Design for Environment

In order to minimize our impact on the environment to the extent possible and achieve the "creation of new values in harmony with the environment," we in the Stanley Group promote energy and resource conservation and the prevention of pollution over the entire life cycle of our products, while also working to cut down on our environmental impact globally.

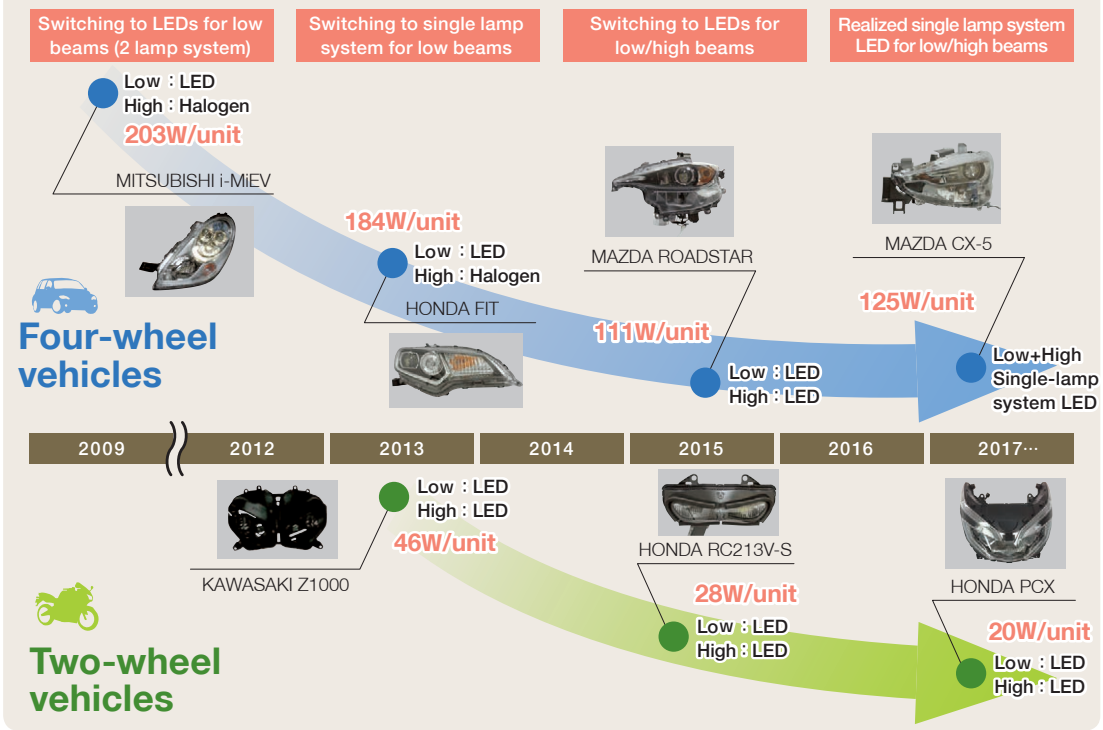
Headlamps

Disseminating energy-saving LED headlamps

Our LED headlamps come equipped on a variety of different vehicle models, including electric, hybrid, gasoline, diesel, and other vehicle types. We have worked to reduce the energy used by our headlamps, with this including their light sources. What is more, we have also expanded the adoption of LEDs on two-wheel vehicles in an effort to disseminate the energy-saving effects from switching to LEDs.

For the future, we will achieve even greater efficiency with our headlamps, while also developing LED light sources that are optimally suited as headlamps and further promoting energy savings.

Changes in headlamp power consumption (W/unit)



※Headlamp power consumption is measured not just for the low/high beams, but for the headlamp as a whole, including position lamps and turn signal lamps

Rear combination lamps

Energy savings from LED light sources

Since the year 2000, we have made progress on changing rear combination lamps, including tail lamps and stop lights, over to LEDs. Compared with conventional incandescent light bulbs, LEDs have achieved reductions in power consumption of roughly 90%.

In addition, we will continue contributing to cutting CO_2 by striving to conserve power through even more efficient use of light and by reducing the weight of our lamps.

Design for Environment

Life Cycle Assessment (LCA)

Promoting design for the environment through the use of a checklist

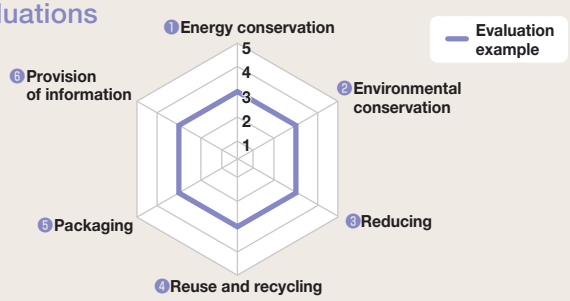
In order to promote the manufacture of products designed for the environment we use our Design for Environment Guidelines and apply them to the full range of our product design. We perform evaluations through the use of checklists in order to reduce our impact on the environment to the extent possible.

We revised our approach to evaluating these in FY 2017 and now use a six-item checklist that includes: ❶ **energy conservation**, ❷ **environmental conservation**, ❸ **reducing**, ❹ **reuse and recycling**, ❺ **packaging, and** ❻ **provision of information**. Our designers personally quantify and evaluate these in an effort to improve our environmental friendliness.

What is more, our checklists allow us to determine the CO_2 emissions given off in every step from the selection of the raw materials to the manufacturing of the product and its delivery to customers.

Overview of the Evaluations

● **Evaluations via Checklists**
As indicated in the figure on the right, we perform quantitative evaluations for different items on a five-point scale in the aim of creating more products designed for the environment.



※Supplement to the evaluation items

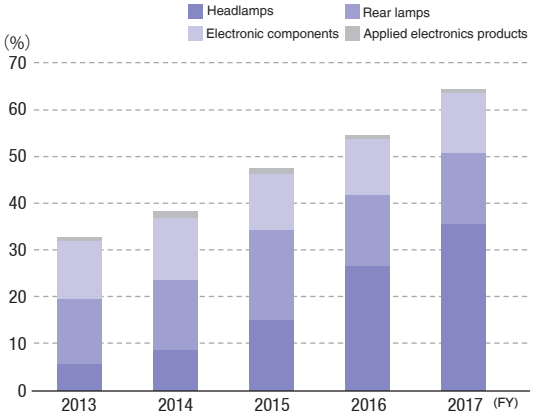
❷ **Environmental conservation:** We must meet standards like the REACH Regulations and RoHS Directive. But over and above these, we are aiming to meet our own, even stricter, voluntary standards.
❻ **Provision of information:** We disclose environmental items that warrant attention as stipulated by law. On top of this, we aim to disclose information based on the guidelines of industry associations and the like.

Major Initiatives in FY 2017

- Based on the results from implementing our Design for Environment Checklist, which we have been evaluating since FY 2014, in FY 2017 we reassessed the evaluation items, details, and standards in order to produce products that are designed for the environment in a more effective and efficient manner.
- Using the Design for Environment Checklist allows us to evaluate all of our products by the same indicators to determine their strengths and weaknesses. Our domestic group companies have worked to improve their environmental friendliness as indicated below.

❶ **Energy conservation:** Efforts were made to reduce power consumption during manufacturing via designs that cut down on the number of parts and improved assemblability.
❷ **Environmental conservation:** We were able to confirm the replacement status for newly restricted materials via the management of substances of environmental concern.
❹ **Reuse and recycling:** Advances were made with design that gives consideration to allowing the identification of materials and sort these by thoroughly marking parts (labeling materials for identification).

Changes in the proportion of products designed for the environment



The percentage of our sales accounted for by products designed for the environment over the past five years is shown in the graph on the left. For FY 2017, headlamps using LEDs continued to increase, due to which the sales ratio of our products designed for the environment grew, and such products came to account for 65% of our products.