



**HAMAMATSU**  
PHOTON IS OUR BUSINESS

# Environmental Report 2013

# Message from the President

## Working toward the Achievement of a Sustainable Society, We Use Photonics Technology to Help Solve Environmental Problems

### Introduction

In 2012, 20 years after the United Nations held its first Conference on Environment and Development, also known as the Rio Summit, the United Nations Conference on Sustainable Development was held in Rio de Janeiro. This conference, which is known as Rio+20, was attended by representatives from more than 100 countries and members of local governments, international organizations, businesses, and civic organizations, making it one of the largest global conferences ever. In the same year, negotiations were held to establish a new international framework for sustainability and revise the Kyoto Protocol at the Conference of the Parties to the 1992 United Nations Framework Convention on Climate Change (COP18) and the Meeting of the Parties to the 1997 Kyoto Protocol (CMP8), respectively. Thus, it is clear that sustainability is drawing global attention. Meanwhile, in Japan, the Great East Japan Earthquake has inspired new examinations of energy problems. National interest in energy efficiency and conservation is growing, and these issues are now seen as urgent challenges.

### Working toward the Achievement of a Sustainable Society,

I believe that given these circumstances, businesses have a social responsibility to work toward the achievement of a sustainable society and to develop their business activities in an environmentally friendly way. That's why we have declared that it is part of our corporate social responsibility (CSR) to "respect the environment and pursue sound, sustainable business activities." In addition, in our efforts to promote environmental management and contribute to global environmental protection, we have drafted a "Fundamental Environmental Policy," deployed an environmental management system across the entire company, are providing products that are friendly to the environment in every phase of their life cycle—from production to disposal, and are carrying out biodiversity conservation activities, such as distributing memorial trees to our employees.

### Using Photonics Technology to Help Solve Environmental Problems

The mission of HPK is to use photonics technology to benefit society and make the world a healthier and more peaceful place. Focusing on the theme of "Life Photonics", we will continue to engage in basic research into the unknown and unexplored properties of photon and use our research and development activities to make photonics technology applicable in a wide range of fields, including information, measurement, medicine, biology, energy, and the environment. As we work to reduce the environmental impact of our business activities, we will help to solve environmental problems such as global warming, resource limitations, and pollution by using photonics technology to produce products that benefit the environment.

I would like to ask our stakeholders for their continued support and guidance in these efforts.

Hamamatsu Photonics K.K.

President

晝馬明



# Hamamatsu Photonics 2013 Environmental Report

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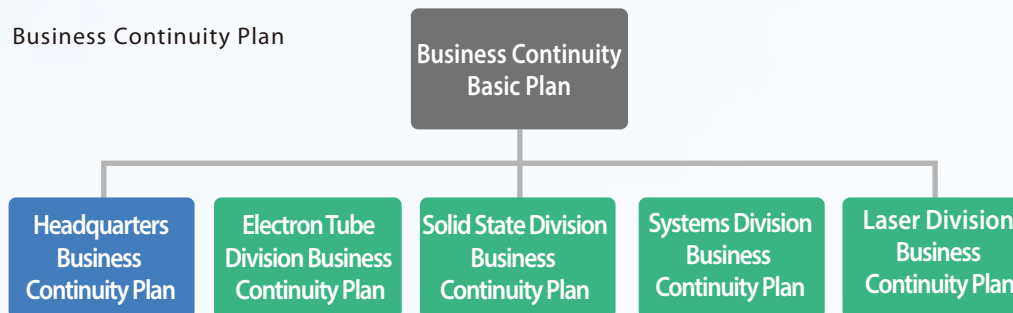
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## Business Continuity Plan (BCP) Activities



### Establishment of the Business Continuity Plan (BCP)

When our operations are halted by a large-scale disaster such as the Great East Japan Earthquake, not only does it affect our ability to supply our products to our customers, it also has a large impact on society as a whole. In addition to our conventional disaster measures, we have now drawn up a Business Continuity Plan (BCP) to ensure that we can continue to fulfill our duties to provide our products to our customers even in the event of a large-scale disaster. The BCP specifies the matters in the Fundamental BCP—which is the fundamental plan for the entire company—that should be dealt with through cooperation between various divisions and our headquarters.

Products That Are Helping the Environment

# Hamamatsu Photonics Contributes to Environmental Impact Reduction Activities Using Photonics Technology


The products of Hamamatsu Photonics are being used in a variety of environmental impact reduction activities, such as the measurement of environmental air and water quality, the analysis of concentrations of regulated chemicals, and the enhancement of the energy efficiency of common electrical equipment.

**Infrared detectors**



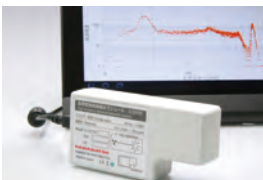
Environmental analysis and measurement

**Photomultiplier tubes**



Environmental analysis and measurement

**Radiation detection modules**



**Deuterium lamps**



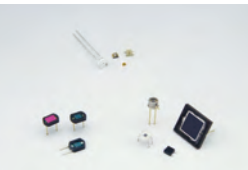
Atmospheric and water quality analysis

**Distance sensors**




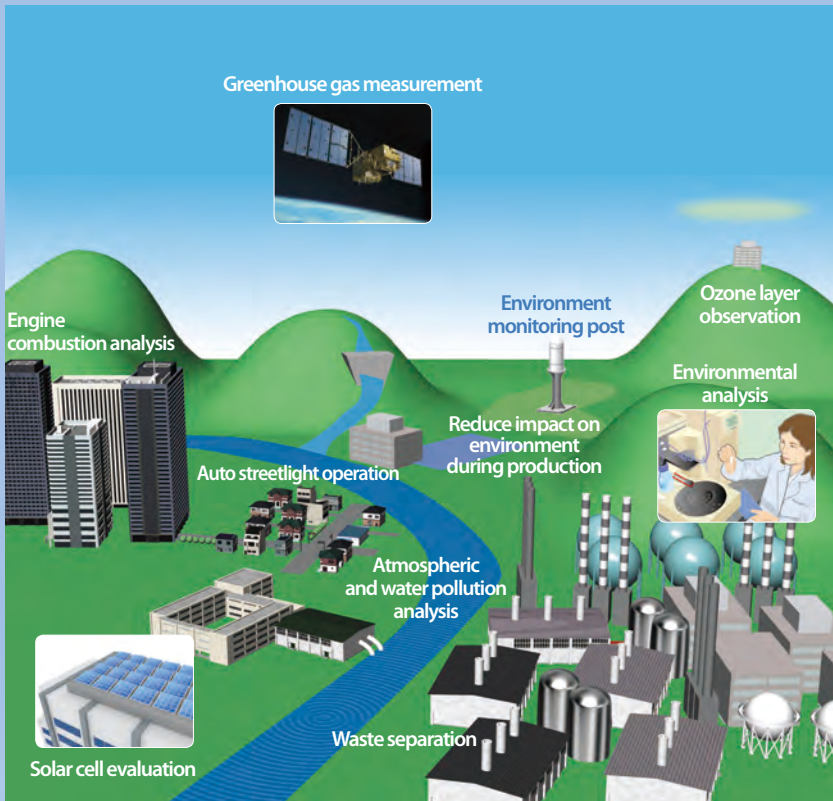
Weather measurement

**Visible light/illuminance sensors**



Ambient light level detection

**Solar cell evaluation systems**

**CO<sub>2</sub> gas sensor modules**



**Quantum cascade lasers**




Gas analysis

**Mini-spectrometers**



Soil analysis and aquametry

**Photonic multichannel analyzer**



Light source evaluation

**Xenon lamps and hollow cathode lamps**



Atmospheric and water quality analysis

**Stealth dicing engine**



Next-generation laser dicing technology

**X-ray line sensor cameras**



Component analysis

# Promoting Environmental Management

## HPK Fundamental Environmental Policy

**Principle** In our conduct of business activities we, Hamamatsu Photonics K.K., recognize that maintaining harmony with the global environment is one of essential issues facing mankind and we are determined to always act with this in mind as we endeavor to create new science, new industries, and to establish true health for mankind by studying, applying and expanding photonics technologies.

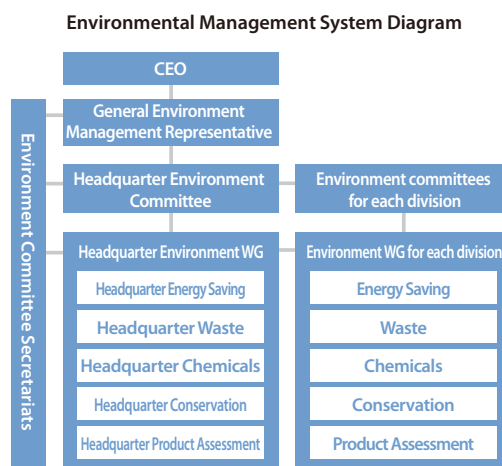
- Policy**
1. Initiate an internal organization for environmental protection and establish environmental management system in each plant in order to carry out activities related to environmental protection
  2. Assess the impact on the environment by our activities, products and services, and constantly improve our environmental protection activities and environmental management
  3. Comply with our internal procedures and policy as well as all governmental laws and regulations related to environmental protection, and impose our own voluntary standards if necessary, to reduce the stress on the environment
  4. Take preventative measure to curb pollution, save energy and resource, reduce waste and control chemical substances
  5. Strive to raise the awareness of all our employees regarding environmental issues through environmental education, and to understand and apply this Fundamental Environmental Policy through in-house publication of the Policy

## Environmental Management System

### Framework for Promoting Environmental Management

At Hamamatsu Photonics, we have established a “Headquarter Environment Committee”. It is directed by a General Environment Management Representative, who serves as a decision-making body for matters pertaining to our Environmental Management System (EMS). This Headquarter Environment Committee comprises of five specialized work groups, the Environment Committee Secretariats, and the environment work groups at each division of Hamamatsu Photonics .K.K.

Also, each division in Hamamatsu Photonics has its own environment workgroup (WG) that implements concrete on-site measures for helping the environment.



### ISO 14001 Certification

Our primary divisions have received ISO 14001 certification and are working to sustain and improve their environmental performance. To deepen each employee’s understanding of the EMS, we engage in a variety of activities, including education for new employees, education for internal auditors, and specialized environmental training.

We are currently considering working toward company-wide certification as a means of improving internal information sharing and operational efficiency.

Organizations That Acquired ISO Certifications

Organization That Acquired Certification	Site	Acquisition Date
Main Office	Main Office	March 2012
Central Research Laboratory	Central Research Laboratory	March 2012
Electron Tube Division	Toyooka Laboratory and Tenno Glass Works (Koso Corporation)	December 2003 (December 2011)
Solid State Division	Main Factory, Mitsue Factory, and Shingai Factory	December 2003 January 2012
Systems Division	Joko Factory	August 2004
Miyakoda Factory	Miyakoda Factory	February 2012

\*ISO 14001 certification includes Koso Corporation, an affiliated company.

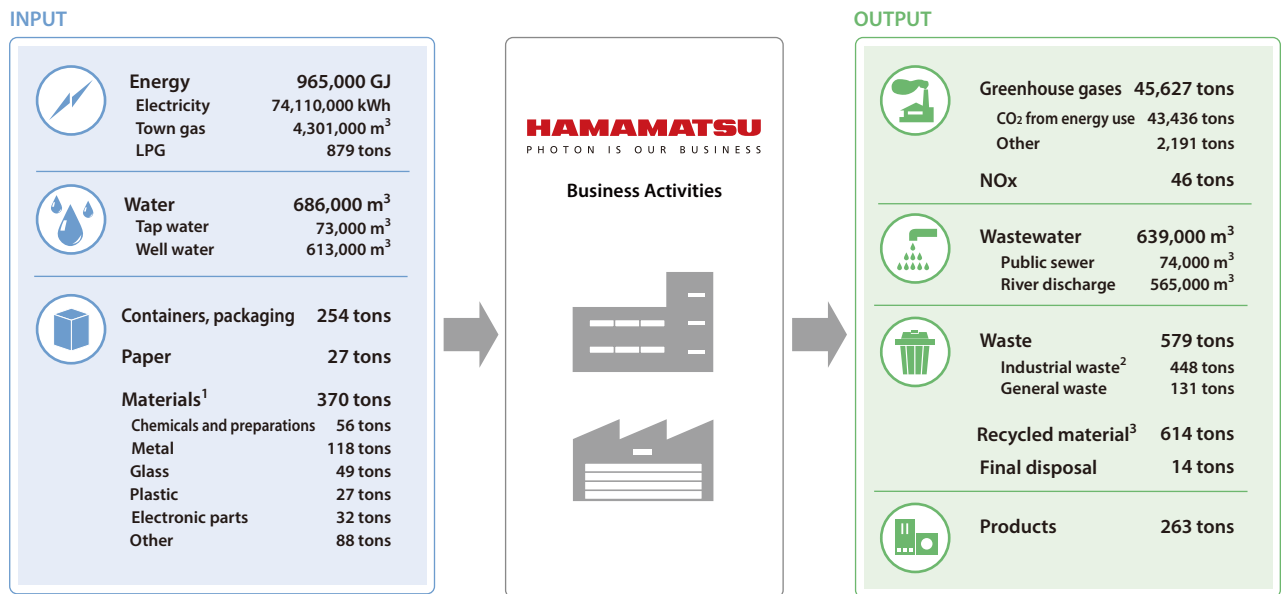
### Environmental Accounting

We are promoting environmental accounting internally as a means of providing the fundamental information necessary for environmental management.

## Promoting Environmental Management

### ■ Environmental Impact of Business Activities

We are quantifying the environmental impact of our business activities and working to reduce our impact on the environment. The following figures are a summary of our environmental impact for this period.



1 Total for materials whose weight data was available.

2 Including chemical waste

3 The amount of recycling is the total amount of material and thermal recycling added to the amount of valuables.

10 locations within Japan were subject to measurement (Toyooka Factory, Tenno Glass Works, Main Factory, Mitsue Factory, Shingai Factory, Joko Factory, Miyakoda Factory, Central Research Laboratory, Main Office, and Industries Development Laboratory).

### ■ Dealing with Environmental Risks

#### Framework for Reducing Environmental Risks

We are continuously improving our efforts to prevent environmental pollution by reducing the impact on the living environments of air, water, and sound pollution. We have an Environmental Conservation Workgroup that meets several times a year. They are currently working on the revisions made to the Water Pollution Control Law in June 2012.

In this period, there was no major problem causing environmental risk.

#### Emergency Response Training

We have prepared accident and disaster response manuals. We regularly hold customized disaster response training for each type of business and division.

In this period, training sessions have included evacuation training for gas leaks and response training for chemical spills in clean rooms, and company-wide disaster preparedness training.



Emergency Response Training

## ■ Targets and Accomplishments of Environmental Activities

Each year, from October 1st to September 30th, we set environmental objectives and targets and work to reduce our impact on the environment and protect the environment. Below is a summary of the objectives and accomplishments of this period.

Primary Targets for 2012	Primary Accomplishments for 2012
<b>Environmental Management System</b>	
› Construct EMS on sites that do not yet approve to ISO 14001.	› The Miyakoda factory, the Central Research Laboratory, and the Main Office have acquired ISO 14001 certification.
› Improve EMS and renew certification for divisions approved to ISO 14001.	› Three divisions were audited by an external certification body.
<b>Making Products Environmentally Friendly</b>	
› Operation in accordance with management standard for Chemical Substances.	› 8th revision
› Conform to each country's environmental regulations for products	› Enhanced compliance to revised RoHS Directives.
<b>Making Business Activities Environmentally Friendly</b>	
<b>Prevention of Global Warming</b>	
› Energy conservation promotion and awareness activities	› Received Hamamatsu City's "Top Runner Grand Prize." › Participated in "Challenge 25 campaign" activities.
› Reduce energy use per unit of sales by at least 2% compared to the previous period.	› Increased by 9.7% compared to the previous period due to reduction in sales and other factors.
<b>Appropriate Management of Chemicals</b>	
› Perform a chemical usage inspection every six months.	› Implemented according to plan in accordance with the PRTR Law.
› Promote the collection of the latest MSDSs and manage the database of MSDSs.	› Holding 5,851 MSDSs.
<b>3R Activities</b>	
› Total recycling rate: 95% or more	› Total recycling rate: 97%
› Supervise contracted waste management facilities.	› Held a total of 20 inspections at 20 contracted waste disposal facilities.
<b>Prevention of Pollution</b>	
› Maintain management in accordance with voluntary standards.	› Closely followed trends in regulations and properly responded to revisions in the Water Pollution Control Law.
› Reduce VOC emissions into the atmosphere by 30% compared to the year 2000.	› Achieved 51.4% reduction.
<b>Social and Environmental Communication</b>	
› Promote biodiversity conservation activities.	› Distributed happy memorial trees. › A total of 435 people participated in local cleaning activities 12 times during the year.
› Disseminate environmental information both within and outside of the company.	› Disseminated environmental information including environmental reports (in English and Japanese).

# Making Products Environmentally Friendly

## ■ Conforming to Regulations Regarding the Chemicals Contained in Our Products

### Green Procurement

To conform to regulations, such as RoHS, and to provide products that meet the demands of our customers, we have established company-wide management standards for chemical substances. We issued the 8th edition in October 2012. This edition mainly focuses on conforming to the revised RoHS directive.

On the basis of these standards, we are conducting green procurement surveys with our business partners regarding the concentrations of regulated chemicals in parts and how the parts are used. The survey results are collected in a company-wide system that stores environmental information about our products, and the results are used to increase operational efficiency and evaluate compliance with regulations.

### Compliance with Regulations

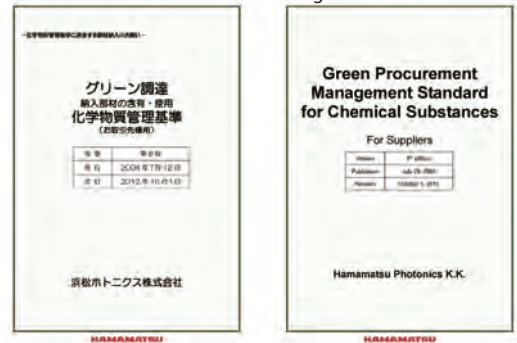
We have joined industrial groups related to each country's regulations regarding the chemicals contained in our products, are striving to stay up to date with the latest information about these chemicals, and are promoting swift, appropriate responses to new regulations.

In July 2011, the RoHS Directive was revised. We needed to respond urgently to maintain compliance. In doing this, we educated concerned parties within our company and subsidiaries. We also, revised the system for storing environmental information about our products. We are now working more swiftly and precisely to comply with other laws and regulations.

### Green Purchasing

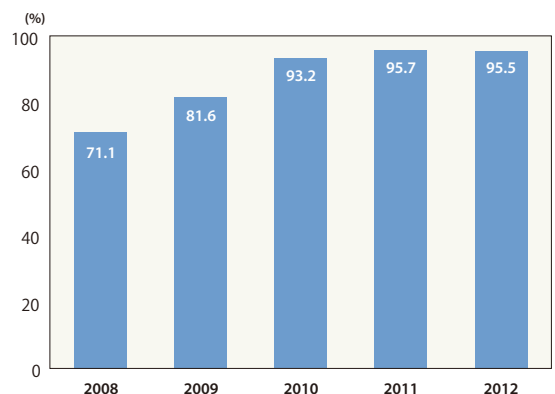
We have established a company-wide green purchasing guide and are purchasing environmentally friendly office products and other goods. Our green purchasing rate for this period has been 95.5%, which is above our target rate for the period of 90%.

Green Procurement and  
Chemical Substance Management Guide



Education for Subsidiaries

Green purchasing rate





## ■ Developing Environmentally Friendly Products

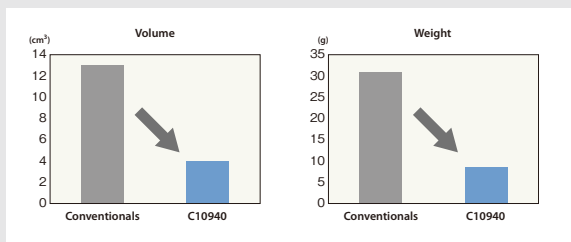
As a means of making our products more environmentally friendly, we are working to promote the sale of products that use less resources, power and have a long service of life.

The following are environmentally friendly products we have developed this period.

### Examples of Newly Developed Environmentally Friendly Products

#### • High-voltage power supply module [Product information C10940](#)

A specially-developed transformer makes the C10940 High Voltage Power Supply for PMTs as compact as possible. With an area of approximately 4 cm<sup>3</sup> (15 mm × 15 mm × 18 mm), the C10940 is 1/3.3 times as small as its predecessor, the C4900, and 1/3.6 times as light. The compactness of the C10940 is made possible by its high power-conversion efficiency and its reduced number of control and transformer parts.

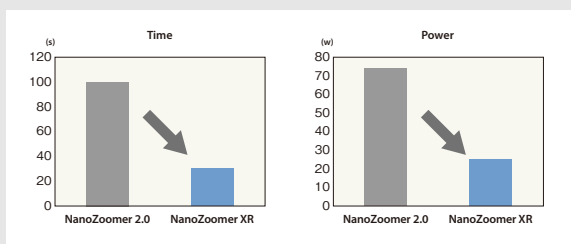


#### • NanoZoomer XR [Product information NanoZoomer XR](#)

The C12000 NanoZoomer XR is a virtual slide scanner that rapidly scans pathology slides and converts them into high-resolution digital data. Its casing and electronic components comply with RoHS, and the scanner saves power by using an LED as its light source. Also, with an even greater scanning speed than ever before, the scanner boasts a processing speed that is approximately 3 times as fast that of its predecessor.

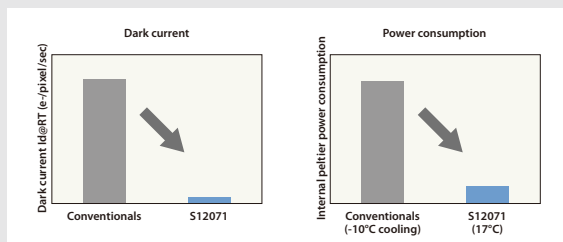
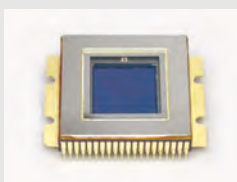


scanner boasts a processing speed that is approximately 3 times as fast that of its predecessor.



#### • Backside CCD image sensor

Because the S12071 two-dimensional image sensor is designed to be capable of full MPP operation, it reduces dark current noise 20 times as much as its predecessor. This has made it possible to increase the cooling temperature of the internal Peltier device compared to that of the predecessor and reduce the power consumption to 1/7 of that of the predecessor. Also, new packaging technology gives the S12071 greatly increased airtightness and reliable resistance humidity, resulting in a longer product lifespan.

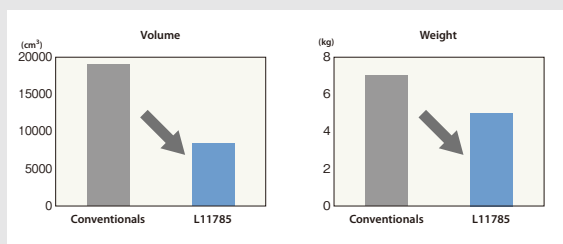


#### • LD irradiation light source (SPOLD) [Product information L11785](#)

The L11785 LD Irradiation Light Source Series (SPOLD) are non-contact laser irradiation devices that supply heat at high levels of efficiency. These devices can be used for soldering, plastic welding, and other forms of processing. They each have one high-output LD chip. The combination of the drive circuit and the cooling system has made it possible



for these devices to be approximately twice as small as their predecessors and approximately three times as light.

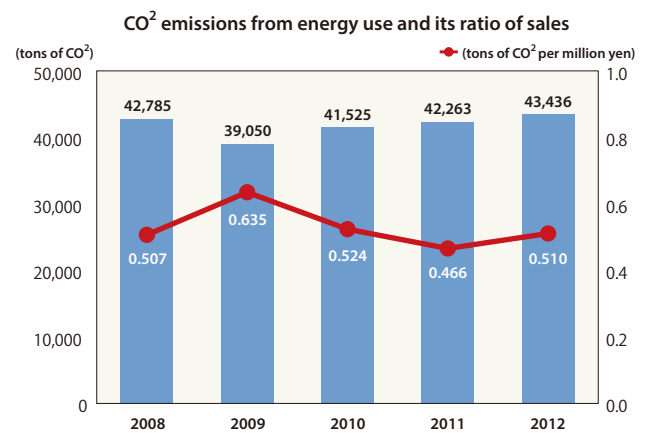
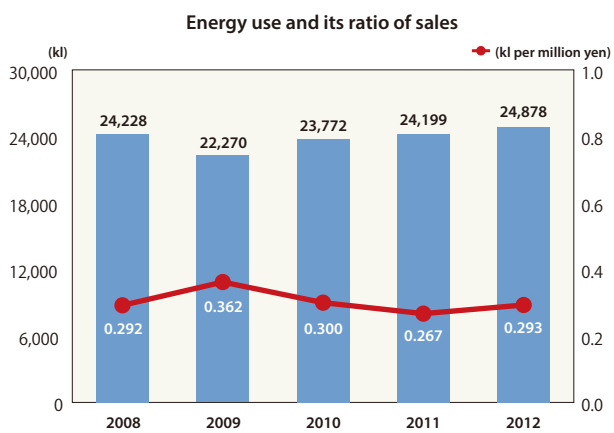


# Making Business Activities Environmentally Friendly

## Fighting Global Warming

### Changes in Energy Conservation and CO<sub>2</sub> Reduction

Hamamatsu Photonics is promoting energy conservation activities. Compared to the previous period, we set a target to reduce the energy used in business activities per unit sales by 2%. We are also working to reduce the greenhouse gases (GHG) used in the manufacturing process. We took steps to conform to the related laws and regulations; installed high-efficiency equipment, lighting equipment and continued to educate our employees about energy conservation.



- Energy use per unit of sales rose by 9.7% compared to the previous period. (We were unable to meet our target)
- CO<sub>2</sub> output caused by energy use increased by 2.8% compared to the previous period.

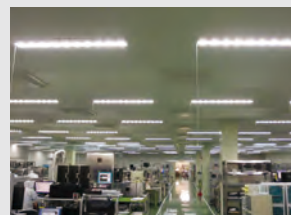
\* Some past data has been changed because of revisions to the scope of data collection and the data collected.

\* The factor we use to convert power to CO<sub>2</sub> and calculate the CO<sub>2</sub> from energy use is 0.417 (the emission factor provided by the Federation of Electric Power Companies).

### Examples of Energy and CO<sub>2</sub> Reduction Efforts

#### • Switch to LED Lighting

To reduce the amount of GHG produced as a result of our business activities, Hamamatsu Photonics is working to conserve energy by switching to LED lighting. In this period, we have reduced power consumption by approximately 40,000 kWh by replacing clean room ceiling lights and lobby, hallway, and other lights with LED lights.



LED lighting in the Mitsue Factory



LED lighting in the Industries Development Laboratory

#### • Education about Energy-Efficient Driving

We are implementing an environmentally-friendly automobile commuting plan in accordance with the Shizuoka Prefectural Ordinance for the Prevention of Global Warming. In this period, we are holding a class about energy-efficient driving in which the effects of energy-efficient driving and examples of how energy-efficient driving has been implemented are introduced. 903 of the employees at the Toyooka Factory have participated in this class.



Class at the Toyooka Factory

## ■ Reducing Electricity Consumption

### Participation in "Challenge 25 Campaign" Activities

The Challenge 25 Campaign is a national movement aimed at preventing global warming. Hamamatsu Photonics is participating in this movement by participating in several energy saving campaigns (COOLBIZ and WARMBIZ). We have also promoted energy and electricity conservation among our employees and organized an employee-household energy-saving declaration and contest program.



COOLBIZ



Company sign with the lighting turned off (Main Office)



Energy-conservation-themed coloring



Power-saving declaration and contest program

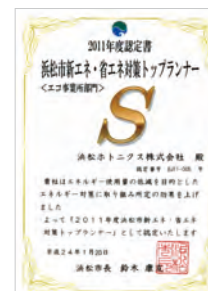
**COLUMN:**

### Hamamatsu Photonics Received the Top Runner Grand Prize for New Energy and Energy Conservation

The Top Runner certification program, is a new energy and energy conservation program being undertaken by Hamamatsu City. Hamamatsu Photonics received the Top Runner Grand Prize in February 2012 in recognition of its status as an excellent business and its acquisition of an S rank in the environmentally-friendly business division of the 2011 program.



Logo for recognized businesses



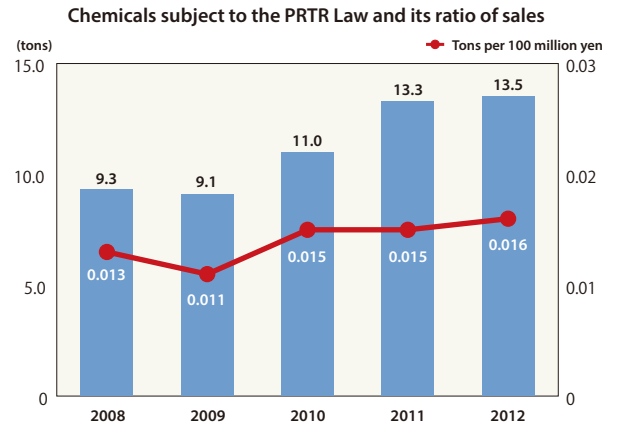
Certificate of recognition

## Making Business Activities Environmentally Friendly

### ■ Appropriate Management of Chemicals

#### Use of Chemicals Subject to the Pollutant Release and Transfer Register (PRTR) Law

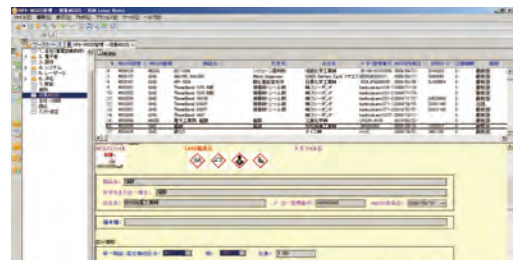
We are improving our management of the chemicals that we handle by maintaining precise knowledge of emissions into air and water and of the amounts of chemicals that are transported through disposal and other means. In this period, we used 13.5 tons of substances designated as class 1 chemical substances under the PRTR Law.



#### Promotion of MSDS (Material Safety Data Sheet) Collection

As stipulated in the Industrial Safety and Health Law, MSDSs are essential for assuring the safety of workers who handle chemical materials and for reducing the risks of these chemicals to the environment. We are promoting the collection of the latest MSDSs.

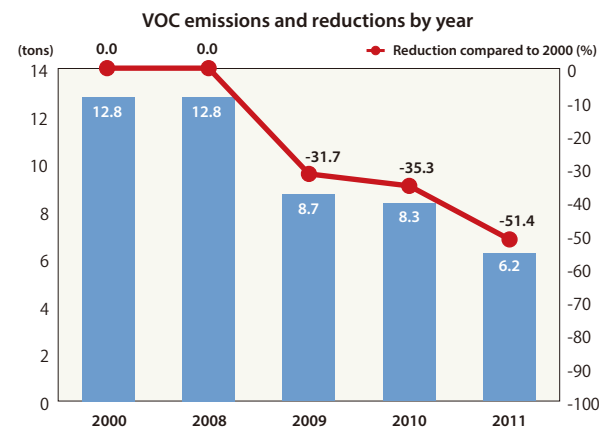
Internal MSDS database



#### Reducing VOC (Volatile Organic Chemicals) Emissions

At Hamamatsu Photonics, we are working to reduce emissions of VOCs into the atmosphere by reducing our use of VOCs, taking measures to inhibit emissions.

In 2011, we set a goal of sustaining a 30% reduction in VOC emissions compared to 2000, and we managed to achieve this goal. We will continue to strive to achieve this goal.



**COLUMN:**

#### Chemical Storage Condition Inspections

The chemicals working group manages inspections of chemical storage facilities and workplaces that handle chemical substances. One purpose of these inspections is to find any sanitation or safety problems that may exist in a workplace.



Clean room inspections

## 3R Activities

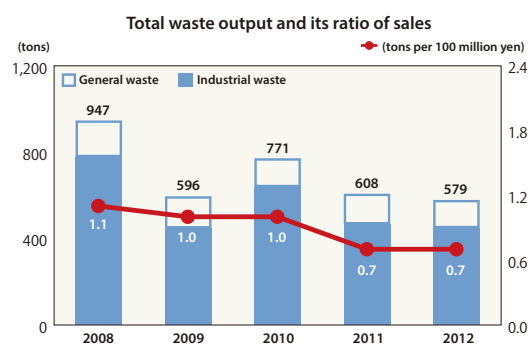
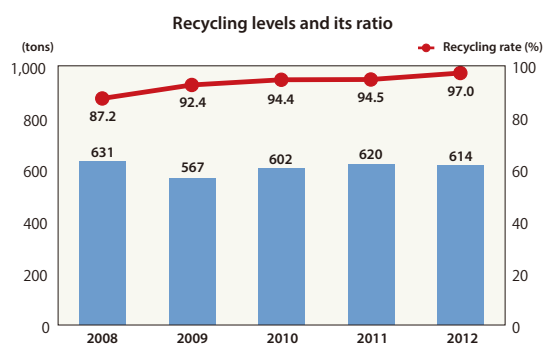
### Reducing Waste Levels to Zero

We are striving to promote and efficiently apply the three Rs to reduce the impact of our waste on the environment and make efficient use of our resources. As part of this effort, we are striving toward the ideal of zero emissions (a rate of recycling of at least 95% for all waste products other than acid and alkali waste).<sup>1</sup> In this period, which marks five years since the initial plan, we managed to recycle 614 tons of waste and achieve a rate of recycling of 97%.

Also, our total waste output was 579 tons, which is 4.8% less than it was in the previous period and is equivalent to 0.7 tons of waste per 100 million yen.

1 3R: Reduce, Reuse and Recycle

2 Zero emissions: The idea that we should strive for a society with no waste



### Examples of 3R Activities

#### • Reducing Clean Room Waste through Recycling

Many of the masks and gloves that are used in clean rooms are used once and then thrown away. This waste was treated as burnable garbage before, but we've made our garbage separation more thorough, and by treating this waste as waste plastic and performing material recycling and heat recovery recycling on it, the Electron Tube Division has managed to reduce waste by 9% compared with the previous period.



#### COLUMN:

#### Supervision and Observation of Contracted Waste Management Facilities

We supervise and observe our contracted waste management facilities each period and work to ensure that waste is processed properly. We handle matters in accordance with the Revised Waste Disposal Law and the ordinances of Shizuoka Prefecture and Hamamatsu City, and our divisions share information about waste management companies that have been recognized as being exceptional.



Observation of a contracted waste management facility

#### Collection and Gathering of Waste Batteries

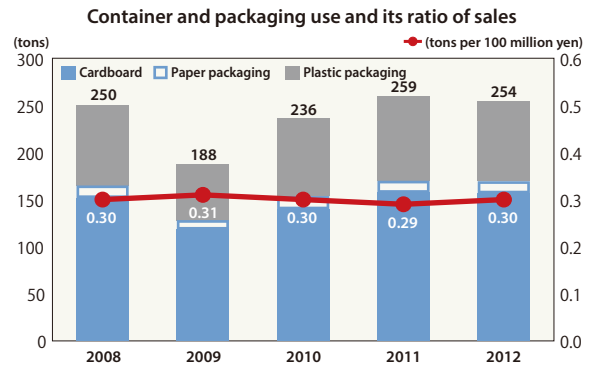
We established company procedures for dealing with waste batteries and gathered the separated and collected batteries from each division in a single division, which then had the batteries processed by a processing facility. In the future, we will determine whether we can handle other types of waste in the same way and pursue appropriate measures.

## Making Business Activities Environmentally Friendly

### Shipping Measures

#### Reducing Containers and Packaging Materials

We are using packaging materials as efficiently as possible to improve product accommodation ratios. We are also promoting the expanded use of reusable shipping containers. In this period, our use of containers and packaging materials was 254 tons, a 2% decrease over the previous period. Our use of containers and packaging materials per unit of sales was 0.30 tons per 100 million yen.



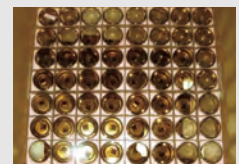
#### Examples of Reductions in Containers and Packaging

- Improvement of Packaging Methods and Quantities**

We have made it possible to store about twice as many PMTs, which has enabled us to cut shipping costs. (e.g. packing boxes now hold 56 PMTs instead of the 30 PMTs, shipping costs were cut by approximately 60%)



Before improvements



After improvements

- Improving Packing Methods**

We have made the exterior cardboard packaging for our automobile photo ICs for optical link more compact and switched from conventional loose-fill cushioning to exterior padding. This has enabled us to reduce cushioning material volume by 28% and reduce shipping costs by 29%.



Before improvements



After improvements

- Making Packing Cases Reusable**

Previously, we had sent large devices overseas using wooden boxes fixed with bolts. We used twist fasteners instead of bolts to make unpacking and repacking more efficient at the shipping destination. By making it possible to reuse our packing cases over and over again, we managed to reduce waste materials and increase environmental friendliness.



Before improvements

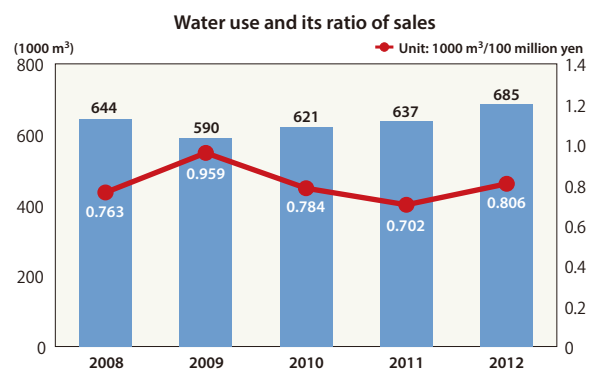


After improvements

### Protecting Our Water Resources

#### Using Water Resources Effectively

As the world is becoming more aware of the importance of water, we are maintaining an awareness of that importance by decreasing our water use, and working to recycle the water that we do use. In this period, our water usage increased by 7.5% over the previous period as a result of full-scale operations at our Shingai Factory, reduced sales, and other factors.



# Site Data

From Oct. 1, 2011 to Sep. 30, 2012



Environmental Impact	(Unit)	Toyooka Factory	Tenno Glass Works	Joko Factory
Energy	(GJ)	258,251	4,227	22,440
Water	(1000 m <sup>3</sup> )	263	9	12
PRTR Law <sup>*1</sup>	(tons)	0.5	0.01	0.01
Paper	(tons)	7.8	0.2	4
Containers, packaging	(tons)	135		21
CO <sub>2</sub> from energy use <sup>*2</sup>	(tons)	11,425	189	942
Other GHGs <sup>*3</sup>	(tons)	1.3	—	0.09
Wastewater	(1000 m <sup>3</sup> )	263	9	12
Waste	(tons)	182	4.6	32.8
Final disposal	(tons)	3.4	0.06	0.47
Recycling rate <sup>*4</sup>	(%)	99.5	99.6	98.7



Environmental Impact	(Unit)	Main Factory	Mitsue Factory	Shingai Factory
Energy	(GJ)	386,087	72,258	37,893
Water	(1000 m <sup>3</sup> )	281	46	12
PRTR Law <sup>*1</sup>	(tons)	10.4	1.5	0.8
Paper	(tons)	7	1.5	0.1
Containers, packaging	(tons)	98		
CO <sub>2</sub> from energy use <sup>*2</sup>	(tons)	17,780	3,391	1,684
Other GHGs <sup>*3</sup>	(tons)	2,170	—	—
Wastewater	(1000 m <sup>3</sup> )	281	31.2	9.8
Waste	(tons)	256.5	31	2.9
Final disposal	(tons)	7	0.4	0.01
Recycling rate <sup>*4</sup>	(%)	96.4	92.2	99.7



Environmental Impact	(Unit)	Miyakoda Factory	Central Research Laboratory	Main Office	Industries Development Laboratory
Energy	(GJ)	60,715	94,901	2,080	19,510
Water	(1000 m <sup>3</sup> )	18	42	1.3	0.9
PRTR Law <sup>*1</sup>	(tons)	0.1	0.2	—	0.02
Paper	(tons)	0.4	3.1	2.4	0.2
Containers, packaging	(tons)	0.4	—	—	—
CO <sub>2</sub> from energy use <sup>*2</sup>	(tons)	2,680	4,177	87	839
Other GHGs <sup>*3</sup>	(tons)	—	19.6	—	—
Wastewater	(1000 m <sup>3</sup> )	14.4	15.5	1.3	0.9
Waste	(tons)	23	38.4	7.2	0.4
Final disposal	(tons)	1.8	0.8	0.05	0.01
Recycling rate <sup>*4</sup>	(%)	82.5	95.9	92.3	96.7

\*1 Quantities of 1 kg or more and are designated as class 1 chemical substances under the PRTR Law.

\*2 The factor we use to convert power to CO<sub>2</sub> and calculate the CO<sub>2</sub> from energy use is 0.417.

\*3 The emitted GHGs other than CO<sub>2</sub> from energy use are converted to equivalent amounts of CO<sub>2</sub>.

\*4 The recycling rate does not include acid or alkali waste.

# Social and Environmental Communication

## Promoting Community and Employee Communication through Ecological Activities

### Social Contributions

As a means of contributing to society and protecting the environment, employee volunteers clean the area around the company. Every October, together with Kasai Middle School, we participate in cleaning activities in Toyoda-gawa that are organized by the Oogawa Sakura no Mizube no Kai (Oogawa Waterside Sakura Tree Association). In this period, a total of 435 employees participated in 12 cleanings.

We will continue to work to beautify community environments and contribute to society.



Community cleaning activities



Toyoda-gawa cleaning activities

### Happy Memorial Trees and Tree Planting on Company Grounds

As part of our biodiversity conservation and greening education activities, we started donating trees in October 2011 to employees who have built a new home or gotten married. A total of 89 employees have planted memorial trees.

Also, to beautify and maintain the environment, each division continues to make the company grounds greener.



Mitsue Factory



### Environmental Communication Using Various Media

To explain clearly to our stakeholders and members of the community how we are working to help the environment, we provide information through a variety of media, including our environmental reports and website. Also, in the company newsletter, we have a green corner about our environmental initiatives.



Environmental Initiatives Website



Company newsletter

[http://www.hamamatsu.com/jp/en/hamamatsu/environmental\\_report.html](http://www.hamamatsu.com/jp/en/hamamatsu/environmental_report.html)



# Opinion of a Third Party

To improve the reliability of this report, we asked for the opinion of Hiroaki Sato, who works within Shizuoka Prefecture to combat global warming.



Head of the Shizuoka Center for Climate Change Actions  
(Professor emeritus and former head of Shizuoka University)

**Hiroaki Sato**

## The Spirit of Photonics

In the middle of February, I toured the Toyooka Factory, which is the manufacturing base for the photomultiplier tubes that can be thought of as the starting point of Hamamatsu Photonics. As I was guided through the manufacturing process, it reminded more of a university research facility than of a manufacturing site. Watching the employees working to accomplish different tasks, it seemed as if the manufacturing line itself was a site for research and development. The spirit of photonics continuously pursues the unknown potential of light. Their manufacturing sites carry on this spirit and give it form every day. Seeing this, I felt that I was also able to see the individual enthusiasm and pride that goes into their photomultiplier tubes, which are the key devices in their product lineup.

## Seeing the Earth's Environment through Light

Hamamatsu products involve light emission, reception, light measurement and photometric technology. These products make it possible to use light to understand the environment. Deuterium lamps, photodiodes, MCPs, and photomultiplier tubes make it possible to analyze and measure contaminants in air, water, and other areas of the natural environment with great accuracy. These devices are also incorporated in a variety of equipment for dealing with environmental risks.

High-power diode lasers are key devices in the research and development of laser fusion, which has great potential as an ideal source of inexpensive, clean, next-generation energy. Expectations are now especially high for the potential of photonics technology to aid in the measurement and prevention of radiation exposure and contamination caused by nuclear accidents. Expectations are continuously growing as the potential of the green technology born from the pursuit of the unexplored and unknown field of light reaches to every corner of our lives, by creating a prosperous and sustainable future.

## Environmental Living and Messaging from Workplace and Employee Perspectives

Hamamatsu Photonics has a program in which trees, known as "Happy Memorial Trees," are donated to employees who have built a new home or recently married. This program has reached its second year. A total of 89 employees have planted trees. The program is steadily rasing throughout the company as a means of promoting greening and protecting biodiversity.

A total of 522 people participated in the three activity areas of our energy-saving declaration and contest program, in which the households of their employees work to save electricity, and they earned the Special Award in the annual Fuji National Green Challenge Cup.

They will work harder than ever before to use various forms of data, including this Environmental Report, to clearly show how their daily green procurement and other efforts are reducing their impact on the environment and how they are working hard and achieving results in the production of environmentally-friendly products and products that contribute to the environment. They will also work harder than ever before to use more advanced environmental accounting as a tool for more clearly communicating the relationship between their company management and environmental stewardship.

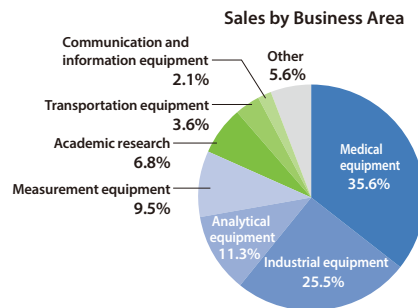
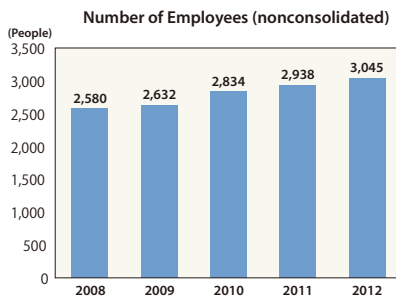
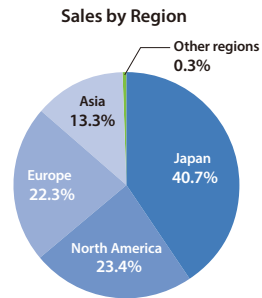
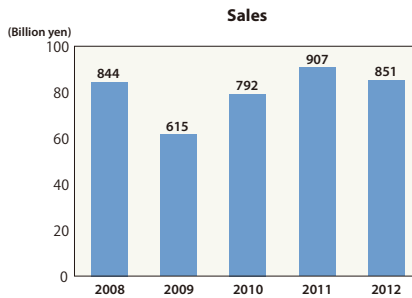
### Response to the Third Party Opinion

Thank you very much for your valuable opinions and your evaluation of our environmental activities and environmental report. We will continue to work to provide environmental information in a more easy-to-understand form. We are also working to use environmental accounting to provide information to the parties involved in the management of our business. In accordance with the suggestions we have received, we will continue to develop products that can serve as key devices in environmental analysis and measurement and strive daily to be a company that contributes to the realization of a sustainable society.

Environment Committee Secretariats

## Company Overview

Company Name	Hamamatsu Photonics K.K.
Headquarter	325-6 Sunayama-cho, Naka-ku, Hamamatsu City, Shizuoka Pref., 430-8587, Japan
Established	September 29, 1953
Representative	Akira Hiruma, president
Capital	34,928,000,000 yen
Sales (nonconsolidated)	85,108,000,000 yen
Employees (nonconsolidated)	3,045
Products	Photonic Detectors, Light Sources, Cameras & Systems

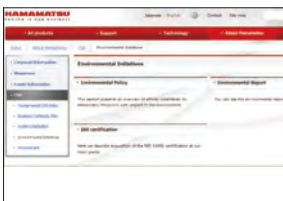


## Editing Guidelines

Period	Our fiscal year begins on October 1 of each year and ends on September 30 of the following year.
Organization	Hamamatsu Photonics K.K. (nonconsolidated)
Environmental Performance Data	Toyooka Factory, Tenno Glass Works, Main Factory, Mitsue Factory, Shingai Factory, Joko Factory, Miyakoda Factory, Central Research Laboratory, Main Office, and Industries Development Laboratory
Reference Guidelines	2012 Environmental Report Guidelines

## Webpage

[http://www.hamamatsu.com/jp/en/hamamatsu/csr/environmentl\\_initiatives/index.html](http://www.hamamatsu.com/jp/en/hamamatsu/csr/environmentl_initiatives/index.html)



HAMAMATSU PHOTONICS K.K. [www.hamamatsu.com](http://www.hamamatsu.com)



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