Product Information
Electronics
The Sumitomo Electric Group strives to provide solutions to contribute to the advancement of societies. We strive to uphold our core values based on the Sumitomo Spirit, which has been passed down through the generations for 400 years since the founding of the Sumitomo Group.

**Company Profile**

- **Company Name**: Sumitomo Electric Industries, Ltd.
- **Head Office**: 4-5-33, Kitahama, Chuo-ku, Osaka, Japan
- **Established**: April 1897
- **Capital Stock**: 99,737 million yen
- **President**: Osamu Inoue

**The Sumitomo Spirit**

The Sumitomo Electric Group is built on three principles based on the Sumitomo Spirit that forms the foundation of our culture and serves as a compass for the decisions we make every day.

- **Banji-nissei**: Banji-nissei means "do your sincere best, not only in business, but also in every aspect of your life." It is a pivotal teaching in the Sumitomo Spirit, Sumitomo personnel are expected to work not only to make money, but also to cultivate their character and grow into better human beings.

- **Shinyo-kakujitsu**: The Business Principles Article 1 emphasizes the importance of integrity; that is, being worthy of the trust of others. Article 2 speaks of the importance of working proactively, pursuing profit by quickly and appropriately responding to changes in society and not being content with the status quo. Article 2 emphasizes the importance of harmonizing business gains with the public interest and scorns reckless or careless actions in pursuit of easy gain.

- **Fusu-furi**: Article 2 speaks of the importance of working proactively, pursuing profit by quickly and appropriately responding to changes in society and not being content with the status quo. Article 2 emphasizes the importance of harmonizing business gains with the public interest and scorns reckless or careless actions in pursuit of easy gain.

**Corporate Principles**

Each company of the Sumitomo Electric Group shall:
- Offer the very best goods and services to satisfy customer needs.
- Build technical expertise, realize changes and strive for consistent growth.
- Contribute to creating a better society and environment, with a firm awareness of our social responsibility.
- Maintain high corporate ethics and strive to become a company worthy of society’s trust.
- Nurture a lively corporate culture that enables employee self-improvement.

**Financial Highlights**

(FY2019)

- **Net sales**: 3,107
- **Operating Income**: 127.2
- **Capital Expenditure**: 208.8
- **R&D Expenses**: 125.4

(Billions of yen)
Our 5 business units provide high quality products and services as part of our commitment to the responsibility of “supporting society”, which we have been fulfilling since the foundation of the Sumitomo copper business 400 years ago. We now share this commitment among over 273 thousand staff in 390 group companies around the world.

**Electronics**

Supporting further evolution of mobile devices, automobiles and aviation equipment

Data transmission volumes of mobile devices are increasing exponentially, accelerating the development of new functionalities and new standards. Also, there are increasing needs for car electronics in electric and autonomous vehicles and for aviation equipment. Sumitomo Electric intends to support these growing markets and become a top global supplier of unique high-performance cables, components and materials.

**Automotive**

Contributing to accelerating improvement delivered by CASE and to the evolution of mobility

Global automotive sales are growing. Sales of eco-friendly vehicles are also growing in line with tightening environmental regulations. The improvement delivered by CASE* is accelerating and new entrants from other industries are entering the market, taking the automotive industry to the verge of a major period of change. Against this backdrop, Sumitomo Electric is committed to contributing to the evolution of mobility by making the most of the resources of the Sumitomo Electric Group.

*CASE: A term for the trends in the automotive industry; an acronym for Connected, Autonomous, Shared, and Electric

**Environment & Energy**

Building next-generation energy systems for the increasing use of renewable energy

We see the unveiling of major international grid-interconnection projects in Europe and the growth in electrical power infrastructure demand in emerging nations. The wealth of experience and technology of the Sumitomo Electric Group active in the environmental and energy sectors are sought after against the backdrop of increasing introduction of renewable energy and widespread use of EV. With a solid foundation and impressive track record of achievements among Japan’s top-tier businesses, Sumitomo Electric will play a significant role in the global market. We will aim to build a stronger global presence.

**Industrial Materials**

Contributing to the growth of industries and social infrastructure by developing and supplying high-functionality materials

There is growing demand for lightweight materials for EV development. In the medical and aviation industries, demand is also growing for Sumitomo Electric Group’s products. The Sumitomo Electric Group aims to become a leading global supplier of high-performance, high-functionality products by leveraging its world-class materials and process technology.

**Infocommunications**

Endeavoring to realize high-speed, high-capacity telecommunications meeting the challenge of the increasing data traffic volume

Data traffic volumes will rapidly increase due to the expansion of cloud computing services to meet the demand for video delivery and AI/IoT-related demand, as well as due to the arrival of the age of the fifth generation mobile communication system (5G) serving as a key to faster networks. The Sumitomo Electric Group has superb optical fiber manufacturing technology, transmission devices, compound semiconductors and access device technology for high-speed, high-capacity telecommunication, enabling it to play a fundamental role in the advanced information age.
We offer an extensive range of interconnect products and advanced materials developed with technical expertise, and provide solutions that enhance the performance of electronics while minimizing weight and size.

**Communication Networking Infrastructure**

Our large-capacity, high-speed communication networking products are geared up for next-generation broadband.

**Automotive**

Our products are qualified by the automotive industries for usage in electric vehicles and in-vehicle infotainment (IVI). Our new product lines feature heat resistance, high voltage, and wide-band cable technologies that are ideal for eco-friendly vehicle systems.

**Aerospace / Railway**

Our advanced cable marking system and interconnect products with lightweight and heat-resistant materials contribute to making railway and aerospace equipment safe and energy-efficient.

**Construction Equipment & Robotics**

Our wide-band cable technologies and flexible custom design services enable us to offer suitable products for rapidly changing demand in the machine and robotics industries.

**Health Care**

Our cross-functional and multifunctional wiring materials support the advancement of technology to increase the portability and performance of medical equipment.
Fine Polymer Products

POREFLON™
A flexible and fibrous structural sheet made of PTFE (Polytetrafluoroethylene) with excellent resistance to heat and chemicals. It also has high efficiency of small particle retention while being air permeable. Applications include various separators and media for filtration and venting processes.

Use Case
It is mounted on the in-vehicle parts housing, and is useful for internal pressure adjustment and foreign matter / chemical solution countermeasures.

Application
- Cartridge filter, Automotive parts, Various electronic devices, Various support membranes

SUMITUBE™ Irradiated Heat-Shrinkable Tubing
It is a heat-shrinkable tube (tube that shrinks in the radial direction by heating) that applies the shape memory effect of plastic using electron beam irradiation technology to our unique material suitable for a wide range of applications. We have a rich lineup of polyolefin resin, fluorine resin, thermoplastic elastomer resin, etc.

Application
- In various fields such as electronic equipment / automobile / aircraft, Binding wires and harnesses, Heat protection, Insulation protection

SUMIMARK™ / SUMITAG™ Cable Identification System
It is an identification product that achieves excellent print quality by applying proprietary printing technology to heat-shrinkable tube and sheet products that apply technologies such as improving shape memory and mechanical properties of plastic by electron beam irradiation. A rich lineup that ensures materials and printing quality that can withstand harsh environments such as aircraft and railway vehicles, and unique and easy-to-use software unique to other companies can provide excellent services.

Application
- For railway vehicles / aircraft: - Identification of electric wires - Mechanical protection

TERALINK™ Cross-Linked Thermoplastic Polymer
An injection-moldable engineering plastic, cross-linked by electron beam irradiation. It is used in parts that can withstand wear and fatigue, such as gears and washers. It is also used in lens packages for optical connections, as it can withstand reflow processes.

Application
- Transparent heat-resistant grade: Reflow compatible lens (for infrared) Sliding grade: Sliding gear (replacement with metal parts)

Polyimide Tube
Developed as a functional part of laser or multifunction printers by utilizing the tube's seamless structure, thinness, stability and excellent thermal resistance.

Application
- Office printer

Flexible Printed Circuits

Flexible Printed Circuits
It is the wiring materials that formed an electric circuit of copper foil on the insulation film, it is adopted to the electronic information appliances such as smartphones and a car widely. Other than small size, the lightweighting purpose of the apparatus, We suggest an FPC corresponding to the needs of high-density wiring and the high-speed transmission.

- High-density wiring FPC - High-speed transmission FPC
- Thin high flexural FPC - Multilayered FPC
- High heat-resistant (150°C) FPC

Application
- Various portable electronic terminals, For automotive, Game / Audio Equipment
**Irradiated Electronic Wire**

It is wiring materials using our original conductor technology and insulating material, electron beam irradiation technology. In a consumer use apparatus and a car, and the abundant adoption results with data transmission equipments and a widely substantial line of products nap, I can meet various needs such as heat resistance and flexibility, the flexure durability.

**Cable Assembly**

**MFCX™ Micro Flex Coaxial Harness**

While our coaxial cables are equipped with double-shielded structures that provide high noise immunity, they have extremely small diameters of 0.35mm down to 0.20mm. As such, our MFCX™ harnesses are ideal in complicated hinged structures such as between motherboards and the LCDs of laptop computers, cellular phones and medical equipment.

**High-Speed Data Harness**

Sumitomo Electric is known as one of the major manufacturers of high-speed data cables for electronics. We produce highly flexible wire harnesses to the newest standards such as USB 3.1 Gen2 or Thunderbolt™ 3 with certifications from the USB Implementers Forum and Intel Corporation respectively. Based on Intel's Thunderbolt™ 3 technology, the new Thunderbolt™ 3 harness with USB Type-C™ reversible connector achieves 40Gbps bi-directional data transmission. In addition, the cable supports up to 100W power delivery and multiple data protocols.

**Flat Component**

**SUMI-CARD™ Flexible Flat Cable**

It is the flat cable which is most suitable for the high-density implementation which a socket type connector can desorb in one-touch. Thin, lightweight, flexible and can be arranged in tight spaces. Furthermore, it contribute to small size, the lightweighting of the apparatus, prevention of miscarriage. We have obtained UL standards with voltage ratings of 30V to 300V and temperature ratings of 80 °C to 125 °C.

**Tab-Lead**

Our tab-lead is a flexible flat cable specially designed for drawing electricity from lithium-ion batteries or electric double-layer capacitors covered with aluminum laminated film. The insulation of our tab-lead prevents heat deformation and is also remarkably resistant to battery electrolytes, providing excellent sealing reliability.

**Compound Semiconductor**

We are a leading supplier of high-quality compound semiconductor wafers used in lasers, LEDs and RF devices for mobile communications. Available in mass production are conductive and semi-insulating GaAs 3, 4 or 6-inch diameter and InP 2, 3, 4 or 6-inch diameter substrates.

**Gallium Nitride Substrate**

Leveraging our expertise in Vapor Phase Epitaxy, we are a leading supplier of free-standing GaN substrate. Available in mass production are GaN 2-inch and 4-inch diameter substrates.
**Magnesium Alloy AZ91**

Magnesium alloys are the lightest of all structural metals. Sumitomo Electric achieved the world's first commercial production of AZ91 magnesium alloy sheet. This material has excellent properties in strength and corrosion resistance and is used in a wide range of products including mobile devices and automobiles.

**Use Case**

It was adopted for the housing of Lenovo high-end laptop PC. Press design that utilizes the properties of the material enables both lightness and robustness.

**Use Case (in development)**

In addition to having high specific strength, it has high workability, and it is possible to realize shapes that are difficult to work with aluminum or iron.

**Application**

- Housing for various portable electronic devices, Automotive interior goods

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**Electronics Components**

**Dumet Wire (Iron-Nickel Alloy Coated with Cuprous Oxide)**

Made from composite materials, our Dumet wires are ideal for sealing glass and are used as weldable leads for various electronics and electronic parts such as thermistors, glass diodes and automobile lamps.

**Application**

- Glass sealing materials such as Glass diodes / Misters / Car lamps

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**Aluminum Wire and Bar**

It is an aluminum alloy wires and bars for various forging and cutting by our unique continuous casting and rolling method. Compared with the extrusion method, the metal structure can be made finer and longer (maximum weight 2t). Realizes high forgeability and machinability, greatly contributing to improved yield and productivity.

**Use Case**

- Forging / Cutting materials for automobiles, bicycles, electronic components, etc. Welding materials for shipbuilding and railways

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**Electrode materials for electric discharge machining**

**Discharge Machining Electrode Wire**

Having secured more than 25% market share, our nickel alloy spark plug electrode material enables automobile engines to achieve high output, faster revolution speeds and longer life.

**Application**

- Electrode wire for electric discharge machining

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**Tin-Plated Brass Square Wire (TPBS)**

TPBS wires are tin-plated and equalized by reflow process after undercoating by the electroplating method on square brass wires. These wires are used as pins for connectors, wrapping connection terminals of electric wires and connection pins between printed circuit boards. Tin-plated round wires and rectangular wires made of copper, phosphor bronze and other alloys are available.

**Application**

- Pins for connecting connectors and printed circuit boards, wire wrapping connection terminal

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**Porous Metal**

**CELMET™**

It is a porous metal body with three-dimensional halftone plate structure. We mass-produce it mainly on battery use with the world’s largest production capacity having lineups such as Ni-Cr, Ni-Sn as not only main Ni (nickel) but also alloy system. It is more flexible than porous materials made by sintering metal powder or metal fiber, and has a much higher porosity of up to 98%. In addition, it has eight levels with a hole diameter of 0.45 to 3.2 mm, and can be processed into various shapes by cutting or pressing.
Global Network

Europe

Middle East Africa

- Germany (12)
- Turkey (4)
- Hungary (3)
- France (4)
- Bulgaria (1)
- Belgium (1)
- Poland (4)
- Moldova (1)
- Morocco (4)
- Romania (3)
- Russia (5)
- China (86)

Asia

Oceania

- India (7)
- Indonesia (12)
- Australia (2)
- Cambodia (1)
- Singapore (4)
- Thailand (23)
- Philippines (11)
- Vietnam (10)
- Malaysia (5)
- Korea (7)
- China (86)

Japan

- America (27)
- Argentina (1)
- Canada (2)
- Paraguay (3)
- Brazil (7)
- Mexico (10)

North & South America

- America (27)
- Argentina (1)
- Canada (2)
- Paraguay (3)
- Brazil (7)
- Mexico (10)

Business Locations for Electronics Products

Sumitomo Electric Industries, Ltd.

Head Office (Tokyo)
Electric and Information System Materials Sales Div.
Akasaka Center Building, 1-3-13, Motoakasaka,
Minato-ku, Tokyo 107-8468
TEL +81-3-6406-2718

Head Office (Osaka)
West Japan Electronic Materials Sales Div.
4-5-33, Kitahama, Chuo-ku,
Osaka 541-0041
TEL +81-6-6220-4480

Chubu District Office
Mobility Electronics Sales Div.
6-1, Nagoya Lucent Tower 35F, Ushijima-cho,
Nishi-ku, Nagoya-shi, Aichi 451-6036
TEL +81-52-589-3851

Korea

Sumitomo Electric (Korea)Electronics, Ltd.
TEL +82-2-3453-4511

Thailand

Sumitomo Electric (Thailand) Ltd.
TEL +66-2260-7231

Singapore

Sumitomo Electric Asia Pacific Pte. Ltd.
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U.S.A.

Sumitomo Electric USA., Inc.
TEL +1-310-782-0227

Sumitomo Electric Interconnect Products, Inc.
TEL +1-760-761-0600

Germany

SEI Interconnect Products (Europe), Ltd.
TEL +49-40-5265-0227

Manufacturing Sites for Electronics Products

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<th>Location</th>
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<th>Fine Polymer</th>
<th>Compound Semiconductor</th>
<th>Electronics Components</th>
<th>CELMET™</th>
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* "Thunderbolt" is registered trademark of Intel Corporation.
* "USB Type-C" is registered trademark of USB Implementers Forum, Inc.

Consolidated sales

2013

Overseas Sales ¥1,417 billion

2019

Overseas Sales ¥1,735.1 billion

Consolidated sales ¥2,568.8 billion

Consolidated sales ¥3,107.0 billion

More details can be found at:
https://global-sei.com/products/electronics/

Updated: 2013

Esp053(2020.06)