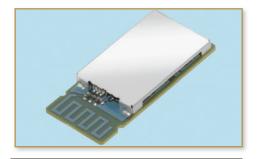
### Capacitive Transparent Touch Switch

SMK has developed a capacitive transparent touch switch that has electrodes formed of organic conductive polymers layered over PET film, instead of the usual indium tin oxide (ITO) materials. In addition to reducing the use of the rare metal indium, SMK has made the sensor parts and output tail parts into a single unit, reducing the number of parts. This new product is a response to demands for new capacitance-type transparent touch switches in home appliances and office machines.



### Wireless Module

In addition to low power operation, contributing to sophisticated power management functions in this wireless module, the development of the Bluetooth® SPP Module (BT401) allows wired connections to become wireless, reducing resource use.



### **TOPICS**

Efforts to highlight sales of eco products

In fiscal 2012, SMK constructed a system for understanding sales and sales ratios of eco products created through environmentally friendly design, and has begun publicizing the results in-house.

Previously SMK managed all its eco products together, but now the company classifies them in detail according to four categories of improvements: energy-saving and high-efficiency products, resource-saving products, environmental protection products, and products for load reduction in manufacturing processes. This makes it easy to see the number of eco products by category, the number sold, and the percentage of sales.

From now on, SMK will make use of each item of information about its eco products, analyzing their strong points and weak points, and seek improvements as it expands its lines of products that make positive contributions to the environment and to society.





# **SMK** Corporation

Published in July 2013

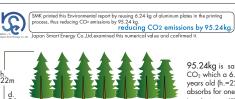
The paper used in this report is FSC mixed source certified, produced using wood from FSC certified forests and managed forests. The report was printed using a vegetable ink derived almost entirely from plant sources, and contains no volatile organic compounds (VOCs). It was printed using the Minus Carbon Printing system, in which aluminum plates are reused.



This article is printed using environment - friendly process qualified as GOLD PLUS status by E3PA. E3PA: Environment Pollution Prevention Printing Association http://www.e3pa.com







 $\begin{array}{l} 95.24 kg \text{ is same as quantity of } \\ \text{CO}_2 \text{ which a 6.83 cedar of 50} \\ \text{years old (h.=22m/d.=26cm)} \\ \text{absorbs for one year.} \\ \text{(source-forestry report 1997, Forestry Agency of Japan)} \end{array}$