



## FUJIKURA HISTORY

**Originated in the fashion industry:** The Fujikura founder, Zenpachi Fujikura, moved out Tochigi to Tokyo in 1875 and started manufacturing hair tassels called Negake worn at the base of a chignon in a traditional Japanese lady's hairstyle. These hair accessories gained popularity since they were advertised by a kabuki star.

Shaping the future with "Tsunagu" Technology.

# FUJIKURA NEWS

2017 No.429 **4**

Power and Telecommunication

## First Delivery of Single-mode Optical/Electrical High-voltage Flat Cabtire Cable

2017  
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Fujikura has delivered its single-mode optical/electrical high-voltage flat cabtire cables to Mitsui Engineering & Shipbuilding Co., Ltd. for the first time.

Cabtire cables are mainly used as the moving parts wiring of industrial machines such as cranes. Since the lengths of the cables mostly used are short, multi-mode optical fibers suitable for short-distance transmission have been incorporated in most cases when optical communications are required.

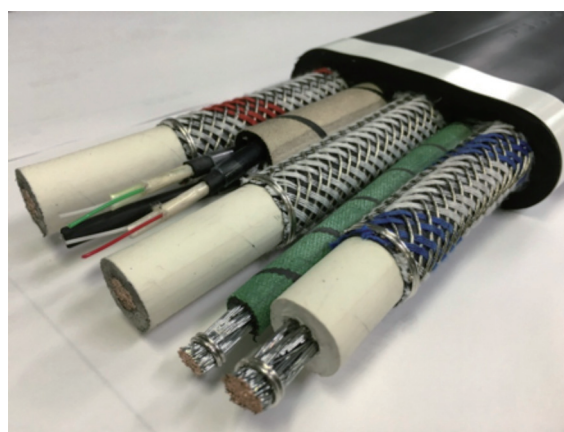
However, with increasing size and moving range of industrial machines, the length of cabtire cables used in them are also increasing. Consequently, there have been growing demands for cables that composite electrical cables and single-mode optical fibers, which are suitable for long-distance transmission.

The delivered cables allow stable transmission characteristics even in a harsh usage environment due to the structure consisting of single-mode optical fibers with excellent flexibility and resistance to cold and heat and electric cables.

Fujikura's cabtire cables are widely used as the moving parts wiring of cargo-handling facilities at harbors inside and outside Japan, achieving stable moving characteristics such as high flexibility. In the age of globalization, shipping including container shipping accounts for about 80% of international distribution, and cargo-handling facilities are increasing in size and performance. To meet the demands for products in step with these trends, Fujikura will further develop technologies to connect the moving parts and fixed parts.

### Specifications

Voltage	6600V
Product	FG-3PNCT
Structure	Composite of power lines and nine-core optical fibers
Application	Parallel take-up reel



Single-mode Optical/Electrical High Voltage Flat Cabtire Cable

Power and Telecommunication

# Optical Fiber Coupler for C+L-band and L-band

A technology, which uses L-band as well as C-band, the conventional communication wavelength band, draws attention as a practical method to deal with a rapid increase of communication volume in recent years. To introduce this technology, optical fiber components that can be used in C+L-band and L-band are growing in demand.

Fujikura has a track record of supplying high-reliability optical fiber couplers for undersea repeaters for more than 20 years. By using the basic design, we have developed an optical fiber coupler for C+L-band and L-band and added it to our product lineup.

## Main features of product

### 1. C+L-band and L-band

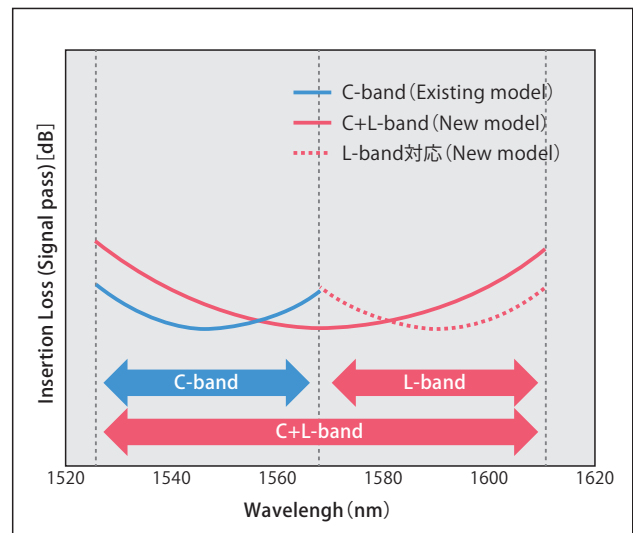
- Excellent optical properties (shown in Figure) in each wavelength band

### 2. High quality, high reliability

- Same basic design and manufacturing method as those of optical fiber coupler of undersea repeater for C-band

### 3. Customized to meet the needs of clients

- Possible to specify details, such as branching ratio, fiber length, and fiber identification marking



● Fig. Optical properties of Tap coupler for C+L-band and L-band

## Product lineup

○: Existing model ●: New model

Coupler	C-band (1526~1568nm)	C+L-band (1526~1610nm)	L-band (1568~1610nm)
Tap <sup>※1</sup>	○	●	●
WDM <sup>※2</sup>	○	●	●

※1 Tap coupler: Coupler branching incident light a certain power ratio

※2 WDM coupler: Coupler multiplexing or demultiplexing light of different wavelengths

Exhibition

## 9th DATA CENTER EXPO (DATA CENTER Spring)

Dates

May 10 (Wed) - May 12 (Fri), 2017  
10:00 to 18:00 (Last day until 17:00)

Venue

Tokyo Big Sight (Fujikura booth East 32 - 36)

Fujikura will be exhibiting at 9th DATA CENTER EXPO (DATA CENTER Spring) to be held in May. This exhibition features products including datacenter facilities and network equipment and solutions regarding the construction and operation of datacenters. In this exhibition, Fujikura will showcase its solutions for datacenters under the slogan "Be the most trusted partner in connecting technologies."

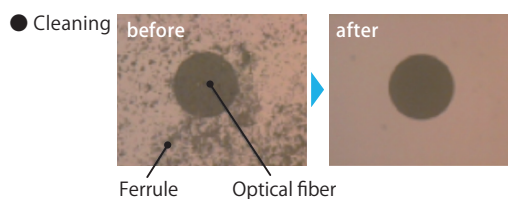
Different solutions to problems such as cable congestions and dirt on the connector end surface, which can cause transmission errors, are demonstrated as a special event. In addition, our most advanced high-density wiring technologies for data centers are also on display in a 19 inch rack.

### Demonstration 1 Transmission error due to defective condition of connector end surface

Visitors can observe dirt on an optical connector end surface and are informed of a cleaner, which can easily remove the dirt.

Exhibits

- Fiber Optic Connector Inspection System(FOCIS Flex)
- Optical connector cleaner(One-Click®)

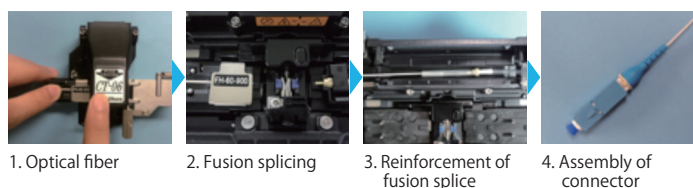


### Demonstration 2 Solution to cable congestions

Introduction to solution to cable congestions by reducing excess cable length between optical distributing board with high-reliability connector for splicing

Exhibits

- Connector for use at worksite(FuseConnect®)
- Single-core optical fiber fusion splicer(12S)
- High-strength low friction code

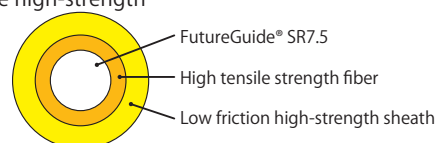


### Demonstration 3 Increase of optical wiring system reliability

Visitors can experience differences in bending loss variations between the high-strength low-friction cable and a normal code using FutureGuide® SR7.5

Exhibits

- High-strength low-friction code



Except for the demonstrations above, visitors are introduced to a 25-year warranty program and can see Fujikura data center wiring solutions suitable for colocation and cloud services. We look forward to seeing you at our booth.



Optical Cable System Division

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## Sales Start of Optical Fiber Tape Core Stripper

Fujikura has developed optical fiber tape core strippers, RS02 and RS03, for removing the sheath of optical fiber tape core for communication and will start marketing them in May.

Optical fiber tape cores consist of 2 to 12 single-core optical fibers aligned in parallel and stuck with a tape and are used in the US, India, China, as well as Japan. These products have improved workability due to its design focusing on operability and a reduction in the force needed to remove the sheath. In addition, they have new different features such as a high-capacity battery, which allows 600 stripping times, which is six

times those of our existing model. In addition, they also enables wireless communication with smartphones to facilitate the setting of operation conditions.

In addition, the products are also suitable to strip our latest optical fiber tape core, Spider Web Ribbon™, in which multiple single-core fibers (sheath dia. 250 μm or 200 μm) are stuck intermittently.

The products due out soon are RS03, which has a battery and no power code, and RS02, which has no battery and needs to be connected to a fusion splicer or outer power source to operate.

### Specifications of RS03

Clad diameter (Thickness of sheath)	125 μm (200 μm~500 μm)
Optical fiber core number	Single to 12 cores
Standard heating time	3 sec. (eco mode: 5 sec.)
Outer dimensions	155.5(W) × 48.7(D) × 36.8(H) mm
Weight	Approx. 265 g (battery included)
Battery operation period/ sheath removal time	Approx. 3.5 h/approx. 600 times: eco mode



Appearance of product

✉ Precision Equipment Division [optfsm@jp.fujikura.com](mailto:optfsm@jp.fujikura.com)

🌐 Website for fusion splicer <http://www.fusionsplicer.fujikura.com/jp>

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