

Fujikura News



Masahiko Ito, President & CEO

I would like to wish everyone a Happy New Year.

The first half of the fiscal year was a severe market environment that resulted in a decrease in revenues and income compared to the previous year. This mainly was due to sudden yen appreciation and a drop in demand in the electronics business. However, operating income increased compared to original targets despite a decline in sales thanks to our success in improving productivity, and other measures. Our operating margin was 4.5%, which compared to the target 3.6%, indicates that we are maintaining and enhancing our ability to generate profits. During the second half of the year, we anticipate that conditions in our operating environment will remain severe due to a continuing lack of transparency with currency trends. Our ability to generate profit will continue to be tested.

I would like every in-house company to work on the following initiatives. First, I would like the Power & Telecommunication Systems Company to respond rapidly to the firm global demand for optical fiber. In the energy business, I would like you position strengthening our EPC business in Myanmar and other emerging markets as a cornerstone of our growth strategy while also promoting further structural reforms for our domestic electrical wire business. In the Electronics Business Company, I ask that you rapidly ascertain customer needs, produce samples and establish mass production systems corresponding to models for next fiscal year, and strengthen quality control systems for our large-volume customers. I would like the Automotive Products Company to achieve the successful launch of the LCC manufacturing sites, and advance business development targeting Chinese car manufacturers. At the same time, I would like you to position our response to the coming age of EV as a company-wide issue and collaborate with R&D unit and other in-house companies to make advancements in this area.

The four core strategies of the 2020 Mid-term Business Plan are 1) developing deeper ties with strategic customers, 2) speed up new business creation, 3) promote open innovation, and 4) implement management and business structural reforms. Specifically, developing deeper ties with strategic customers involves strengthening our EPC and service business transactions with major communications companies overseas. We are developing business in a way that enables us to accurately identify the value desired by customers and provide total solutions.

We also are offering SWR/WTC optical cables to core clients overseas. SWR/WTC are our newly developed thin, lightweight optical cables that are easy to install and easily adapted to suit customer needs.

In the area of R&D, instead of focusing on detached domains, we will secure the superiority of “Tsunagu (connecting)” technology by strengthening three technology platforms – electrical wires and cables, optical, and electronic products. Furthermore, we will promote R&D aimed at expanding new business in the medical, industrial equipment, and automotive products segments. Furthermore, by developing deeper ties with strategic customers and promoting open innovation, we will identify social changes and customer needs ahead of our competitors to create the new technology and new products desired by our customers. In doing so, we further accelerate our ability to achieve powerful innovation.

Let’s all work together to make this another healthy, successful year!



Sales Launch of New CO₂ Laser Splicer Series

Fujikura has put the LZM-110 Series, CO₂ laser optical fiber fusion splicers, on the market. These splicers are distinguished by the use of a CO₂ laser for fusion splicing special optical fibers such as large-diameter fibers and processing fiber edges. The fusion splicers are expected to find a wide range of applications including optical devices, medical equipment, various sensors, research and development.

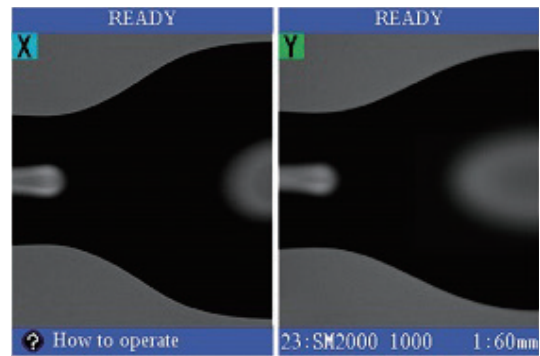
The use of CO₂ laser as the heat source allows fusion splicing of optical fibers with an outer diameter as large as up to 2.3 mm. Doing this work, however, is difficult for the ordinary system, in which optical fibers are heated by electric discharge. The new fusion splicers are capable of processing fiber edges with a ball-lens by using dedicated software.

The LZM-110 Series products are much smaller and lighter in weight than the LZM-100 Series and thus can be set on a table. The addition of four fusion splicers under the LZM-110 Series will offer the user a wide choice of options.

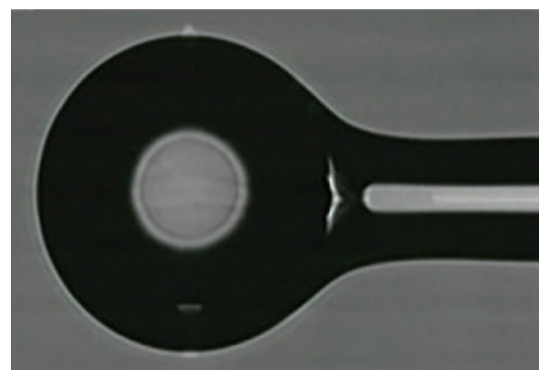


Photo image of the LZM-110 series product

External dimensions (W×D×H)	482×584×843 mm
Weight	26 kg



Fusion splicing of 1 mm-dia. fiber and 2 mm-dia. fiber



Processing of ball-lensed edge

✉ Precision Equipment Division → optfsm@jp.fujikura.com

Our website for splicers → <http://www.fusionsplicer.fujikura.com/jp/>

R&D

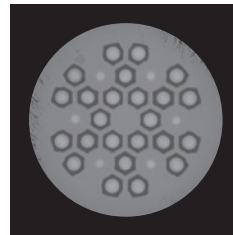
Fujikura awarded Horizon Prize together with Technical University of Denmark and University of Southampton

Researchers from Fujikura, Technical University of Denmark (DTU), and University of Southampton received Horizon Prize for Breaking the Optical Transmission Barriers from the European Commission for their joint research using Fujikura's multi-core fiber.

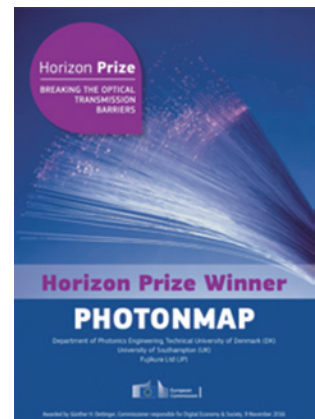
Horizon prizes are 'challenge' prizes under Horizon 2020 (EU's research and innovation program with nearly €80 billion of funding available over 7 years from 2014 to 2020).


The research was conducted using DTU's single photonic chip-based supercontinuum source, Fujikura's multicore fiber, and University of Southampton's multi-core erbium doped fiber amplifiers. The results showed that 1Pbit/s or higher optical transmission over 1,000 km was achieved without complicated electrical treating of the transmission line, which lead to the prize.

In addition, this research is part of the SAFARI (Scalable And Flexible optical Architecture for Reconfigurable Infrastructure) project funded by Ministry of Internal Affairs and Communications and the European Commission's Horizon 2020 under Strategic Information and Communications R&D Promotion Programme.



Cross-section of newly-developed multi-core fiber



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Electronics
&
Auto

Fujikura Joins IZB 2016

International Suppliers Fair (IZB) 2016 was held in Wolfsburg, Germany between October 18 and 20. The Fujikura Group put on display various products such as harnesses, cables, connectors, flexible printed circuits, thermal products, and assemblies for next generation vehicles. Among these exhibits, the demonstration of AOC (active optical cable), which transmits data as fast as 56 Gbps, attracted many visitors' attention. We had many of our major European customers in our booth and good discussions with them. The event was so meaningful that we were able to see future development of the automotive business.



Demonstration of AOC

 Automotive Electronics Component Company → automotive@jp.fujikura.com

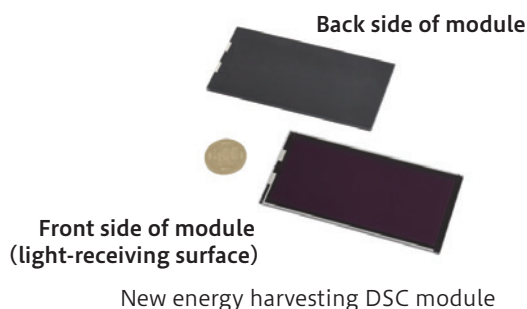


Development of Slim Die-sensitized Cells for Energy Harvesting

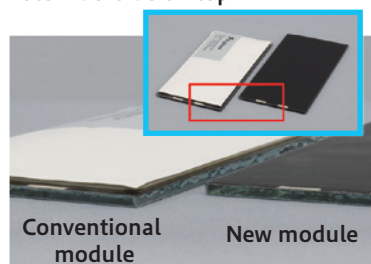
Fujikura has developed a die sensitized cell (DSC) that will be most suitable for energy harvesting use. In the IoT field, where technical development is underway, many sensing systems are expected to be used in different places in the future. Energy harvesting is assumed to be an effective environmentally friendly method to operate these sensors because the system does not require the installation of an AC outlet or battery replacement, or produce waste.

Last year, Fujikura launched the sales of DSCs for energy harvesting, which displays excellent performance in conditions without direct sunlight. Meanwhile, we have been further downsizing DSCs in keeping with the miniaturization of sensors.

We have developed an energy harvesting DSC with a 1.2 times wider effective generating area than the previous model and half the thickness, 2.5 mm, of it after succeeding in simplifying the sealing of the DSC without sacrificing long-term reliability. It is expected that rapidly spreading IoT sensor systems will operate completely without batteries and that net-zero energy buildings (ZEB) will be put to practical use. To support the development of green society, Fujikura will keep working on DSCs.



Note: Backside on top



Comparison of thickness with old module

Comparison of properties with cold module

	Conventional module (FDSC-FSC4)	New module
Outer dimensions (W×D×H)	112 × 56 × 5.0 mm	112 × 56 × 2.5 mm
Effective generating area	40.6 cm ²	48.2 cm ²
Typical output (white LED 200 lux)	250 μW	300 μW

Note: The values in the graph are those of modules under development and can be different from those of products.

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