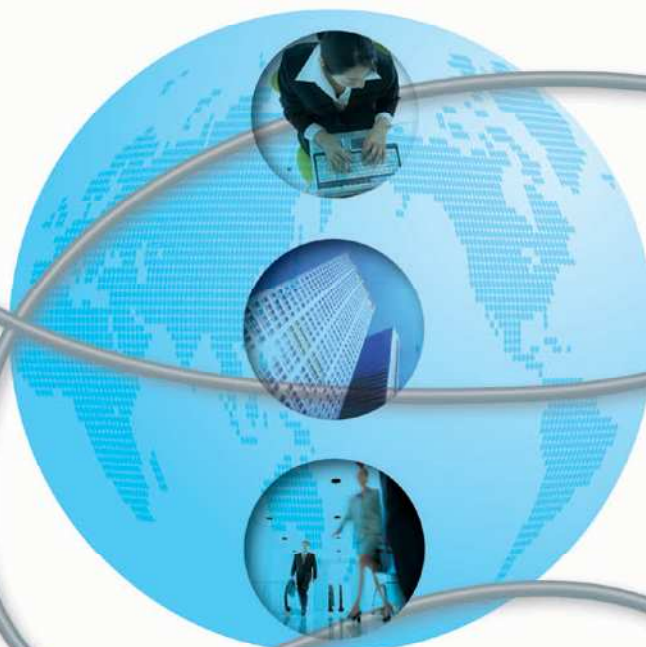


**Corporate Profile
&
products**



Oki Electric Cable Co., Ltd.

We aim to be a world-class company at the top of the three niche markets of electric wires and cables, FPCs, and EDM wires.

Oki Electric Cable plays an essential part in the history of telecommunications in Japan. The Meikosha company was founded as the first telecommunications instrument manufacturer in Japan in 1881. The founder's invention of lacquer-coated wires was followed by enamel wires, which were mass produced by Meikosha's electric wire and cable division. Meikosha later changed its name Oki Company, and then Oki Electric Co., Ltd. In 1936, the electric wire and cable manufacturing department was spun off, and Oki Electric Cable Co., Ltd. was born.

Through periods of great change that followed, Oki Electric Cable sought products that customers demanded and continued to release many unique products as telecommunications industry expanded. Today, Oki Electric Cable aims to be a world-class company at the top of the three niche markets of electric wires and cables, FPCs, and EDM wires. With our business, technology, and production departments working together, we continue to make products overflowing with ideas and contribute to the realization of a bright future.

We look forward to your guidance and cooperation in the years to come.



Masasuke Kishi, President

As its basic management policy, Oki Electric Cable Group developed and works to achieve the following principles.

- We contribute to the wide-ranging progress of society through our business.
- We work together for the limitless growth of the company.
- On the basis of independence and good faith, we expect to do right by ourselves.

okidens

Three businesses of Oki Electric Cable

Electric wire and cable business



Since our establishment in 1936, we have invested our efforts into basic research and product development of electric wires and cables to meet the use cases and requests of our customers. We offer products with high speed transmission, high flexibility, and other new added values.

We also proactively develop and commercialize products in cooperation with our customers.

FPC business



Since we started manufacturing FPC in 1972, in addition to high-density, ultra-thin, and other miniaturization applications, we combine technologies for long lengths, high-speed transmission, flexible sections, and large currents to offer new FPC for various consumer and industrial uses.

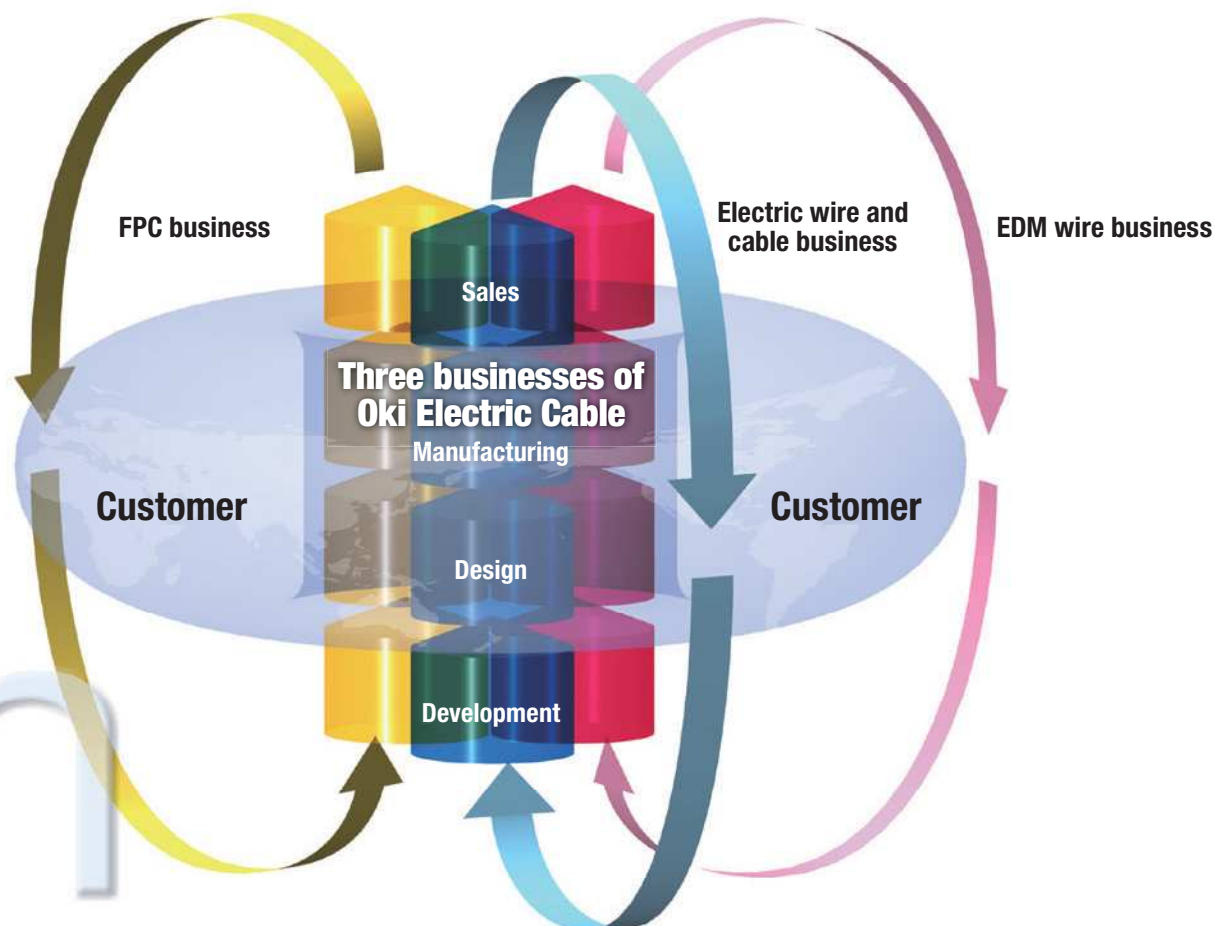
*FPC: Flexible printed circuit board

EDM wire business



We started manufacturing EDM wire early in their development in 1976. Since then, we have continually made improvements to provide customers worldwide with various EDM wire for general use, high-precision cutting, and high-speed cutting.

*EDM: Electric Discharge Machine



Pursuing manufacturing from the perspective of customers

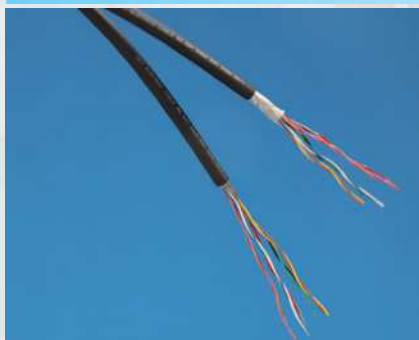
We offer the optimal products for various needs by:

- Handling custom products quickly
- Handling production from single items to large lots
- Managing production lines and quality assurance strictly

Products

- FA cable (robot cable, etc.)
- Machine-vision interface cable
- HPCF optical fiber cable
- Custom composite cable
- Flat cable
- Noise-countermeasure products

FA cable (robot cable, etc.)



Highly movable robot cable [ORP slim cable]
*FA: Factory Automation



Parallel robot cable [VEYOR-CABLE]
Curled parallel robot cable [VEYOR-SP]

Custom composite cable



High-speed interface composite cable
(for medical use)

Machine-vision interface cable



Superfine camera link cable



Camera link cable [Clean Eye]



USB3 Vision cable

Other products



Flat cable [OKIFLEX]



HPCF optical fiber cable



Motor drive cable [SYM cable]

Support of free design for limited spaces

Our original production methods deliver products with special features.

- Full support from pattern design to part mounting
- Roll-to-roll production enables production from small to large quantities
- Tool-free production eliminates the need for dies

Products

- 3D FPC
- Power FPC
- Flex-rigid board
- Combex FPC
- Long high-speed transmission FPC
- Long FPC

*FPC: Flexible Printed Circuit



3D FPC



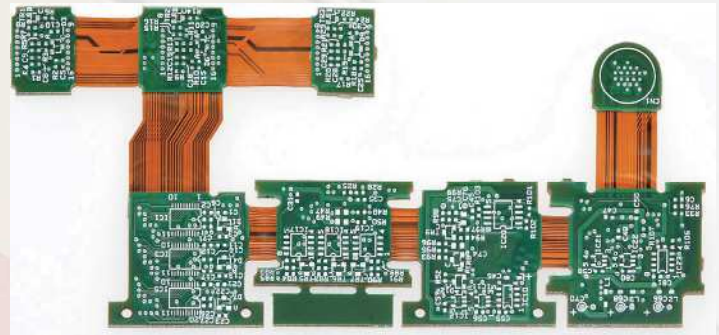
Combex FPC



Power FPC



Long high-speed transmission FPC



Flex-rigid board



Long FPC

EDM wire continue to advance along with global wire-cut technologies

We deliver the optimal products for various electric discharge machines and cutting objectives.

- General-purpose brass wires with excellent straightness and automatic threading technologies
- High-precision wires optimal for die making and other uses
- High-speed cutting wires optimal for product cutting and other uses

*EDM: Electric Discharge Machine

Products

- Brass wire
- Coated wire

- Fine brass wire
- High-speed cutting wire



Brass wire [OB-P wire]



Fine brass wire [OB-7S wire]



Coated wire [OS-Z wire]



High-speed cutting wire [OS-UZ wire]

EDM wire recycling

Reduce your procurement costs by returning your used wire!



To effectively utilize limited global resources, Oki Electric Cable has run a resource recycling program since 2007 to collect used EDM wires from customers and exchange them with the EDM wires of new products in accordance with the amount collected.

Consider this as an environmentally friendly cost reduction measure.

To further widen the circle of eco-friendliness and recycling, we collect the EDM wires of other companies in addition to the EDM wires of Oki Electric Cable.

For details, visit the Oki Electric Cable website at <http://www.okidensen.co.jp>. (for Japanese market)

Research and development

The needs of society and markets change continually. To deal with these changes precisely, Oki Electric Cable continually carries out research and development activities for the intentions of its customers. To add to the technology and knowledge we have accumulated over more than 50 years, we carry out research with universities and other research organizations and apply the resulting advanced theories and technology to deliver the items that customers truly need as products. We also release various new products that only Oki Electric Cable can develop through the commercialization of the creative ideas generated from free and lively discussions.

Recent research and development themes

Electric wire and cable business

- Robot cable with excellent movability for flexibility and thinness
- High-speed interface cable with stable transmission even during movement
- Construction of lifetime estimation technology for movable cable
- Products that utilize aluminum materials
- Active optical cable



FPC business

- Long high-speed transmission FPC that can transmit high-frequency signals over long distances
- 3D FPC that can move in all directions
- Power FPC resistant to heavy-current applications for use in power systems
- Ultra-thin multi-layer FPC with the flexibility of double-sided FPC
- Heat-resistant FPC that can be used continually under high temperatures



EDM wire business

- Multi-layer EDM wire for high-speed cutting to greatly reduce cutting time
- Basic research to improve the stability of quality
- Recycling system for EDM wire materials in anticipation of an eco-friendly society

Manufacturing and quality assurance, services for customers, and environmental activities

Manufacturing and quality assurance

We uniformly manage our products through planning, design, production, delivery, and quality assurance. We implement a system that delivers products that satisfy customers in the necessary quantity at the necessary time and at a high level of quality.

We plan products that serve the needs of our customers, use various types of simulation software to run thorough analyses, prototype and reliance testing, and other tests, and then apply the results to our designs.

We seek visibility in our manufacturing processes. We use instruments to put monitoring and product inspection online and manage schedules through a production management system to deliver the products that meet the requested delivery dates of our customers.

We also use quality programs prescribed for each product to inspect and assure quality and work to maintain a high level of quality. We can handle requests for various standard certifications in Japan and around the world.



Services for customers

• Provide “design mockups” for 3D printers

When our customers provide us with 3D data, we can design mockups for mass-production inspections of connector sections in a short period of time.

• Provide a “cable design tool” on the Oki Electric Cable web site

With just the entry of simple specification conditions, we can quickly provide cable construction and functions and support our customers' investigations of cable specifications. Using this tool, we can also provide quick estimates.

• Provide “approximate estimates for FPCs” on the Oki Electric Cable web site

With just the entry of basic specification items, we can quickly provide estimated prices for FPCs even when customers have little FPC usage experience.

Environmental activities

Efforts for the environment

In its activities to deliver products that contribute to the development of information communications, Oki Electric Cable treats its environmental conservation efforts as one of its top priorities and proactively expands its conservation activities for global and local environments based on the participation of all employees.

Reduction of CO₂ emissions

We make efforts to reduce energy consumption as a way to reduce CO₂ emissions. We promote various efforts, including the introduction of high-efficiency facilities, such as inverters for motors, insulation counter-measures, as well as the efficient operation of power generation facilities.

Provision of environmentally friendly products

We proactively support the observance of Japanese laws (laws related to the improvement and promotion of the chemical-substance management, industrial safety and health laws, etc.) and global regulations for hazardous substances in products (Restriction of Hazardous Substances Directive (ROHS), Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), etc.). Furthermore, we provide environmentally friendly products by developing and promoting the use of ecological products.

Promotion of “reduce, reuse, recycle”

We engage in various activities to shape a recycling-oriented society that balances both the environment and economy. Our “EDM Wire Recycling Network” activities collect EDM wires used by customers for wire electric discharge machines, and we collect and reuse bobbins. Furthermore, we limit the manufacturing waste of wire sheathing.

Business overview and history

■ Business overview

Trade name: Oki Electric Cable Co., Ltd.

Founded: July 16, 1936

Paid-in Capital: 4,304 million yen

President: Masasuke Kishi

Businesses: Nonferrous metal production, electric machinery and appliance production

Business description: Manufacturing and sales of electric wires/cables, flexible printed circuit boards, and EDM wires

Listing: First section of the Tokyo Stock Exchange

■ History

- 1936 The Electric wire and cable manufacturing department was spun off from the Oki Electric Co., Ltd. (currently Oki Electric Industry Co., Ltd.) to establish Oki Electric Cable Co., Ltd. in Shinagawa-ku, Tokyo.
- 1944 Purchased a silk mill in Okaya-shi, Nagano-ken and established the Okaya Factory.
- 1946 Rented the Oki Electric Nakahara factory in Kawasaki-shi, Kanagawa-ken and established the Oki Electric Cable Nakahara factory.
- 1957 Centralized the Head office and Head office factory at the Nakahara factory.
- 1963 Listed on the Second section of the Tokyo Stock Exchange.
- 1971 Established and moved to the new Okaya Factory in Okaya-shi, Nagano-ken.
- 1975 Established the Gunma Factory in Isesaki-shi, Gunma-ken.
- 1980 Moved the Kawasaki Factory to the Gunma and Okaya Factories.
Established the Electric parts manufacturing factory at the Gunma Factory site.
- 1984 Extended the Management wing and the Electric parts manufacturing factory at the Gunma Factory site.
- 1988 Established a new business wing at Okaya Factory site.
- 1990 Became listed on the First section of the Tokyo Stock Exchange.
- 1991 Established the Head office building.
Established OEC Akagi Co., Ltd. (currently Oki Electric Cable Wire Harness Co., Ltd.).
- 1996 Acquired ISO9001 certification.
- 1999 Acquired ISO14001 certification at the Gunma Factory.
Established OEC Service Co., Ltd. (currently Oki Electric Cable Service Co., Ltd.).
- 2001 Acquired ISO14001 certification at the Okaya Factory.
- 2007 Established Oki Electric Cable Changshu Co., Ltd.
- 2015 Acquired Mogami Wire & Cable Corp.

Domestic/international locations

Head office

2-12-8 Shimokodanaka, Nakahara-ku, Kawasaki-shi, 211-8585 Japan TEL +81-44-766-3171

Sales offices

Sendai sales office

Grand Shario Bldg., 3-10 Futsukamachi, Aoba-ku, Sendai-shi, 980-0802 Japan
TEL +81-22-266-0855

Gunma sales office

3344-1 Sakaiyoku, Isesaki-shi, Gunma-ken 370-0105 Japan TEL +81-270-76-4300

Nagano sales office

2-10-1 Osachigoshō, Okaya-shi, Nagano-ken 394-8686 Japan TEL +81-266-27-1597

Nagoya sales office

Daiei Bldg., 1-11-20 Nishiki, Naka-ku, Nagoya-shi, 460-0003 Japan TEL +81-52-201-2130

Osaka sales office

Oak Esaka Bldg., 10-28 Hiroshibachō, Suita-shi, Osaka-fu 564-0052 Japan TEL +81-6-6337-2681

Fukuoka sales office

Kyushu Branch, Oki Wintech Co., Ltd., Shin KBC Bldg., 1-1-35 Nagahama, Chuo-ku, Fukuoka-shi, 810-0072 Japan TEL +81-92-738-1685

Factories

Gunma Factory

3344-1 Sakaiyoku, Isesaki-shi, Gunma-ken 370-0105 Japan TEL +81-270-76-4311

Okaya Factory

2-10-1 Osachigoshō, Okaya-shi, Nagano-ken 394-8686 Japan TEL +81-266-27-2255

Domestic subsidiaries

Oki Electric Cable Wire Harness Co., Ltd.

3344-1 Sakaiyoku, Isesaki-shi, Gunma-ken 370-0105 Japan TEL +81-270-76-7865

Oki Electric Cable Service Co., Ltd.

2-10-1 Osachigoshō, Okaya-shi, Nagano-ken 394-8686 Japan TEL +81-266-27-0433

Mogami Wire & Cable Corp.

469 Souga, Shiojiri-shi, Nagano-ken 399-6461 Japan TEL +81-263-52-0131

International subsidiaries

Oki Electric Cable Changshu Co., Ltd.

19th Xihuantu Zhangqiao Xinzhuang town, Changshu China TEL +86-512-5299-2059



Head office



Okaya Factory



Gunma Factory

Due to the printing specifications, the colors of products may differ slightly from those of the actual products.

OKI

<http://www.okidensen.co.jp/en/>

Products

TABLE of OKI ELECTRIC CABLE's Products

Application	Page
Classification	
Product name	
Electric Wire and cable business	
OKI Robot Cable Series	
Selection guide for OKI robot cables and movable products	2
Technical data durability test of cables for moving parts	3
ORP cable series	4
ORP slim cable series	6
ORP-D cable series	8
ORV cable series	10
ORF cable series	12
OR super cable	14
ORP-I series	15
VEYOR-CABLE	16
Spiral cable	17
High-speed Digital Transmission Cable for Machine Vision	
Overview	18
Oki machine vision digital interface cables	19
USB3 Vision cable	
USB3 Vision flexible cable	20
USB3 Vision active optical cable (AOC)	21
Camera Link cable 'CL- * * series'	
CL-H series	24
CL-S series	24
CL-KH series	25
CL-K series	25
CL-KS series	26
CL-STH series	26
CL-LS series	27
CL-LK series	27
Clean Eye Camera Link cable	28
IEEE1394.a/b interface cable	
1394 K1 series	30
1394B K series	31
1394a long cable series	32
1394B L series	33
Gigabit Ethernet cable	
C5E (S-HFR) series	34
Optical fiber cable	
Overview	36
Optical cord for wiring inside instruments	38
Highly bendable optical cable	39
Optical cable for fixed wiring	40
Non-metallic optical cable for fixed wiring	41
Laminated aluminum polyethylene (LAP) optical cable for outdoor use	42
Flexible optical cable for low temperature environments	43
Optical metal composite cable (for indoor use)	44
Optical metal composite cable (for outdoor use)	45
FPC business	
Deployed fields	46
Process overview	47
Product line-up (standard items)	
Single-sided FPC	48
Double-sided FPC	48
Flex-rigid boards	48
Product line-up (trending items)	
Highly flexible FPC	49
High-speed transmission FPC	50
Product line-up (novel items)	
Long FPC	51
Long, high-speed transmission FPC	52
Combex FPC	53
Power FPC	54
3D FPC	55
Ultra-thin, flexible, multi-layer FPC	56
EDM Wire business	
Overview	58
OB-P/OB-B wire	59
OB-7S wire	60
OB-PN wire	61
OB-PZN wire	62
OS-Z wire	63
OS-UZ wire	64
Wire take-up bobbin details / Packing information	65