

Environmental management

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Hamamatsu Photonics Group Environmental Policy

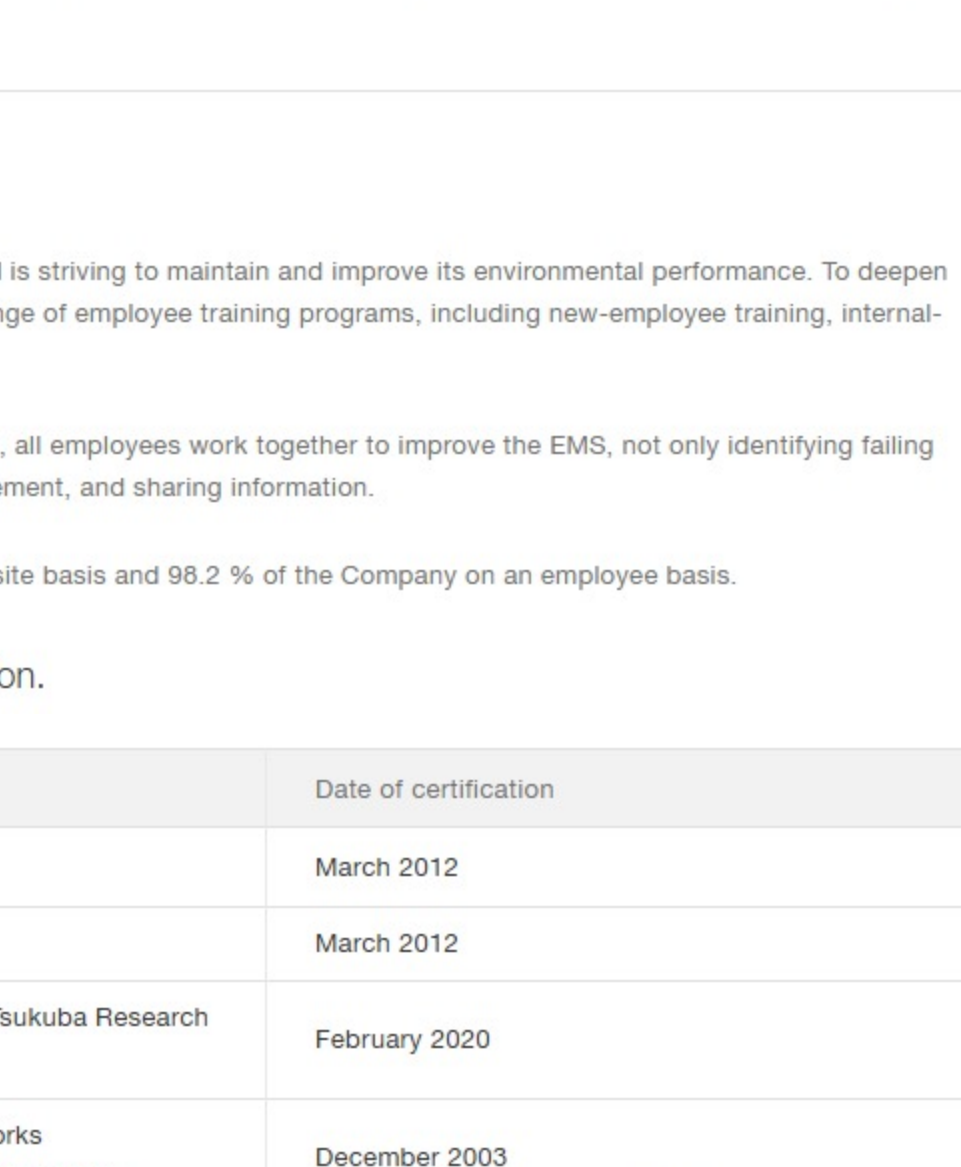
1. Providing environmentally friendly products
Develop and provide products that contribute to environmental improvement and reduce the impact throughout the product life cycle.
2. Actions to address environmental activities
Encourage all our employees to take environmentally friendly actions, and strive to achieve our environmental goals based on the identification of risks and opportunities that can influence our business activities, products, and services.
3. Protection of the environment, prevention of pollution
Address climate change mitigation and adaptation, resource circulation, energy saving, waste reduction, chemical management, biodiversity protection, water conservation, and pollution prevention.
4. Compliance with environmental regulations
Comply with domestic and international legal requirements, individual agreements, and other requirements to which we subscribe voluntarily.
5. Continuous improvement of the environmental management system
Make every effort to improve our environmental performance through the continuous improvement of our environmental management system, by evaluating our environmental impact at regular intervals.
6. Promoting environmental communication
Promote environmental awareness and open communication with stakeholders and employees by sharing environmental information both internally and externally.

Established: December 4, 2002
Revised: April 1, 2024

Environmental management system

Under the Hamamatsu Photonics Fundamental Environmental Policy, each fiscal year we set environmental goals and targets for our environmental management system(EMS), we evaluate the results from our activity, and work to constantly improve our EMS on the basis of management review.

To ensure that the cycle described above runs smoothly, we have established a Headquarters Environmental Committee, the decision-making body of the EMS chaired by the General Environmental Management Representative (environmental management executive officer) under the Sustainability Management Committee. This Committee is an umbrella group composed of the five environmental working groups, the environmental committees in each business domain, and the Headquarters Environmental Secretariats. By establishing similar structures in each business domain, we enable the execution of comprehensive environmental activities.



The environmental working groups and the issues they primarily deal with are listed below.

- Energy saving working group: Reduction of use of electricity, fuel and other forms of energy; advancement of use of renewable energy; prevention of global warming
- Waste working group: Appropriate management of waste, "Reduce, Reuse, Recycle" (3R Activities)
- Chemicals working group: Appropriate management of chemicals, management of shipment and receipt of chemicals
- Conservation working group: Pollution prevention and other environmental maintenance, maintenance of biodiversity, prevention of global warming
- Product assessment working group: Advancement of environment-friendly and environmentally contributing products; management of chemicals included in products; green procurement

Certification under ISO 14001

Every business location of Hamamatsu Photonics is certified under ISO 14001:2015 and is striving to maintain and improve its environmental performance. To deepen each employee's understanding of the EMS, Hamamatsu Photonics conducts a wide range of employee training programs, including new-employee training, internal-auditor training and specialist environmental training.

The Company also conducts annual environmental internal audits. Through these audits, all employees work together to improve the EMS, not only identifying failing processes but also optimizing operation through pointing out areas for possible improvement, and sharing information.

Today ISO 14001 certification covers 100 % of Hamamatsu Photonics on a production-site basis and 98.2 % of the Company on an employee basis.

Hamamatsu Photonics is planning to expand the range of certification.

Organizational unit certified	Name of business location	Date of certification
Main Office	Main Office	March 2012
	Central Research Laboratory	March 2012
Central Research Laboratory	Industries Development Center, Tsukuba Research Center	February 2020
	Toyooka Factory, Tenno Glass Works (Including Koso Corporation and Takaoka Denshr)	December 2003 (December 2011, January 2018)
Electron Tube Division	Main Factory, Mitsue Factory	December 2003
Solid State Division	Shingai Factory	January 2012
System Division	Joko Factory	August 2004
Laser Division	Miyakoda Factory	February 2012

Initiatives of the Photonics Group

Hamamatsu Photonics is working with its subsidiaries in Japan and around the world to promote environmental action throughout the Photonics Group. The Company monitor environmental impact data and environmental activity plans of subsidiaries, share environmental measures, and provide environmental education. In FY2023, the Photonics Group as a whole improved its environmental management and took steps towards its long-term vision, introducing a waste management system and a CFC management system for Group companies in Japan, and a Group-wide environmental information management system for Group companies in Japan and abroad, and introducing renewable energy.

In addition, ISO 14001 certification was newly obtained by HPUK in October 2022, in addition to Koso, Takaoka Electronics, BHP/BHM, HPKR, EQ and HPD. As a result, the coverage of certification on a consolidated basis amounts to 92.3% on a manufacturing site basis and 88.1% on an employee basis.

Targets and results of environmental activities

Medium- and long-term targets

Item	Medium- and long-term targets
EMS	Advancement and improvement of the Fundamental Environmental Policy, its objectives and its targets Advancement of the Environmental Management System (EMS)
Making products environmentally friendly	Production and development of environmentally friendly products; expansion to new markets and customers
Appropriate management of chemicals	Establishment of appropriate management systems for chemicals Promotion of understanding and management of the dangers and hazards of chemicals
Prevention of pollution	Compliance with laws and regulations and efforts to prevent environmental pollution
Fighting global warming	Reduction of greenhouse gas emissions by 83 % or more compared with FY2018 in FY2051 Reduction of energy consumption per unit of sales by 10 % or more compared with FY2021 in FY2031
	<RE100> Increase of use of renewables to 100 % of electricity used in FY2040 Increase of use of renewables to 80 % or more of electricity used in FY2030
	<SBT> [Scope1+2] Reduction of greenhouse gas emissions by 30 % or more compared with FY2019 in FY2031 (Science Based Targets) [Scope3] Category 11 (Emissions from use of sold products) : 15% reduction by FY2031 (Compared to FY2019) (Science Based Targets) Category 1 (Emissions from purchased goods and services) : 76 % of suppliers by spend covering purchased products and service will have science-based targets by FY2026. (fiscal year ended September 2026) (Science Based Targets)
3R activities	<Non-energy greenhouse gas> Reduction of non-energy greenhouse gas emissions by 44 % with FY2013 in FY2030
Measures to protect water resources	Support of Company-wide landfill rate of less than 1.8 % Minimizing the environmental impacts caused by waste plastics by FY2030
Environmental and social communications	Advancement of environmental communications

Targets and results in FY2023

Item	Main targets in FY2023	Main results in FY2023	Evaluation
EMS	Continuous support, management and improvement of the EMS at ISO 14001-certified business locations	• Acceptance of maintenance and renewal examinations from external examining organizations	✓
	Compliance with environmental laws and regulations	Number of violations of environmental laws and regulations: 0	✓
Making products environmentally friendly	Company-internal/external operation based on the Standards for Use of Environmentally Controlled Substances (Management of Chemical Substances) and update of the Standards	• Updated to version 2.0 of Standard for Use of Environmentally Controlled Substances • Provided presentations on green procurement (to business partners), in-house training (In Japan: 6 times; overseas subsidiaries and dealers: 3 times)	✓
	Advancing R&D in environmentally contributing and friendly products	Advanced at each business locations Case Studies >	✓
Appropriate management of chemicals	None of major nonconformity of chemical environmental laws and regulations None of chemical substance related environmental accident	None of major nonconformity None of environmental accident Trained 428 employees to use and handle hazardous chemicals safely.	✓
	Prevention of pollution	Confirmed and responded to applicable laws, etc. and observed environmental-maintenance facilities.	✓
	Support and management of operations according to autonomous standards	Confirmed and responded to applicable laws, etc. and observed environmental-maintenance facilities.	✓
Fighting global warming	Reduction of greenhouse gas emissions by 12.5 % or more compared with FY2018	• Reduction by 88.7 % compared with FY2018	✓
	Promoting the introduction of renewable energy	• Renewable-energy usage rate: 80 %	✓
	Reduction of energy consumption per unit of sales by 2 % compared with FY2021 compared with the previous fiscal year	11.7 % reduction compared with FY2021	✓
3R activities	Support of Company-wide landfill rate of less than 1.8 %	Landfill rate of 0.9 %	✓
	Support of management of waste-disposal contractors	Through actions such as on-site inspection of the operations of waste-disposal contractors, it was confirmed that the contracted waste disposal is handled correctly.	✓
	Measures to protect water resources	Support of reduction of water use per unit of sales by 10 % compared with FY2020 (Reduce by 1 % in one year)	22.4 % reduction compared with FY2020. (1.3 % increase compared with the previous fiscal year.)
Evaluation of water risks		Using tools for the evaluation of water risk (Aqueeduct), water risks were evaluated at all production facilities and research centers. In addition to "WRI Aqueeduct", we also measure of risks with local hazard maps such as "Hamamatsu City Disaster Prevention Maps" and "Ibaraki Digital Map".	✓
	Promoting biodiversity conservation activities	• Distribution of Happy Memorial Trees to 126 employees. A total 512 employees participated in the following activities • Local cleaning activities (14 times) at each Division • Lake Hamana Cleanup Campaign, etc (5 times).	✓
Environmental and social communications	Dissemination of environmental information within and outside the Company	• Dissemination of environmental information in online • Held internal environmental learning courses • Posted ECO communication 4 times a year in company newsletter	✓

Compliance with environmental laws and regulations

Hamamatsu Photonics works hard to prevent pollution of the living environment in all forms, including air, water, noise, soil and odor pollution. We also strive to reduce our environmental impact and manage waste responsibly. On a regular basis, the Company measures and analyzes outputs such as wastewater, noise and vibration, and conducts on-site inspection of its waste-disposal contractors. When problems are discovered, we take appropriate measures and takes every precaution to ensure that it complies strictly with environmental laws and regulations. At the meetings of the Headquarters Conservation Working Group and Headquarters Waste Working Group, we observe environmental preservation facilities and the status of waste management at each business location.

There were no violations of environmental laws and regulations, environment-related fines or major environmental accidents at Hamamatsu Photonics during the period under review.

Environmental accounting

The environmental accounts for FY2018 and FY2019 are currently being prepared.

Period covered: FY2017 (October 1, 2016 to September 30, 2017)
Scope of tabulation: Hamamatsu Photonics K.K., non-consolidated
Method of tabulation: Tabulation was conducted with reference to the Ministry of the Environment's Environmental Accounting Guidelines 2005.
Related investments: Capital investment related to the conservation of the environment
Related expenses: Personnel costs and expenses related to environmental conservation (except depreciation)
Note: For expenses and investments that cannot be considered entirely related to environmental conservation, balance tabulation and proportional-distribution tabulation are conducted.

1. Environmental conservation cost

Concerning the results for environmental conservation costs in the fiscal year under review, investments were ¥863 million and expenses were ¥921 million. In comparison with the previous fiscal year, investments increased while expenses decreased. The majority of investments consisted of costs for the global environmental conservation and costs for prevention of pollution, both of which are included under costs within operating areas; and research and development costs, which mainly consist of costs for research and prevention of environmentally friendly and environmentally contributing products. Meanwhile, expenses mainly consisted of research and development costs.

Classification	Main activities	Investments (millions of yen)	Expenses (millions of yen)
Business area cost	Prevention of pollution Prevention of air and water pollution, restraint of emissions of chemicals into the environment, etc.	168	68
	Global environmental conservation Investment and maintenance costs for energy-saving equipment, etc.	385	9
Upstream/downstream cost	Resource circulation Treatment, disposal, recycling of general and industrial waste, etc.	0	82
	Advancement of green procurement, surveys of chemicals included in products, recycling of containers and packaging, etc.	2	105
Administration cost	Expenses for formation and maintenance of the EMS, greening and beautification of business locations, etc.	63	175
R&D cost	R&D in environmentally friendly products and environmentally contributing products, etc.	246	479
Social activity cost	Expenses for greening and beautification of areas around business locations, etc.	0	1
Environmental remediation cost	Imposition of fees for pollution impact	0	0
Other	Environmental conservation activities	1	0
Total ¹⁾		863	921

¹⁾ The total may differ from the total of investment and expenses in each category due to rounding.

Breakdown of environmental conservation cost



2. Environmental conservation benefit

Category	Environmental performance index (unit)	FY2016 ²⁾	FY2017	Environmental conservation benefit (amount of improvement compared with previous fiscal year)	
Effects within the business area	Environmental conservation benefit related to resources input into business activities	Energy usage (thousands of GJ)	1,155	1,093	62
	Environmental conservation benefit related to waste or originating impact originating from business activities	Amount of relevant chemicals handled (t)	14	13	1
		Water usage (thousands of cu. m)	784	703	81
		Amount of photocopy paper purchased (t)	25	24	1
Container and packaging usage (t)		296	318	-22	
Total	Volume of greenhouse-gas emissions (t)	53,475	50,151	3,324	
	Total waste emissions volume (t)	776	869	-93	
	Final waste disposal volume (t)	12	9	3	
	Recycling volume (t) ³⁾	756	870	114	
	Wastewater volume (thousands of cu. m)	761	631	130	
	Nitrogen oxides (t)	44	46	-2	

²⁾ This value is adjusted for increases and decreases in sales.
³⁾ Increase in recycling volume is evaluated as a positive effect.

3. Economic benefit associated with environmental conservation activities (actual benefit)

Economic benefit associated with environmental conservation activities¹⁾ refers to the effects generated by environmental conservation activities, expressed in financial terms.

	Item of benefit	Economic benefit (millions of yen) ¹⁾
Revenue	Revenue from sale of valuables	41
	Revenue from sale from solar-power generation	6
Expense saving	Expense reductions from energy-saving measures	185
	Reductions in waste-treatment expenses	-5
	Reductions in photocopy-paper purchasing expenses	1
	Reductions in expenses from purchasing of containers and packaging	-4
	Reductions in fees for waterworks usage	-0.4
	Reductions in fees for sewerage usage	-1
Total ²⁾		223

¹⁾ Figures other than receipts from sale of valuables are calculated as economic benefit using figures adjusted for increases and decreases in sales.
²⁾ The total may differ from the total of individual categories due to rounding.

Timeline of environmental activities

Final update: Jan 31, 2024

Year	Environmental activities and related topics
2023	Restructuring and introduction of chemical substance management system Restructuring and introduction of environmental information management system Restructuring and introduction of CFC management system
2022	Restructuring and introduction of waste management system Conversion of all purchased electricity at domestic business sites (excluding some offices) to renewable energy Participated in the international initiative "RE100" Began disclosing information based on the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD)
2021	Photonics Group's Greenhouse Gas Reduction Targets Receive SBT Certification Receipt of 2020 Environmentally Friendly Building Award from Shizuoka Prefecture for Shingai Factory Building No. 2
2020	Endorsement of the Task Force on Climate-related Financial Disclosure (TCFD) recommendations Introduction of solar-power generating equipment (Toyooka Factory, Shingai Factory) Endorsement of the Declaration of Biodiversity by Keidanren and Action Policy Formulation of the Long-Term Vision for Global Warming Countermeasures to 2050 Expansion of the scope of ISO 14001 certification (Industries Development Center, Tsukuba Research Center)
2019	Expansion of the scope of ISO 14001 certification (Miyakoda Factory CFC) Participation in a prefectural 6R campaign to prevent ocean waste plastic Introduction of solar-power generating equipment (Main Factory) Publication of 2019 Environmental and Social Report Participation in Hamamatsu City's 2019 Environmental Future Project—Countywide Garbage Reduction Campaign
2018	Participation in the electrical and electronics industries' Low-carbon Society Action Plan Start of purchasing of renewable (CO ₂ -free) energy Start of participation in flower-bed display by Hamamatsu Shizuoka (south exit of JR Hamamatsu Station) Receipt of 2017 Environmentally Friendly Building Award from Shizuoka Prefecture for Shingai Factory Building No. 1 Publication of 2018 Environmental and Social Report
2017	Start of participation in Shizuoka Prefecture Industrial Waste 3R Campaign Receipt of Chair's Award from the Chubu Regional Committee on Rationalization of Energy Use for corporate excellence in energy management (for Mitsue Factory) Revision of Fundamental Environmental Policy Publication of 2017 Environmental Report
2016	Implementation of third-party testing of greenhouse-gas emissions in accordance with ISO 14064-3 Receipt of CSR Activity Award (for social-contribution activities) for Hamamatsu businesses (for JoJo Factory and Miyakoda Factory) Receipt of Shizuoka Prefecture Governor's Award for Distinguished Service in Advancement of Appropriate Treatment of Industrial Waste Receipt of Top Runner Award from the 2016 Hamamatsu City Top Runner Certification Program for New Energy and Energy-saving Measures Start of participation in the KALA seawall tree-planting project Receipt of Grand Prix in the business-location category of the 2015 Tiry Fujinokuni Eco Challenge Cup Publication of 2016 Environmental Report
2015	Start of Donguri-no-Morizukuri (tree-planting) activities (Central Research Laboratory) Introduction of solar-power generating equipment in coordination with the Company's solar-power generating business (Toyooka Factory) Publication of 2015 Environmental Report
2014	Registration to participate in Fun to Share, a climate-change campaign promoted by the Ministry of the Environment Publication of 2014 Environmental Report
2013	Receipt of the FY2013 Environment Minister's Award for Activities to Prevent Global Warming Introduction of solar power generating equipment (Central Research Laboratory) Start of introduction of solar power generating equipment at employee dormitories Receipt of Kanto Bureau of Economy, Trade and Industry Director's Award for corporate excellence in energy management (for Main Factory) Start of participation in the Lake Hamana Cleanup Campaign Participation in the Subcommittee on Environmental Measures for Light-source Devices of the Japan Lighting Manufacturers Association (JLMA) Publication of 2013 Environmental Report Receipt of Judges' Special Prize in the 2012 Fujinokuni Eco Challenge Cup Participation in the Environmental Committee of the Japan Analytical Instruments Manufacturers' Association (JAIMA)
2012	Participation in the Energy and Low-carbon Measures Committee of the Japan Electric Measuring Instruments Manufacturers' Association (JEMIMA) Receipt of Top Runner Award from the 2011 Hamamatsu City Top Runner Certification Program for New Energy and Energy-saving Measures (eco-friendly business-location category) Publication of 2012 Environmental Report Certification under ISO 14001 of the Central Research Laboratory, Miyakoda Factory and Main Factory
2011	Receipt of Kanto Bureau of Economy, Trade and Industry Director's Award for corporate excellence in energy management (for the Central Research Laboratory) Start of apportionment of Happy Memorial Trees Publication of 2011 Environmental Report
2010	Receipt of Associate Grand Prix in the CSR/eco-office category of the 2009 Stop Global Warming Action Campaign Registration to participate in the Challenge 25 Campaign Publication of 2010 Environmental Report Complete Elimination Company-wide of perfluorooctane sulfonate (PFOS) Sponsorship of Hamamatsu City as "Hamamatsu, City Where You Can Enjoy Green Living"
2009	Sponsorship of Hamamatsu City as "Hamamatsu, City of Flowers and Greenery" Receipt of silver medal in the Excellent Energy Service Company (ESCO) Award program (Central Research Laboratory)
2008	Registration for participation in Team Minus 6% Introduction of acid-waste-trickering equipment (Main Factory)
2007	Introduction of energy-service operations (Central Research Laboratory)
2006	Introduction of system for management of chemicals included in products Start of provision of information on the removal of Hamamatsu Photonics products with RoHS (EU) directives Start of introduction of equipment for compliance of perfluorinated compounds (PFCs) (Main Factory) Introduction of a gas cogeneration system (Main Factory) Preparation of Green Purchasing Guide
2004	Establishment of Standard on Use of Environmentally Controlled Substances (chemicals) Certification under ISO 14001 Participation in Environmental Green Committee of JEMIMA Membership in the Japan Business Council in Europe (JBCE) Participation in the Environmental Working Group of the Japan Medical Imaging and Radiological Systems Industries Association (JIRA)
2003	Complete elimination Company-wide of controlled CFCs and 1,1,1-trichloroethane Establishment of the Green Procurement Policy and management procedures for environmentally controlled substances Certification of Electron Tube Division and Solid State Division under ISO 14001
2002	Launch of the Headquarters Environment Committee Introduction of environmental accounting Establishment of the Fundamental Environmental Policy
2001	Launch of the Seminar on Environmental Laws and Regulations, an in-house training program
1998	Launch of the Environmental Preparation Committee
1990	Launch of the Environmental Preservation Measures Committee

Environment >

Environmental management	Disclosure based on TCFD Recommendations, Reducing carbon emissions and climate change >	Management of pollution including waste >
Environmentally Friendly and Contributing Products >	Protecting our water resources >	Environmental communication activities >
Environmental report back number >	Inquiries concerning Environmental Initiatives >	