



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.

萬事入精

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.

信用確実

Shinyo-kakujitsu

The Business Principles Article 1 emphasizes the importance of integrity; that is, being worthy of the trust of others.

不趨浮利

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.

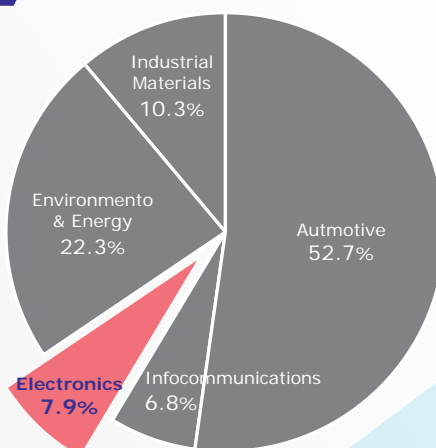
Financial Highlights

(FY2019)

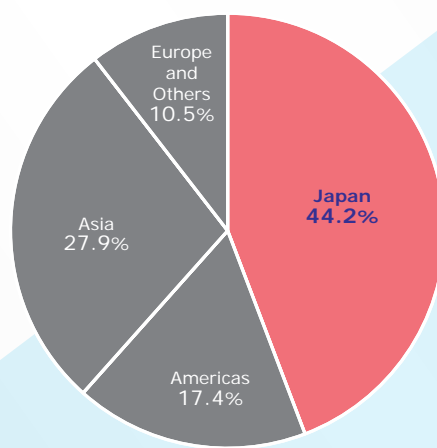
Net sales	3,107
Operating Income	127.2
Capital Expenditure	208.8
R&D Expenses	125.4

(Billions of yen)

Sales by Segment



Geographical Segment Sales



Business Segment

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.

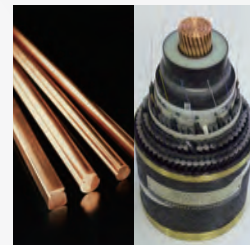
*CASE: A term for the trends in the automotive industry; an acronym for Connected, Autonomous, Shared, and Electric



Environment & Energy

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

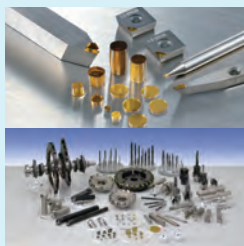
We see the unveiling of major international grid-interconnection projects in Europe and the growth in electrical power infrastructure demand in emerging nations. The wealth of experience and technology of the Sumitomo Electric Group active in the environmental and energy sectors are sought after against 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.



PRODUCT FIELDS

Electronics Business Segment

Consumer and office equipment electronics

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.

•Applications

Internal wiring [Irradiated Electronic Wire](#) [Flexible Printed Circuits](#) [Cable Assembly](#) [Flat Component](#)

External wiring [Cable Assembly](#)

Electronics components [TERALINK™ Cross-Linked Thermoplastic Polymer](#)

Compound Semiconductor [Compound Semiconductor wafer](#)

OA apparatus·Cookware [Polyimide Tube](#)

Insulation, protection and reinforcement for the termination and joints of electric wire

[SUMITUBE™ Irradiated Heat-Shrinkable Tubing](#)

Communication Networking Infrastructure

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

•Applications

Internal wiring [Flat Component](#)

External wiring [Cable Assembly](#)

Insulation, protection, reinforcement and marking for the termination and joints of electric wire

[SUMITUBE™ Irradiated Heat-Shrinkable Tubing](#) [Cable Identification System](#)

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.

•Applications

Internal wiring [Irradiated Electronic Wire](#) [Flexible Printed Circuits](#) [Cable Assembly](#) [Flat Component](#)

Insulation, protection and reinforcement for the termination and joints of electric wire

[SUMITUBE™ Irradiated Heat-Shrinkable Tubing](#)

Electronics components [Compound Semiconductor wafer](#)

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.

•Applications

Internal wiring [Irradiated Electronic Wire](#)

Insulation, protection, reinforcement and marking for the termination and joints of electric wire

[SUMITUBE™ Irradiated Heat-Shrinkable Tubing](#) [Cable Identification System](#)

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.

•Applications

Internal wiring [Irradiated Electronic Wire](#) [Flexible Printed Circuits](#) [Cable Assembly](#) [Flat Component](#)

Insulation, protection, reinforcement and marking for the termination and joints of electric wire

[SUMITUBE™ Irradiated Heat-Shrinkable Tubing](#) [Cable Identification System](#)

Health Care

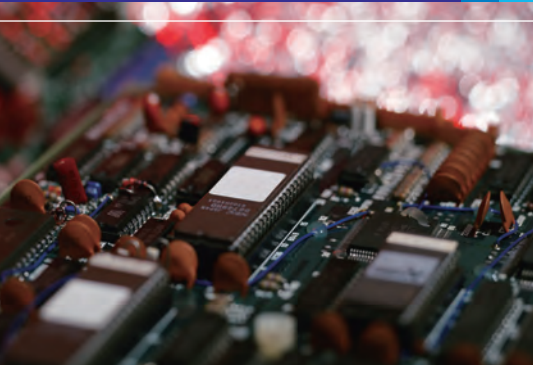
Our cross-functional and multifunctional wiring materials support the advancement of technology to increase the portability and performance of medical equipment.

•Applications

Internal wiring [Flat Component](#)

External wiring [Cable Assembly](#)

Filtration [POREFLON™](#)

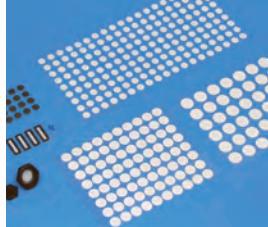


Products

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

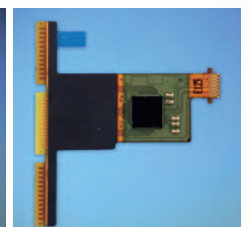
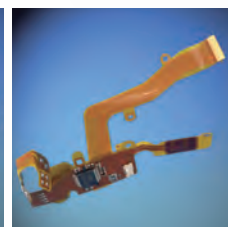
Flexible Printed Circuits

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

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.

Application Electronic equipment in general



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.



Application Electronic equipment in general (especially Medical devices and laptop PCs, Wiring between mobile phone motherboard and LCD)

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.



Application PC internal and external connections, etc.

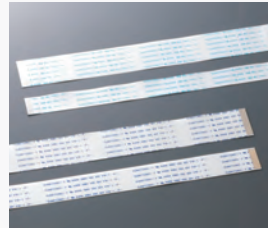
Flat Component

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.

Application Consumer equipment such as audio / home game consoles, Office equipment such as scanners and copiers, In-vehicle equipment for car navigation and audio / ADAS / powertrain



SUMI-CARD™ High Frequency Flexible Flat Cable -FlexFlyer™-

It is the flat cable for high-speed transmission.

It achieves the same transmission performance as the coaxial harness and Twinax, and is compatible with the latest high-speed transmission standards such as USB4 and PCIe 5.0.

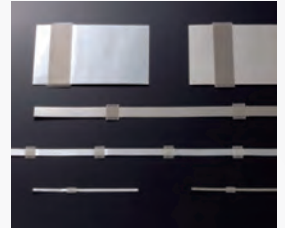
Application LCD TV, Laptop / Tablet PC, Server, Storage, Office equipment such as scanners / copiers, Home game console



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.

Application Battery electrode



Compound Semiconductor

Compound Semiconductor

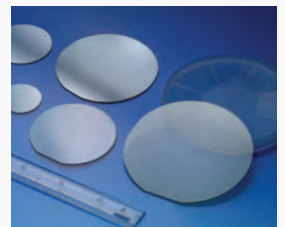
We are a leading supplier of high-quality compound semiconductor wafers used in lasers, LEDs and RF devices for mobile communications. Available in mass production are conductive and semi-insulating GaAs 3, 4 or 6-inch diameter and InP 2, 3, 4 or 6-inch diameter substrates.



Application GaAs: laser, VCSEL, LED, High frequency power amplifier, Solar cell, etc.
InP: Lasers for optical communication, Photo detectors, Lng wavelength sensors

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.

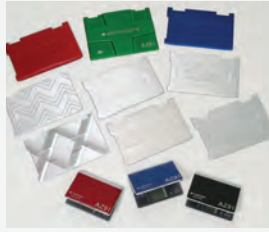


Application Laser projector, Laser headlight, Laser for optical disk, Laser pointer, Lighting and automotive LEDs, Power devices

Magnesium Alloy

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.



Application Housing for various portable electronic devices, Automotive interior goods

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.

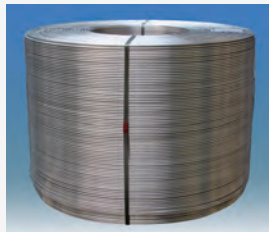


Prototype of hybrid car battery cover (iron 2.5 kg, AZ91 1.0 kg)

Aluminum Wire and Bar

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

It is used for electric wire rod, forging of automobile / electronic parts, for cutting, for welding etc.

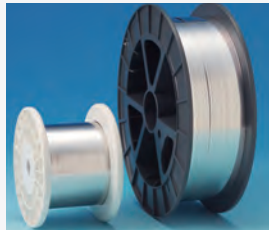


Application Forging / Cutting materials for automobiles, bicycles, electronic components, etc. Welding materials for shipbuilding and railways

Electronics Components

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

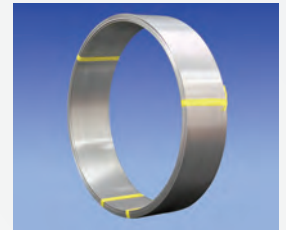
Made from composite materials, our Dumet wires are ideal for sealing glass and are used as weldable leads for various electronics and electronic parts such as thermistors, glass diodes and automobile lamps.



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

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

Nickel Alloy Wire for Spark Plugs in Internal Combustion Engines

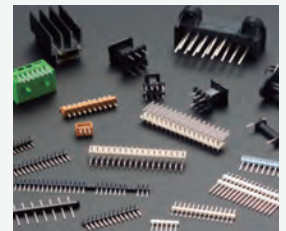
Used for a wide range of applications such as die fabrication and parts machining. We have introduced various product lines such as Premium Brass EMD Wire, the SUMISPARK™ series and tungsten wires to meet growing demand for high-precision and high-speed machining.



Application Electrode materials for gasoline engine plugs for automobiles and diesel engine plugs for environmental measures

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.



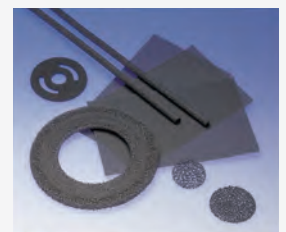
Application Pins for connecting connectors and printed circuit boards, wire wrapping connection terminal

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.

Application Current collectors for nickel-metal hydride batteries for hybrid vehicles
Components of a fuel cell, Electrode materials for hydrogen generator, Grease filter, Catalyst carrier



Global Network

Europe Middle East Africa

69

U.K.	(7)	Germany	(12)
Italy	(2)	Turkey	(4)
Ukraine	(1)	Hungary	(3)
Egypt	(2)	France	(4)
Netherlands	(3)	Bulgaria	(1)
Spain	(1)	Belgium	(1)
Saudi Arabia	(1)	Poland	(4)
Slovakia	(2)	Moldova	(1)
Serbia	(1)	Morocco	(4)
Czech Republic	(1)	Romania	(3)
Tunisia	(4)	Russia	(5)
		South Africa	(2)

Asia Oceania

168

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

Japan

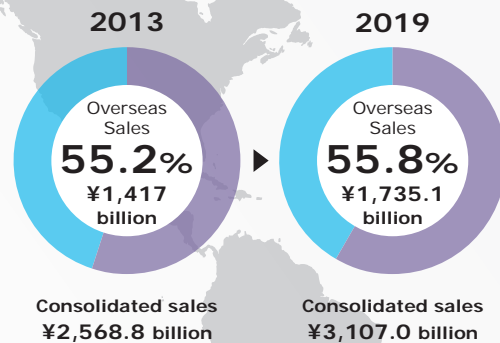
105

North & South America

48

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

Overseas
Domestic



Business Locations for Electronics Products

Sumitomo Electric Industries, Ltd.

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Manufacturing Sites for Electronics Products

	Location	Electronic Wire	FPC	Fine Polymer	Compound Semiconductor	Electronics Components	CELMET™	Aluminum	Mg Alloy
JAPAN	Tochigi	●							
	Gunma					●			
	Shiga		●						
	Osaka (Kumatori)			●					
	Osaka (Himeshima)					●			
	Hyogo (Itami)					●	●		●
	Hyogo (Kobe)					●			
Toyama							●	●	
CHINA	Suzhou	●		●					
	Shanghai	●							
	Changzhou								●
	Shenzhen	●	●						
	Zhongshan			●					
ASIA / OCEANIA	Taiwan			●	●	●			
	Vietnam	●	●	●					
	Thailand							●	
	Malaysia	●							
	Philippines		●						
U.S.A.	Massachusetts	●							
	California			●					
	Oregon				●				
EUROPE	Germany			●					
	Hungary	●							
	United Kingdom			●					

