



SanRex

LEADING THE NEW POWER ELECTRONICS ▶▶

Corporate Profile



SANSHA ELECTRIC MFG. CO., LTD.

Sansha Electric, as a leading company in the Power Electronics Industry, continues to develop innovative and environmentally technology that contributes to the future of society.



Since developing arc power supplies for movie projectors in 1933, we have been one of the pioneers in the industrial world as a manufacturer of power semiconductors and power supply units.

In 1963, we released the power thyristor and then embarked on the development of power transistors, IGBTs and other power semiconductor devices, keeping pace with developments in power electronics. We have also applied these semiconductor devices to our industrial power supply units, which we provide to many industries. We enjoy a high reputation for the excellence of our products both at home and overseas.

Our company's philosophy is "We always strive to do our best to create products that the market requires. Our innovative and high-quality products must always make a positive contribution to social and economic development."

We combine human resources, technology and capital, and continue to make every effort to create sophisticated and high-quality products with our integrated production system.

We sincerely ask for your kind support.



Representative Director,
Chairman of the Board
Kunio Shikata Representative Director,
President
Hajimu Yoshimura

Company History

- 1933 Sansha Electric Mfg. established. Company managed privately by Yukio Shikata.

1937 Developed the tungar rectifier for the light projector.

1948 Reorganized the company into a corporation.
Developed the selenium rectifier for the F type projector.

1951 Developed the high frequency measurement equipment to dry fabric.

1953 Developed the selenium rectifier for light projection, "Super SanRex."

1956 Received award from Japan Cinema Technology Society in recognition of contribution to cinema technology.

1961 Developed the silicon rectifier for motor inverters.

1964 Developed an inverter UPS system and an electric furnace power controller.

1968 Developed a diffused type of triac and thyristor.

1970 Developed the "Mini Rex" rectifier for plating.

1971 Developed the insulated triac, which is the first in Japan.

1979 Developed an insulated mold triac (TG series).
Developed a dimmer equipped with a memory device (microcomputer control).

1980 Developed the Thyristor module and the power Transistor for high speed switching.
Developed a rectifier for switch type plating (100 A).

1981 Developed an inverter (VVVF) for alternating current electromotor control.

1982 Developed the power Transistor module, and the switching type welding machine (300A).
Established Shiga Plant in Moriyama, Shiga.

1983 Established SANREX CORPORATION in New York, U.S.A. and SANREX LIMITED in Hong Kong.

1985 Developed the DC power supply for EGL.
Established Okayama Plant in Nagi, Katsuta, Okayama.

1987 Awarded the invention grand-prix and Fukuda special award at Japan Inventor's Association for the development of the welding machine.

1988 Developed the power MOSFET module.

1989 Developed a high frequency PWM type medium capacity UPS-BACKUPS8800.

1990 Developed a power switching supply (MRT) for plating and a low noise medium capacity UPS.

1991 Developed a planar type Transistor module.

1993 Developed the IPM (intelligent power module).

1994 Shiga Plant obtained ISO9001 certification.
Established FOSHAN CITY SHUNDE SANREX LIMITED in China.
- 1996 Okayama Plant obtained ISO9002 certification.

1997 Company listed on the Osaka Stock Exchange, second division.
Awarded the 32nd machine promotion association award from the Machine Promotion Association for the development of portable intelligent arc welding machines.

1998 Developed the highest efficiency inverter for solar power generation.

1999 Established SANREX ASIA PACIFIC PTE. LTD. in Singapore.
Developed the small 250A TIG welding machine.

2000 The UPS for Electronic Toll Collection (ETC) is delivered.

2001 Sansha Electric (Shanghai) Co., Ltd. established in Shanghai, China. Power Supply System Manufacturing Division obtained ISO14001 certification.

2002 Established representative offices in Korea and Taiwan.
Semiconductor Manufacturing Division obtained ISO14001 certification.

2004 Developed for the world standard of full digital welding equipment.

2005 Developed the power supply, DCAUTO Fseries, for plating.

2007 Developed an IGBT chip for general purpose inverters.

2008 Developed inverter welding equipment for robotics.

2009 Established a representative office in Slovenia.

2010 Grid connected PV inverter is approved by TUV Rheinland.

2013 Company listed on the Tokyo Stock Exchange, second division.

2014 Completed a new building at Shiga plant in Japan.
Completed a new building at FOSHAN CITY SHUNDE SANREX LIMITED in China.
Developed the 49.9kW low voltage grid connected PV inverter.
First installation of the PCS evaluation system for National Institute of Advanced Industrial Science and Technology.

2015 Sansha Electric and Panasonic jointly develop a compact SiC power module.
Second installation of the PCS evaluation system for National Institute of Advanced Industrial Science and Technology.

2016 Established Sansha Solution Service Co.,Ltd.:
Established Sansha Electric Eastern Co., Ltd.
The company name has been changed from FOSHAN CITY SHUNDE SANREX LIMITED to SANSHA ELECTRIC MFG. (GUANGDONG) CO., LTD.

2017 Established Helsinki Branch in Finland, Seoul Branch in Korea and Taipei Branch in Taiwan.

2018 Kunio Shikata is inaugurated as Chairman of the Board.
Hajimu Yoshimura is inaugurated as President.
Established Chubu Sales Office

Aiming for a CUTTING EDGE in the next generation as a pioneer in power electronics



Creating innovative semiconductors and power supplies for the future. That is the mission of Sansha Electric.

Since we released the thyristor (a silicon controlled rectifier device) in 1963, we have greatly contributed to the development of the power electronics industry. Products bearing the **SanRex** brand are rapidly spreading into various fields involving semiconductors, environmental equipment, industrial equipment, information technology and electronic equipment.

Our past efforts to always respond to the demands of the times and to develop sophisticated and value-added products, have lead us to more advanced technology and given us the power to lead the way into new ages.

Our products such as power semiconductor devices, which are used for various applications, and various power supply units and controllers, which support manufacturing facilities and management systems in many industries, can expand future possibilities and help us predict the future.

As a pioneer in power electronics, we wish to continue to create new semiconductors and advanced applied products required by people and society in the 21st century by making full use of our experience and expertise accumulated over the past three quarters of a century.

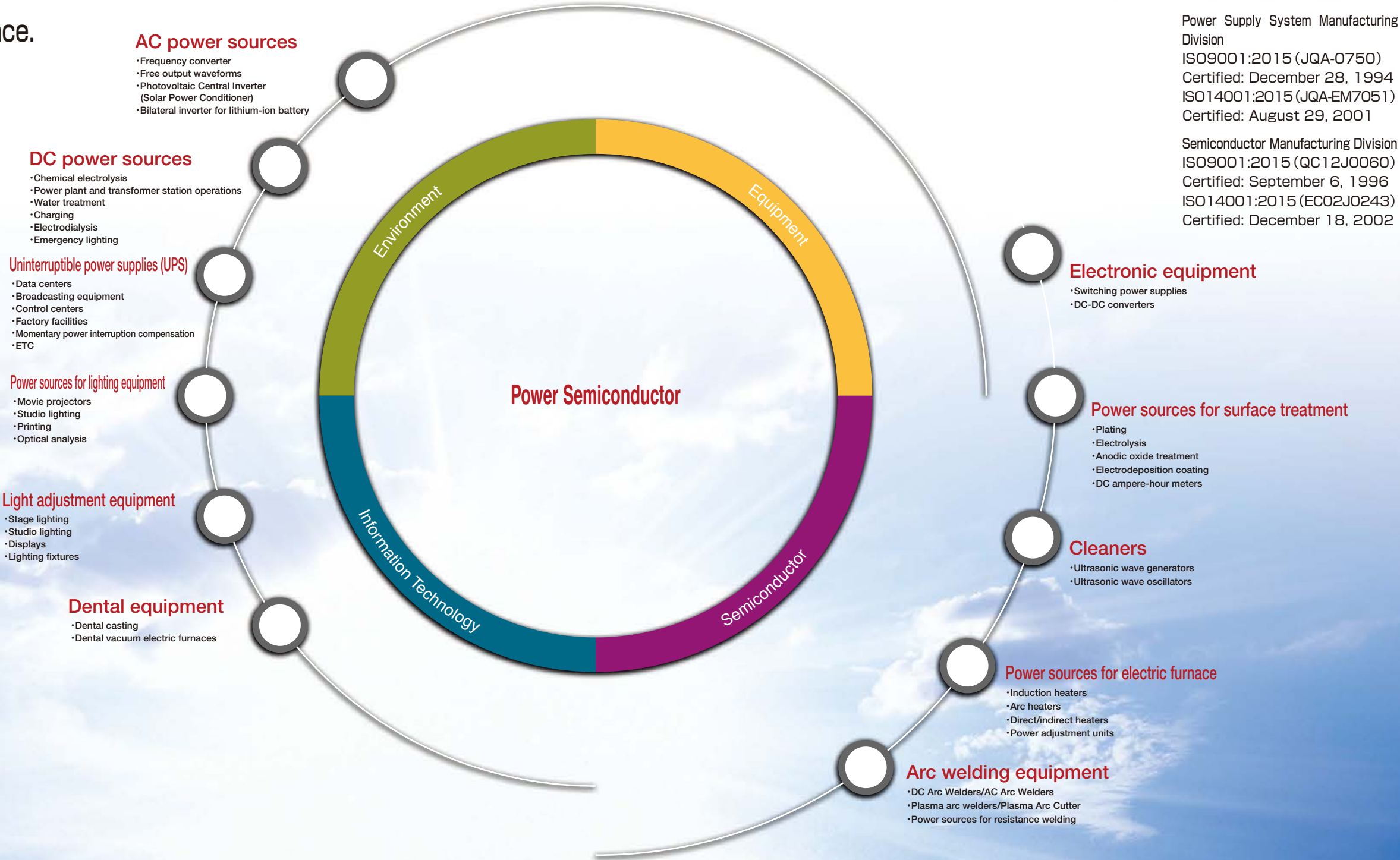
I N D E X	
07 - 10	Semiconductor business
11 - 12	Equipment business
13 - 14	Information technology business
15 - 16	Environment business
17 - 18	Network business

Our achievements in various fields stand as evidence of Sansha Electric's technical excellence.

We have quickly and accurately responded to the various needs of industry through our original corporate system that harmonizes the following functional divisions: Research and Development, Manufacturing, Management and Sales. Now, our products are highly regarded as the best for supporting the basis of most industrial fields.

Our products, which are spreading into all industries, particularly those involving semiconductors, but also power supplies for lighting equipment, surface treatment equipment, control systems, light adjustors, dental equipment, electronic equipment, cleaning systems and arc welding machines, stand as the evidence of our efforts to fulfill our duty as a leading company in semiconductors and their applications. Our struggles towards the fulfillment of new needs have brought us to higher levels of technology. We recognize that there are even higher expectations from many areas of industry ranging from the most advanced technological fields such as fuel cell technology, which is drawing a great deal of attention, and other new energy technologies, to the raw material industry, which requires technological innovations in fields such as nanotechnology.

In compliance with the trust put in us by our customers, we have obtained certification for ISO9001 and ISO14001, the international standards for quality and environment.

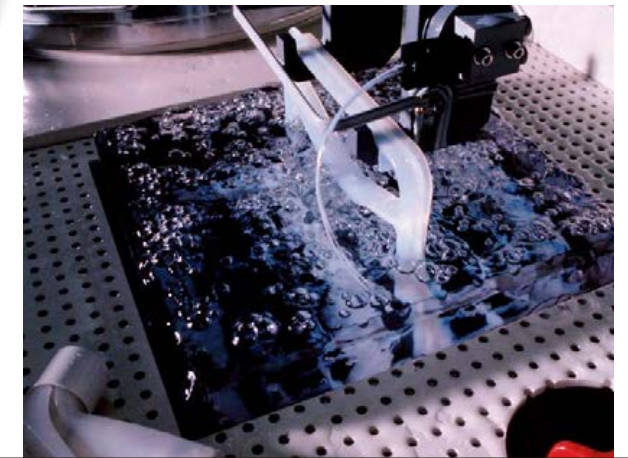
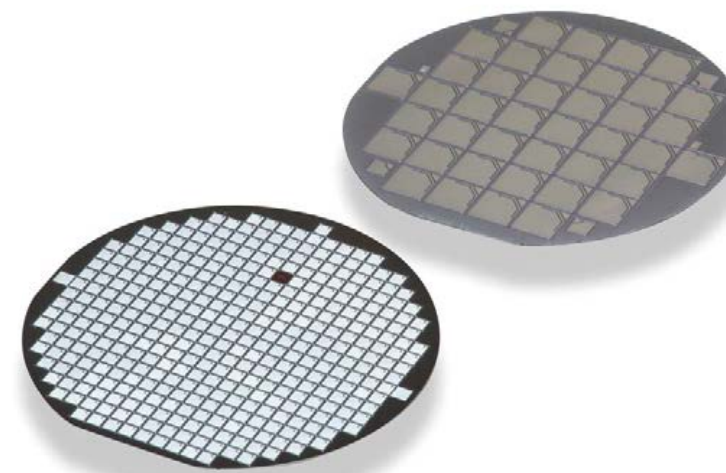


Semiconductor Business

Wafers/Discrete Devices/Power Modules



Semiconductor



High-performance semiconductors Bringing new possibilities to the industrial world

The social environment has been drastically changing.

Against this background, our products play an important role in supporting the core of manufacturing facilities and management systems in many industries by creating a wide range of products from our expertise in semiconductor devices.

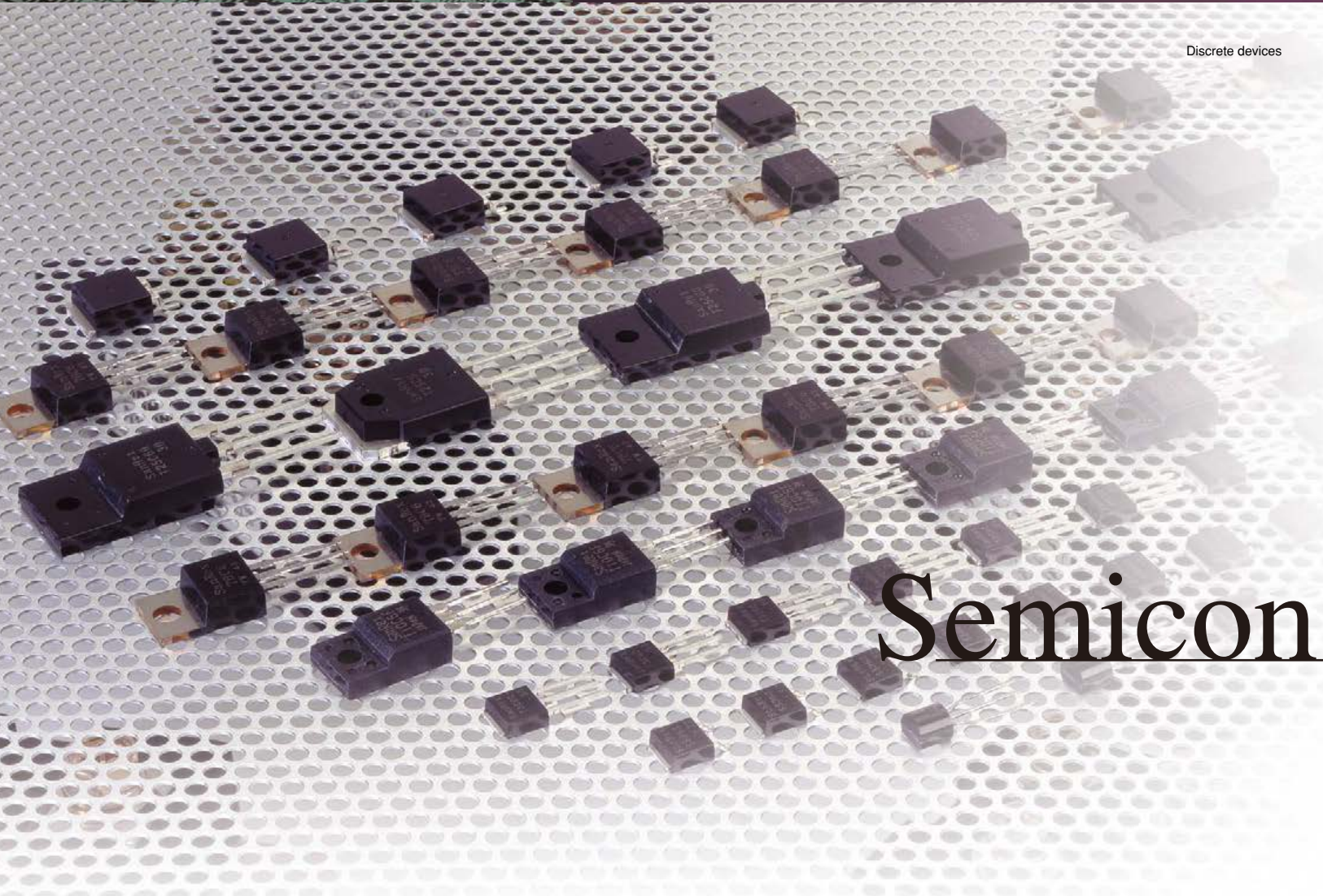
Finding new business opportunities in the continuously evolving power electronics industry

Developments in the power electronics field are directed towards higher performance, higher intelligence, and higher capacity. The scope of applications is expanding into many different areas, including lifestyle-related fields and the environmental and space industries. We continuously pursue research and development that will enable us to lead the power electronics industry, aiming at a consolidation of semiconductor device technology and circuitry technology and responding to the changes of our times.



Semiconductor Business

Wafers/Discrete Devices/Power Modules



Discrete devices



Power modules

Semiconductor

Power semiconductors

Since 1947, Sansha Electric, as a pioneer of semiconductor devices for electrical power, has had considerable success in efforts geared towards new technologies and application technologies. Triacs, thyristors and diodes, which were developed as a result, are representative of our technology. Our products, which support power electronics in a variety of industrial fields, are now widely used as indispensable parts not only in switching power sources, inverter equipment and power adjusters, but also in electric home appliances.

Wafers

Wafers, which are manufactured using the mesa, planar and bipolar processes in our Okayama Plant, can be applied to most of the devices used for power control.

Discrete Devices (Diodes, Thyristors, and Triacs)

Motors and heaters are essential parts of electric home appliances. We provide thyristors and triacs for the control of commercial power that is supplied by electric power companies, and FRDs (fast recovery diodes) for high-speed switching control in the

most recent types of inverter control. These products support the development of new products that meets market needs, and reflect the consideration of environmental issues such as energy-saving and noise reduction.

Power Modules (Diodes, Thyristors, and Triacs)

High voltage, high current power modules with high reliability and durability are used in manufacturing facilities for many kinds of industrial products and power supply facilities that support many aspects of our society's infrastructure, such as information, communication, and traffic control.



Equipment Business

Equipment for facilities/Equipment for metal surface treatment/Equipment for electric furnace control/Large capacity power sources/Various power sources



Equipment



Full digital welder series



Thyristor rectifier for plating



Power source for condenser foil etching

Futuristic technologies support society and create better lifestyles.

Industrial technology continues to evolve as the needs of each generation diversify. Consequently, higher performance is required of various equipment. Sansha Electric has a full lineup of equipment and devices that employ cutting-edge technologies and thereby contributes to industrial development.



Automatic dental casting equipment



Controller for electric furnaces



Power source for copper foil

Equipment for surface treatment

Power sources play an important role in surface treatment. In this process, efficient and accurate control to obtain the most suitable voltage waveform for each kind of metal is required. Our rectifiers, which enjoy a high reputation worldwide, demonstrate high performance in many plants.

Equipment for electric furnace control

Electric furnaces are pollution-free and energy-efficient and therefore draw more attention than other types of industrial furnaces. Our thyristor-controlled electrical power regulators automatically control these furnaces. There are many features, such as fully automated temperature control and high performance, that contribute to improvement in product quality and production efficiency.

Large capacity power sources

In large scale facilities, such as those used for material processing, it is necessary to efficiently supply stable electric power, even when there are large load fluctuations. In plants with a large amount of precision equipment, such as semiconductor plants, power sources with high reliability are required to avoid problems such as power interruptions. We can achieve optimum specifications required for facilities.

Various power sources

There are many different kinds of equipment that use electric power, and various power source types are required for different purposes. We provide power sources with a variety of features to meet voltage, current-capacity and frequency requirements.

Information Technology Business

Uninterruptible power supplies (UPS's)/Power supplies for networks/Electronics components/Component material processing/Movie-related equipment



Information Technology



Uninterruptible power supply (UPS)



Power source for communications



Power source for light exposure

Advanced, next-generation units that support a growing information society.

IT (information technology) equipment provides the keys to communication networks that instantaneously connect different places all over the world. Sansha Electric's high performance equipment plays an important role, exhibiting high performance at communication bases, in network construction, in plants with open networks, and in various other environments.



Evaluation systems for charging/discharging of secondary batteries



Small capacity power sources for plating with network communication capability



Modular type power supply for surface treatment



Power source for plating with network communication capability

M-POWER
High speed PR power source for horizontal plating on PCB's

Uninterruptible power supplies (UPS's)

Computers handle all kinds of information in various areas ranging from business to daily life. Momentary power interruptions in IT equipment, even those lasting less than a second, may cause malfunctions that consequently lead to equipment failure. Our protection equipment maintain a high level of reliability in any situation against unexpected accidents.

Power supplies for networks

The continuously advancing high-speed communication technology is expected to be incorporated into many additional fields. We aim to realize advanced factory automation and information networks by improving the communication functions of various power sources used in the IT industry.

Electronic components

Lithium ion and nickel hydrogen batteries are indispensable to mobile devices. In order to support the production and ensure the quality of the new type of high performance batteries, for which demand is increasing, we are making efforts geared towards system integration of production facilities by providing charging/discharging systems that allow each kind of test to be performed automatically.

Component material processing

The metal etching and plating processes require continuously improving technology to achieve optimum performance while adhering to changing environmental protection. requirements. We respond to such demands with products incorporating advanced power electronics technology, such as large capacity pulse power sources and highpower accuracy power sources.

Movie-related equipment

We began our business with the manufacture of light sources for movies. Today, we are proud of our market share, obtained through the trust we have earned over many years. We have applied our advanced technology to our vast lineup of products, which supports the direction of dramatic art and includes high-performance stage lighting systems and power sources for projectors.

Environment Business

Power sources for clean energy/Cogeneration systems/Power sources for industrial waste disposal plants/Energy-saving equipment for power distribution improvement



Environment

Harmonizing ecology and technology Contributing to a clean society

The role played by Sansha Electric as a leading company in the power electronics field is to realize a truly affluent society not only for human beings but for the whole planet.
We strive to create a more comfortable global environment by trying to create products with both environmental and technological value.



PV inverter for mega - solar power plant



Power sources for industrial waste disposal



Intelligent String Monitor Box



Forced air-cooled outdoor integrated PV inverter



Single unit large capacity PV inverter
Indoor independence panel

Power sources for clean energy

The energy for making our lives more comfortable should be nature-friendly. For this reason, we are making efforts to develop solar power conditioners and power sources for wind power generation that give priority to environmental protection. We are working to realize a beautiful future, in harmony with the earth through power electronics technology.

Cogeneration systems

Facilities such as hospitals that use large amounts of electric power, hot water and steam, employ cogeneration systems that achieve high fuel efficiency by utilizing heat generated by generators. Our controllers are used to control the power generated by power generators and/or fuel cells in accordance with the load conditions to realize higher efficiency with easy operation.

Energy-saving equipment for power distribution improvement

The voltages of commercial power supplied by transmission lines from power plants may change or fluctuate irregularly. Our equipment can stabilize power transmission by using our high capacity switching technology for power electronics.

Power sources for industrial waste disposal plants

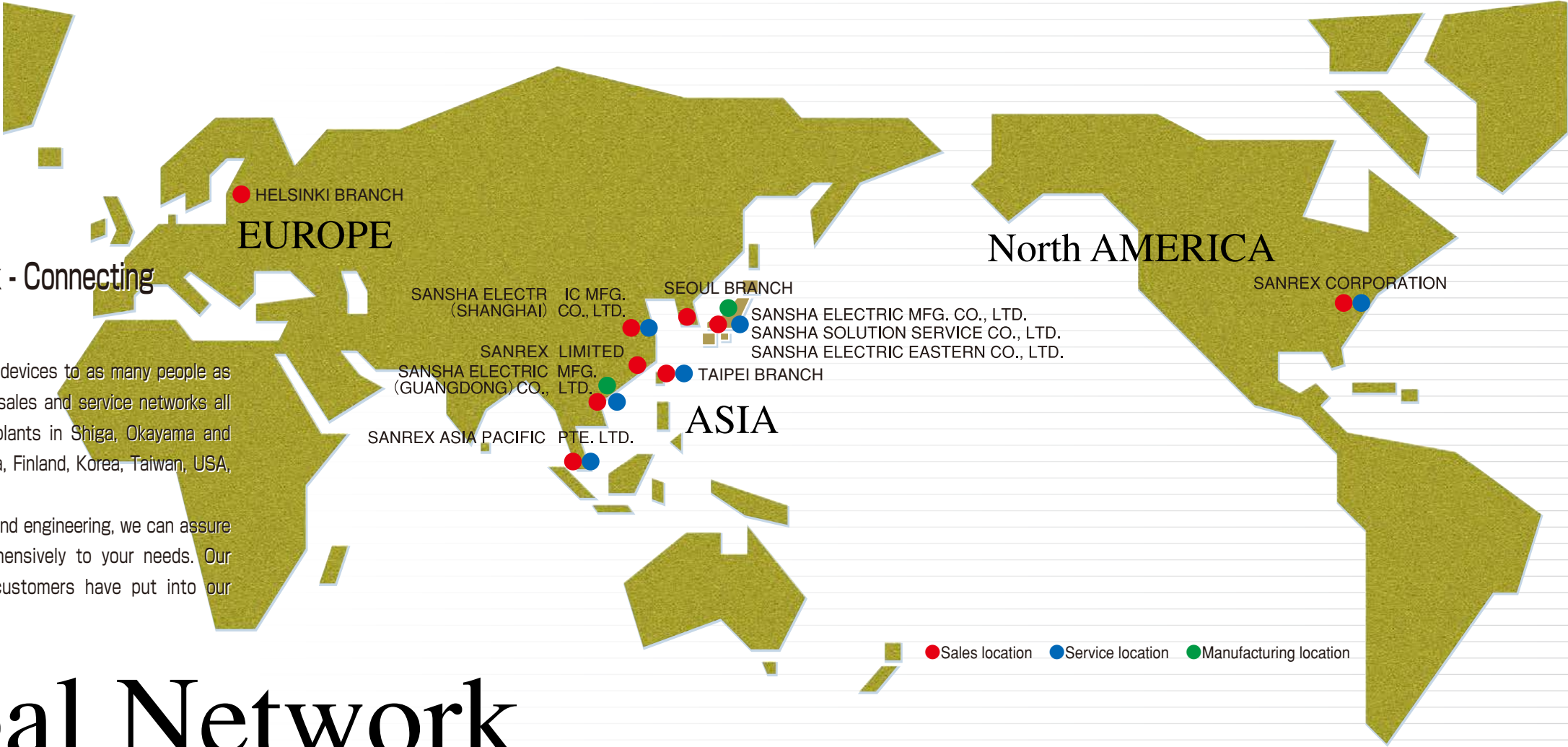
This system heats and melts the ash produced from incinerated garbage and converts it into recycled materials that can be used safely for road pavement and asphalt composites. In this way, heavy metals can be made harmless and processed stably.



The Sansha Electric Group Network - Connecting the world through technology

It is our mission to provide superior power electronic devices to as many people as possible. To achieve this goal, we have established sales and service networks all over Japan and overseas. We have manufacturing plants in Shiga, Okayama and China, and sales branches in Tokyo, Nagoya, Fukuoka, Finland, Korea, Taiwan, USA, China, Hong Kong and Singapore.

With our substantial capacity for after sales service and engineering, we can assure you of our ability to respond quickly and comprehensively to your needs. Our worldwide network is evidence of the trust our customers have put into our technology.



Global Network



Head Office



Okayama Plant
Built in 1985 to manufacture silicon wafers, semiconductors and semiconductor modules in clean environment.



Shiga Plant
Built in 2002 and expanded in 2014, the Shiga Plant manufactures large-scale products such as industrial power sources and cleaning systems. This plant also manufactures external panels and frames using CNC machines.

Head Office, Branch and Sales Offices

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