

Baseball club achieves successive victories at the inter-city baseball tournament

The next president, Arata Matsumoto



## FUJIKURA HISTORY

**Second President's taking office:** The first president, Tomekichi Matsumoto passed away in 1938. His personality and management skills built the status as a leading electric cable and wire company, "Fujikura of technology". His sound management and humble attitude were taken over by the next president, Arata Matsumoto, who further strengthened the organization and also promoted cultural and sports activities.

Shaping the future with "Tsunagu" Technology.

# FUJIKURA NEWS

2018 No.444 **7**

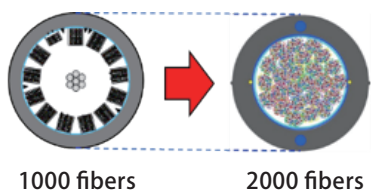


## Start of Delivery of 2000-Fiber SM Optical Fiber WBZ Cable to NTT

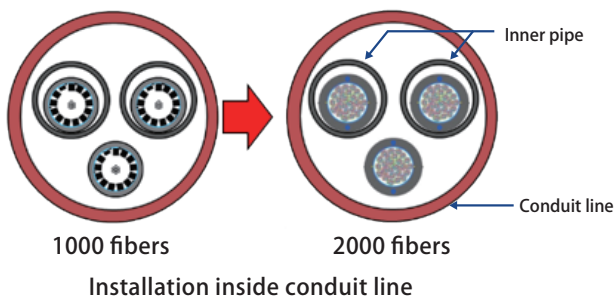
Fujikura received an order for 2000-Fiber SM Optical Fiber WBZ cables, which contain coated optical fibers bonded in places, from Kyusyu Branch, NTT West Corp. for Kumamoto's recovery from the earthquake and delivered them for the first time in Japan. These cables have been installed by SYSKEN Corp. The cable uses coated optical fibers bonded in places and has a structure without slots. Even with the same external diameter as

that of a conventional 1000-fiber slot cable, the product can accommodate twice as many coated fibers per conduit as those with slots. This will further allow effective use of the conduit line. Multi-fiber optical cables shifted from multi-slot cables to single-slot cables, to small-diameter high-density slot-less cables having coated optical fibers bonded in places. Currently, NTT Corp. is replacing their slot cables with slot-less cables. We will contribute to further progress in advanced information society by developing, manufacturing and supplying these cables.

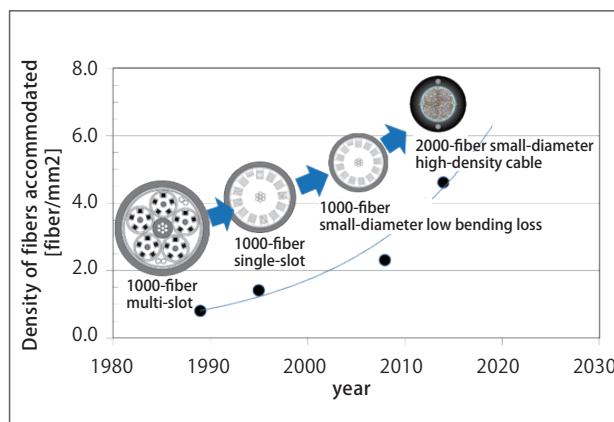
### ● Effect of multi-fiber high-density cable



Standard external diameter less than 24 mm equivalent to that of conventional slot cable



### ● Transition to densification of multi-fiber optical cable





## TEC PANDA Fiber

Fujikura releases a polarization maintaining optical fiber suitable for use in the most advanced telecommunication devices that use silicon photonics technology. The waveguide of a silicon photonic device has a high refractive index and a mode field diameter (MFD) smaller than that of an optical fiber. A large difference in MFDs between the waveguide and the optical fiber causes an increase in connection loss. Aiming at reducing connection loss, we have developed a polarization maintaining optical fiber (TEC PANDA fiber) having a small MFD by applying thermally-diffused expanded core (TEC) technology. The small MFD of TEC PANDA fiber reduces connection loss between the fiber and the silicon waveguide. In addition, in fusion splicing of TEC PANDA fiber to a standard PANDA fiber, the MFD of the new fiber is enlarged by heat generated by discharge and thus cuts down on connection loss. We will be committed to developing products that contribute to society by utilizing specialty fiber technology.

\*1 Acronym of mode field diameter: an index representing the distribution of irradiance across a single-mode fiber

\*2 PANDA (Polarization-maintaining AND Absorption-reducing) fiber is a typical kind of polarization-maintaining optical fibers and has a characteristic that its polarization of the transmitted light is not readily affected by disturbance

### RC13-15-PS-U17E-M4-T Specification

Item	Product
Polarization cross talk [dB/2 m]	-25 or less*3
Transmission loss [dB/km]	30 or less*3
Cutoff wavelength [ $\mu\text{m}$ ]	1.28 or less
MFD [ $\mu\text{m}$ ]	4.0 $\pm$ 0.3*3 3.4 $\pm$ 0.4 *4
Clad diameter (major axis) [ $\mu\text{m}$ ]	80 $\pm$ 1
Minimum permissible bending radius [mm]	5
External clad diameter (major axis) [ $\mu\text{m}$ ]	165 $\pm$ 15

\*3:wavelength 1.55  $\mu\text{m}$  \*4:wavelength 1.31  $\mu\text{m}$

Optical Fiber Division [optodevice@jp.fujikura.com](mailto:optodevice@jp.fujikura.com)



## Cable Tech Show

**Dates** July 19 (Thur)-20 (Fri)  
9:30-18:00 (last day until 17:00)

**Venue** Fujikura booth No.B-08, Hall E,  
Tokyo International Forum

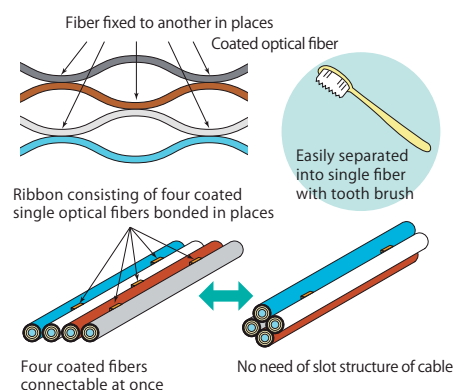
Fujikura is exhibiting at Cable Tech Show 2018 to be held on July 19 and 20.

Cable Tech Show 2018 intends to provide visions of the future in our life and society along with cutting-edge cable technology, looking forward the year of 2020 and 2025 described in 4K/8K Promotion Road Map (Ministry of General Affairs).

On the theme of suggesting new-age optical network solutions, Fujikura's booth mainly presents optical slot-less cables, which are much thinner and lighter than conventional cables, methods of their lead-out and retaining of them in a closure, our future product lineup and road map. We look forward to seeing you at our booth.

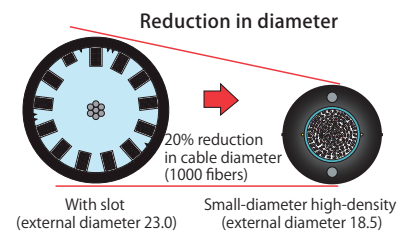
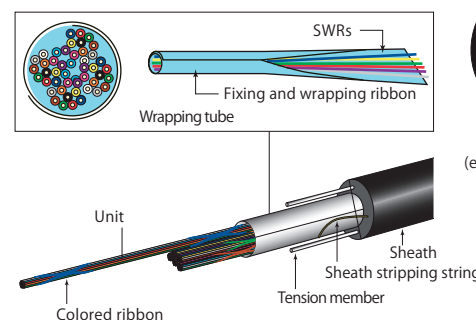
### Spider Web Ribbon® (SWR®)

- Multiple optical fibers arranged in row and bonded in places
- No slot structure needed due to readily formable ribbon
- Return to parallel form at connection to enable connection at once



### Wrapping Tube Cable® (WTC®)

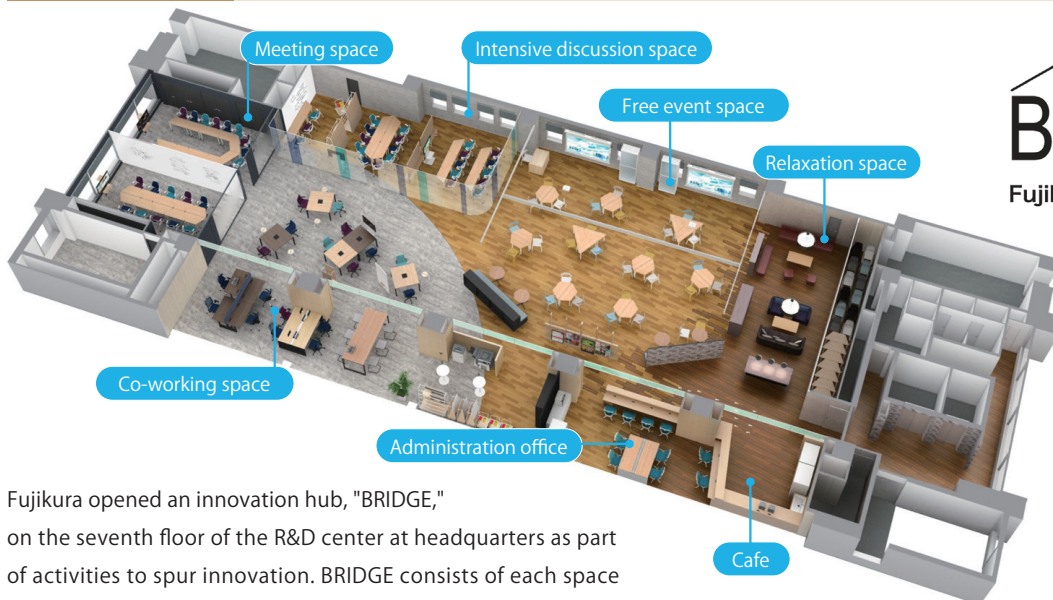
- With structure where SWRs fixed and wrapped by ribbon
- Ensuring of fiber exposure by stripping sheath



ケーブルコンベンション関連イベント  
**ケーブル技術ショー**  
Cable Tech Show 2018  
<https://www.catv-f.com/>

Optical Cable Systems Division [telcon@jp.fujikura.com](mailto:telcon@jp.fujikura.com)

# Information **Opening of Innovation Hub, BRIDGE**



- Weekdays: 9:00 to 18:00
- Membership system

Fujikura opened an innovation hub, "BRIDGE," on the seventh floor of the R&D center at headquarters as part of activities to spur innovation. BRIDGE consists of each space for event, co-working, and meeting, where a variety of people from companies and organizations, R&D institutes, and national and local governments gather to create value with us. We intend to obtain a lot of inspiration and awareness through learning different ways of thinking and technologies and change and evolve ourselves. In addition to seminars on innovation and events where

advanced technologies and spirited venture companies are introduced, we will carry out a variety of programs including symposiums and workshops toward solving social challenges and different kinds of exchanges.

BRIDGE WEB [www.bridge.fujikura.jp/contact/02/index.php](http://www.bridge.fujikura.jp/contact/02/index.php)

# Power & Telecom **6kV Portable Power Cable**

In advanced information society, substations are important facilities to supply power to commercial, industrial and residential areas, and a blackout significantly affects society. When electricity is cut off because a substation is under construction or suffers from an accident or disaster, a 6kV portable power cable can be connected between the points that cause the power failure to minimize the duration. In addition, the cable can supply power sent from a mobile power supply vehicle to a substation.

Fujikura Components Ltd. has manufactured and sold 6kV portable cables for more than 30 years and can also deliver the products according to the needs of customers.

- **Applicable standard** : Standard for power B-1220 portable power cable
- **Specifications** : cable: 6kV CV 325 to 800 mm<sup>2</sup>, up to 50 m in length  
 Terminal : for exterior use (can be used up to 0.35 mg/cm<sup>2</sup> fouling) or direct connection to device  
 Cable former : Iron container or drum
- **Performance**



● Inside the container

Item	Performance
Power-frequency withstand voltage	13 kV × 1 hour (room temperature)
Lightening impulse withstand voltage	±85 kV × 3 times (room temperature)
Partial discharge voltage	No partial discharge detected after 9kV applied for 10 min. (room temperature)

● Portable Container

Fujikura Components [haiden-info@jp.fujikura.com](mailto:haiden-info@jp.fujikura.com)

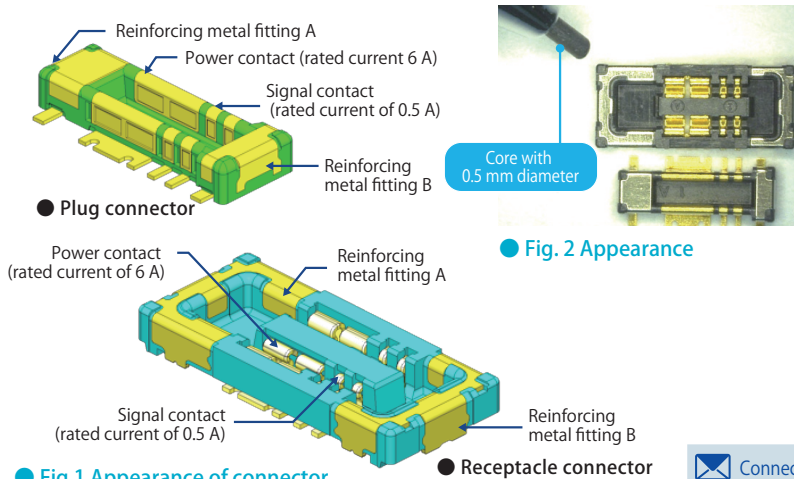


## Battery Connector BTK series for Smartphones

In recent years, there are increasing demands for larger capacity of batteries and faster charging of smartphones and mobile devices.

To meet these demands, Fujikura has developed a small-sized

high-current connector that has two 6A-rated power contacts, four 0.5 A-rated signal contacts (fig.1), a mated height of 0.7 mm, length of 4.9 mm, and width of 2.2 mm.



● Table 1 Specifications

Mated height	0.7mm
Rated voltage	AC15V (r.m.s.)/DC15V
Rated current	0.5 A Signal contact 6.0 A Power contact
Withstanding voltage	AC100 V (r.m.s.)/min
Insulation resistance	100 MΩ or higher at DC100 V
Contact resistance	20mΩ or less signal contact 10mΩ or less power contact
Operating temperature range	-40°C to 85°C
Number of core	Power contact: 2 Signal contact: 4

Connector Development Division [ddk.contact@jp.fujikura.com](mailto:ddk.contact@jp.fujikura.com)



## Fujikura Receives Top 100 Global Technology Leader 2018 Award from Tomson Reuters

Fujikura was selected to receive Top 100 Global Technology Leader 2018 Award by Tomson Reuters (headquarters in New York), an international information service company, and awarded with a trophy on May 16.

Top 100 Global Technology Leader 2018 were chosen from 5,000 technology companies worldwide by assessing the performance in 28 inputs across 8 pillars. The pillars include financial performance, management and investor confidence, risk and resilience (withstanding shock and disruptions), legal compliance, innovation, people and social responsibility, environmental impact, and reputation.

We were regarded in terms of "innovation" specifically because of our high patent success rate backed by our high-quality inventions. We will actively work on the speedup of new business

creation, open innovation, and efforts in ESG, which are essential measures of our 2020 mid-term management plan, so that we can be a promising company, continuing our operations in the future.



Mr. Wada, Executive Director, receiving trophy



Mr. Wada, Executive Director, delivering speech

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 Issue : June 2018, No. 443 Editor in Chief : Keisuke Okamura  
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