〈English〉

TAMURA

C O R P O R A T I O N   R E P O R T   2 0 2 0

CORPORATE PROFILE / CSR REPORT DIGEST

Biltrite Tamura

The 12th Mid-term Plan 2019-2021 & 2024

GROWING ANEW

Creating Value

Creating Tamura Group's Value

The Tamura Group aims to increase corporate value by contributing to society through our business activities and is making continuous efforts to create new values towards solving society's problems.

Input

(FY2019 or as of March 31, 2020)

Financial capital
Total assets
88.6 billion yen

Shareholder's equity ratio
52.4 %

Manufactured capital
Capital expenditure
(Including leased assets)
4.5 billion yen

Intellectual capital
Longstanding accumulation of technologies and know-how
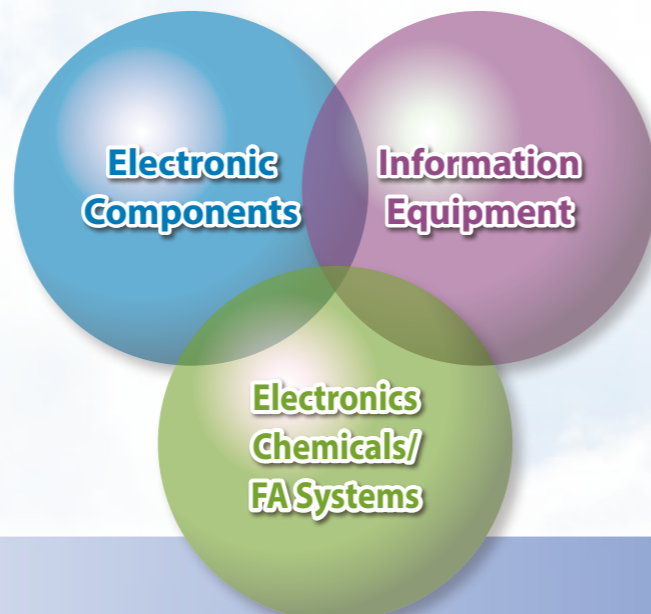R&D related expenses
2.9 billion yen

Human capital
Number of employees on a consolidated basis
4,753 employees

Social and relationship capital
Trusting relationship with stakeholders

Natural capital
Natural resources, such as raw materials and energy

Corporate Philosophy

MISSION
The Tamura Group supplies an original range of products and services, highly regarded in the global electronics market, to satisfy the evolving needs of customers, employees and shareholders supporting the Group's growth.

VISION

GUIDELINE

Tamura Group Code of Conduct

Business fields 》》P.09~15

- Electronic Components
- Information Equipment
- Electronics Chemicals/ FA Systems

Value Chain 》》P.16

R&D	Procurement	Production	Sales

Efforts to support business activities 》》P.17~22

Environment
- Energy savings and CO_2 emissions reduction
- Resource savings and waste reduction
- Reduction of substances of concern

Society
- Improving customer satisfaction through quality improvement
- Promoting green procurement and CSR procurement
- Nurturing global human resources and active promotion of local staff
- Establishing safe workplaces and proper work environments

Governance
- Compliance enhancement
- Timely and proper disclosure of corporate information

Output

Value creation through business

"One Tamura" strategy 》》P.06

By providing products, technologies, and services, Tamura shall support

◆ **Automotive;**
Popularization of eco-friendly cars as well as safe and comfortable driving

◆ **Power electronics;**
Next-generation energy-saving societies

◆ **IoT/next-generation communications;**
Network societies in the near future

The 12th Mid-term Plan 》》P.06

Biltrite Tamura

The 12th Mid-term Plan 2019-2021 & 2024

GROWING ANEW

FY2024 (Centennial anniversary year)

Operating income ratio : **10% or more**

ROE : **10% or more**

Realization of a Sustainable Society

Sustainable Growth of Tamura Group

Related social issues

- Realizing a decarbonized society
- Conserving energy and resources
- Promoting diversity
- Promoting workstyle reform
- Preparing for natural disasters
- Responding to a rapidly aging society
- Coexisting with communities

The whole group as "One Tamura" is committed to further growth towards the centennial anniversary.

In April 2019, the Tamura Group started its medium-term management plan as a long-term vision for sustainable growth towards its centennial anniversary (2024) and thereafter. Faced with the task of confronting the sudden outbreak of COVID-19, the chairperson and the president shared their views on the current business environment and future prospects in an interview.
(Date of interview: June 2, 2020)

Could you explain the business environment and major business performances in FY2019?

Asada: Fiscal year 2019 was filled with turbulence for our company. The year started amid the U.S.-China trade friction and the COVID-19 pandemic hit the economy towards the end of the year, to name but a few. First and foremost, I would like to extend my heartfelt sympathy to those who are suffering from COVID-19 and are facing difficulties under the present circumstances. Furthermore, I would like to express my respect and appreciation to all those who are endeavoring day after day to prevent the spread of infection from their own positions and are contributing to society.

In terms of profits, unfortunately, we witnessed a decrease from the previous year because of two major factors, namely, the U.S.-China trade friction and COVID-19, and failed to reach the goal for the initial fiscal year of the medium-term management plan.

In particular, the entire business of automotive products stagnated as production-plans of automobile manufacturers were postponed in the midst of the COVID-19 pandemic. Nevertheless, we predict that the demand for eco-friendly cars such as hybrid vehicles will continue to grow, and expect an increase in demand post-COVID-19. Meanwhile, thanks to the expansion of the 5G market in China, future growth of investments is expected for electronic chemicals business even with the ongoing U.S.-China trade friction.

Please tell us the main purpose of "change of management level personnel in charge of each business unit" that was implemented in January 2020.

Asada: In the medium-term management plan "Biltrite Tamura *GROWING ANEW*" that was started in FY2019, we have designated three fields as the pillars of growth, namely, "automotive," "power electronics," and "IoT/next-generation communication," whose markets are expected to expand in the future. Our One Tamura Strategy is that all employees be "One Team" as they combine every effort and approach clients.

This time, reassignment of the heads of business units who are well versed in their respective fields was carried out with the expectation that the best practices in each business unit would also be developed in other business units and that chemical reactions would be created from combinations of different features of various business units. For example, automotive products can offer business opportunities not only for electronics parts but also for electronic chemicals and FA systems. In other words, it is

Naoki Tamura

Chairperson and Representative Director
Tamura Corporation

necessary for further business expansion to adopt an approach that is based on not each individual business unit but the whole group. By accelerating cross-sectoral utilization of human resources, my goal is to improve business efficiency on a company-wide basis. (page 06)

What is the gist of Tamura's approach toward clients to expand business?

Asada: It is expected that we as a group try our best to serve individual clients and have them understand the fact that "the Tamura Group deals with a wide range of businesses, including parts, materials, and equipment." Our wide range of businesses have resulted in stable performance and a global network. I envision a future business scene where we, working with a mission to further spread our "Tamura" brand, make efforts to deepen clients' understanding by introducing firstly the total image of the Tamura Group and secondly the contents of each business unit, and finally engage in business negotiations.

Please tell us your ideas regarding human resource utilization/development in the One Tamura strategy.

Asada: In the immediate future, the focus will be on strengthening and developing management-level personnel under the One Tamura strategy. Whereas the Group's bottom-up educational program has been relatively successful, there is an urgent need to develop personnel who act as the main driving force for management. (page 22)

Furthermore, personnel-system reform in concert with the vision is also being promoted. In the case of a "*monozukuri* (manufacturing) company" like us, if technical specialists in charge of innovation have to assume management responsibilities as well, such valuable human resources with keen sensitivity will not be able to spend enough time in R&D, which is not

good for the company. Furthermore, it is often said that "the best player is not necessarily the best coach," and a person who excels as a technical specialist may not be necessarily good at management. Therefore, it is necessary to establish a personnel system in which technical specialists can aim for higher-ranking positions while devoting themselves to mastering their own fields of expertise. Under the work style reform, although focus is given to "a comfortable work environment" alone, I would like to also put emphasis on "job satisfaction" and establish a system that provides an environment for developers and researchers to devote their time solely to R&D.

Basic policy on promotion of SDGs (Sustainable Development Goals)

Tamura Group Code of Conduct

The Tamura Group recognizes our corporate social responsibility (CSR) of balancing the achievement of a sustainable society and the sustainable growth of the Tamura Group. We recognize the term "SDGs" as shared global language regarding social issues. In addition to understanding the business opportunities presented by SDGs and the responsibility of corporation in achieving SDGs, the Tamura Group will contribute to the solution of social issues through products, services, technology, and business activities.

SUSTAINABLE DEVELOPMENT GOALS

Masahiro Asada

President and Representative Director
Tamura Corporation

According to survey results, the recognition rate for SDGs rose to 97% among employees. What do you think is the main contributor to this?

Tamura: The recognition rate of nearly 100% was achieved as a result of efforts to strengthen the push-based information delivery system. In FY2019, using the e-mail magazine to employees, content related to "What are the 17 Goals of SDGs?" was delivered on a periodic and intensive basis. I believe that the employees became familiar with SDGs because the content included not only explanations for the 17 goals but also example cases of specific programs carried out worldwide and of activities performed in the Tamura Group.

For example, Goal 14 of SDGs, "Life Below Water," seems to be completely irrelevant to the Group's businesses. Nevertheless, I believe that business activities should include not only development/manufacturing/trading but also education and welfare programs for employees. On one occasion, an acquaintance who works for Panasonic and I joined an industry-based CSR activity, and there he spoke about how Panasonic's company canteen has implemented the "sustainable seafood" activity by serving only fish and shellfish whose sustainability has been secured. Thinking that such an activity would contribute to "Life Below Water" in business operations, I started consultations with the subcontractor for the Group's canteen operation. As a result, after acquisition of CoC Certification*, sustainable seafood dishes are now being served on a regular basis. I would like to continue developing initiatives that would help employees become familiar with SDGs. (page 22)

With regard to SDGs, the goals for greenhouse gases and renewable energy have been reconfigured towards 2030.

Tamura: It was because I thought it necessary to establish specific KPIs (Key Performance Indicators) as a company that is committed to contributing to the achievement of SDGs. By FY2030, we aim to reduce greenhouse gases by 21% or more relative to FY2013 levels and to at least double the use of renewable energy relative to FY2019 level. (page 19)

With regard to renewable energy in particular, the goal has been set as part of our sustainability strategy that looks into "decarbonization" in the future. Measures toward decarbonization have already started, including the acquisition of the "Nearly ZEB (Net Zero Energy Building)" certification by the Sakado Factory that was rebuilt in 2018.

Along with continued environmental investment efforts, we will endeavor to expand sales volume and improve productivity of environmentally friendly products. Under the current circumstances created by the COVID-19 pandemic, many businesses have gone online as a COVID-19 infection control measure. With this as a trigger, I am also planning the active use of ICT. (page 21)

What prospects do you have for business environments including contributions to SDGs in FY2020 and thereafter?

Tamura: Although SDGs have been advocating the development of a sustainable society, the outbreak of COVID-19 seems to have somewhat put a question mark on the sustainability of society and economy. Knowledge of SDGs including their ideals and goals should have been spread by now to all employees. Our previous plan was that each business base and each division would start taking action in FY2020. However, in consideration of the changes in circumstances, we would like to start once again by reviewing our overall business from the perspective of BCP (Business Continuity Plan) and by re-examining the BCP manual.

Asada: From the management perspective including SDGs and social contribution as well, it will become important for us to focus on three fields: "automotive," "power electronics," and "IoT/next-generation communication."

In the post-COVID-19 era, although there will be no change in basic business stance, approaches thereof may have to be changed. In the case of online business, business starts only when there is access from customers. How to overcome issues that cannot be resolved unless people actually go out and take action is another challenge. From the BCP perspective, I would like to review "which functions in what style" we should have "in which places."

Finally, please give a message to the stakeholders.

Tamura: In FY2019, we witnessed the emergence of the new social problem, COVID-19. Over time, I have come to realize again that in order to continue being a sustainable company, it is imperative that we carry out management with even more awareness about our contribution to SDGs and with a strong resolve to coexist not only with society and nature but also with the virus. We should continue positive developments triggered by the COVID-19 pandemic, such as work style reform, operational reform, and CO_2 emissions reduction as a result of acceleration of telework. I consider it a challenge for us top management to find ways to maintain those positive results.

Asada: In the business environment that is rapidly evolving from face-to-face business to online business, it will become necessary for us to develop an exceedingly "attractive product" that can shine even on the computer monitor and can motivate customers to contact us. In order to realize such an attractive product, we will have to overcome various challenges, including conducting a review of marketing at first, increasing product appeal, and creating "cross-divisional collaboration products" by utilizing cross-divisional cooperation under the One Tamura strategy.

The Tamura Group will continue to endeavor toward the further development of the Company as it approaches its centennial anniversary in four years' time. We ask all our stakeholders for their continued understanding and support.
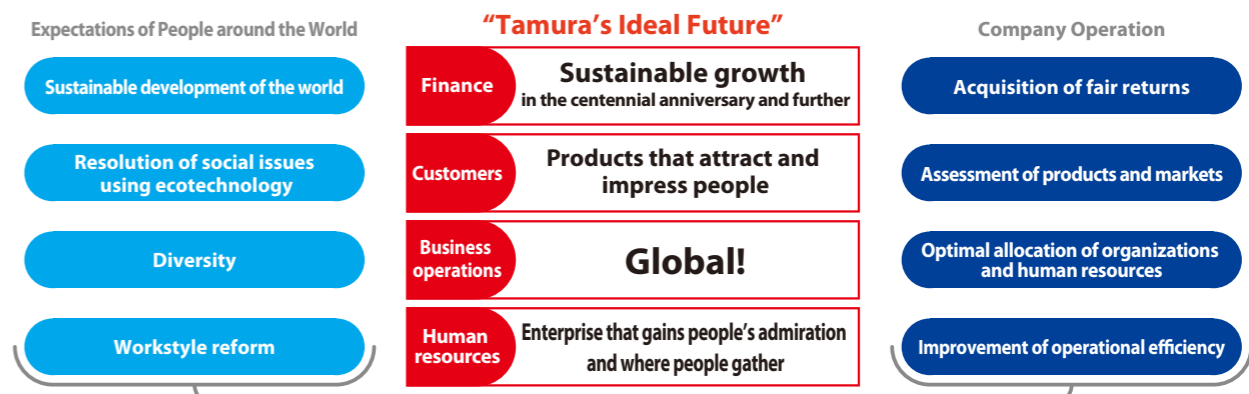
*A certification system that guarantees traceability to ensure that fishery products of MSC (Marine Stewardship Council)/ASC (Aquaculture Stewardship Council), which are certified as sustainable seafood, reach consumers without being mingled with non-certified fishery products

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The 12ᵗʰ Medium-term Management Plan (2019–2021 & 2024)

# Biltrite Tamura GROWING ANEW
Biltrite = Build up + Right

Company's Ideal Future in the Centennial Anniversary Year (2024)

Based on this Medium-term Management Plan and various challenges towards the achievement of SDGs (Sustainable Development Goals), the Company aims to grow in a healthy manner while responding to the expectations of people around the world as an entity needed by all its stakeholders, including its shareholders, business partners, employees, and local communities.
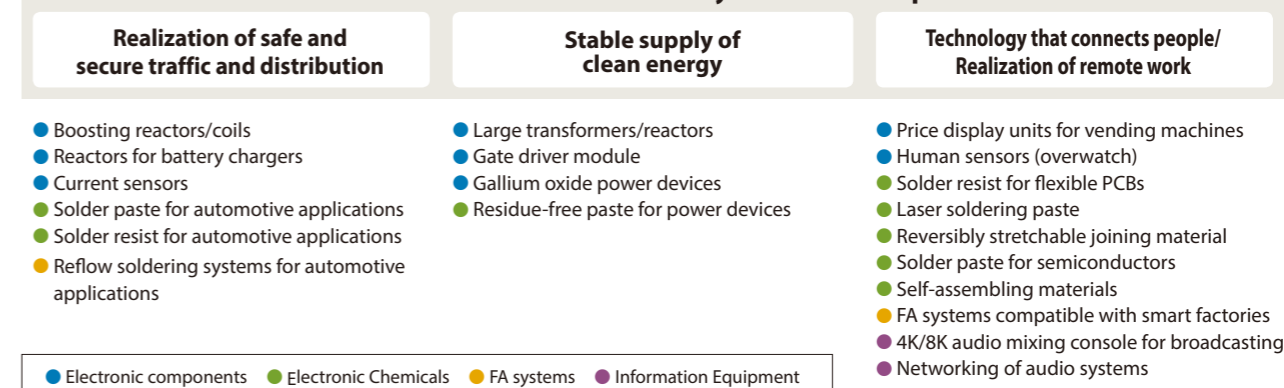
Expectations of People around the World
- Sustainable development of the world
- Resolution of social issues using ecotechnology
- Diversity
- Workstyle reform

"Tamura's Ideal Future"

Finance	**Sustainable growth** in the centennial anniversary and further
Customers	**Products that attract and impress people**
Business operations	**Global!**
Human resources	**Enterprise that gains people's admiration and where people gather**

Company Operation
- Acquisition of fair returns
- Assessment of products and markets
- Optimal allocation of organizations and human resources
- Improvement of operational efficiency

Advancing SDGs

One Tamura Strategy

Tamura has outstanding products and technologies in each of its business fields. By focusing on automotive, power electronics, and IoT/next-generation communication markets which are expected to grow significantly in the future, we will do our best as One Tamura on a group-wide basis. The COVID-19 pandemic has accelerated the relevance of these fields more rapidly than ever.

Automotive
Support for popularization of eco-friendly cars as well as safe and comfortable driving

Responding to the world's growing need for eco-friendly cars, we offer a wide range of automotive products that are essential for improving fuel consumption, environmental performance, cruising performance, and acceleration performance.

Power electronics
Support for next-generation energy-saving societies

We promote the power electronics business by offering products that can be used in wind-power generation and electricity transmission/distribution for the expansion of renewable energy, and products that contribute to energy efficiency improvement.

IoT/next-generation communications
Support for network societies in the near future

We provide products that can support a wide range of communication technologies, including chemical materials for multi-functionalized electronic devices such 5G (5th generation mobile communications system) smartphones.

Needs that have been accelerated by the COVID-19 pandemic

Realization of safe and secure traffic and distribution	Stable supply of clean energy	Technology that connects people/ Realization of remote work
● Boosting reactors/coils ● Reactors for battery chargers ● Current sensors ● Solder paste for automotive applications ● Solder resist for automotive applications ● Reflow soldering systems for automotive applications	● Large transformers/reactors ● Gate driver module ● Gallium oxide power devices ● Residue-free paste for power devices	● Price display units for vending machines ● Human sensors (overwatch) ● Solder resist for flexible PCBs ● Laser soldering paste ● Reversibly stretchable joining material ● Solder paste for semiconductors ● Self-assembling materials ● FA systems compatible with smart factories ● 4K/8K audio mixing console for broadcasting ● Networking of audio systems

● Electronic components   ● Electronic Chemicals   ● FA systems   ● Information Equipment

Time-honored technological capabilities that continue to excel

HISTORY

PRODUCTS

CORE TECHNOLOGY

The company that would eventually become the Tamura Group came into being in 1924, one year before the start of radio broadcasting in Japan, as the Tamura Radio Store. Its main business was radio repair and the manufacture of original radios. In the process of pursuing superior sound, the firm came to handle the manufacture of the key component, the transformer.
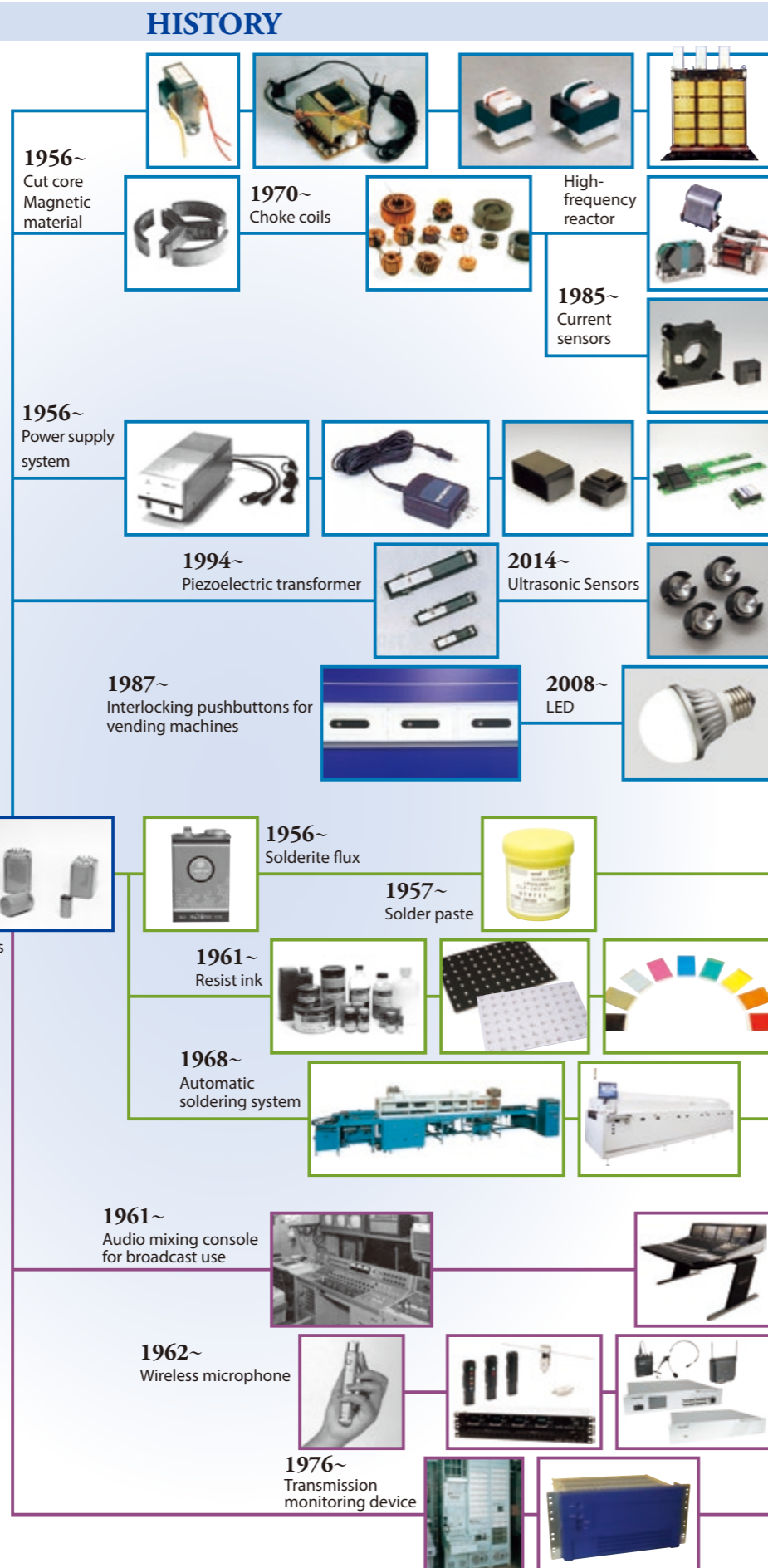
since 1924

Manufacture and sale of radio and gramophone

1930~
In-house production of Biltrite series transformer

Its reputation as the "Tamura of transformers" created a foundation on which to expand its businesses, including various electronic components related to transformers; flux and soldering materials that were born out of the pursuit of quality joining materials for the manufacture of transformers; soldering systems; and even broadcast audio equipment and communication systems, based on achievements in the manufacture of transformers for broadcasting and communication.

Currently, Tamura Corporation conducts business operations in three areas: electronic components, electronic chemical mounting, and information equipment, to develop and supply products that meet the needs of new markets, such as the environment and energy markets.

1956~
Cut core Magnetic material

1970~
Choke coils

High-frequency reactor

1985~
Current sensors

1956~
Power supply system

1994~
Piezoelectric transformer

2014~
Ultrasonic Sensors

1987~
Interlocking pushbuttons for vending machines

2008~
LED

Transformers

1956~
Solderite flux

1957~
Solder paste

1961~
Resist ink

1968~
Automatic soldering system

1961~
Audio mixing console for broadcast use

1962~
Wireless microphone

1976~
Transmission monitoring device

Electronic Components

Switching transformers, Reactors, Coils (High-frequency products)

Power transformers, Reactors, Coils (Low-frequency products)

Specialized large transformers and reactors

Current sensors

AC adaptors, Battery chargers
Power modules
Power supply for outdoor LED lighting
Gate driver modules

Piezoelectric ceramic products

LED-related products
Vending machine products
IoT-related products (Human sensors/Vitals sensors)

Electronic Chemicals/FA Systems

Solder paste & post-flux
Self Assembling Material

Solder resists (for rigid PCBs and flexible PCBs) (Photoimageable coverlay)
OSP (pre-flux)
White reflective material,
black absorbing material

Reflow soldering system
Wave soldering system
Spray fluxer and other peripheral devices

Information Equipment

Audio mixing console for broadcast use
Sound editor and other equipment

Wireless intercom
Wireless microphone

Communication network equipment
Security-related equipment
OEM products

Power solutions
- Dust core material development and mass-production technology
- Electromagnetic field, heat, structural analysis (simulation) technology
- High-efficiency, low-noise power supply technology
- Large current transformer coil winding technology
- Environmental technology
- Adaptive technology for highly reliable standards (JAXA and MIL standards, etc.)
- Mass production technology for large products
- Design technology for special specifications (water cooling, waterproof, high pressure)

Piezoelectric ceramics
- Material development and process technology
- Element design technology and analysis technology
- Technology for controlling piezoelectric elements

LED/LD application and IoT solutions and semiconductor devices
- LED packaging technology
- Waterproofing technology
- Thermal design and analysis technology
- Optical design and analysis technology
- High-efficiency reflection processing technology
- Sensing technology
- Data processing technology
- Growth technology of single crystal substrates
- High-quality epitaxial growth technology
- High efficiency High-power LED manufacturing
- Lighting design technology
- Optical single-crystal technology
- Wireless technology

Mounting process, PCB material and semiconductor mounting material
- Unified, collaborative product development for both material and equipment
- Resin design and synthesis technology (photosensitive resin, thermosetting resin, thermoplastic resin)
- Metal powder production technology
- Soldering technology
- Photosetting technology
- Thermosetting technology
- Environmental technology (technologies compliant with Pb-free, halogen-free requirements)
- Simulation technology (CAE analysis)
- Analytical technology contributing to materials design
- Reliability evaluation technology for product quality
- Reflow heating technology
- Soldering technology
- Wave soldering technology
- Heat control technology
- (Nitrogen) Atmosphere control technology

Information equipment
- Audio processing technology
- Digital signal processing technology
- Acoustic technology
- High-frequency technology
- Radio technology
- High-density mounting technology
- Surround-sound technology

Tamura's Technologies
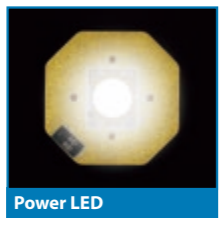# Supporting Society, Industry, and Daily Life

Tamura's products have been supporting various industries and social infrastructure as "materials," "components," and "devices" that range from consumer products, such as automobiles and electronic equipment, to devices at manufacturing sites and natural-energy-related and aerospace fields. From raw materials to complete systems, Tamura's technologies have contributed to safety and comfort as well as energy savings.

- Electronic Components
- Electronic Chemicals / FA Systems
- Information Equipment

In Aerospace
Contributing to society by providing ultimate environmental resistance in the form of airplanes, rockets, and satellites

Transformers/Reactors

At Lighthouse
Achieving energy-saving, extended service life, and improved maintainability for the luminous source of the lighthouse, which requires ultra-high brightness and high straightness

Power LED

At Train Stations
Supporting railway operation in the audio-visual realm by conveying such information as arrival/departure times

LED electric bulletin board

Wireless microphone for railways

In convenience stores and shops
LED light source contributes to energy savings for shop sign lighting and showcases.

Advertisement LED Lighting

LED lighting for showcases

In Automatic Vending Machines on the Street
Realizing leading-edge functions for display, item selection, interface with a smartphone, etc.

販売中

Price display unit

Product selection buttons

In Broadcast Stations
Used in equipment for adjusting sound delivered to audiences, and wireless systems for in-house communication

Audio mixing console

DECT-based Intercom

Portable audio mixer

In Eco-Friendly Cars
Supporting safe, secure, and eco-friendly driving with highly reliable and efficient parts and materials

Automotive reactors/Coils

Solder resist

Solder paste

In Wind and Solar Power Generation, by infrastructure
Offering parts and materials that contribute to efficiency improvement in renewable energy generation and DC transmission

Large transformers and reactors

Current sensors

Gate driver module

Power modules

Self assembling material

White reflective material

Flux

In Manufacturing Plants
Playing active roles as components of robots and machine tools as well as devices indispensable for PCB assembly

Current sensors

Gate driver module

Power modules

Transformers/Reactors

Soldering systems

In Smartphones and Tablet PCs
Employed as materials that support device evolution to realize multi-functionalization and miniaturization

Solder resists for flexible PCBs

Black absorbing material

Self assembling material

Photoimageable coverlay (film or liquid form)

At Home
Components contributing to energy-saving in air conditioners or power conditioners, or sensors monitoring people's activities indoors.

Current sensors

Power modules

Reactors

Human sensors

東北・山形・北陸新幹線
- MAX とき 245 号　6:26 新潟
- つばさ　　45 号　6:38 山形
- あさま　　503 号　6:46 長野
- MAX とき 675 号　6:56 新潟

24

Electronic Components

"High-reliability" and "high-efficiency" power technology contributes to the future of power electronics, realizing safer and more secure lives as well as a decarbonized society.

Social value of business

- We are directing efforts into the development of high-reliability and high-efficiency products required for power systems that deal with high current, such as those for eco-friendly cars, renewable energy, and industrial equipment. Our boosting reactors for eco-friendly cars, which necessitate high-safety designs, are highly regarded in terms of performance and quality, so we will enhance production capacity in response to increases in demand, supporting the widespread use of eco-friendly cars.

- The LED-related products that we have developed include high-brightness power LEDs that are extremely power efficient and human sensors to which sensing and communication technologies are applied. These products help monitor people's activities in nursing-care facilities and the like, enhancing safety.

- Our transformers, reactors, LEDs, power supplies, and piezoelectric ceramics products contribute to saving energy and resources in devices that incorporate these products. We provide these products globally in a broad range of areas, effectively offering eco-technological solutions to social problems.

■ Products

Reactors and coils
Reactors are core components for voltage control and noise removal for power conditioners, air conditioners, and the like. They contribute to energy saving and clean energy.

High-frequency transformers
High-frequency transformers are necessary to miniaturize electronic devices or increase efficiency. Our products are compatible with various types of circuits and enable higher-frequency power conversion, contributing to energy saving.

Automotive reactors
The reactors are key components for optimal voltage control in hybrid and electric cars. Our reactors ensure not only eco-friendly but also highly reliable and safe driving.

Large transformers and reactors
In large-scale wind or solar power generation systems and the like, large transformers and reactors are the core components—the former are used for voltage conversion and the latter are for voltage control and noise removal. They contribute to the spread of renewable energy.

Transformers and reactors for aerospace use
As the only domestic manufacturer that has obtained certification from Japan Aerospace Exploration Agency (JAXA) for the standards of transformers and reactors for power systems, we develop, produce, and supply transformer and coil products for onboard use on satellites and their launching vehicles.

Current sensors
In order to make effective use of natural energy, it is necessary to monitor electrical current in equipment with a high degree of accuracy. Our product line, which is broad in terms of current range and accuracy range, contributes to creation, storage, and saving of energy.
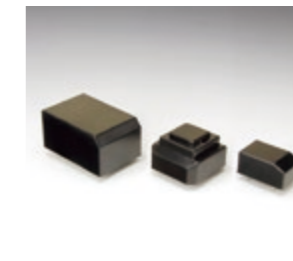
Power modules
High-efficiency DC converter functions are packaged. e modules allow you to easily design high-performance power supply (high-efficiency, low-standby-power, quiet, and small) best suited for your product.

Gate driver module
The product for driving high-power switching semiconductors used in inverters, etc. Suitable for both IGBT and SiC-MOSFET because of its low noise characteristics. This product can contribute to drastic simplification of equipment design.

Power supply for outdoor LED lighting
LED power supply for outdoor use such as facility illumination and road illumination. Designed to achieve high efficiency and high power factor and equipped with multi-stage optical modulation function, the product can realize the industry's top level of energy saving illumination.

AC adaptors
Our AC adaptors supply stable power to optical network units (ONU). Their high resistance to exogenous noise due to thunder and other causes provide support for communication lifelines such as the Internet and telephones.

Piezoelectric transformers
The use of the resonance phenomenon of piezoelectric ceramics allows efficient generation of high voltage. Our products are used for high-voltage power supply for laser printers, copiers, ion generators, etc.

Vending machine related products
We have developed major components such as the item selection button, which holds over 90% of the market share according to our investigation, the price display unit, and LED lighting. Buttons with a built-in price display have already become the trend for vending machines.
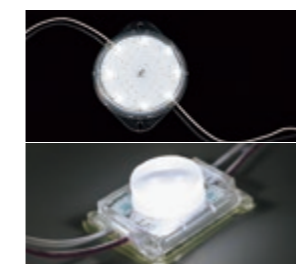
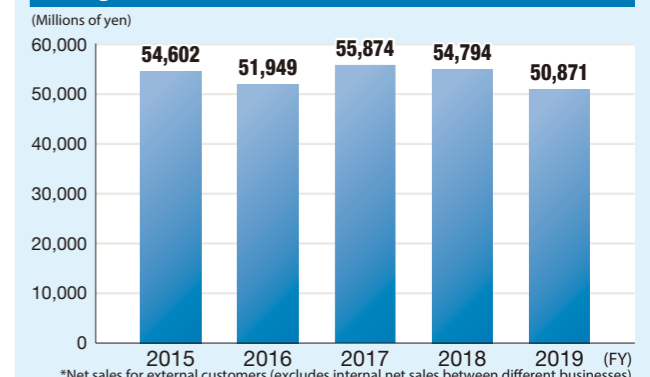### LED lighting for special applications
LED lighting for special applications, such as inside lighting type signboards and refrigeration showcases that utilize optical engineering design technology. This product has been adopted for use in showcases manufactured overseas, mainly Asia.
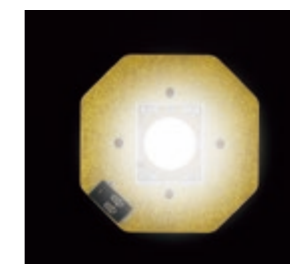
Power LED
Ultrabright LED that has been officially adopted for use in a large lighthouse. Its original packaging technology and heat dissipation design offer improved brightness, making it a suitable replacement for a 2.0 kW halogen lamp.

Changes in net sales
(Millions of yen)

2015	2016	2017	2018	2019 (FY)
54,602	51,949	55,874	54,794	50,871

*Net sales for external customers (excludes internal net sales between different businesses).

Electronic Chemicals/FA Systems

Well-refined soldering technology for "highly reliable" and "high-density mounting", with eco-friendly materials and equipment, contributes to the development of a sustainable electronics industry.

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION

Social value of business

Electronic Chemicals

● As cars are becoming more fuel-efficient and highly functional, automotive components are becoming more electronically controlled, lightweight, and miniaturized. Under these circumstances, we offer superior materials that meet reliability requirements that are becoming stricter each year. Our materials have high reliability and show good performance, including crack resistance, heat resistance, and humidity resistance, even in a harsh engine room environment. In addition, as smartphones and wearable devices are becoming more multi-functional, lightweight, and miniaturized, there is a demand for further high-density mounting and various joining methods. We provide materials that meet such demand, supporting high-speed and high-capacity communication in 5th generation (5G) mobile network systems.

FA Systems

● We provide high-performance soldering systems compatible with other assembly equipment. Such systems are needed due to an increase in demand for in-vehicle PCBs associated with advances in automotive electronics or to development in smart factories typified by Industry 4.0. Our systems show good environmental performance that helps save power and resources. Using this advantage, our systems streamline mounting lines and support manufacturing in evolving factories around the world.
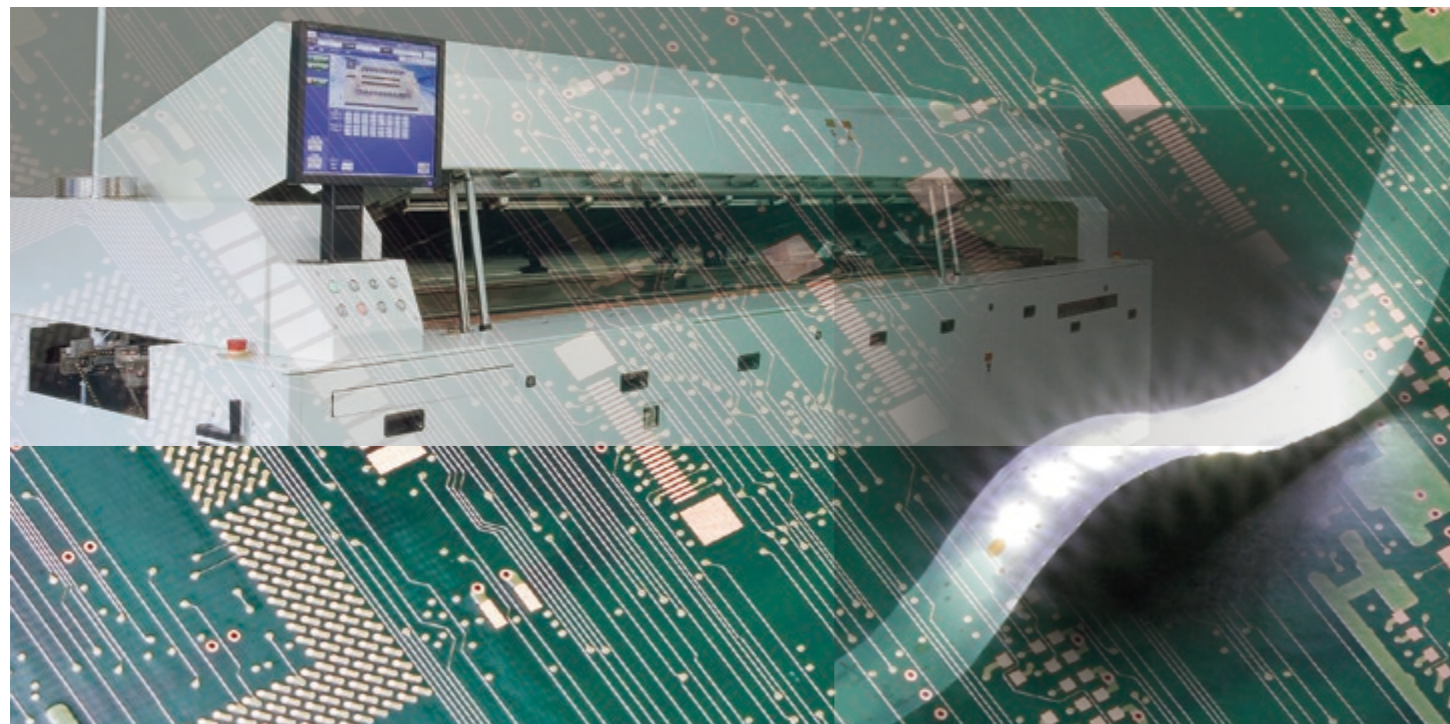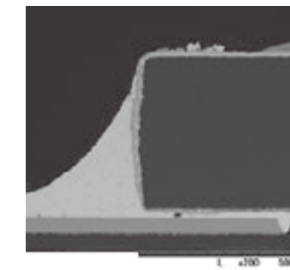
■ Products

Flux
Flux is the keystone of Tamura's materials development. By chemically removing oxide film from the metal surface to be soldered, flux ensures superior wettability and spreadability for solderable metals.
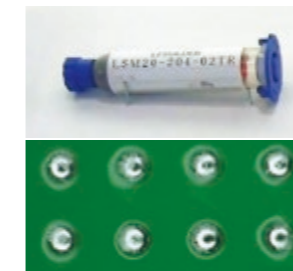
Solder paste
Used as joining material for surface mounting, solder paste is prepared by mixing solder powder and a flux. Tamura's extensive metal composition lineup provides compatibility with various applications, such as fine mounting, in-car use, and micro bump formation.

High heat resistance solder
In-car electronic devices should have high resistance to harsh temperature environments due to miniaturization and mechatronic integration. Our solder products prevent solder joints from cracking, contributing to reliability improvement of electronic devices.
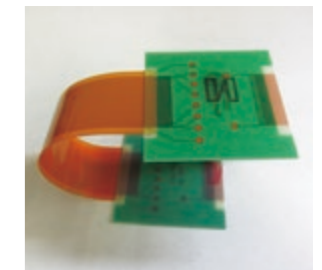
Self-assembling materials
Self-assembling materials join flexible and rigid PCBs through a thermocompression bonding process at a low temperature and in a short time. These materials reduce the joining area of connections on circuit boards and allow low-temperature joining, thereby contributing to reducing CO_2 emissions.

Selective soldering material
Solder paste available for quick-heating soldering such as laser soldering. It allows 3D mounting and partial soldering. It is also available as a jet dispensing product.

Solder resist
The solder resist plays an important role in maintaining insulation performance by protecting printed circuit boards (PCBs) from oxidation. Mindful that it serves as the face of PCBs, Tamura is as attentive to the external appearance as the reliability.

Solder resists for flexible PCBs
Halogen-free solder resists for flexible PCBs are available in rich color variations.
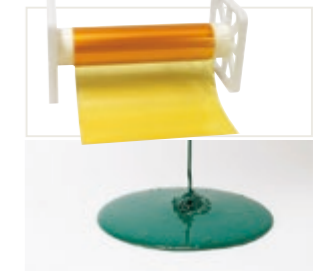
Photoimageable coverlay (film or liquid form)
Insulation material satisfying the requirements for functional modules—good workability, fine-mounting capability, weight and thickness reduction, and high reliability.

Reflow soldering system
Reflow soldering system heat PCB-mounted electronic components to melt solder and join the components and circuits on the board. Our new systems are equipped with convection control technology that efficiently circulates gas within the systems, making it possible to suppress flux adhesion to the inner surface of the furnace as well as reduce nitrogen consumption.
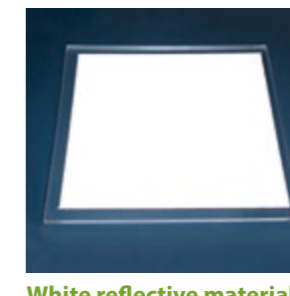
White reflective material
White reflective materials are applied to the back surface of a LED PCB or a solar power panel to increase reflectivity. They are highly functional halogen-free materials with high reflectivity and discoloration resistance.
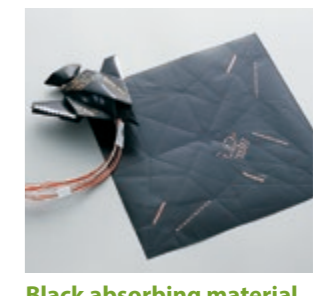
Black absorbing material
These materials are applied to a surface of a printed circuit board or a film to accentuate LED light. They can meet design requirements such as covering and hiding wiring.

Wave soldering system
Wave soldering system through which a printed circuit board with electronic components inserted is passed with its lower surface dipped in solder bath. The soldering system uses a solder bath made of titanium, which is resistant to corrosion, and has a hot air heater with high preheating capability.

Changes in net sales
(Millions of yen)

FY	2015	2016	2017	2018	2019
Net sales	24,741	23,567	25,378	28,084	25,342

*Net sales for external customers (excludes internal net sales between different businesses).
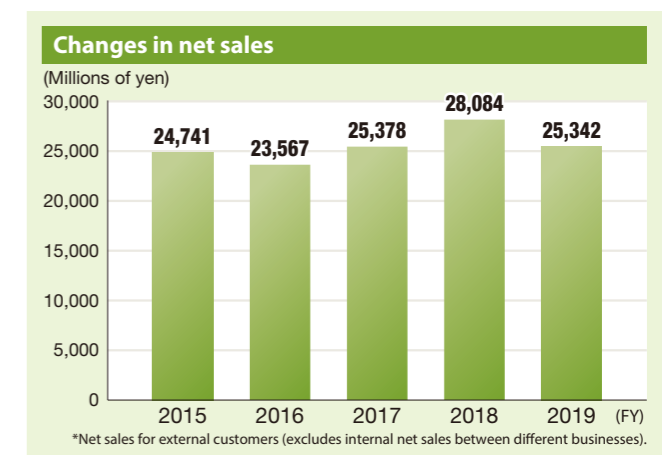
Information Equipment

Improve "safety and security" of social infrastructure through "sound" to deliver "value" and "excitement" to customers.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE **11 SUSTAINABLE CITIES AND COMMUNITIES**

Social value of business

- We have accumulated sound and communication technologies in the areas of broadcasting and telecommunication. Using these technologies, we provide customers, particularly broadcast stations, with wireless intercoms and more as well as audio mixing consoles compatible with high-resolution 4K/8K TV broadcasting, thereby delivering new experiences to the audience and contributing to comfortable living.

- We have applied our original wireless technology to various systems that watch over for human safety life.

■ Products

Audio network

NT110
NT880
NT660

DECT-based Intercom **Wireless microphone for railways**

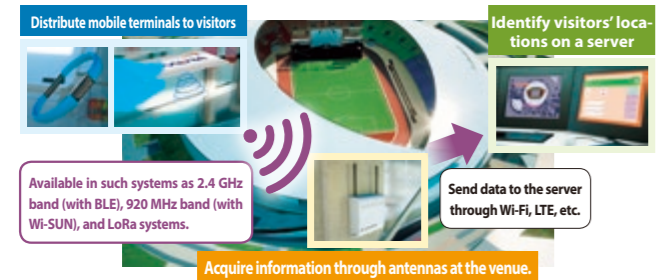#### NT series—audio mixing consoles for broadcasting
Sound adjusting equipment used in TV and radio broadcast stations, etc.
It features a digital sound signal processing system that efficiently adjusts multiple sounds. All models have an audio network function that facilitates IP networking to streamline broadcast facilities.

Wireless devices
Wireless intercoms, such as DECT-based intercoms, are essential communication tools for producing TV and radio programs. Wireless microphones for railways are capable of not only amplifying voice across platforms but also controlling departure bells and door closing indicators using control switches.
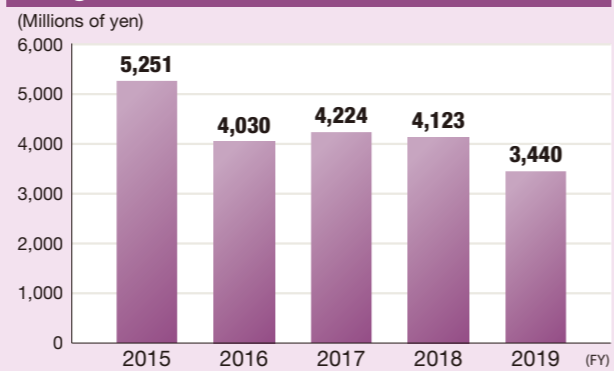
Identifying visitors' locations in a stadium

Distribute mobile terminals to visitors
Identify visitors' locations on a server
Available in such systems as 2.4 GHz band (with BLE), 920 MHz band (with Wi-SUN), and LoRa systems.
Send data to the server through Wi-Fi, LTE, etc.
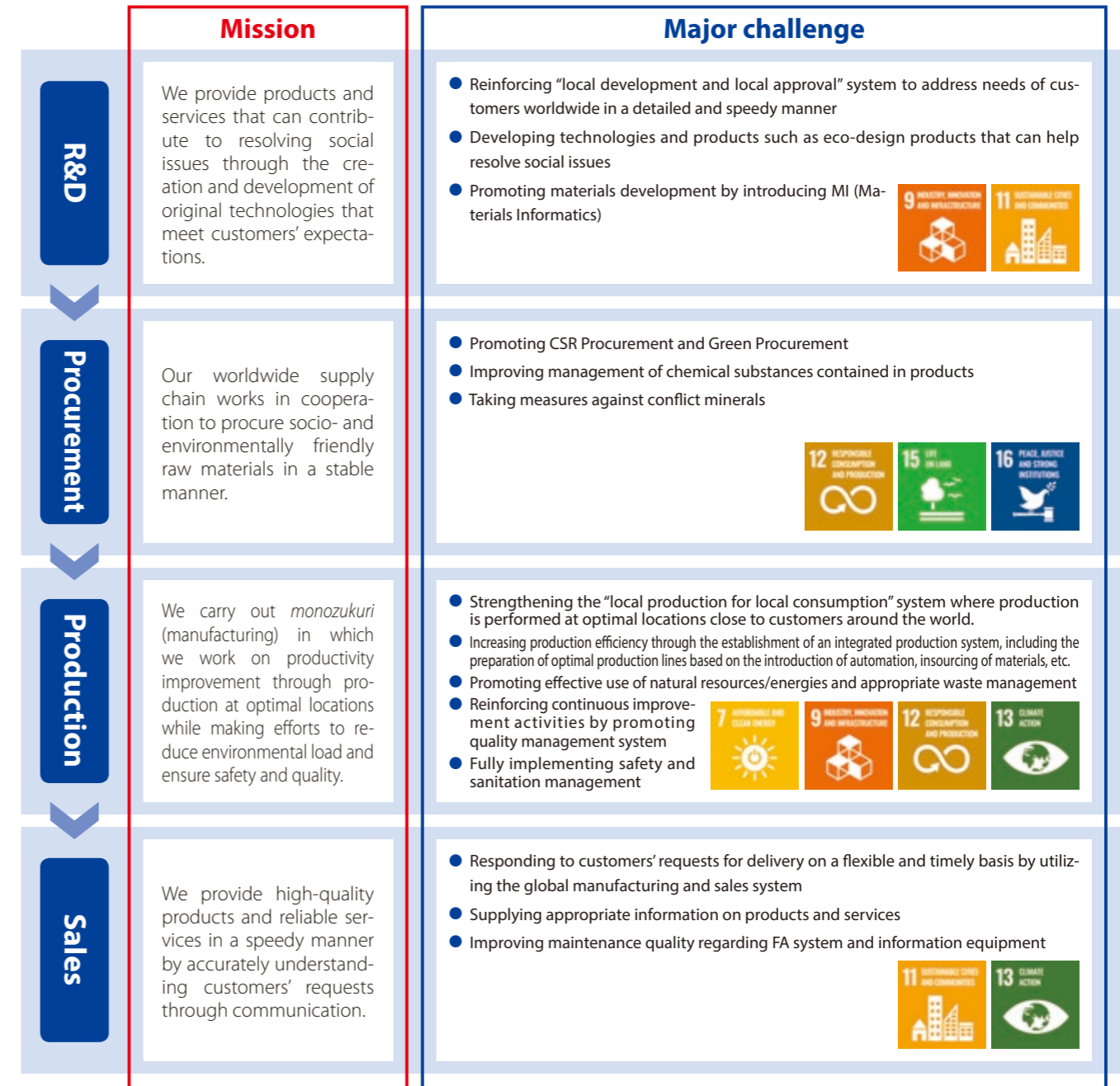Acquire information through antennas at the venue.

TS-LINK®
TS-LINK is Tamura's original wireless technology for the IoT area. It uses the time-division multiple access (TDMA) system to avoid wireless communication interference while allowing a large number of mobile terminals to be networked densely and be moved freely. We are promoting its use in the management of visitors' entry to and exit from a large event venue, the identification of their locations at the venue, etc.

Changes in net sales
(Millions of yen)

Year	Net sales
2015	5,251
2016	4,030
2017	4,224
2018	4,123
2019	3,440

(FY)
※ Net sales for external customers (excludes internal net sales between different businesses).

With the aim of continuously providing safe and secure high-quality products and services that satisfy customers from all over the world, the Tamura Group has been working on resolving social issues by promoting business activities while taking social and environmental impacts into account in all processes ranging from R&D, procurement, and production to sales.

Mission	Major challenge

R&D

Mission: We provide products and services that can contribute to resolving social issues through the creation and development of original technologies that meet customers' expectations.

Major challenge:
- Reinforcing "local development and local approval" system to address needs of customers worldwide in a detailed and speedy manner
- Developing technologies and products such as eco-design products that can help resolve social issues
- Promoting materials development by introducing MI (Materials Informatics)

(9 INDUSTRY, INNOVATION AND INFRASTRUCTURE / 11 SUSTAINABLE CITIES AND COMMUNITIES)

Procurement

Mission: Our worldwide supply chain works in cooperation to procure socio- and environmentally friendly raw materials in a stable manner.

Major challenge:
- Promoting CSR Procurement and Green Procurement
- Improving management of chemical substances contained in products
- Taking measures against conflict minerals

(12 RESPONSIBLE CONSUMPTION AND PRODUCTION / 15 LIFE ON LAND / 16 PEACE, JUSTICE AND STRONG INSTITUTIONS)

Production

Mission: We carry out *monozukuri* (manufacturing) in which we work on productivity improvement through production at optimal locations while making efforts to reduce environmental load and ensure safety and quality.

Major challenge:
- Strengthening the "local production for local consumption" system where production is performed at optimal locations close to customers around the world.
- Increasing production efficiency through the establishment of an integrated production system, including the preparation of optimal production lines based on the introduction of automation, insourcing of materials, etc.
- Promoting effective use of natural resources/energies and appropriate waste management
- Reinforcing continuous improvement activities by promoting quality management system
- Fully implementing safety and sanitation management

(7 AFFORDABLE AND CLEAN ENERGY / 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE / 12 RESPONSIBLE CONSUMPTION AND PRODUCTION / 13 CLIMATE ACTION)

Sales

Mission: We provide high-quality products and reliable services in a speedy manner by accurately understanding customers' requests through communication.

Major challenge:
- Responding to customers' requests for delivery on a flexible and timely basis by utilizing the global manufacturing and sales system
- Supplying appropriate information on products and services
- Improving maintenance quality regarding FA system and information equipment

(11 SUSTAINABLE CITIES AND COMMUNITIES / 13 CLIMATE ACTION)

Foundation that supports value chain
With the aim of creating additional value in each process in the value chain, we endeavor to reinforce maintenance and development of diverse human resources who engage in functions and business activities useful for governance and compliance, and efforts that contribute to local society and environmental conservation at each base.

Corporate governance	Compliance	Facilitation of human resource development and diversity	Respect for human rights	Regional contribution	Environmental management

(3 GOOD HEALTH AND WELL-BEING / 4 QUALITY EDUCATION / 5 GENDER EQUALITY / 6 CLEAN WATER AND SANITATION / 7 AFFORDABLE AND CLEAN ENERGY / 8 DECENT WORK AND ECONOMIC GROWTH / 10 REDUCED INEQUALITIES / 13 CLIMATE ACTION / 15 LIFE ON LAND / 16 PEACE, JUSTICE AND STRONG INSTITUTIONS / 17 PARTNERSHIPS FOR THE GOALS)

CSR goals and results

The Tamura Group is promoting CSR in such areas as "environment," "human rights/labor," "quality," "social contribution," "compliance/corporate ethics," "risk management," and "information management," in relation to the environment, society, and governance.

* In order to show the association between the Tamura Group's initiatives and the Sustainable Development Goals (SDGs), each area of activity is indicated by the corresponding SDGs icons.

■ Self-assessment criteria

- 100% or higher achievement
- 80–100% achievement
- Less than 80% achievement

■ Report page

Page number indicates the page on which activities are reported in the **TAMURA CORPORATION REPORT 2020**.
Web: https://www.tamuracorp.com/csr/
All activities, with some exemptions, are reported.

Area of Activity	Key Issue	FY2019 Goals	Main Result in FY2019	Self-assessment	FY2020 Goals	Report page
Environment	Environment	● Offering eco-design products	● Premier eco-design products sales ratio: 21%	● 20%【Goal not achieved】		● Premier eco-design products sales ratio: 22%	Pages 19-20 Web: ◆ Environmental Management ◆ Environmental Targets, Performance, and Evaluation ◆ Eco-design Products ◆ Action on Environmental Protection
		● Reduction in use of substances of concern	● Substances of concern: 60% reduction in basic unit compared with FY2005	● 58%【Goal not achieved】		● Substances of concern: 60% reduction in basic unit compared with FY2005	
		● Promotion of energy and resource savings	● Power consumption: 14% reduction compared with FY2005	● 16%【Goal achieved】		● CO_2 emissions: 7% reduction compared with FY2013	
		● Promotion of group-wide integrated ISO 14001 certification	● Compliance with environmental laws and regulations	● No violations of environmental laws and regulations ● Implementation of internal environmental auditor upskilling training		● Compliance with environmental laws and regulations	
Society	Human rights/Labor	● Personnel system and human resource development	● Development of global human resources ● Continuous provision of overseas training	● Introduction of management level training (for current management level and selected next-generation managers) ● Overseas training for new employees ● Global expansion of personnel system		● Development of global human resources and management ● Revision of personnel system	Pages 21-22 Web: ◆ Human Rights/Labor ◆ Supply Chain Management
		● Workstyle reform	● Improvement of working environment ● Enrichment of healthcare	● Improvement of ICT infrastructure to enhance flexibility of work sites and hours ● Introduction of work-interval system ● Implementation of labor management training and stress management training ● Promotion of taking paid leave (up 1.1% YoY) ● Implementation of stress check and periodic stress counseling		● Improvement of working environment ● Work efficiency improvement through introduction of RPA (Robotic Process Automation) ● Enrichment of healthcare	
		● Promotion of diversification	● Execution of the action plan to promote active female participation ● Promotion of employment of disabled/elderly persons	● Implementation of career design training for all employees and female career design sessions ● Promotion of employment of disabled/elderly persons		● Execution of the action plan to promote active female participation ● Promotion of employment of disabled/elderly persons	
		● Promotion of safety and sanitation	● Promotion of safety and sanitation	● Workplace inspection for safety and sanitation, and implementation of traffic safety training sessions		● Promotion of safety and sanitation	
		● Promotion of CSR procurement	● Response to conflict minerals issues	● Implementation of supplier survey of uses of conflict minerals ● Promotion of conclusion of contracts, etc. in accordance with "Procurement Guidelines" ◆ Disuse of conflict minerals ◆ Elimination of antisocial forces		● Response to conflict minerals issues	
	Quality	● Provision of high-quality products	● Establishment/enhancement of quality education system ● Quality improvement awareness-building activities during the Quality Month ● Hosting of the Tamura Group Quality Promotion Conference	● Implementation of design review working training, design reviewer training, human error prevention training, and job teaching training ● Message sent by officers responsible for quality on the first day of Quality Month ● Hosting of Tamura Group Quality Promotion Conference		● Establishment/enhancement of quality education system ● Quality improvement awareness-building activities during the Quality Month ● Hosting of the Tamura Group Quality Promotion Conference	Web: ◆ Quality/Service ◆ Supply Chain Management
		● Increased green procurement	● Update of green procurement standards ● Strengthening of management of chemical substances in products	● Update of green procurement standards ● Promotion of sharing of information on establishment, revision, and abolishment of laws and regulations for chemical substances in products		● Update of green procurement standards ● Strengthening of management of chemical substances in products	
	Social contribution	● Continuous social contribution activities	● Donation activities ● Promotion of resources recycling activities	● Donation activities ● Support for the Drop-in Center Project in Bangladesh ● Collection of empty cases of disposable contact lenses, donation of old books, promotion of used stamp collection activity, etc.		● Donation activities ● Promotion of resources recycling activities	Pages 22 Web: ◆ Social Contribution Activities
		● Coexistence with community and volunteer activities	● Hosting of *Monozukuri* (manufacturing) School ● Implementation of internship and job experience programs ● Coexistence with the community and volunteer activities	● Hosting of *Monozukuri* (manufacturing) School ● Implementation of internship and job experience programs ● Promotion of environment beautification activities near and around individual business sites, participation in the Akaya Project and more		● Hosting of *Monozukuri* (manufacturing) School ● Implementation of internship and job experience programs ● Coexistence with the community and volunteer activities	
		● Promotion of cultural, art, and sports activities	● Promotion of sports	● Sponsorship of women's football team (Chifure AS Elfen Saitama)		● Promotion of sports	
Governance	Compliance/Corporate ethics	● Promotion of compliance with laws and regulations	● Promotion of compliance education	● Group training on security trade control, the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, Unfair Competition Prevention Act, information leakage prevention, etc. ● Discussion-based training in small groups using training materials ● Issuance of an e-mail magazine, in which familiar news, case studies, etc. of compliance violations are explained in an easy-to-understand manner		● Promotion of compliance education	Page 22 Web: ◆ CSR at Tamura Group ◆ Compliance
		● Dissemination of CSR	● Continuous dissemination of SDGs	● Internal dissemination of SDGs through e-mail magazines explaining 17 SDGs, CSR lectures, internal magazines, etc. ● Introduction of sustainable seafood at Tokyo Factory and Sakado Factory canteens		● Continuous dissemination of SDGs	
	Risk management	● Strengthening of risk management	● Periodic/occasional review of business continuity plan (BCP) documents ● Implementation of emergency drills	● Response to COVID-19 ● Global implementation of BCP in individual business segments ● Implementation of evacuation drills and safety confirmation drills at domestic business sites ● Improvement of stockpile at each business site in Japan		● Response to COVID-19 ● Periodic/occasional review of BCP documents ● Implementation of emergency drills	Page 21 Web: ◆ Risk Management ◆ Human Rights/Labor
	Information management	● Reinforcement of data protection program	● Reinforcement of the information protection system	● Enhancement of network security against cyberattack and information leakage		● Reinforcement of the information protection system	Web: ◆ Risk Management ◆ Corporate Governance
		● More timely and appropriate disclosure of corporate information	● Timely and appropriate corporate information disclosure on Website	● Timely and appropriate corporate information disclosure on Website		● Timely and appropriate corporate information disclosure on Website	

Environmental topics

Since FY2006, the Tamura Group has been working toward the establishment of a globally united environmental management system, and was able to consolidate 22 business sites of 15 companies by FY2019.

This time, the Group has set new goals. The first goal is to reduce greenhouse gases by FY2030 by 21% or more compared with FY2013 levels in accordance with the "less than 2 °C" target of the Paris Agreement. The second goal is to more than double the amount of renewable energy introduced by FY2030 compared with FY2019 level, aiming at promoting the introduction of renewable energy.

For the realization of continuous growth and a sustainable society, the Tamura Group shall continue working on resolving social issues specified by SDGs, thereby contributing to a decarbonized society.

Tamura Group Environmental Targets

● Greenhouse gas emissions*:
  FY2030: Reduction of **21% or more** (compared with FY2013 levels)
● Amount of renewable energy introduced:
  FY2030: **More than double** (compared with FY2019 level)

＊ ● Within Scope 1 (direct emissions from our own fuel use or production process) or Scope 2 (indirect emissions from the use of electricity or heat we purchased).
  ● Emissions related to new plants are added to those of past fiscal years including the base year to appropriately evaluate reduction efforts made after the start of operation.
  ● The emission factor is defined as the emission factor for electrical power purchased under contract (subject to change annually).

Tamura Group Environmental Policy

Environmental Concept

The Tamura Group conducts all its business activities in harmony with the environment by promoting sustainable resource use, climate change mitigation and adaptation, and biodiversity and ecosystem protection. These activities are based on the Group Mission Statement: "The Tamura Group supplies an original range of products and services, highly regarded in the global electronics market, to satisfy the evolving needs of customers, employees, and shareholders supporting the Group's growth."

Main Measures

Fully recognizing the global targets specied in the SDGs (Sustainable Development Goals) and the Paris Agreement and with the aim of achieving continuous business growth, the Tamura Group focuses on the following environmental protection activities in its business operations, including design, development, production, and after-sales service of electronic components, electrochemical materials, soldering equipment, and information equipment, by utilizing its environmental management system, observing pollution prevention practices as well as laws and regulations, and working on their consistent improvement.

1. **The supply of eco-friendly products.**
2. **Control and reduction of environmental burden materials.**
3. **Promotion of energy conservation and saving resources.**

Efforts on premier eco-design products

The Tamura Group carries out product environmental assessment in the development and design phases to minimize environmental impact, and strives to contribute to achieving the SDGs through the development and provision of premier eco-design products.

Open-loop high-current sensor L40S/L51S series

The L40S and L51S series consist of open-loop high-current sensors for renewable energy systems, such as solar and wind power generation systems, and for energy management systems, such as electricity storage systems.

With a temperature compensation circuit, the sensors achieve a linearity error of 1% and an output temperature characteristic of 0.05%/°C over the wide temperature range of -40 to 105°C. They are therefore suitable for accurate control of a system exposed to a severe natural environment. In addition, their shield technology achieves noise resistance properties such as dV/dt at least three times as high as those of our existing products. Moreover, by devising the design of its casing structure, the L51S series can reduce the amount of filler by 20% compared with existing products, to help reduce environmental load.
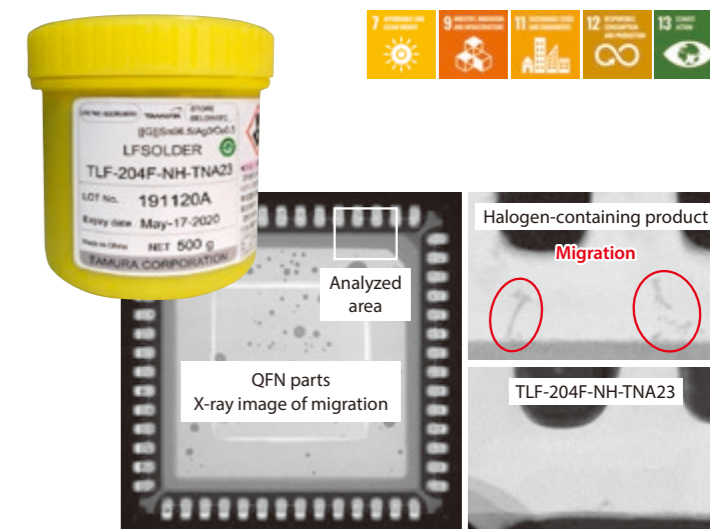
L51S (left) and L40S (right)

TLF-TNA23 solder paste series compatible with 5G (5th generation mobile communications system)

5G base stations, the number of which is increasing rapidly, are often set up in a severe environment, such as an outdoor location, a high place, or a cold area. As such, a control system failure could affect all related wireless systems. In this regard, the solder paste used requires extremely high reliability.

The TLF-TNA23 series causes less migration because of its special halogen-free technology, even when the mounting location absorbs moisture. In addition, the series includes products combined with #287 alloy, which has sufficiently high strength (crack control) to withstand thermal shock due to high voltage.

It is an environmentally friendly, halogen-free, and lead-free product.

Analyzed area

Halogen-containing product

Migration

QFN parts
X-ray image of migration

TLF-204F-NH-TNA23

APB-200 black solder resist series for rigid circuit boards for smartphones

As smartphones are becoming more functional, lighter, and thinner, their printed circuit boards are becoming increasingly integrated and dense.

The APB-200 black photoimageable solder resist series reduces lithographic exposure to one-third or less ($100\,\text{mJ/cm}^2$) compared with our existing products and offers high resolution in a lithographic exposure process for printed circuit board production, thereby achieving high productivity and good resolution in the direct-imaging lithographic exposure process necessary for high-density printed circuit boards.

Moreover, because of its less reflective appearance, it provides high visibility during automatic appearance inspection, resulting in good compatibility with high-density component mounting. It is an environmentally friendly halogen-free product.

SEM image of resolution   SEM image of via openness
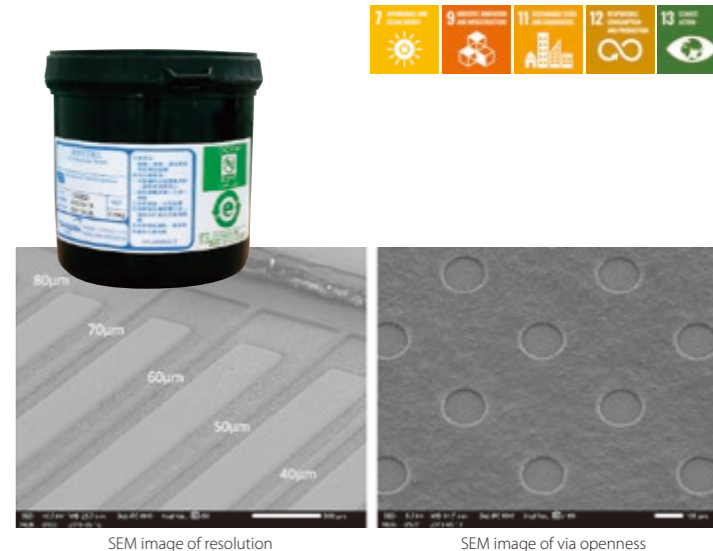
Portable DECT-based wireless intercom system

The portable DECT-based wireless intercom system, Tamura's new digital wireless intercom system, incorporates technologies accumulated for existing wireless intercom systems while complying with the new DECT standard.

It retains the same operability for intuitive use while offering further improved user-friendliness. Three units of the existing model (YFP-1821B) are required to connect 10 personal stations; meanwhile, one unit of the new model (MK-H96) can connect 10 personal stations. With the RF power setup function, it can save power and reduce radio waves that interfere with other devices when the communication distance is short.

Item	Comparison with existing portable controller
Power consumption	Reduced by approx. 12%
Number of components	Reduced by approx. 37%
Volume	Reduced by approx. 65%
Mass	Reduced by approx. 65%

Condition: 10 personal stations connected

Portable controller (MK-H96)   Personal station (MK-B96)

Social and Governance Topics

Promotion of Work Style Reform and Business Process Re-engineering (BPR)

Development of a working environment where employees can concentrate on work in a pleasant way

Through efforts to increase job satisfaction along with appropriate labor management, we have been working on the development of a working environment where employees can concentrate on their work continuously in a pleasant way.

As part of measures to improve job satisfaction, we have introduced systems that enable employees to take multipurpose leaves for childcare, nursing, volunteer work, etc. as well as hourly-paid leave. Furthermore, a system is also in place in which past employees who retired for a specific reason, such as childcare, nursing, or spouse's job relocation, are re-employed by the Company. Thus, in the environment where employees' values and work styles are diversified, we have been providing support to establish good work-family balance. With regard to optimization of labor management, seminars on labor management and stress management have been held for managers and supervisors of all business sites, promoting efforts to fully spread compliance-based labor management and realize a less stressful work environment.

In FY2019, the work-interval system (employers are required to have a certain number of hours of rest between the ending time of work on a given day and the starting time of work on the next day) was newly introduced, and measures for improvement of paid-leave acquisition rate were implemented. These activities were highly regarded, and we were recognized as a "2020 Certified Health and Productivity Management Outstanding Organization (for the large enterprise category)" by the Ministry of Economy, Trade and Industry.

Improvement of ICT environment

Responding to the diversification of employment and work style, efforts have been made to improve the ICT (information and communication technology) environment so that employees experiencing various situations (location/time/distance) can work in a flexible way.

With regard to the work-from-home system that had been introduced but limited to only some employees, we were planning to implement it to cover the whole company. As one measure to prevent the spread of COVID-19, we launched the system in FY2019 ahead of schedule. Under the system, through data sharing in cloud environment, Web meetings, etc., many employees have become able to work in almost the same environment as the office. Particularly for employees with children who need to be home due to temporary school closure, this system allows them to practice childcare while doing their job and is effective also from the standpoint of business continuity.

Improvement of work efficiency

Aiming at man-hour reduction of routine tasks, we have been working on the utilization of RPA (Robotic Process Automation) for automating "routine tasks" where employees repeat routine operations using computers. We have been taking steps to introduce RPA in auxiliary tasks and checking the outcome so that we can eventually introduce it to the entire company. In order to advance work style reform, it is indispensable to improve work efficiency and to shift from routine tasks to high value-added work. We are aiming at full-scale introduction at the earliest possible time.

2020
健康経営優良法人
Health and productivity

Measures against COVID-19 (as of May 2020)

The Tamura Group has always put priority on the health and safety of people in local communities, its business partners, and its employees. In this respect, the Group has been taking various measures to prevent the spread of infection in compliance with the policies of national and local governments, including thorough sanitation, introduction of the work-from-home system and rotating shifts, use of telephone/Web meetings, etc.

Furthermore, at the beginning of February, the Global Risk Management Office was set up at the head office, the task of which is to control global business continuity in collaboration with all business sites around the world so that products and services are supplied to customers all over the world without interruption.

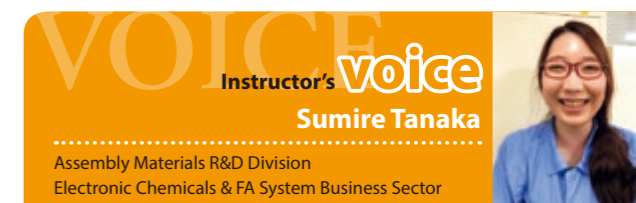|	
Japan	● The Global Risk Management Office was set up at the beginning of February, the task of which is to control global business continuity in collaboration with all business sites around the world. ● After the declaration of the state of emergency, various efforts were taken, including work-from-home/rotating shift/staggered office hours/change in office layout, etc. to reduce human contact by 70% or more (target: 80%), while holding transactions with customers as usual.
China	● After operation shutdown due to the extended Chinese New Year Holiday, operation resumed on February 10 and has been back to normal from March.
Europe and U.S.	● The design office for electronic components in Italy has adopted the work-from-home system, whereas the factory in Czech Republic has continued normal operation. ● The factory for electronic chemicals business in Germany has continued operation while paying attention to safety. Alcohol disinfectant that was produced in the factory was supplied outside the factory.
Others	● In Malaysia, factory operation was suspended for the period between mid-March and April in accordance with the government's notification. As the factory focuses on local production/local consumption items and the customers' factories also were not operating, there were no serious problems. ● The Bangladesh Factory adopted a shift work system. Business sites in China and Japan offered support through substitute production.

Engagement with SDGs

The Tamura Group, based on the understanding that the SDGs (Sustainable Development Goals) adopted by the UN General Assembly in 2015 represent important agenda to be tackled by the society, has been undertaking efforts to integrate the concept of SDGs into its operation.

With the aim of having all employees of the Group understand and work toward realizing the SDGs as if it were their own, we have been promoting various in-house dissemination measures also in FY2019.

SDG e-mail magazines

A total of 19 e-mail magazines were issued, which contained explanations of the 17 goals/169 targets of SDGs and specific cases of challenges taken up by the Tamura Group. In the questionnaire survey conducted after the issuance of e-mail magazines, such comments as "I was able to deepen my understanding of SDGs and obtain useful information for future challenges" were received, and the recognition rate of SDGs among employees reached 97%.
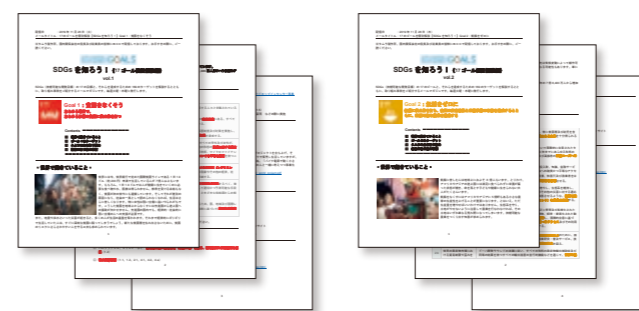
Introduction of sustainable seafood to Company canteens

Since January 2020, menus using sustainable seafood have been served on a regular basis at the canteens of Tokyo Factory and Sakado Factory. We choose sustainable seafood with the "MSC"/"ASC" global certification, which is given to sustainable fishery products that have been caught or cultivated in consideration of marine environment and fishery resources, thus contributing to "Life Below Water," one of the SDGs, and supporting producers who observe the catch limit.

Around eight companies (as of March 2020) have introduced sustainable seafood to their employees' canteens in Japan. Introduction to our canteens was realized thanks to Panasonic Corporation, the forerunner company; World Wildlife Fund Japan (WWF Japan), a public interest incorporated association that works on its diffusion in Japan; and Hanakago Co., Ltd., a food service company that has endeavored to acquire the certification.

Development of management level
(Current management level and selected next-generation managers)

Since 2019, seminars for management level have been held for executive officers and division directors who play core roles in the Company's business. The objective of the seminars is to develop their strategy planning, business management, and leadership abilities so that they become capable of performing management at a higher level. We also started a cram school in 2019 for next-generation executive manager candidates by inviting Mr. Takeo Minomiya (outside director) as chief of this private cram school. The curriculum has wide-ranging contents that include not only management and business science but also psychology and history/culture, the aim of which is to develop human resources who have acquired not only practical learning but also cultural knowledge.

These seminars also serve as an opportunity to establish a network of human connections; they also aim to establish and strengthen human network beyond business frameworks.

Monozukuri (Manufacturing) School

Since 2008, the *Monozukuri* (manufacturing) School has been held every year to convey the joy of *monozukuri* to the next generation, who will be the builders of the future. At the School, such skills as how to make an AM radio are taught to children by the Company's employees. In FY2018, the School was also held in Tamura Corporation Sakado Factory, Wakayanagi Tamura Corporation, and Aizu Tamura Corporation, which received a favorable response.

① Iruma Factory, Tamura Corporation
② Wakayanagi Tamura Corporation
③ Aizu Tamura Corporation

VOICE
Instructor's voice
Sumire Tanaka

Assembly Materials R&D Division
Electronic Chemicals & FA System Business Sector

For the first time, I participated as an instructor in the *monozukuri* (manufacturing) class of Iruma Factory. In the beginning, all the participants seemed to hesitate using a hot soldering iron, but they eventually became excited and enjoyed doing real soldering work. When the work was completed, all of us were able to gain a sense of fulfillment.
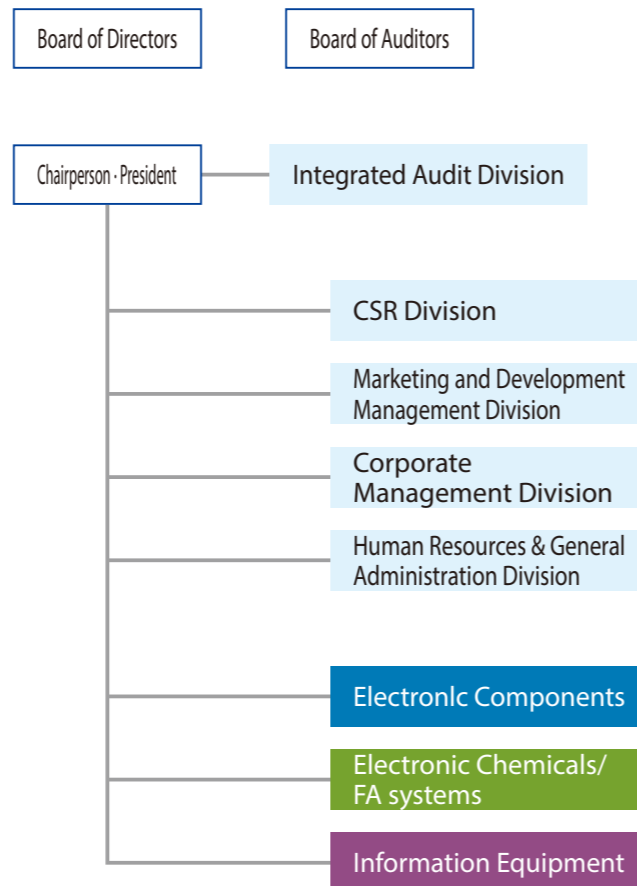
Company Profile

Company name	TAMURA CORPORATION
Founded	May 11, 1924 (Incorporated in Nov 21, 1939)
Capital	¥11,829 million
Share capital	(as of Mar. 31, 2020)

Authorized	252,000,000 shares
Issued and outstanding	82,090,751 shares
(Not including 680,722 shares of treasury stock)	
Closing date	March 31, each year.
Number of shareholders	11,451

Directors/Corporate officers

(as of June. 25, 2020)

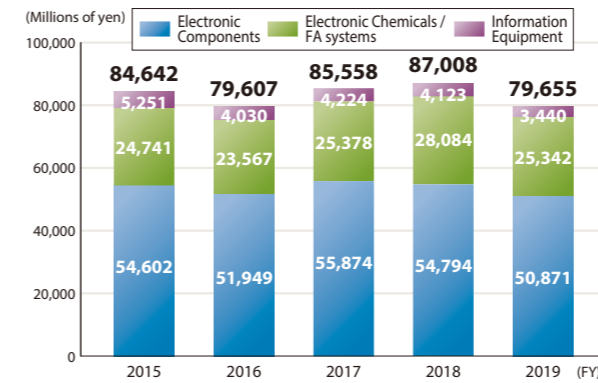|	
Chairperson and Representative Director	Naoki Tamura
President and Representative Director	Masahiro Asada
Director/Vice President	Yusaku Hashiguchi
Outside Director	Takeo Minomiya
Outside Director	Akira Kubota
Outside Director	Haruko Shibumura
Director/Senior Executive Officer	Norihiko Nanjo
Director/Senior Executive Officer	Shoichi Saito
Standing Auditor	Hajime Kubo✳
Outside Auditor	Koichi Moriya
Outside Auditor	Atsuji Toda

✳ Auditor and Supervisory Board Member for rights and obligations under provisions of Article 346 (1) of Companies Act

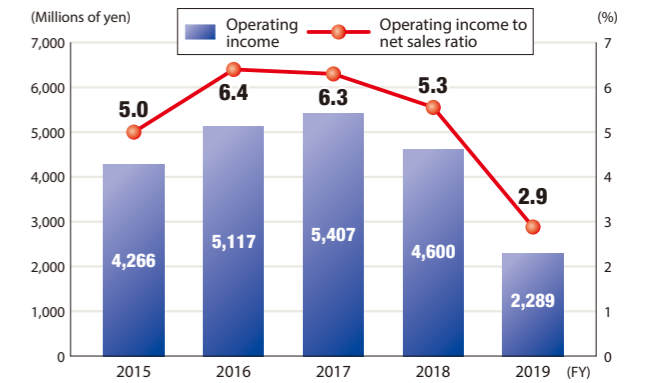## Organization Map (as of April 1, 2020)

- Board of Directors
- Board of Auditors
- Chairperson・President
  - Integrated Audit Division
  - CSR Division
  - Marketing and Development Management Division
  - Corporate Management Division
  - Human Resources & General Administration Division
  - Electronlc Components
  - Electronic Chemicals/FA systems
  - Information Equipment

Major financial information 〈consolidated〉

● Net sales

(Millions of yen)

Electronic Components / Electronic Chemicals / FA systems / Information Equipment

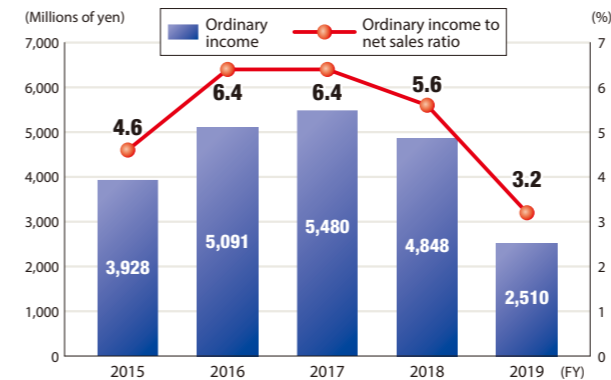|	2015	2016	2017	2018	2019 (FY)
Total	84,642	79,607	85,558	87,008	79,655
Information Equipment	5,251	4,030	4,224	4,123	3,440
Electronic Chemicals / FA systems	24,741	23,567	25,378	28,084	25,342
Electronic Components	54,602	51,949	55,874	54,794	50,871

※Net Sales for external Customers by business segment (excludes internal net sales between different businesses).
※The amount of net sales for each fiscal year includes other operations (transportation, warehousing and others).
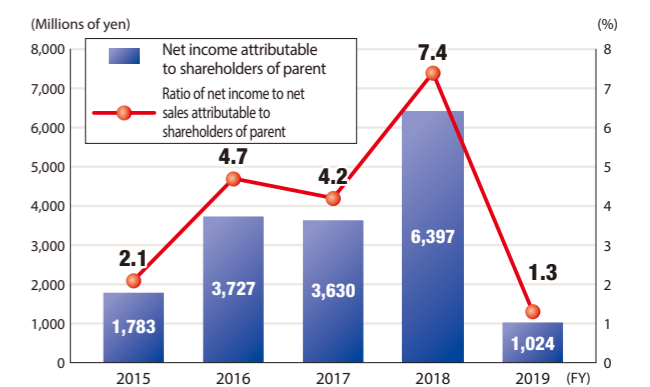
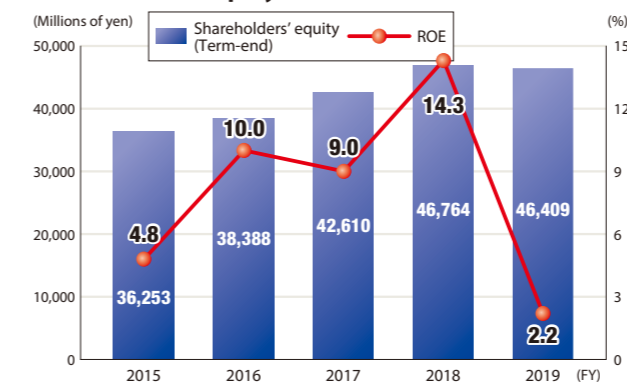### ● Operating income/Operating income to net sales ratio

(Millions of yen) / (%)

Operating income / Operating income to net sales ratio

	2015	2016	2017	2018	2019 (FY)
Operating income	4,266	5,117	5,407	4,600	2,289
Ratio	5.0	6.4	6.3	5.3	2.9

● Ordinary income/Ordinary income to net sales ratio

(Millions of yen) / (%)

Ordinary income / Ordinary income to net sales ratio

	2015	2016	2017	2018	2019 (FY)
Ordinary income	3,928	5,091	5,480	4,848	2,510
Ratio	4.6	6.4	6.4	5.6	3.2

● Net income attributable to shareholders of parent / Ratio of net income to net sales attributable to shareholders of parent

(Millions of yen) / (%)
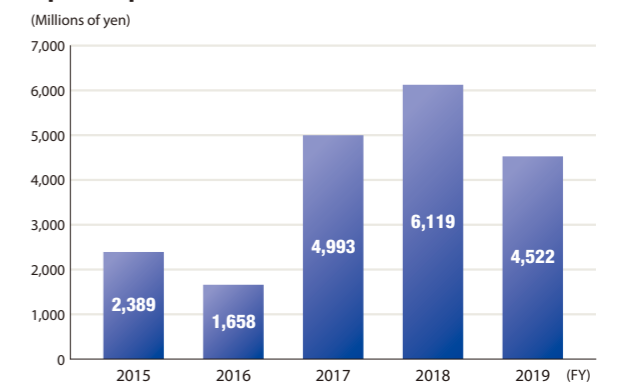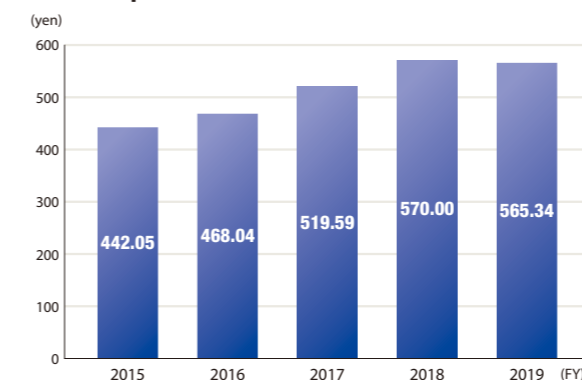
Net income attributable to shareholders of parent / Ratio of net income to net sales attributable to shareholders of parent

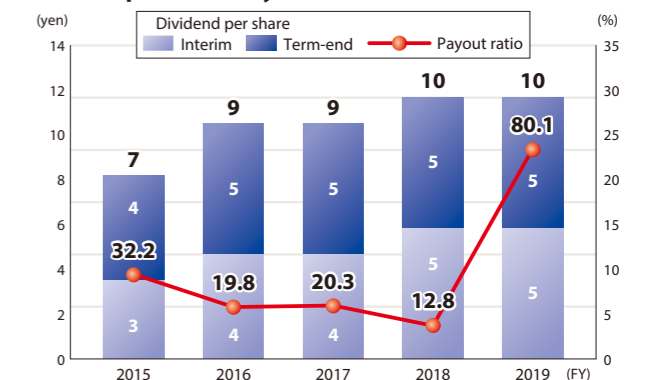|	2015	2016	2017	2018	2019 (FY)
Net income attributable to shareholders of parent	1,783	3,727	3,630	6,397	1,024
Ratio	2.1	4.7	4.2	7.4	1.3

● ROE (Return on Equity)

(Millions of yen) / (%)

Shareholders' equity (Term-end) / ROE

	2015	2016	2017	2018	2019 (FY)
Shareholders' equity (Term-end)	36,253	38,388	42,610	46,764	46,409
ROE	4.8	10.0	9.0	14.3	2.2

● Capital expenditure

(Millions of yen)

	2015	2016	2017	2018	2019 (FY)
Capital expenditure	2,389	1,658	4,993	6,119	4,522

● Net assets per share

(yen)

	2015	2016	2017	2018	2019 (FY)
Net assets per share	442.05	468.04	519.59	570.00	565.34

● Dividend per share/Payout ratio

(yen) / (%)

Dividend per share: Interim / Term-end / Payout ratio

	2015	2016	2017	2018	2019 (FY)
Total	7	9	9	10	10
Term-end	4	5	5	5	5
Interim	3	4	4	5	5
Payout ratio	32.2	19.8	20.3	12.8	80.1

EUROPE

AMERICAS

ASIA

JAPAN

- Tamura Elsold GmbH
- Tamura Europe Limited
- Tamura Magnetic Engineering S.R.L.

- Tamura Chemical Korea Co.,Ltd.
- Tamura Corporation of Korea
- Tamura Professional Solution Korea Co.,Ltd.

- Tamura Corporation of China Limited
- Shanghai Xiangle Tamura Electro Chemical Industry Co.,Ltd.
- Tamura FA System (Suzhou) Co., Ltd.
- Tamura Electronics (Suzhou) Co., Ltd.
- Tamura Seiko Electronics (Changshu) Co.,Ltd.
- Tamura Electronic Material (Tianjin) Co.,Ltd.
- Hefei Ecriee-Tamura Electric Co.,Ltd.
- Op-Seed Co., (BD) Ltd.
- Earth Tamura Electronic (Myanmar) Co.,Ltd.
- Tamura Elcomponics Technologies Pvt.Ltd.
- Tamura Corporation (Thailand) Co.,Ltd.
- ESE Industries (Thai) Co., Ltd.
- Tamura Electronics (M) Sdn.Bhd.
- Tamura Kaken (M) Sdn.Bhd.

- Taiwan Tamura Technology Co., Ltd.
- Tamura Corporation of Hong Kong Limited
- Tamura Kaken (Dongguan) Ltd.
- Tamura Electronics (S.Z.) Co.,Ltd.
- Tamura Electronics (Huizhou) Co.,Ltd.
- Tamura Corporation Vietnam Co.,Ltd.
- Tamura Corporation Singapore Pte.Ltd.

- Tamura Kaken Corp.,U.S.A
- Tamura Corporation of America
- Tamura Power Technologies de Mexico, S.A de C.V.
- Telepart-Tamura Industria e Comercio Ltda.
- Indusul Industria de Transformadores Ltda.
- Industria Sul Brazil de Transformadores Ltda.

- Wakayanagi Tamura Corporation
- Nagoya Sales Office
- Aizu Tamura Corporation
- Tamura Corporation
  - Head Office/Tokyo Factory
  - Sakado Factory
  - Iruma Factory
  - Sayama Factory
  - Kodama Factory
  - Koha Co.,Ltd.
- Osaka Sales Office
- Fukuoka Service Office

- Head Office/Regional Headquarters/Others
- Electronic Components
- Electronic Chemicals
- FA Systems
- Information Equipment

◼ Wakayanagi Tamura Corporation: Automotive product factory

Wakayanagi Tamura Corporation was founded in 1966. The company used to be one of the important production bases in Japan for small transformers for AV equipment. The company suffered such disasters as the shrinkage of customers' domestic production and the Great East Japan Earthquake in 2011. After its transformation into a mass-production factory for "in-vehicle booster reactors" with promising future expansion, the company completed a new building in August 2018. Since then, capital investment and development of prototype products have been pursued, and the company launched full-scale production in the second half of 2019.

◼ ESE Industries (Thailand) Co., Ltd.

In November 2017, Tamura acquired capital in ESE Industries (Thai) Co., Ltd. Over many years, Tamura had outsourced to ESE the final process of solder paste supplied to ASEAN countries. As a consolidated subsidiary of Tamura, ESE is currently aiming at local production for local consumption based on integrated production from raw materials (solder power) and profit increase through cost reduction. The second factory was completed in October 2018, and mass production and sales of bare metal, solder power, etc. was started in April 2019.
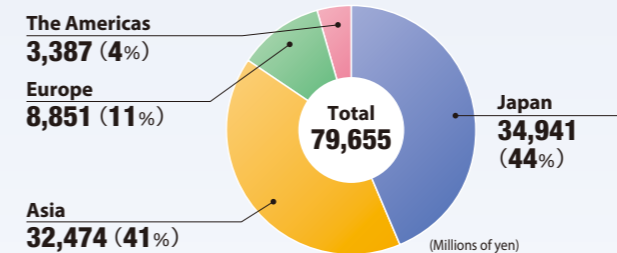
◼ Tamura Elsold GmbH

In October 2017, Tamura acquired 100% equity in Elsold GmbH and Co. KG, a soldering manufacturer in Germany, and established Tamura Elsold GmbH. Elsold has been dealing with representative automotive manufacturers in Europe as its customers. Such products as "bar solder" and "thread solder" for the automobile market account for approximately 60% of the company's sales.
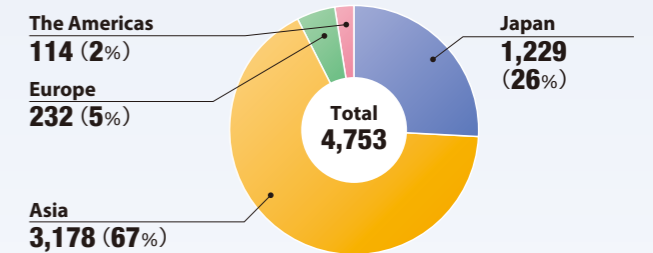
Under the guidance of Tamura, the company has introduced new production facilities for "solder paste related products" and is now developing an integrated system for development, production, and sales in Europe. Continued efforts are being made in sales development of soldering materials with high-added value, focusing on non-Japanese customers for automotive products.

● **Composition of net sales by region 〈consolidated〉** (FY2019)

- The Americas **3,387** (**4**%)
- Europe **8,851** (**11**%)
- Asia **32,474** (**41**%)
- Japan **34,941** (**44**%)
- Total **79,655**
(Millions of yen)

● **Number of employees by region 〈consolidated〉** (as of March 31, 2020)

- The Americas **114** (**2**%)
- Europe **232** (**5**%)
- Asia **3,178** (**67**%)
- Japan **1,229** (**26**%)
- Total **4,753**

UN GLOBAL COMPACT

COMMUNICATION ON
PROGRESS

This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

Tamura's mascot "Quenu"

TAMURA CORPORATION
https://www.tamuracorp.com/

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2020.09