

# TAIYO YUDEN Group's Research and Development Activities

## The Foundation of Our Research and Development Activities

Hikohachi Sato, the founder of TAIYO YUDEN, was a researcher in ceramic materials. Since its establishment, TAIYO YUDEN has believed that product commercialization should start from the development of materials. This has been one of the strengths of TAIYO YUDEN, and has resulted in us creating many products that have been “world firsts.”

The TAIYO YUDEN Group's research and development continues its focus on activities that are driven by one of the Company's main objectives, which is to develop products that are rated highly by our customers, by means of enhancing the Company's many elemental technologies that have been built up since its foundation. In particular, we are focusing on the development of super high-end products.

## Research and Development Principles

### “Innovative advance”

#### Technology precedence

Promote leading edge technological development as the precursory to innovative product development and become a global leader in technology

#### Reproducibility

Logically verify the reproducibility of the technology we develop

#### Technological applicability

Develop technologies that are feasible and applicable economically to our manufacturing process and that meet critical environmental standards

#### Environmental consideration

Devise technologies which can be applied not only to specific products but also to other areas useful to the markets we serve

## Achievement of our Vision through Development of “Green Products”

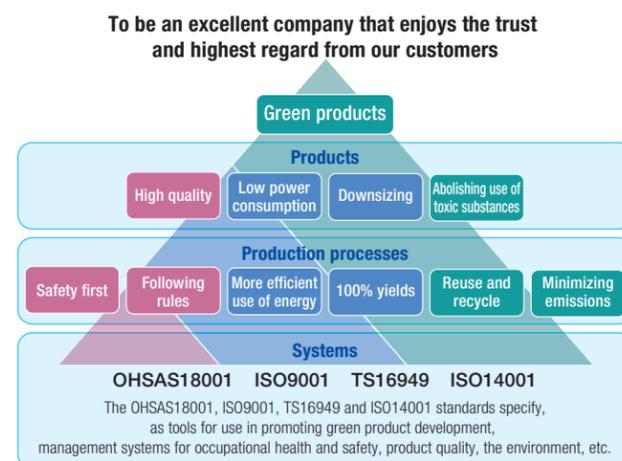
The TAIYO YUDEN Group has effective methods available that resolve the dilemma of how to both respond to customer demands for more advanced electronic devices and reduce environmental burdens on society as a whole and the communities we serve. Our core objective using these methods is to make electronic components that are incorporated inside a final product possess higher and higher performance levels and values.

Electronic components with high performance levels manifest improvements such as compactness (leading to

reduction in the parts and materials used) and enhanced power efficiency (leading to lower energy consumed). Consequently, the TAIYO YUDEN Group continues to support the implementation of higher performance in all devices, and to achieve reductions in the environmental burden. We also consider our products as being beneficial for society as they are useful for a wide variety of producers that use electric power and, most importantly, our products enhance the quality of life of our customers.

The TAIYO YUDEN Group strives to make a positive contribution to reducing the Company's burden on the environment by pursuing “green products” and working to provide a stable supply of these items. The green products that the Group has on its development horizon reflect environmental considerations applied throughout the product life cycle, not only at the products' end use, but also at all stages from design through production, sales, and incorporation into the final product right up to final disposal. We eliminate what in Japanese are called the three M's—*muda* (wastefulness), *mura* (inconsistency), and *muri* (overburden)—over the entire life cycle of products to add value for customers and local communities we serve as well as our employees.

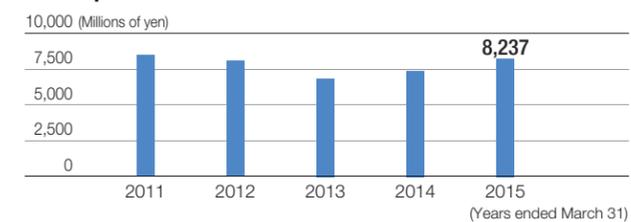
We are confident that our R&D activities aimed at creating a higher standard of green products will enable us to realize our vision to “become an excellent company that enjoys the trust and highest regard from our customers.”



## R&D Expenses

We recognize that continuing innovations and advancement in our technologies through R&D is the foundation for the Group to create the future. With this belief, we will continue to invest in R&D activities and the future development of our products.

### R&D expenses



## R&D Center, TAIYO YUDEN's Research Facility (Takasaki City, Gunma Prefecture)

As we were committed to continuing to create the world's best products and uphold our claim to be “the TAIYO YUDEN of technology and the TAIYO YUDEN of development,” we opened the R&D Center in 1998. In 2003, we established an Anechoic Chamber Test Facility in the same complex, and accelerated our proactive R&D activities in the field of radio communication. Currently, the R&D Center of the TAIYO YUDEN Group drives development and technological progress and takes a role of a foundation of creativity focusing on the future.



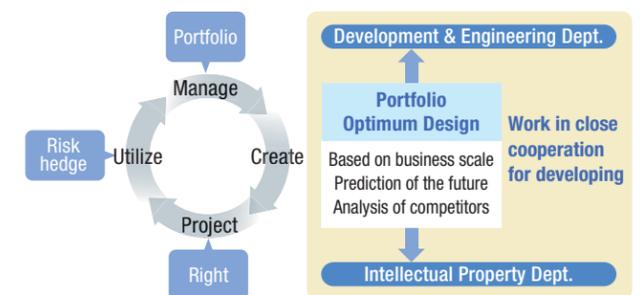
## Activities on Intellectual Property Rights

### Basic Policy

We, the TAIYO YUDEN Group, endeavor to obtain, maintain and protect intellectual property rights for proper use, and also to respect the intellectual property rights of third parties, in accordance with our CSR Code of Conduct.

### Protection of Intellectual Property Rights

At TAIYO YUDEN, the Intellectual Property Department and the Development and Engineering Department work in close cooperation with each other from the early stages of developing new technologies and obtaining intellectual property rights. We have our own management system to create, protect and utilize the intellectual property rights that are suitable for each of our businesses.



## Intellectual Property Strategy

## Intellectual Property Department: Our Mission Is to Stimulate Development

Since its founding, TAIYO YUDEN has been dedicated to applying its proprietary technologies to create “world-first” products. This element of our corporate culture is reflected in the decision to locate the Intellectual Property Department, despite it belonging to a management function, in the R&D Center so it can work closely with development teams. Together with development and engineering department, we promote the creation of new and original technologies and see our basic mission as raising the level of activity in development.

TAIYO YUDEN submits about 200 patent applications in Japan every year. We work closely with developers based on two perspectives: a) activities aimed at anticipating what the future will look like, and b) activities aimed at looking out a step ahead of what is now required in our R&D efforts. Rather than focusing on the number of patent filings, however, we put a greater emphasis on quality in light of the direction our R&D policies have set. We are especially careful to protect the technologies we have patented that are used in our high value-added products, centering on our super high-end products. Beyond that, we also manage our patents on general-use technologies to generate licensing income and secure cross-licensing arrangements with other companies.



**Iwao Fujikawa**  
General Manager,  
Intellectual Property  
Department