CANON ANELVA CORPORATION

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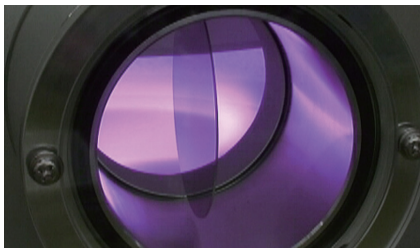
Corporate Profile



Message from the President

CANON ANELVA contributes to the development of society
through supplying high value-added products based on its ultra-high vacuum technology.

Since its establishment in 1967, CANON ANELVA has focused its business on vacuum equipment for semiconductors and electronic components, based on the theme of "pioneering the future with vacuum technology."
Our equipment can achieve a vacuum comparable to that of outer space. We manufacture devices that produce extremely thin films at the nano level (one-millionth of a millimeter) as well as vacuum components for those devices.

In 2005, our company became a member of the Canon Group. Today, as part of the Canon Industrial Group, we provide cutting-edge technologies throughout the world with the mission of "using innovative industrial equipment to create new value with our customers."

Information and telecommunications technology, and the Internet and smartphones in particular, have become an indispensable part of our lives.
The semiconductors and electronic components that form the basis of these products are constantly undergoing technological innovation to improve their performance. Our vacuum technology-based products and solutions have been and will continue to support some of these innovations.

We are very pleased to be able to provide value to our customers and society with our products.
We will respond to needs, value cooperation with our customers, and boldly take on new challenges.

We sincerely appreciate the support and cooperation of everyone associated with our company.
We look forward to your continued patronage.

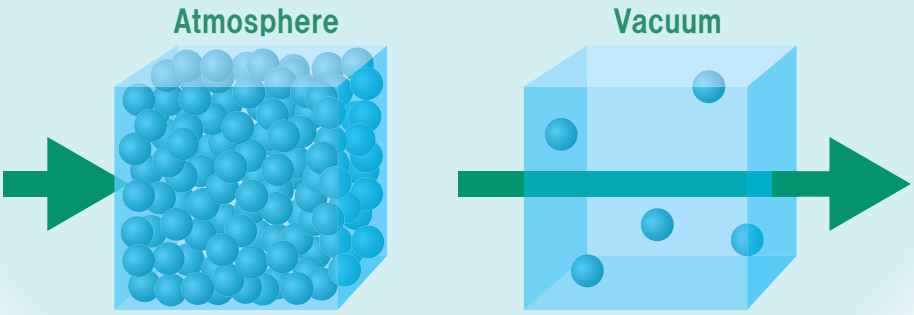
Takumi Nakajima
President & Representative Director

Enabling nano level micro fabrication by ultra-high vacuum

Vacuum is a state of space having sub-atmospheric pressure.
Ultra-high vacuum that enables nano level micro fabrication is naturally available only in outer space at the altitude of 400 km or above.
This ultra-high vacuum is where CANON ANELVA's expertise lies.

Why vacuum ?

It is difficult to play catch in a crowded space. Ideally, there should be no obstacles between the pitcher and the catcher.
The same is true for film deposition. High quality thin films with reduced impurities can be created by creating a vacuum that reduces the number of obstructing gas molecules resulting in an environment where molecules and atoms can be aimed accurately.
There are more than 2.5×10^{19} molecules such as Nitrogen and Oxygen in a cubic centimeter of atmosphere.
The pressure inside of the CANON ANELVA's magnetic head manufacturing equipment is 10^{-7} Pa (Pascal) which is an extremely low molecular density that is 1 trillionth the atmospheric pressure of 10^{5} Pa.



Products manufactured utilizing vacuum thin film formation technologies

A great number of products throughout the world are manufactured utilizing vacuum technology. Vacuum technology is an indispensable key technology of the modern world.

Solar panel

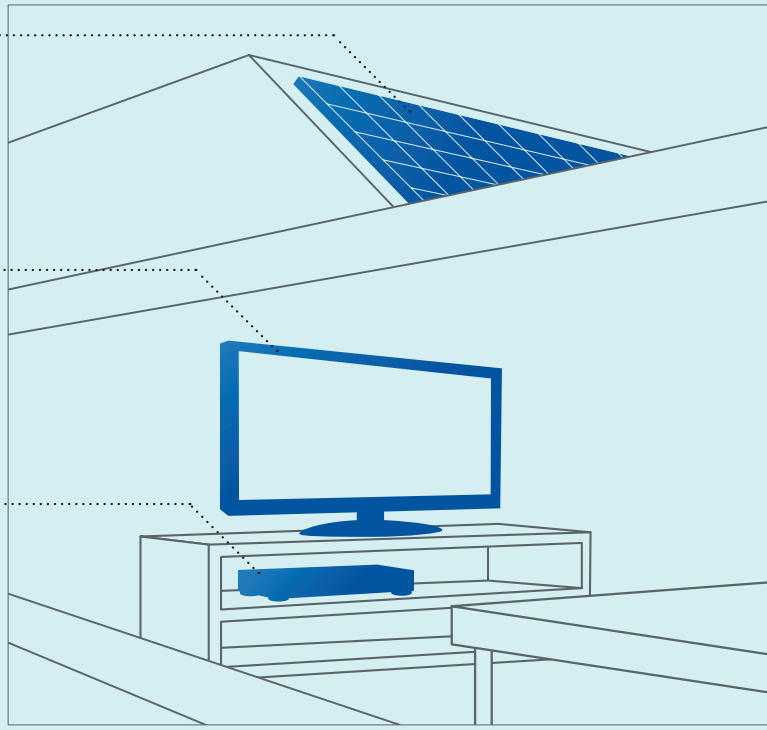
Formation of power generating layers and electrodes of solar panel (thin film type)

LCD TV

Formation of transparent electrodes to drive the liquid crystals of an LCD panel

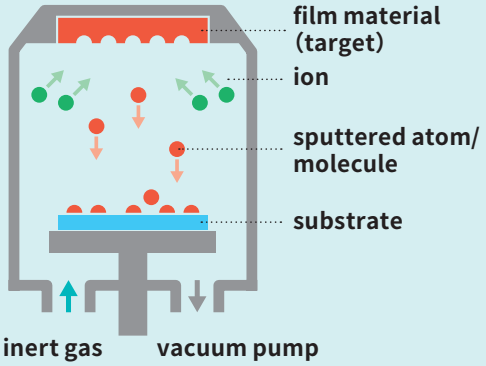
Hard disk recorder

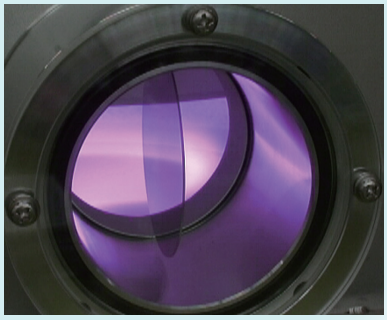
Formation of magnetoresistive elements of magnetic head to read/write hard disk data as well as forming magnetic layer of magnetic disk to record data



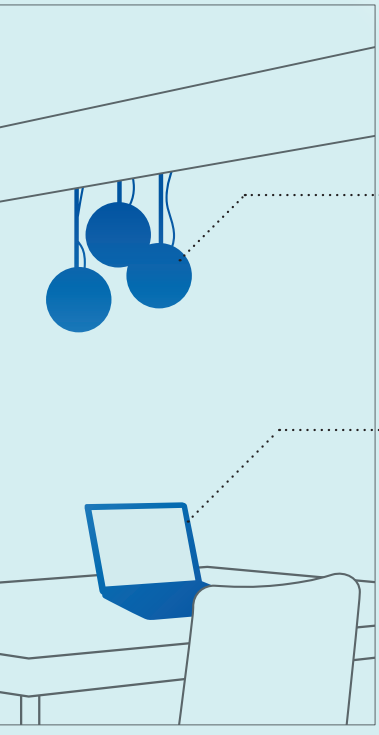
Vacuum thin film formation technology utilizing sputtering phenomenon

When voltage is applied to a substrate and film material (target) in a vacuum containing inert gas (e.g. argon), the inert gas ionizes and collides with the target at high-speed.
This collision knocks out (sputtering) the atoms and molecules forming the target causing them to adhere to the substrate and form a thin film.
The thin film has various characteristics depending on the material it is made of and its thickness. There characteristics are utilized in various devices.





vacuum chamber during sputtering



LED lighting

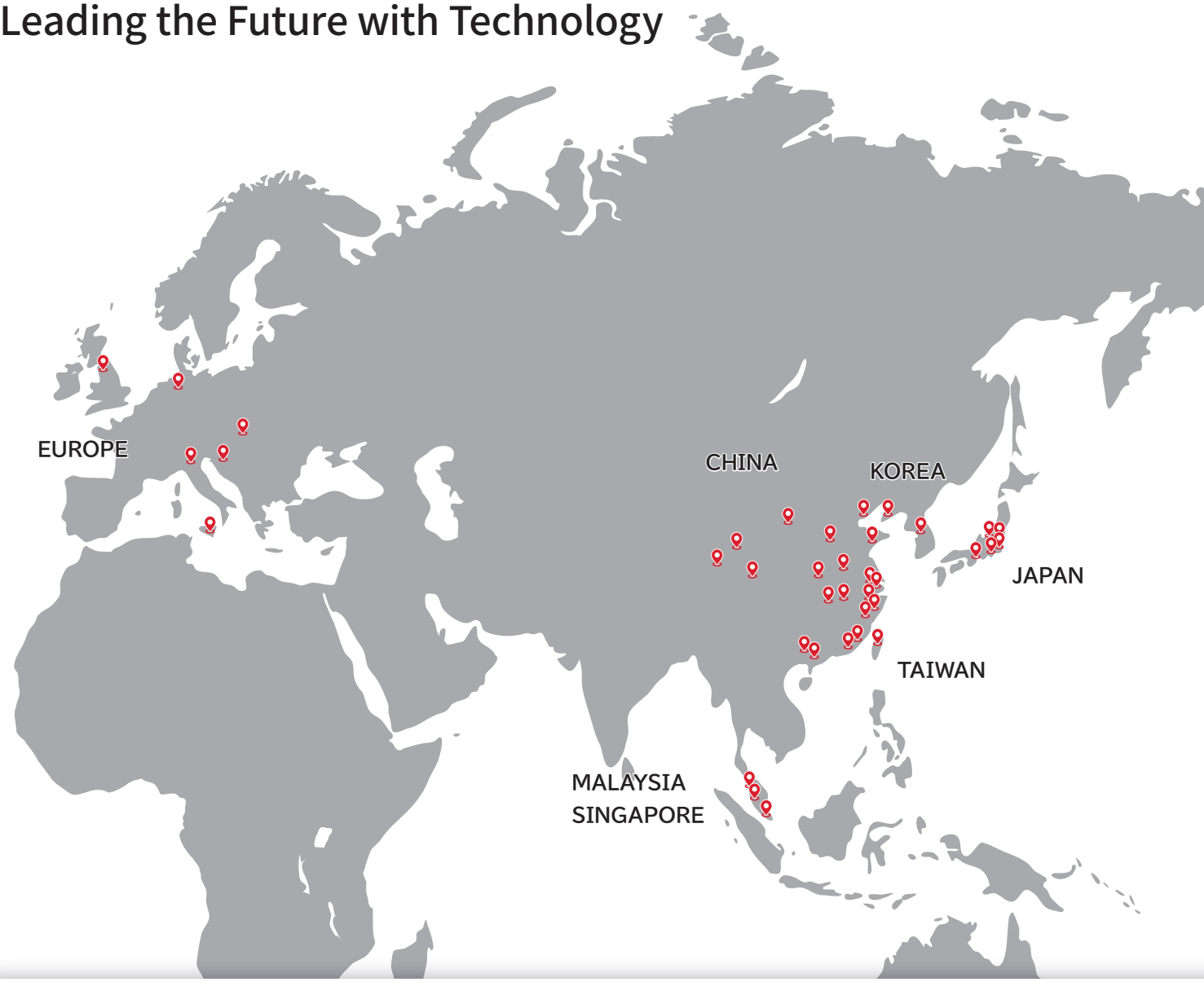
Formation of light emitting diode's electrodes

PC

Formation of electrodes of various semiconductor devices

CANON INDUSTRIAL GROUP

Leading the Future with Technology



Canon Industrial Group Directory, Japan

Canon ANELVA Corporation
Kawasaki-city, Kanagawa

Canon Inc. (Optical Products Operations)
Utsunomiya-city, Tochigi

Canon Tokki Corporation
Mitsuke-city, Niigata

About Canon Industrial Group

Canon has four industry-oriented business groups: Printing, Imaging, Medical, and Industrial.
The Industrial Group is a group of ultra-precision technology professionals responsible for Canon's industrial equipment business.
As a member of the Industrial Group, Canon ANELVA will work with a total of 15 companies and divisions, including domestic affiliates of Canon Inc. (Optical Products Operations), Canon Tokki, Canon Machinery, and Canon Semiconductor Equipment, to co-create new value with customers through innovative industrial equipment.

Evolving manufacturing to enhance the future of humanity and the planet

Canon Industrial Group provides high-precision technology in the form of industrial equipment solutions. Customers all over the world use our industrial equipment to manufacture products and solutions that offer greater functionality, improved performance and brand-new values. We help enable manufacturing evolution and the realization of an exciting future society in a sustainable manner for humanity and the planet.

Canon Machinery Inc.
Kusatsu-city, Shiga

Canon Semiconductor Equipment Inc.
Ami-machi, Inashiki-gun, Ibaraki

Solutions Offered

Total vacuum solutions by CANON ANELVA, a comprehensive Manufacturer of Vacuum Systems

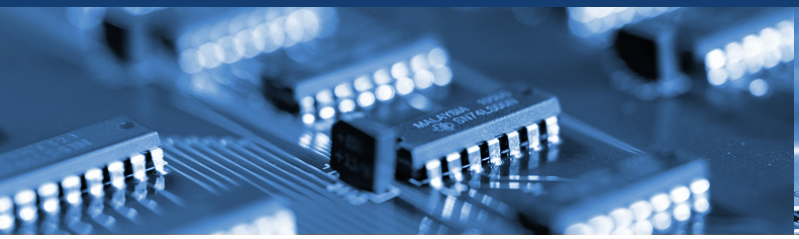
- Semiconductor Device Manufacturing Equipment
- Magnetic Device Manufacturing Equipment
- Equipment for Electronic Device Manufacturing and for R&D
- Components
- Maintenance Service

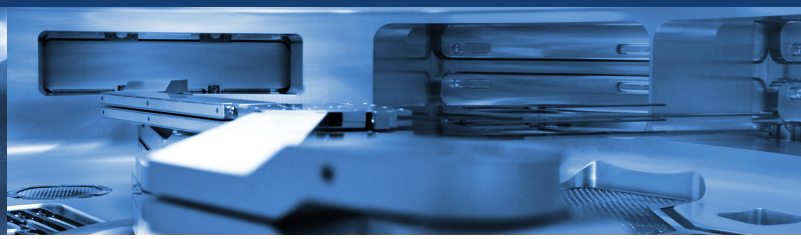
High throughput and easy-to-use semiconductor device manufacturing equipment

Semiconductor Device Manufacturing Equipment

Meeting the needs of nano-scale semiconductor devices.

Semiconductors are used in extremely broad range of products today and have become indispensable to an information-oriented society.
CANON ANELVA develops and manufactures highly reliable sputtering equipment for use in semiconductor production lines.
Thin film formation by sputtering plays a very important role in nanometer level processing required for a large scale integration of semiconductor devices.





Sputtering Equipment for Metal Gates

Sputtering equipment that meets every requirement in all stages from material development all the way to commercial production.
CANON ANELVA's proprietary cathode design has led to the realization of damage free sputtering.
Excellent film thickness uniformity and precise thickness control are achieved; moreover alloy film deposition by co-sputtering via multiple cathodes is supported.

Sputtering Equipment for Nonvolatile Memory

Recently, a high-speed nonvolatile memory is expected to take over the conventional semiconductor memory as the next generation product.
CANON ANELVA offers a range of sputtering equipment to support development and mass production of the nonvolatile memory.
These equipment utilize the thin film formation technology cultivated by CANON ANELVA for many years where a multilayer thin film deposition of high uniformity required by nonvolatile memory is enabled.

Magnetic device manufacturing equipment adopting a state-of-the-art thin film technology

Magnetic Device Manufacturing Equipment

Supporting both present and future data storage manufacturing needs with our unique technology.

Thin film formation technology based on ultra-high vacuum technology is
a driving force for innovations in the data storage field.
In fact, high density magnetic heads and disks for use in hard disk drives
for PCs and servers have been realized using sputtering equipment manufactured
with the proprietary technology of CANON ANELVA, which commands the world's largest market share in the segment.
We intend to continue our technology leadership in the evolution of hard disk drives.

Sputtering Equipment for Magnetic Disks

Hard disk sputtering equipment that is
capable of high throughput mass production
of high density recording media.
The equipment provides both high productivity
and high quality films through the use of
high vacuum chambers, thus realizing low production
cost of high performance magnetic disks.
Flexible equipment configurations are available for processes
that range from R&D to the production of a variety
of next-generation high density recording media.

Sputtering Equipment for Magnetic Heads

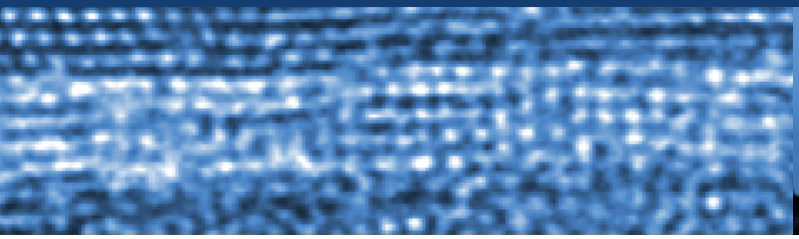
Sputtering equipment for TMR heads that utilizes
tunnel magnetoresistive effect.
Magnetron cathodes are designed to
achieve both excellent film thickness control performance
as well as thickness uniformity of ultrathin films.
Deposition takes place at an order
of magnitude less pressure than that
of normal sputtering, thus realizing
the formation of very flat films of low resistance.

Valuable in experiments, R&D, and all the way to a commercial production

Equipment for Electronic Device Manufacturing and for R&D

Comprehensive product lineups active in a variety of scenarios.

The technology to from and process thin film within
a vacuum is used in a variety of device manufacturing processes.
CANON ANELVA's versatile device lineup supports next generation technology research,
parts development, and production of products including LEDs and power devices.



Wafer Bonding Equipment

This wafer bonding equipment performs fully automated, integrated vacuum processing from substrate transfer to film deposition, bonding, and recovery. By optimizing the type and thickness of the thin film used for bonding, it is possible to perform bonding at the atomic level at room temperature and without pressure, regardless of the wafer material.

Equipment for R&D/Small-Scale Production

CANON ANELVA's equipment is used in a variety of applications from development to production of the next generation devices and materials, like the compact and versatile sputtering equipment.

High value added, energy-saving product line

Components

Products fully packed with vacuum technologies/know-hows accumulated by CANON ANELVA, the comprehensive manufacturer of vacuum systems.

Numerous companies and R&D laboratories engaged in thin film manufacturing
and other related fields use CANON ANELVA's vacuum components as indispensable
parts in systems incorporating vacuum technology.
CANON ANELVA's vacuum technology contributes to
stable operations of equipment and measuring instruments.

Vacuum Gauges

CANON ANELVA meets a wide variety of needs with our diverse lineup including
a transducer type providing efficient wiring and low power consumption.

Microfocus X-ray Source

CANON ANELVA's X-ray sources for industrial non-destructive testing are equipped
with transmission-sealed X-ray tubes that enable high-resolution and
high-speed imaging.

Quadrupole Mass Spectrometers (Mass Filters)

A quadrupole mass spectrometer is a versatile instrument
used in analyzing residual gases, inorganic gases,
and thermal desorption gases, as well as monitoring process gases.
The product is designed with careful consideration of operability and energy efficiency.

Leak Detectors

CANON ANELVA's leak detectors are used in a variety of
quality control applications requiring high sealing performance.
These products that emphasize operability are highly regarded
by our customers in a variety of industries.

Vacuum Pumps

CANON ANELVA provides a variety of pumps from low vacuum to ultra-high vacuum
in addition to cryopumps with the world's highest energy efficiency.

Supporting maximum equipment performance at the front line

Maintenance Service

Offering close communication with our customers.

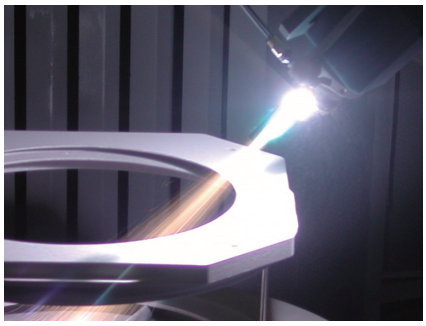
CANON ANELVA maintains close communication with customers in providing service to maintain high performance for equipment and products. Maintenance services best suited for each customer including periodic maintenance, repair, overhaul, parts cleaning and equipment modification are provided.

Customized preventive maintenance service

CANON ANELVA offers customized preventive maintenance services to provide parts and components replacement as well as pump maintenance at optimum cycles to enable a long and stable operation of customer's valuable equipment. This enables a proactively prevention of equipment failures, continued high performance, increased availability and systematic budget control.

Parts cleaning/recycle business

Parts such as shield inside the chamber must be periodically replaced/cleaned/regenerated in order to maintain stable equipment operation. Because we are a comprehensive manufacturer of vacuum systems, CANON ANELVA can provide stable and high quality service in each step of the process such as cleaning, correction, and spraying.



Providing higher quality service

To ensure higher quality service of service engineers CANON ANELVA maintains backup organizations that provide education and training programs, streamlined manuals, parts supply, and support centers. CANON ANELVA's efforts to provide higher quality maintenance service are ceaseless.

Our organization supports our technology

Every employee has a key role.
CANON ANELVA's total corporate strength is a result of team plays based on the San-ji (Three Selfs) Spirit.

CANON ANELVA contributes to the creation of an affluent society through the unified efforts of all its employees. It also aims at improving the quality of its products and services while promoting the environmental sustainability.

The San-ji (Three Selfs) Spirit
Canon group's guiding principles

R&D Division

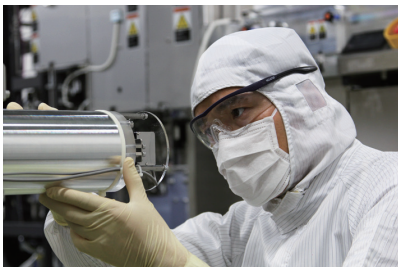
CANON ANELVA has a total commitment to the cutting-edge R&D and design technology innovations in order to deliver competitive products to customers in the highly competitive semiconductor and electronic component industries where product evolution is extremely rapid. CANON ANELVA has achieved a number of excellent results in the development of globally advanced technologies not only by in-house R&D but also through active joint research with universities and external laboratories.

Sales Division

CANON ANELVA's Sales Division quickly acts with expertise to precisely identify needs of customers and assist them in selecting the most appropriate equipment model. It also strives to identify the market needs and collaborate with the relevant divisions to continuously support the development of improved products.

Field Service Division

CANON ANELVA's Field Service Division provides customers with tailored maintenance to ensure a full realization of the equipment potential. It also aims at improving customer satisfaction by constantly updating and deepening expert knowledge of the processes, mechanisms, electric controls and software involved in the equipment.



Honored with the top class Prime Minister's Award at the Sixth Industry-Academia-Government Collaboration Award Ceremony

Development theme

Development of high performance tunnel magneto-resistive element for ultra high density HDDs

*Awarded jointly with the National Institute of Advanced Industrial Science and Technology and Osaka University

Honored with a Contribution Award in the 40th Ichimura Industrial Award

Development theme

Development and implementation of sputtering equipment for the manufacturing of disk and head for ultra-high density HDD

*Awarded jointly with Tohoku University

Honored with the 34th Inoue Harushige Award

Development theme

Magnesium oxide tunnel magneto-resistive element and its mass-production technology

*Awarded jointly with the National Institute of Advanced Industrial Science and Technology

Production Division

Every product supplied by CANON ANELVA plays a crucial role in determining the quality of the final product of our customers. CANON ANELVA is committed to stringent quality control to guarantee the best quality products. It is also active in enhancing the competitiveness of our manufacturing technology by production technique innovations.

Procurement Division

The Procurement Division has the responsibility to improve QCD from the early stage of product development ensuring availability of high quality components at the right cost and time. It is also focused on "Green Procurement" to reduce the environmental burden. Another focus of the division is oversea procurements.

Administrative Division

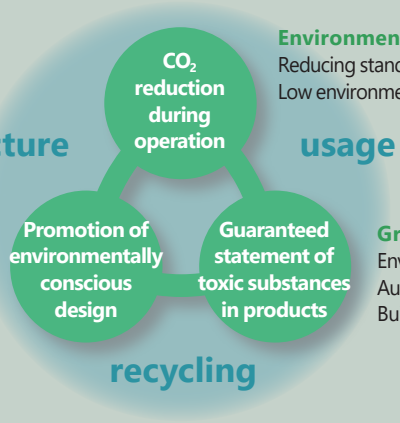
The Administrative Division duties include corporate management, finance and accounting, personnel training, development/improvement of the IT infrastructure, and protection of intellectual property, thus supporting the overall operations of the company. In order to meet drastic changes in the corporate environment, it has to continuously perform business innovations and propose management strategies. It is also active in developing human resources utilizing the wide variety of the company's internal training programs.

Commitment to the Environment

Assurance of Environment-friendliness of Products

CANON ANELVA is aggressively promoting activities to reduce the impact on the environment throughout the entire life cycle of the products that includes "manufacture", "usage", and "recycling".

Environmental impact assessment of products
Reducing the use of environmentally harmful substances
Energy saving
Resource saving
Space saving



Environmental safeguard
Reducing standby power consumptions
Low environmental impact processes

Green procurement
Environmental evaluation of the suppliers
Audit of contained materials
Building the data base

Environmental Activities

Introducing a part our of social activities and contributions.

ISO14001 certification

Collecting plastic bottle caps

Cleaning the headquarters and factory surroundings

CANON ANELVA CORPORATION

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