

Environmental Data Book 2016

ROHM Co., Ltd.

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OPeriod covered by this Report

Fiscal year 2015: April 1, 2015 to March 31, 2016

OScope of this Report

This Report covers environmental conservation activities implemented by ROHM Head Office, ROHM Yokohama Technology Center, and 16 ROHM Group Affiliates: 8 domestic affiliates including 3 LAPIS Semiconductor Group companies and 8 overseas affiliates.

RMT that shut down due to the 2011 Thailand floods is not included in the data aggregation for the period of fiscal 2011 to fiscal 2015.

YTC and LAPIS Semiconductor Co., Ltd. have become subject to this Report since fiscal 2014.

SciCrystal, and Kionix are not included in the data aggregation at present,

but it is being considered to include these companies in the data aggregation in the future.

OAbbreviated names for the Overseas Affiliates

For the purposes of this Report, the names of the Overseas Affiliates are abbreviates as follows:

YTC: ROHM Yokohama Technology Center (Japan) REPI: ROHM Electronics Philippines, Inc. (Philippines) RIST: ROHM Integrated Systems (Thailand) Co.,Ltd. (Thailand) RSC: ROHM Semiconductor (China) Co.,Ltd. (China) REDA: ROHM Electronics Dalian Co.,Ltd. (China) RWEM: ROHM-Wako Electronics (Malaysia) Sdn.Bhd. (Malaysia) RMPI: ROHM Mechatech Philippines, Inc. (Philippines) RMT: ROHM Mechatech (Thailand) Co.,Ltd. (Thailand)

# **Environmental Policy**

# ROHM's Environmental Policy

ROHM's everlasting conscientiousness to preserve the global environment contributes to the healthy existence of humanity and to the continued prosperity of the company.

- 1. Conserve energy by initiating innovative methods in all corporate activities.
- 2. Develop environmentally-conscious products that minimize the environmental burden by employing responsible processes throughout the life cycle of each product.
- 3. Give priority to the procurement of materials and products that have the least levels of adverse impact on the environment.
- 4. Comply with international and national environmental laws and regional agreements.
- 5. Endeavor to train employees and encourage our constituents to actively care for their surroundings and the global environment.
- 6. Develop positive relationships with the community through contributions to the local environment and the proper disclosure of environmental data.
- 7.We continuously resolve problems by creating and carrying out the environmental objectives, and their action plans. We strive for higher levels of excellence through

ROHM established an Environmental Policy applicable to the entire ROHM Group on October 20, 1997 pursuant to the provisions in the International Environmental Standards ISO 14001.

In response to the 2004 revision of ISO 14001, ROHM made a complete revision to the Environmental Policy on April 1, 2006 to provide even more concise, clearer, and more exact descriptions.

Furthermore, item that is promoting the continuous improvement of Environmental activity was added on April 1,2016.

#### ROHM's Approaches toward Global Environmental Conservation



ROHM has been working on a variety of environmental conservation activities centering on the Environmental Policy.

We believe that corporate activities contributing to the environment are to manufacture environmentally friendly products and yet to reduce our own environmental impact in manufacturing them. Particularly for the prevention of global warming, we are active in a range of the reduction of  ${\rm CO_2}$  and other greenhouse gases emitted from our business operations.

In addition, we will define long-term environmental targets and policy from the perspective of biodiversity, and have approaches to realize sustainable society.

# **Environmental Objectives**

#### OResponse to Legal Requirements

We shall certainly comply with environmental laws and requirements relating to all business activities and voluntarily promote to reduce the environmental impacts.

#### OObjectives and Targets of Voluntary Activities

1. CO<sub>2</sub> countermeasures in each site

[Policy] Work to stop global warming throuh overall energy conservation and the reduction of global greenhouse gas emission.

[Objectives] (1) Reduce CO<sub>2</sub> emission by 25% in FY2020 from the actual results of FY2005.

- (2) Reduce CO<sub>2</sub> emission (per production unit) by 50% in FY2020 from the actual results of FY1990.
- (3) Reduce global greenhouse gas emission (PFC's SF6, etc) by 50% in FY2020 from the actual results of FY1995.

#### 2. CO<sub>2</sub> countermeasures through value chain

[Policy] The scientific techniques and various kinds of calculation tools including LCA are utilized, and CO<sub>2</sub> reduction activities are promoted.

Development of the environmentally-conscious products in alignment with 'NEXT50' is led, and it contributes to the CO<sub>2</sub> reduction at the time of use.

- [Objectives] (1) Reduce CO<sub>2</sub> emission through the value chain by 10% in FY2020 from the actual results of FY2010.
  - (2) Increase the ratio of environmentally-conscious products that account for product development to 100% by FY2020.

#### 3. Reduction of environmental impact

[Policy] Reduce the amount of materials discharged to the air and water, and strive to preserve the Grobal environment.

- [Objectives] (1) Reduce the amount of handling volume of PRTR substances (per production unit) by 10% in FY2020 from the actual results of FY2010.
  - (2) Reduce VOC emission by 40% by FY2020 from the actual results of FY2000.

#### 4. Effective use of resources

[Policy] Strive for the effective use of valuable resources and the protection of water resources that are fundamental to environmental biodiversity.

- [Objectives] (1) Maintain zero emission in domestic group consolidated and reduce waste generation(per production unit) by 40% by FY2020 from the actual results of FY2000.
  - (2) Reduce waste generation(per production unit) in overseas group consolidated by 60% by FY2020 from the actual results of FY2000.
  - (3) Reduce water input volume by 10% in FY2020 from the actual results of FY2009.
  - (4) Increase the usage ratio of the eco-reel (reduced, compact reel) that comprises the packaging reel to 100% by FY2020.

#### 5. Promotion of original environmental activity at each site

[Policy] Consider the environmental impact, implementation of the new project and all, Set the original target and carry out the environmental activity.

[Objectives] The activity which can be completed at a given single year, the purpose does not set up.

### Outline of ROHM's Environmental Conservation Activities

# Targets and Results based on Environmental Policy

The ROHM Group defines targets and approaches based on the environmental policy and objectives to formulate an action plan each year toward the accomplishments of the targets and approaches and promote positive activities.

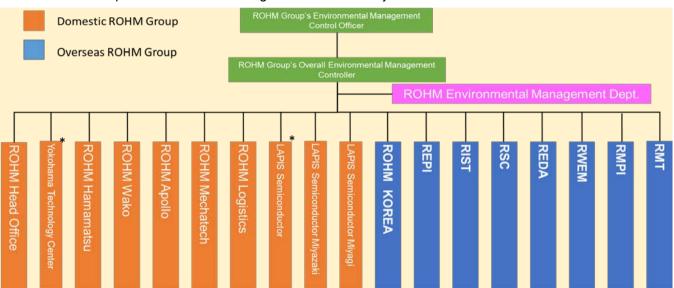
[ Targets and Results in Fiscal Year 2015 ]

| Targets in Fiscal Year 2015  | Results in Fiscal Year 2015   | Evaluation |
|--|---|------------|
| [CO <sub>2</sub> reduction   | n measures at bases]  |            |
| ① Reduce CO <sub>2</sub> emissions by 1% from the predicted value based on the 2015 production volume.                                   | ① CO2 emissions were reduced by 7.3% from the predicted value based on the 2015 production volume.                              |            |
| ② Reduce CO2 emissions per unit by 1% from the 2014 level.   | ② CO <sub>2</sub> emissions per unit production were increased by 0.2% from the 2014 level.                                     | **         |
| ③ Reduce greenhouse gas (i.e. PFCs, SF6) emissions by 1% from the predicted value based on the 2015 production volume.                   | ③ Greenhouse gas (i.e. PFCs, SF6) emissions were reduced by 22.2% from the predicted value based on the 2015 production volume. |            |
| [CO <sub>2</sub> reduction meas  | sures through value chains]   |            |
| ① Formulate a model to calculate greenhouse gas emissions based on the GHG Protocol Scope 3, and disclose the emissions.                 | ① The GHG Protocol employment model according to Ctegory Scope3 is utilized, and six categories are exhibited.                  | -A- A-     |
| ② Increase the ratio of eco-friendly products that comprise sales profits to 75%.  | ② The development ratio of eco-friendly products is 88%.  | **         |
| [Reduction of e  | environmental impact]   |            |
| ① Maintain the 2014 results of PRTR substances handled per unit.   | ① Reduced the PRTR substances handled per unit by 12.7% from the 2014 level.  |            |
| ② Reduce VOC emissions by 1% from the value predicted based on the 2015 production volume.   | ② Reduce VOC emmissions by 15.7% from the predicted value based on the 2015 production volume.                                  | **         |
| [Effective utili   | zation of resources]  |            |
| ① Maintain zero emissions at domestic consolidation and the 2014 results of waste volume (per unit production) handled per unit.         | ① Zero emissions were maintained at all domestic companies, Waste emissions per unit was reduced by 4.2% from the 2014 level.   |            |
| ② Maintain the 2014 results of the volume of consolidated waste overseas (per unit production).  | ② Waste emissions per unit at overseas companies was reduced by 0.6% from the 2014 level.                                       |            |
| ③ Reduce water consumption by 1% from the value predicted based on the 2015 production volume.   | ③ Water consumption was reduced by 5.8%from the the value predicted based on the 2015 production volume.                        | ***        |
| Raise the proportion of use of Eco reels (volume-<br>and weight-reduced reels) to that for packaging reels to<br>60% by the end of 2015. | A Raised the proportion of use of Eco reels (volume-<br>and weight-reduced reels) to that for packaging reels<br>to 79%.        |            |
|  | 4   |            |

#### Outline of ROHM's Environmental Conservation Activities

# **Environmental Management System**

ROHM Group's Environmental Management Promotion System



ROHM has deployed across the ROHM Group an environmental management system designed to be shared among the Group on the basis of the International Environmental Standard ISO 14001 and all employees have been working on continual environment improvements.

Furthermore, the ROHM Group has been implementing constant environmental activities from a global perspective on a consolidated basis.

ROHM Head Office Environmental Management Promotion System

President

Chairperson of the Environmental Conservation Management Committee

Internal Environmental Auditor

Overall Environmental Management
Controller

Environmental Conservation Management Committee

Environmental Conservation Management
Controller

Environmental Conservation Management Committee

Environmental Management
Controller

Sales Headquarters

Environmental Management
Controller

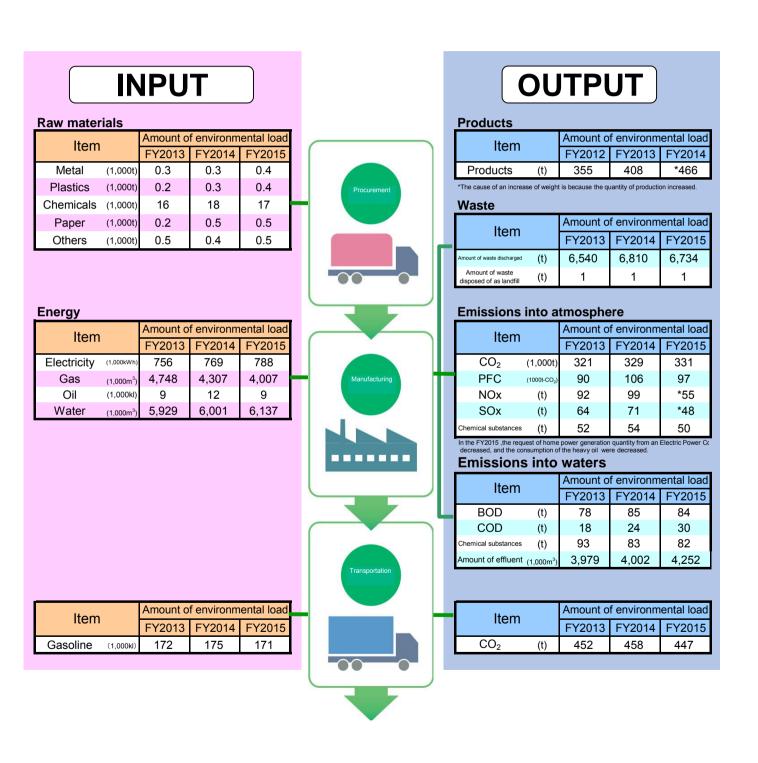
Subcommittee on Energy Conservation Subcommittee on Environmental Impact Reduction Subcommittee on Environmental Impact Reduction Subcommittee on Environmental Incommental Impact Reduction Subcommittee on Discharge restraint of Freon

ROHM started the environmental management promotion system in its Head Office in 1990 mainly to conduct pollution prevention activities, and rebuilt it afterward to a promotion system taking environmental conservation with a view to the global environment as a principle behind its activities. In this rebuilt promotion system, the "Environmental Conservation Measures Committee" that deliberates significant policies and measures relating to the environmental activities, and six Subcommittees and one Working group that comprise the Committee are playing an important role in the promotion system. The Subcommittees are composed of experts in the relevant field, engineers, and related national qualification holders, and the chairpersons of the Subcommittee serve as members of the Environmental Conservation Measures Committee. The Management Committee and Subcommittees and Working group meetings are held on a monthly basis.

#### **Environment Report**

# Highlights of Environmental Impact

### **Domestic Bases**



# **Overseas Bases**

# **INPUT**

#### Raw materials

| Item      |          | Amount of environmental load |        |        |  |  |  |
|-----------|----------|------------------------------|--------|--------|--|--|--|
| iteiii    |          | FY2013                       | FY2014 | FY2015 |  |  |  |
| Metal     | (1,000t) | 3.5                          | 3.9    | 3.5    |  |  |  |
| Plastics  | (1,000t) | 4.1                          | 4.3    | 3.9    |  |  |  |
| Chemicals | (1,000t) | 2.8                          | 2.9    | 2.6    |  |  |  |
| Paper     | (1,000t) | 2.5                          | 2.6    | 2.3    |  |  |  |
| Others    | (1,000t) | 0.7                          | 0.7    | 0.7    |  |  |  |



| Item        |                        | Amount of environmental load |        |        |  |  |  |  |
|-------------|------------------------|------------------------------|--------|--------|--|--|--|--|
| пеш         |                        | FY2013                       | FY2014 | FY2015 |  |  |  |  |
| Electricity | (1,000kWh)             | 591                          | 609    | 594    |  |  |  |  |
| Gas         | (1,000m <sup>3</sup> ) | 104                          | 142    | *1495  |  |  |  |  |
| Oil         | (1,000kl)              | 5                            | 6      | *2     |  |  |  |  |
| Water       | (1,000m <sup>3</sup> ) | 3,604                        | 3,818  | 3,686  |  |  |  |  |

\*It is because the boiler fuel of REDA was changed to town gas that the amount of the gas used increased.

It is based on use abolition of coal that the amount of the oil used was halved.
(In China, since many coal is used, so coal energy's amount convert to

heavy oil energy's amount .)



# OUTPUT

#### Products

| Item         | Amount of environmental load |        |        |  |  |
|--------------|------------------------------|--------|--------|--|--|
| пеш          | FY2013                       | FY2014 | FY2015 |  |  |
| Products (t) | 9,504                        | 9,837  | 8,121  |  |  |

#### Waste

| Item                                    |     | Amount of environmental load |        |        |  |  |  |  |
|---|-----|------------------------------|--------|--------|--|--|--|--|
| пеш                                     |     | FY2013                       | FY2014 | FY2015 |  |  |  |  |
| Amount of waste discharged              | (t) | 5,746                        | 6,131  | 5,652  |  |  |  |  |
| Amount of waste disposed of as landfill | (t) | 624                          | 573    | 499    |  |  |  |  |

#### **Emissions into atmosphere**

| Item                |          | Amount of environmental load |        |        |  |  |
|---------------------|----------|------------------------------|--------|--------|--|--|
| item                |          | FY2013                       | FY2014 | FY2015 |  |  |
| CO <sub>2</sub>     | (1,000t) | 237                          | 244    | 227    |  |  |
| NOx                 | (t)      | 1                            | *4     | *63    |  |  |
| SOx                 | (t)      | 0                            | *9     | *66    |  |  |
| Chemical substances | (t)      | 0                            | 1      | 1      |  |  |

The private electric generator of REPI which had stopped 2011 to middle in 2014 is resumed , so Heavy oil use restart .

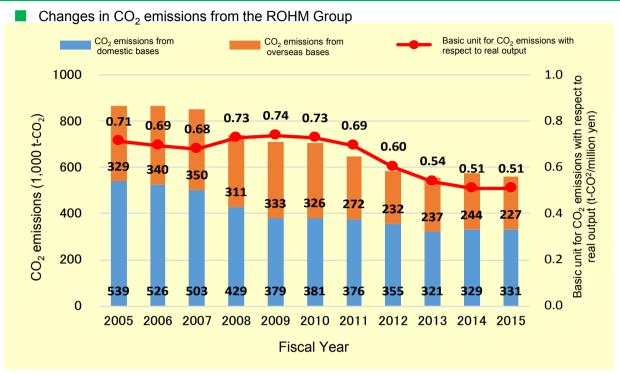
#### **Emissions into waters**

| Item                |                        | Amount of environmental load |        |        |  |  |  |  |  |
|---------------------|------------------------|------------------------------|--------|--------|--|--|--|--|--|
| псш                 |                        | FY2013                       | FY2014 | FY2015 |  |  |  |  |  |
| BOD                 | (t)                    | 26                           | 16     | 13     |  |  |  |  |  |
| COD                 | (t)                    | 81                           | 56     | 49     |  |  |  |  |  |
| Chemical substances | (t)                    | 1                            | 1      | 1      |  |  |  |  |  |
| Amount of effluent  | (1,000m <sup>3</sup> ) | 1033                         | 1,440  | 1,372  |  |  |  |  |  |



#### **Changes in Emissions of Environmentally Hazardous Substances**

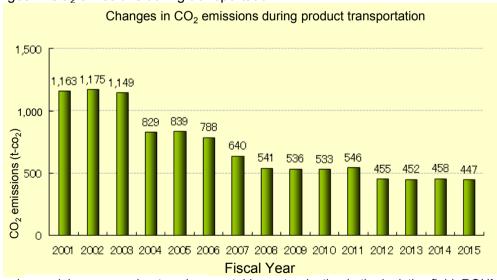
# Changes in CO<sub>2</sub> Emissions



ROHM has been pushing ahead with and boosting the shift of downstream process overseas due to the globalization of production bases. This resulted in the reduction of  $CO_2$  emissions from domestic bases by 39% in fiscal year 2015 compared to fiscal year 2005.

Furthermore, the basic unit for CO<sub>2</sub> emissions with respect to real output reduced by 56% in fiscal year 2015 compared to fiscal year1995.

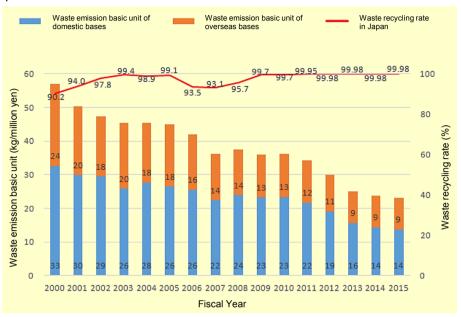
#### ■ Changes in CO₂ emissions during transportation



Amid growing social concerns about environmental impact reduction in the logistics field, ROHM has been working on the reduction of  $CO_2$  emissions caused by fuel consumption through transportation by road since fiscal year 2004 with measures taken for the transportation of products from production bases, including improvement in loading efficiency and the optimization of delivery frequency by the use of cross-docking. ROHM continued to integrate transport operations and focused on approaches to the reduction of  $CO_2$  emissions, thus achieving the reduction by 16% in fiscal year 2015 compared to fiscal year 2010.

# Changes in Emissions of Waste and PFC Gases

Waste emission basic unit (domestic and overseas bases) and recycling rate (domestic bases) of the ROHM Group



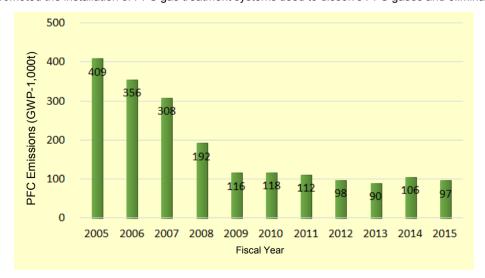
Regarding measures to reduce the volume of waste, ROHM Group companies optimize the amount of incoming and secondary materials and strive to increase yield as well as thoroughly separate unneeded materials generated to obtain valuable resources.

In addition, the ROHM Group has defined a waste recycling rate of at least 99% as 'zero emissions.' And after reaching this target at all domestic companies in fiscal year 2009, the group continues to strive towards a true 100% recycling rate (99.98% in fiscal year 2015). Waste emission basic unit were reduced by 65% from the 2000 level.

#### Changes in PFC Gas Emissions

What is PFC gas (Perfluorocarbon gas)?

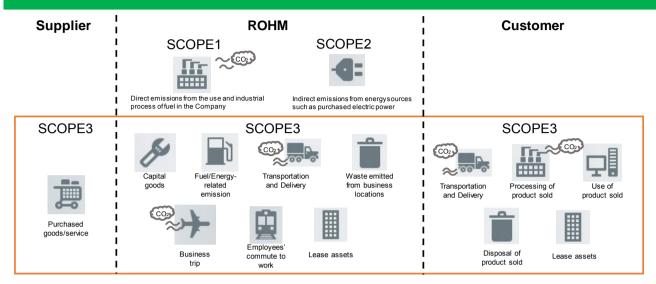
PFC gas is a material essential for fine processing of semiconductors, especially ICs. This PFC gas will turn to a greenhouse gas that produces greenhouse effect 6,500 times as high as CO<sub>2</sub> when it is released into the atmosphere. The semiconductor industry has determined a target for reduction in the PFC gas emissions and promoted the installation of PFC gas treatment systems used to dissolve PFC gases and eliminate the



The ROHM Group promoted the installation of PFC gas treatment systems and reduced PFC gas emissions by 68% in fiscal year 2015 compared to fiscal year 1995.

# CO<sub>2</sub> Emissions under the Scope3 Standard

# **Domestic and Overseas Bases**



#### CO<sub>2</sub> emissions from the ROHM Group's business operations in fiscal 2015

|   | Cate           | gory of     | Scope Protocol   | CO <sub>2</sub> Emissions<br>(t-CO <sub>2</sub> ) | Outline of Calculation  | Verification |
|---|----------------|-------------|--|---|---|--------------|
| SCOPE1 (Direct emiss  | sions)         |             |  | 42,904  | Direct emissions from facilities in the<br>Company's own business locations                                       | 0            |
| SCOPE2 (Indirect emis   | ssions from e  | nergy s our | pes)   | 515,335   | Emissions associated with the<br>production of energy purchased by the<br>Company's business locations            | 0            |
|   | Classification | Category    |  | CO <sub>2</sub> Emissions (t-CO <sub>2</sub> )    | Outline of Calculation  |              |
|   | Upstream       | 1           | Purchased product/service  | 363,198   | Emissions associated with the<br>manufacturing of purchased product<br>(including material and part)              |              |
|   | Upstream       | 2           | Capital goods  |   |   |              |
|   | Upstream       | 3           | Fuel- and energy-related activities not included in Scope1 and Scope 2 | 48,281  | Emissions associated with the procurement of fuel and energy used in the Company's business locations             |              |
|   | Upstream       | 4           | Transportation and Delivery (Upstream)                                 | 33,086  | Emissions associated with the distribution of sold product from the Plant → Logistics base → Consumer             | 0            |
|   | Upstream       | 5           | Waste emitted from business operations                                 | 298   | Emissions associated with the transportation and treatment of waste generated in the Company's business locations |              |
|   | Upstream       | 6           | Business trip  | 1,963   | Emissions associated with the business trips of employees   |              |
| SCOPE3 (Emissions<br>from any sources<br>other than Scope1<br>and Scope2, such as | Upstream       | 7           | Employers' commute to work   | 704   | Emissions associated with the movement of employees when they commute to the Company to work.                     |              |
| Company's supply chains)  | Upstream       | 8           | Lease assets (Upstream)  | -   | Not covered   |              |
|   | Downstream     | 9           | Transportation and Delivery (Downstream)                               |   |   |              |
|   | Downstream     | 10          | Processing of product sold   |   |   |              |
|   | Downstream     | 11          | Use of product sold  |   |   |              |
|   | Dow nstream    | 12          | Disposal of product sold   |   |   |              |
|   | Downstream     | 13          | Lease assets (Downstream)  | -   | Not covered   |              |
|   | Dow nstream    | 14          | Franchising  | -   | Not covered   |              |
|   | Downstream     | 15          | Investment   |   |   |              |

# Independent Verification of Environmental Data

The ROHM Group received an independent verification of its environmental impact data by Bureau Veritas Japan Co., Ltd. in order to disclose information to society with higher transparency and reliability.

#### [Scope of Verification]

Scope 1 and 2 12 domestic sites

Scope 3, Category 4: Upstream Transportation and Distribution:

Product transportation between 8 domestic manufacturing sites, 1 domestic logistics center, 6 overseas manufacturing plants, and 9 overseas sales companies and domestic and overseas





Environmental Performance Data Independent Verification Report

Greenhouse Gas Emissions Verification Report

#### [Comment of Verifier]

Through the verification of the states of tabulating data in the 12 domestic sites and Head Office, It was confirmed that the mechanism of reporting to Head Office numerical values calculated according to the procedure functioned with certainty in all the foregoing sites and tabulated data with high reliability through automatic calculations.

The effect of these activities is expected to spread throughout the entire ROHM Group.

### **Environment Report**

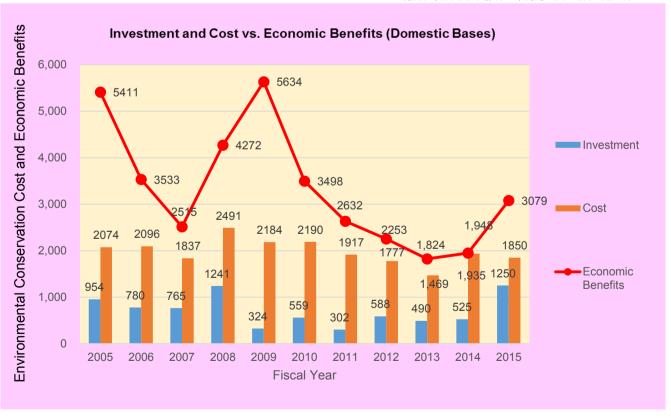
# **Environmental Accounting**

# **Domestic Bases**

(Unit: Millions of yen)

|  |            | FY2013 |                      |            | FY2014 |                      |            | FY2015 |                      |
|--|------------|--------|----------------------|------------|--------|----------------------|------------|--------|----------------------|
| Category of cost under the Guidelines  | Investment | Cost   | Economic<br>Benefits | Investment | Cost   | Economic<br>Benefits | Investment | Cost   | Economic<br>Benefits |
| Pollution prevention cost              | 69         | 841    | -                    | 135        | 1,074  | -                    | 172        | 1,034  | -                    |
| Global environmental conservation cost | 361        | 118    | 758                  | 374        | 225    | 926                  | * 1,057    | 238    | * 1,932              |
| Resource recycling cost                | 11         | 251    | 1,065                | 1          | 324    | 1,023                | 1          | 258    | 1,147                |
| Administration cost                    | 49         | 255    | -                    | 14         | 309    | -                    | 21         | 316    | -                    |
| Social activity cost                   | 0          | 4      | -                    | 0          | 4      | -                    | 0          | 4      | -                    |
| Environmental remediation cost         | 0          | 0      | -                    | 0          | 0      | -                    | 0          | 0      | _                    |
| Others                                 | 0          | 0      | -                    | 0          | 0      | -                    | 0          | 0      | _                    |
| Total                                  | 490        | 1,469  | 1,824                | 525        | 1,935  | 1,948                | 1,251      | 1,850  | 3,079                |

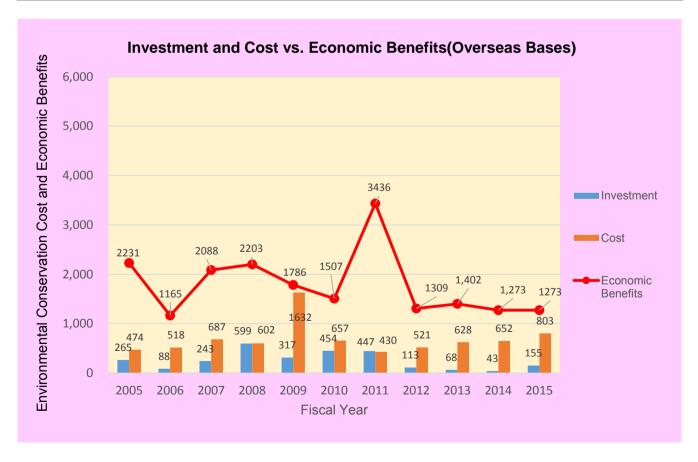
\*Updating to the energy-saving equipment in each site was



# **Overseas Bases**

(Unit: Millions of yen)

|  |            | FY2013 |                      |            | FY2014 |                      |            | FY2015 |                      |
|--|------------|--------|----------------------|------------|--------|----------------------|------------|--------|----------------------|
| Category of cost under the Guidelines  | Investment | Cost   | Economic<br>Benefits | Investment | Cost   | Economic<br>Benefits | Investment | Cost   | Economic<br>Benefits |
| Pollution prevention cost              | 12         | 350    | -                    | 3          | 424    | -                    | 3          | 470    | -                    |
| Global environmental conservation cost | 55         | 43     | 491                  | 38         | 39     | 338                  | 143        | 6      | 425                  |
| Resource recycling cost                | 23         | 65     | 818                  | 23         | 89     | 1,064                | 2          | 238    | 848                  |
| Administration cost                    | 1          | 48     | -                    | 3          | 58     | -                    | 7          | 69     | -                    |
| Social activity cost                   | 0          | 1      | -                    | 0          | 2      | -                    | 0          | 1      | -                    |
| Environmental remediation cost         | 0          | 0      | -                    | 0          | 0      | -                    | 0          | 0      | -                    |
| Others                                 | 0          | 14     | -                    | 0          | 16     | -                    | 0          | 19     | -                    |
| Total                                  | 92         | 521    | 1,309                | 67         | 628    | 1,402                | 155        | 803    | 1,273                |



### **Environment Report**

Approaches to Environmentally Friendly Products and Environment

# Social contribution through products



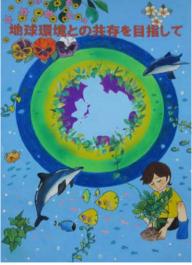
Nighttime illumination of Kamigamo Shrines

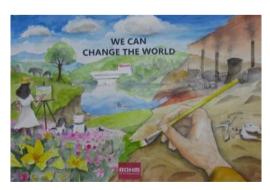
Cooperate with Awareness-raising Activities for Cultural Preservation We collaborated to provide nighttime illumination of Kamigamo and Shimogamo Shrines as part of "the 51st Special Viewing of Privately Owned Properties in Kyoto" from October to November 2015. At the venues, where traditional Shinto music and dance were performed, ROHM EnOcean wireless switches, which requires no batteries, wiring, or maintenance, were used to control the stage lighting.

#### **Environment Month Environment Poster Contest**

The ROHM Group has dedicated the month of June, in which World Environment Day falls, as Environment Month, and has held a ROHM Group Environmental Poster Contest by calling for posters and slogans related to environmental matters. Every year, we receive the increasing number of applications as well as artworks that take the environmental issues seriously.







Grand Prix

Award for Excellence

Award for Excellence

# **Approaches to Environmental Communications**

# **Approaches in "Environmental Conservation"**



ROHM HAMAMATSU Welcome Clean Project (The Enshu Nada Open Sea cleaning)



ROHM WAKO Refresh SETOUCHI Project (Seashore Cleanup campaign)



ROHM LOGISTICS

AMAKUSA Park Cleanup Campaign



ROHM APOLLO IKUHASHI Cleanup NAGAIHAMA Lake



RWEM
Cleanup Campaign in PANTAI Beach



REDA Afforestation Project



ROHM KOREA
One Company Cleanup
One River Campaign



REPI Plant of a fry to the LAGUNA Lake

# Approaches in "Environmental Education"



The ROHM Group has provided environmental education for elementary school students in Kyoto-city from FY2010. In the education program, we give the opportunities for them to experience the energy-saving effects such as comparing the energy-consumption of LED and miniature bulbs by using a human powered generator besides the lecture about global-warming's mechanism, and energy-saving tips that can be performed at home or school. The ROHM Group will continuously develop these kinds of activities that help children understand the value of global environment.

#### **Environmental Awards**

# Selected to the CDP Water Program "A LIST"



Selected CDP Water Program A LIST

ROHM was selected to "the CDP Water Program A LIST" in FY2015 as a leading company that takes action to improve water security and manage water resources. A LIST, the highest rank, emphasizes companies that make a great effort and progress to manage water resources in a sustainable way. Those companies in A LIST are selected and announced by a non-governmental organization, CDP that has the largest amount of corporate self-reported environmental data including water resource in the world while representing institutional investors in world-wide. Water resource is an essential for the production of semiconductors. ROHM works on the management of water consumption as well as the reduction of industrial wastewater globally. Also, we have established a Business Continuity Management system that can respond to a variety of risks including floods. Considering these water-related initiatives, we received such high evaluation.

### **Received Award for Excellence at Environmental**



Award for Excellence

On February 24, 2016, "ROHM Group Innovation Report 2015" received an award for excellence at "Environmental Communication Awards" sponsored by the Global Environmental Forum. This annual awarding system works to recognize outstanding environmental reports that promote the environmental communication and improve the quality of environmental information at companies. The award is given to companies that progressively work on the environmental initiatives related to "sustainability," "global-warming," and "biodiversity" and new information disclosure system. ROHM provide information disclosure in a more transparent and reliable manner by receiving third-party verification on its environmental impact data. Considering these initiatives, we could receive the award this time.

### RSC received the Environmental Excellence Company Award



State of the award ceremony

On June 5, 2015, RSC received the "Environmental Excellence Company Award" in Tianjin Economic-Technological Development Area, China. The Environmental Excellence Company Award is given to companies that achieved excellent activities for environmental impact reduction. RSC has won this Award for three consecutive years.

# **Site Reports (Domestic and Overseas Bases)**

ROHM Co., Ltd. 21 Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan



■Manufacturing items: Electronic parts, including semiconductors

|   |                      | 2013       | 2014       | 2015       |
|---|----------------------|------------|------------|------------|
| Power consumption                               | kWh                  | 77,167,000 | 78,805,000 | 81,613,000 |
| Fuel consumption                                | kį                   | 1,012      | 1,091      | 1,465      |
| Water consumption                               | 1,000 m <sup>3</sup> | 750        | 607        | 801        |
| Total waste emissions                           | t                    | 394        | 456        | 464        |
| Amount of waste finally disposed of as landfill | t                    | 0          | 0          | 0          |
| Waste recycling rate                            | %                    | 100        | 100        | 100        |
| Emissions into the atmosphere: NOx              | t                    | 1.1        | 3.3        | 3.3        |
| Emissions into waters: BOD                      | t                    | 5.0        | 2.1        | 1.9        |

 PRTR
 2013
 2014
 2015

 Ordinance number
 Substances covered handled handle

#### ROHM Yokohama Technology Center 2-4-8 Shin Yokohama, Kohoku-ku, Yokohama 222-8575 Japan

374 Hydrogen fluoride and its water-soluble salts



|                                    |                      | 2013 | 2014      | 2015      |
|------------------------------------|----------------------|------|-----------|-----------|
| Power consumption                  | kWh                  | -    | 3,006,803 | 2,757,727 |
| Fuel consumption                   | kl                   | -    | 68        | 81        |
| Water consumption                  | 1,000 m <sup>3</sup> | -    | 16        | 16        |
| Total waste emissions              | t                    | -    | 19        | 52        |
| Amount of waste finally            | +                    |      | 0         | 0         |
| disposed of as landfill            | ι                    | -    | U         | U         |
| Waste recycling rate               | %                    | -    | 100       | 100       |
| Emissions into the atmosphere: NOx | t                    | -    | 0.1       | 0.1       |
| Emissions into waters: BOD         | t                    | -    | 0.0       | 0.0       |

13.0

13.9

15.9

\*Included in data aggregation from fiscal 2014

#### ROHM Hamamatsu Co., Ltd. 10 Sanwa-cho, Minami-ku, Hamamatsu



■Manufacturing items: ICs and LEDs

|                                    |                      | 2013        | 2014        | 2015        |
|------------------------------------|----------------------|-------------|-------------|-------------|
| Power consumption                  | kWh                  | 148,573,000 | 151,422,599 | 152,138,480 |
| Fuel consumption                   | kl                   | 4,021       | 3,341       | *2,489      |
| Water consumption                  | 1,000 m <sup>3</sup> | 1,215       | 1,211       | 1,243       |
| Total waste emissions              | t                    | 894         | 699         | 571         |
| Amount of waste finally            | +                    | 0.0         | 0.1         | 0.1         |
| disposed of as landfill            | l                    | 0.0         | 0.1         | 0.1         |
| Waste recycling rate               | %                    | 99.99       | 99.98       | 99.98       |
| Emissions into the atmosphere: NOx | t                    | 5.7         | 5.1         | 4.4         |
| Emissions into waters: BOD         | t                    | 52.9        | 47.9        | 53.0        |

■PRTR Unit: tons

|   |                |                | Offic. torio   |
|---|----------------|----------------|----------------|
| PRTR  | 2013           | 2014           | 2015           |
| Ordinance number Substances covered               | Amount handled | Amount handled | Amount handled |
| 374 Hydrogen fluoride and its water-soluble salts | 49.2           | 56.2           | 50.9           |

\*By having introduced the turbo freezer, the amount of the gas used became less.

#### ROHM Wako Co., Ltd. 100 Tomioka, Kasaoka, Okayama



■Manufacturing items: ICs, diodes, and semiconductor lasers

|                                    |                      | 2013       | 2014       | 2015        |
|------------------------------------|----------------------|------------|------------|-------------|
| Power consumption                  | kWh                  | 91,778,200 | 95,662,900 | *88,740,306 |
| Fuel consumption                   | kl                   | 637        | 663        | *571        |
| Water consumption                  | 1,000 m <sup>3</sup> | 589        | 590        | 581         |
| Total waste emissions              | t                    | 1,270      | 1,392      | 1,251       |
| Amount of waste finally            | +                    | 0.3        | 0.4        | 0.4         |
| disposed of as landfill            | ·                    | 0.3        | 0.4        | 0.4         |
| Waste recycling rate               | %                    | 99.98      | 99.97      | 99.97       |
| Emissions into the atmosphere: NOx | t                    | 1.4        | 1.8        | 0.9         |
| SOx                                | t                    | 0.5        | 0.7        | 0.4         |
| Emissions into waters: BOD         | t                    | 6.6        | 10.2       | 5.5         |

| ■PRTR            |   |                |                |                |  |
|------------------|---|----------------|----------------|----------------|--|
| PRTR             |   | 2013           | 2014           | 2015           |  |
| Ordinance number | Substances covered                            | Amount handled | Amount handled | Amount handled |  |
| 53               | Ethylbenzene                                  | 5.7            | 6.7            | 5.6            |  |
| 58               | Ethylene glycol monomethyl ether              | 3.6            | 4.2            | 3.8            |  |
| 80               | Xylene  | 19.7           | 22.5           | 18.2           |  |
| 82               | Silver and its water-soluble salts            | 1.8            | 2.1            | 1.8            |  |
| 302              | Naphthalene                                   | 10.1           | 11.8           | 9.3            |  |
| 343              | Pyrocatechol                                  | 1.1            | 1.3            | 1.0            |  |
| 374              | Hydrogen fluoride and its water-soluble salts | 32.0           | 36.8           | 32.6           |  |
| 438              | Methyl nanhthalene                            | 20.0           | 21.8           | 176            |  |

\*Power consumption decreased by having madequipment into energysaving specification.

#### ROHM Apollo Co., Ltd. Hirokawa Chukaku Industrial Estate, Hirokawa-cho, Yame-gun, Fukuoka



■Manufacturing items: ICs, transistors, diodes, SiC, power modules, etc.

|                                    |                      | 2013        | 2014        | 2015        |
|------------------------------------|----------------------|-------------|-------------|-------------|
| Power consumption                  | kWh                  | 145,645,205 | 148,330,586 | 151,735,238 |
| Fuel consumption                   | kl                   | 2,207       | 2,192       | 2,120       |
| Water consumption                  | 1,000 m <sup>3</sup> | 1,253       | 1,267       | 1,294       |
| Total waste emissions              | t                    | 1,342       | 1,334       | 1,320       |
| Amount of waste finally            | ŧ                    | 0.2         | 0.3         | 0.2         |
| disposed of as landfill            | ı                    | 0.2         | 0.5         | 0.2         |
| Waste recycling rate               | %                    | 99.99       | 99.98       | 99.98       |
| Emissions into the atmosphere: NOx | t                    | 3.3         | 4.7         | 5.4         |
| SOx                                | t                    | 3.7         | 6.5         | 7.9         |
| Emissions into waters: BOD         | t                    | 10.0        | 21.0        | 20.0        |
| COD                                | t                    | 4.3         | 10.2        | 9.6         |

■PRTR Unit: tons

| PRTR             |   | 2013           | 2014           | 2015           |
|------------------|---|----------------|----------------|----------------|
| Ordinance number | Substances covered                            | Amount handled | Amount handled | Amount handled |
| 53               | Ethylbenzene                                  | 3.6            | 3.7            | 2.8            |
| 80               | Xylene  | 2.8            | 3.0            | 2.4            |
| 341              | Piperazine                                    | 1              | 1.4            | 1.4            |
| 374              | Hydrogen fluoride and its water-soluble salts | 26.0           | 28.6           | 29.4           |
| 438              | Methyl naphthalene                            | 21.9           | 22.4           | 21.8           |



|                            |                      | 2013      | 2014      | 2015      |
|----------------------------|----------------------|-----------|-----------|-----------|
| Power consumption          | kWh                  | 2,888,848 | 2,772,000 | 2,547,017 |
| Water consumption          | 1,000 m <sup>3</sup> | 3         | 3         | 4         |
| Total waste emissions      | t                    | 18        | 15        | 15        |
| Amount of waste finally    | t                    | 0         | n         | 0         |
| disposed of as landfill    | ·                    | 0         | · ·       | 0         |
| Waste recycling rate       | %                    | 100       | 100       | 100       |
| Emissions into waters: BOD | t                    | 0.0       | 0.0       | 0.0       |
| COD                        | t                    | 0.0       | 0.0       | 0.0       |

<sup>■</sup>Manufacturing items:
Molds and dies, and lead frames

### LAPIS Semiconductor Miyagi Co., Ltd. 2-4-8 Shin Yokohama, Kohoku-ku, Yokohama 222-8575 Japan



|                                    |                      | 2013 | 2014      | 2015      |
|------------------------------------|----------------------|------|-----------|-----------|
| Power consumption                  | kWh                  | -    | 3,641,259 | 3,447,789 |
| Fuel consumption                   | kl                   | -    | 70        | 68        |
| Water consumption                  | 1,000 m <sup>3</sup> | -    | 16        | 17        |
| Total waste emissions              | t                    | -    | 8         | 7         |
| Amount of waste finally            | +                    |      | 0.2       | 0.1       |
| disposed of as landfill            | ·                    | -    | 0.2       | 0.1       |
| Waste recycling rate               | %                    | -    | 97.49     | 98.59     |
| Emissions into the atmosphere: NOx | t                    | -    | 0.0       | 0.0       |
| Emissions into waters: BOD         | t                    | -    | 0.0       | 0.0       |

\*Included in data aggregation from fiscal 2014

## LAPIS Semiconductor Miyagi Co., Ltd. 1 Okinohiradaira, Oohira Mura, Kurokawa-gun, Miyagi



■Manufacturing items: ICs

|   |                      | 2013        | 2014        | 2015        |
|---|----------------------|-------------|-------------|-------------|
| Power consumption                               | kWh                  | 114,200,400 | 114,748,400 | 128,432,400 |
| Fuel consumption                                | kl                   | 3,525       | 3,334       | 3,361       |
| Water consumption                               | 1,000 m <sup>3</sup> | 1,234       | 1,230       | 1,256       |
| Total waste emissions                           | t                    | 1,113       | 1,191       | 1,482       |
| Amount of waste finally disposed of as landfill | t                    | 0.4         | 0.3         | 0.4         |
| Waste recycling rate                            | %                    | 99.96       | 99.97       | 99.97       |
| Emissions into the atmosphere: NOx              | t                    | 9           | 10          | 12          |
| SOx   | t                    | 6           | 6           | 4           |
| Emissions into waters: BOD                      | t                    | 2.0         | 2.0         | 1.4         |
| COD   | t                    | 12.4        | 12.0        | 18.4        |
| ■PRTR   |                      |             | Linit: tons | •           |

| IP. | KIK                             |   |         |         | Unit: tons |
|-----|---------------------------------|---|---------|---------|------------|
|     | PRTR                            |   | 2013    | 2014    | 2015       |
|     | Ordinance<br>Substances covered |   | Amount  | Amount  | Amount     |
| ı   | number                          | Substances covered                            | handled | handled | handled    |
| ſ   | 278                             | Triethylenetetramine                          | 1.1     | 1.6     | 2.2        |
|     | 343                             | Pyrocatechol                                  | -       | -       | 1.1        |
|     | 374                             | Hydrogen fluoride and its water-soluble salts | 41.5    | 39.6    | 48.8       |
| Į   | 438                             | Methyl naphthalene                            | 39.7    | 37.5    | 37.7       |

#### LAPIS Semiconductor Miyazaki Co., Ltd. 727 Kihara, Kiyotake-cho, Miyazaki city, Miyazaki Pref.



■Manufacturing items: ICs, diodes, transistors, and SiC

|                                    |                      | 2013        | 2014        | 2015        |
|------------------------------------|----------------------|-------------|-------------|-------------|
| Power consumption                  | kWh                  | 163,365,613 | 169,302,983 | 175,775,081 |
| Fuel consumption                   | kl                   | 5,572       | 4,909       | *3199       |
| Water consumption                  | 1,000 m <sup>3</sup> | 882         | 922         | 921         |
| Total waste emissions              | t                    | 1,492       | 1,683       | 1,559       |
| Amount of waste finally            | t                    | 0           | 0           | 0           |
| disposed of as landfill            |                      | 0           | 0           | 0           |
| Waste recycling rate               | %                    | 100         | 100         | 100         |
| Emissions into the atmosphere: NOx | t                    | 72          | 73          | 36          |
| SOx                                | t                    | 55          | 58          | 22          |
| Emissions into waters: BOD         | t                    | 1.6         | 2.3         | 2.0         |
| COD                                | t                    | 1.5         | 1.8         | 2.2         |

| ■PRTR   |         | Uni     | t: tons |
|---|---------|---------|---------|
| PRTR  | 2013    | 2014    | 2015    |
| Ordinance Substances covered                      | Amount  | Amount  | Amount  |
| number Substances covered                         | handled | handled | handled |
| 20 2-aminoethanol                                 | 6.5     | 6.6     | 7.0     |
| 50 Ethylene glycol monoethyl ether                | 1.2     | 2.4     | 1.2     |
| 80 Xylene   | 1.1     | 1.2     | -       |
| 374 Hydrogen fluoride and its water-soluble salts | 22.9    | 26.5    | 24.2    |
| 438 Methyl naphthalene                            | 65.9    | 58.0    | 37.6    |

#### ROHM Logistec Co., Ltd. 75 Masusaka, Kamogata-cho, Asakuchi, Okayama



■Business line: Logistics management of the ROHM Group's products

|                                    |                      | 2013      | 2014      | 2015      |
|------------------------------------|----------------------|-----------|-----------|-----------|
| Power consumption                  | kWh                  | 1,211,453 | 1,234,389 | 1,200,246 |
| Fuel consumption                   | kl                   | 61        | 0         | 1         |
| Water consumption                  | 1,000 m <sup>3</sup> | 4         | 3         | 2         |
| Total waste emissions              | t                    | 15        | 15        | 14        |
| Amount of waste finally            | t                    | 0.03      | 0.03      | 0.03      |
| disposed of as landfill            |                      | 0.00      | 0.00      | 0.00      |
| Waste recycling rate               | %                    | 99.79     | 99.78     | 99.82     |
| Emissions into the atmosphere: NOx | t                    | 0.1       | 0.0       | 0.0       |
| SOx                                | t                    | 0.0       | 0.0       | 0.0       |
| Emissions into waters: BOD         | t                    | 0.0       | 0.0       | 0.0       |

\*In the FY2015, the request to the quantity from an Electric Power Company decreased home power generation and the quantity of the heavy oil used by that cause became less.



|                            |                                       | 2013       | 2014       | 2015       |
|----------------------------|---------------------------------------|------------|------------|------------|
| Power consumption          | kWh                                   | 37,446,843 | 38,476,627 | 37,421,227 |
| Fuel consumption           | kl                                    | 57         | 50         | 47         |
| Water consumption          | 1,000 m <sup>3</sup>                  | 102        | 111        | 105        |
| Total waste emissions      | t                                     | 443        | 463        | 407        |
| Amount of waste finally    | +                                     | 0.1        | 0.2        | 0.4        |
| disposed of as landfill    | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 0.1        | 0.2        | 0.4        |
| Waste recycling rate       | %                                     | 99.98      | 99.95      | 99.90      |
| Emissions into waters: BOD | t                                     | 0.5        | 0.2        | 0.2        |
| COD                        | T t                                   | 0.6        | 0.3        | 0.6        |

■Manufacturing items: ICs, transistors, and diodes **■**PRTR Unit: tons

| PRTR                                   | 2013              | 2014              | 2015              |
|--|-------------------|-------------------|-------------------|
| Ordinance<br>number Substances covered | Amount<br>handled | Amount<br>handled | Amount<br>handled |
| 31 Antimony and its compounds          | 6.5               | 6.3               | 5.1               |

#### ROHM Electronics Philippines, Inc. People's Technology Complex Special Economic Zone, Carmona, Cavite 4116 Philippines



■Manufacturing items: ICs, transistors, and resistors

|                                    |                      | 2013        | 2014        | 2015         |
|------------------------------------|----------------------|-------------|-------------|--------------|
| Power consumption                  | kWh                  | 197,134,000 | 203,490,116 | *193,461,238 |
| Fuel consumption                   | kl                   | 348         | 812         | *1,448       |
| Water consumption                  | 1,000 m <sup>3</sup> | 1,146       | 1,237       | 1,240        |
| Total waste emissions              | t                    | 1,145       | 952         | 1,081        |
| Amount of waste finally            | +                    | 0           | 0           | 0            |
| disposed of as landfill            | l l                  | U           | U           | U            |
| Waste recycling rate               | %                    | 100         | 100         | 100          |
| Emissions into the atmosphere: NOx | t                    | 0.0         | 3.4         | *62.8        |
| SOx                                | t                    | 0.1         | 9.0         | *66.2        |
| Emissions into waters: BOD         | t                    | 0.3         | 0.6         | 1.3          |
| COD                                | t                    | 0.6         | 3.6         | 2.8          |

<sup>\*</sup>Operated generation of electricity facilities by an administrative request, largely increased.

#### ■PRTR

| Unit: | tons |
|-------|------|
|       |      |

| PRTR                                      | 2013           | 2014           | 2015           |
|---|----------------|----------------|----------------|
| Ordinance number Substances covered       | Amount handled | Amount handled | Amount handled |
| 31 Antimony and its compounds             | 6.4            | 6.7            | 5.5            |
| 57 Ethylene glycol                        | 1.0            | 0.9            | 0.7            |
| 82 Silver and its water-soluble compounds | 7.6            | 8.6            | 6.8            |
| 308 Nickel                                | 11.4           | 14.2           | 15.2           |
| 309 Nickel compounds                      | 3.5            | 4.1            | 4.1            |

# ROHM Integrated Systems (Thailand) Co., Ltd. 101/94. 102 Navanakorn Industrial Zone. Moo 20. Phaholyothin Road. Tambol Khlong-Nueng. Amphur Khlomg-Luong. Pathumthani 12120 Thailand



■Manufacturing items: ICs, transistors, diodes, and resistors

|                            |                      | 2013        | 2014        | 2015        |
|----------------------------|----------------------|-------------|-------------|-------------|
|                            |                      | 2013        | 2014        | 2013        |
| Power consumption          | kWh                  | 150,113,800 | 166,050,000 | 168,199,417 |
| Fuel consumption           | kl                   | 130         | 147         | 197         |
| Water consumption          | 1,000 m <sup>3</sup> | 1,118       | 1,132       | 1,095       |
| Total waste emissions      | t                    | 1,051       | 1,114       | 1,015       |
| Amount of waste finally    | _                    | 0           | 0           | 0           |
| disposed of as landfill    | τ                    | 0           | 0           | 0           |
| Waste recycling rate       | %                    | 100         | 100         | 100         |
| Emissions into waters: BOD | t                    | 6.1         | 5.8         | 5.4         |
| COD                        | t                    | 27          | 23          | 17          |

| ■PRIR                                     |         |         | Unit: tons |
|---|---------|---------|------------|
| PRTR                                      | 2013    | 2014    | 2015       |
| Ordinance Substances covered              | Amount  | Amount  | Amount     |
| number                                    | handled | handled | handled    |
| 31 Antimony and its compounds             | 6.0     | 6.7     | 5.6        |
| 82 Silver and its water-soluble compounds | 3.8     | 4.2     | 4.0        |
| 304 Lead                                  | -       | -       | 1.3        |
| 308 Nickel                                | 11.7    | 12.5    | 11.2       |
| 309 Nickel compounds                      | 4.4     | 4.5     | 3.1        |



|                            |                      | 2013       | 2014       | 2015       |
|----------------------------|----------------------|------------|------------|------------|
| Power consumption          | kWh                  | 79,420,000 | 75,372,000 | 67,381,000 |
| Water consumption          | 1,000 m <sup>3</sup> | 365        | 346        | 259        |
| Total waste emissions      | t                    | 1,098      | 1,151      | 1,108      |
| Amount of waste finally    | +                    | 512        | 493        | 403        |
| disposed of as landfill    | l l                  | 512        | 493        | 403        |
| Waste recycling rate       | %                    | 53.38      | 57.20      | 63.62      |
| Emissions into waters: BOD | t                    | 5.5        | 7.0        | 4.0        |
| COD                        | t                    | 15         | 18         | 11         |

PRTR Unit: tons

| PRTR                                      | 2013    | 2014    | 2015    |
|---|---------|---------|---------|
| Ordinance Substances covered              | Amount  | Amount  | Amount  |
| number                                    | handled | handled | handled |
| 31 Antimony and its compounds             | 1.3     | 1.2     | 1.1     |
| 37 Bisphenol A                            | 29.8    | 24.7    | 10.4    |
| 71 Ferric chloride                        | 41.8    | 45.6    | *3.8    |
| 82 Silver and its water-soluble compounds | 1.6     | 1.5     | 1.2     |
| 265 Tris (2, 3-epoxypropyl)               | 12.6    | 13.6    | 10.9    |
| 291 Lead and its compounds                | 4.3     | 4.5     | 4.2     |
| 392 n-hexane                              | 5.3     | 4.6     | 2.7     |

About Femic chloride, it reduced by substituting. About Bisphenol A and Tris, since the production item was integrated, it reduced.

#### ROHM Electronics Dalian Co., Ltd.

No. 20 Four Street East & North, Dalian Economic & Technical Development Zone, Dalian 116600 China



|                            |                      | 2013       | 2014       | 2015       |
|----------------------------|----------------------|------------|------------|------------|
| Power consumption          | kWh                  | 59,011,346 | 58,958,848 | 56,715,092 |
| Fuel consumption           | kl                   | 3,417      | 2,967      | 2,170      |
| Water consumption          | 1,000 m <sup>3</sup> | 519        | 491        | 517        |
| Total waste emissions      | t                    | 237        | 245        | 194        |
| Amount of waste finally    | ŧ                    | 32         | 21         | 20         |
| disposed of as landfill    | l .                  | 32         | 31         | 20         |
| Waste recycling rate       | %                    | 86.37      | 87.39      | 89.70      |
| Emissions into waters: BOD | t                    | 1.1        | 0.9        | 0.7        |
| COD                        | +                    | 1          | 7          | 12         |

# ■Manufacturing items: Power modules, thermal print heads, contact image sensor heads, photo link modules, lighting, optical sensors, and LED displays

#### ■PRTR

|   |         |         | Offic. (Office |
|---|---------|---------|----------------|
| PRTR                                      | 2013    | 2014    | 2015           |
| Ordinance Substances covered              | Amount  | Amount  | Amount         |
| number                                    | handled | handled | handled        |
| 82 Silver and its water-soluble compounds | 2.0     | 2.2     | 1.5            |

# ROHM-Wako Electronics (Malaysia) Sdn. Bhd. Lol 1320 Kawasan Penndustrian, Peogkalan Chepa II, Padang Tmenbak, 16100 Kota Bharu, Kelantan, Malaysia



■Manufacturing items: Diodes and LEDs

|                            |                      | 2010       | 2017       | 2010       |
|----------------------------|----------------------|------------|------------|------------|
| Power consumption          | kWh                  | 62,898,000 | 59,563,125 | 60,849,477 |
| Fuel consumption           | kl                   | 20         | 18         | 28         |
| Water consumption          | 1,000 m <sup>3</sup> | 383        | 444        | 446        |
| Total waste emissions      | t                    | 1,025      | 950        | 1,123      |
| Amount of waste finally    | t                    | 80         | 40         | 76         |
| disposed of as landfill    |                      | 00         | 49         | 70         |
| Waste recycling rate       | %                    | 92.15      | 94.81      | 93.21      |
| Emissions into waters: BOD | t                    | 1.0        | 1.1        | 1.2        |
| COD                        | t                    | 3          | 4          | 5          |

■PRTR

|   |         |         | Unit: tons |
|---|---------|---------|------------|
| PRTR                                      | 2013    | 2014    | 2015       |
| Ordinance Substances covered              | Amount  | Amount  | Amount     |
| number Substances covered                 | handled | handled | handled    |
| 20 2-aminoethanol                         | 1.3     | 1.6     | 23.2       |
| 31 Antimony and its compounds             | -       | -       | 38.8       |
| 71 Ferric chloride                        | 13.7    | 19.7    | 0.0        |
| 82 Silver and its water-soluble compounds | -       | -       | 18.1       |
| 291 Tris (2, 3-epoxypropyl)               | -       | -       | 2.2        |
| 297 1,3,5-Trimethylbenzene                | -       | -       | 6.5        |
| 304&305 Lead and its compounds            | 7.0     | 6.0     | 7.9        |

About Femic chloride, it reduced by substituting. About the numerical value which FY2013 and FY2014 have not indicated, the official announcement was started from FY2015.



■Manufacturing items:
Molds and dies, and lead frames

|                                    | Fiscal year          | 2013       | 2014      | 2015      |  |
|------------------------------------|----------------------|------------|-----------|-----------|--|
| Power consumption                  | kWh                  | 10,421,412 | 9,869,608 | 9,260,368 |  |
| Fuel consumption                   | kl                   | 47         | 43        | 43        |  |
| Water consumption                  | 1,000 m <sup>3</sup> | 31         | 31        | 24        |  |
| Total waste emissions              | t                    | 669        | 862       | 725       |  |
| Amount of waste finally            | +                    | <b>C</b>   | <b>C</b>  | 0         |  |
| disposed of as landfill            | ι                    | U          | U         | U         |  |
| Waste recycling rate               | %                    | 100.0      | 100.0     | 100.0     |  |
| Emissions into the atmosphere: NOx | t                    | 0.5        | 0.0       | 0.0       |  |
| SOx                                | t                    | 0.1        | 0.0       | 0.0       |  |
| Emissions into waters: BOD         | t                    | 0.0        | 0.0       | 0.1       |  |
| COD                                | t                    | 0.0        | 0.0       | 0.4       |  |