

Environmentally Friendly and Contributing Products

2021 2020 2019 2018

Case Studies ↓

While contributing to global environmental conservation and reduction of environmental impact through our products and its applications, we have promoted development of new technologies and sales of products to reduce such impact from the products themselves based on our guidelines for "Environmentally Friendly and Contributing Products" as follows.

Environmentally Friendly Products

Products that are designed to have less impact on the environment, such as by reducing the amount of waste or designing products that are easy to recycle, and that have improved one or more of the following compared to conventional products.

- Smaller, thinner and lighter
- Power saving
- Products with reduced or eliminated hazardous substances (hazardous substances: HoHS 10 substances, the environment-related substances to be controlled set by us, etc.)
- Reusability (reuse)
- Recyclability (recycling)
- Ease of disposal (ease of disassembly in case of equipment)

Environmentally Contributing Products

The products themselves or the final products using them that contributes to and are used for applications such as the conservation of the global environment.

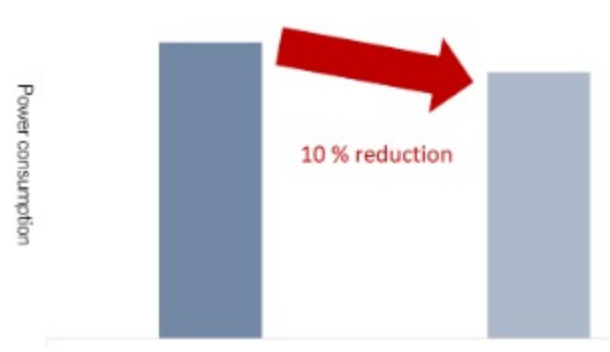
- Prevention of global warming, diffusion of new and renewable energy sources
- Prevention of ozone depletion, air pollution, water pollution, and soil contamination; analysis of pollutants
- Analysis of chemical substances contained in products, evaluation of toxicity of chemical substances
- Reduction, separation and disposal of waste

Case Studies

Every year, we develop new environmentally friendly and contributing products. Here are some typical examples from the current fiscal year.

● Power Supply for Biplanar Phototubes

C15433 is a high-voltage power supply used in biplanar phototubes for laser waveform observation. By adopting an AC adapter that meets the requirements of Level 6 of the International Energy Star Program and other measures, power consumption has been reduced by 10% compared to conventional products.



● Pulsed Solid State Laser

L11038-11 is a passively Q-switched short-pulse laser capable of 2 mJ of high energy output despite its compact laser head. Because LIBS does not require any pre-treatment of the measurement object, it is expected to become an important method for "in-situ analysis" such as waste recycling and in-line plant inspections. It is expected to become an important method for "in-situ analysis" such as waste recycling and in-line plant inspections.



● Laser Heating System (T-SMILS)

The laser heating system (L15570) is a laser light source for laser thermal processing while measuring the temperature of the processing point. Laser processing can produce products with energy savings due to the high electricity-to-optical conversion efficiency of lasers (about twice that of LEDs). Therefore, by converting processes that are conventionally produced using a heating furnace to laser processing, power consumption can be reduced to about 1/10. In addition, resin welding technology using lasers can firmly bond identical materials and has high processing stability, enabling higher yields (less material waste) and improved product recyclability.



T-SMILS
Sintering, Melting, High-Speed Laser System

● Light Source Array Unit (Fura-2)

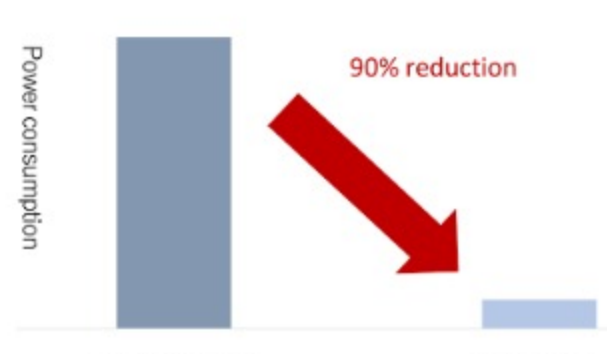
L11601-07 is an excitation light source for the fluorescent indicator Fura-2 for FDSS/uCELL, which uses microplates and measures fluorescence change over time in batch measurements. The LC-8 xenon light source has been used for FDSS7000EX, but the development of the LED light source unit for FDSS/uCELL has realized power saving of the light source for Fura-2 measurement.



FDSS7000EX



FDSS/uCell



● Dual PHEMOS

Dual PHEMOS, which enables analysis from both sides, has been added to the lineup of semiconductor failure analysis systems. Previously, two units were required, an upright type for surface observation and an inverted type for backside observation, but with Dual PHEMOS, both front and backside can be observed with a single unit. In addition, the number of parts has been reduced by approximately 300 because only one system rack is required.



Dual PHEMOS

● ODPL Measurement System

The ODPL measurement system (C15993-01) measures the spectrum of photoluminescence in all directions using an integrating sphere to determine the luminous efficiency of a sample. It can instantly calculate IQE (Internal Quantum Efficiency), which is necessary for quality evaluation of GaN single crystals, which are attracting attention as a power device material, and perovskite crystals, which are expected to increase the efficiency of solar power generation and LEDs, in a nondestructive and non-contact manner.

It contributes to the development of smaller, faster, and lower power loss (higher efficiency) power devices.

* ODPL (Omnidirectional photoluminescence)



2020 >

2019 >

2018 >

Environment >

Environmental management >

Management of pollution including waste >

Green procurement activities >

Environmental communication activities >

Reducing carbon emissions and climate change >

Environmentally Friendly and Contributing Products

Request for surveys on chemical substances in products >

Environmental report back number >

Disclosure based on TCFD Recommendations >

Protecting our water resources >

Management of chemicals in products >