FUJIKURA NEWS NO.507 2025 10

CEATEC 2025 Exhibitor Information

We will be exhibiting at CEATEC 2025, which will be held at Makuhari Messe (Chiba Prefecture) from October 14th. This year's CEATEC will be held under the theme of "Innovation for All" with the aim of "bringing together people, technology, and information from all industries and sectors to envision the future through 'co-creation' with the aim of realizing 'Society 5.0' that balances economic development and solving social issues."

At our booth, we will showcase where and how our products are used, how they solve social challenges, and how they contribute to transforming industrial and social structures.

We sincerely look forward to your visit.

POINT01

Essential SWR® /WTC® optical fiber cables and optical components for data centers

POINT02

Introducing SWR-MCX, which applies SWR® to micro-coaxial cables (MCX)

POINT03

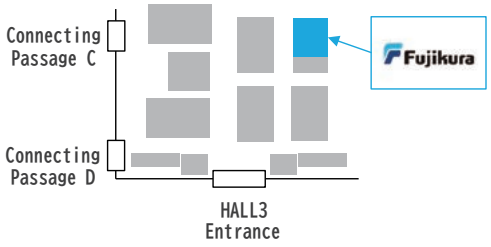
Fiber lasers achieving both high-quality processing and reduced environmental impact

POINT04

High-temperature superconducting wires, key to the practical application of fusion energy (nuclear fusion power generation) that emits no CO_2

Date and time	October 14(Tue)-17(Fri), 2025 10：00～17：00
Location	Makuhari Messe HALL3 General Exhibits Area Fujikura Booth：3H212

HALL3 General Exhibits



CEATEC 2025 Registration

https://reg.ceatec.com/?act=Form&event_id=28&_lang=en

CEATEC 2025 Fujikura Special Website

https://www.ceatec.com/nj/exhibitor_detail_en?id=1775

Products and technologies contributing to the realization of a highly digitalized and sustainable society

Ultra-high density optical fiber cables

With the advancement of technologies such as 5G, IoT, and generative AI, data traffic is increasing exponentially. To address this, expanding the transmission capacity of optical fiber cables—specifically, increasing the number of fibers and achieving higher density—is essential.

This time, we are exhibiting the "13,824-core SWR®/WTC® " ultra-high density optical fiber cable, which boasts the world's highest core count. This product achieves the implementation of up to 13,824 optical fibers—twice the capacity of conventional cables—by integrating our proprietary 12-fiber intermittent fixed optical fiber ribbon technology "Spider Web Ribbon® (SWR®)" with our small-diameter, high-density optical fiber cable technology "Wrapping Tube Cable® (WTC®)".

The 13,824-core SWR®/WTC® enables space-saving and efficient cabling, providing powerful support for building environments requiring a large number of optical fibers. We will continue to promote the development of high-quality, innovative technologies and contribute to the advancement of the information society.

SWR®/WTC® Cable (13,824 cores)

■ Points relevant to the 17 SDGs

Our proprietary technology enables the development of high-density optical fiber cables with small diameters, supporting the advancement of 5G and increasing network capacity, contributing to the development of safe and resilient infrastructure.

Thurmal Products

Due to technological innovations in generative AI and big data analysis, the increasing performance of CPUs/GPUs, and the increased heat generation associated with high-density board mounting, data centers and servers are increasingly adopting water-cooling units with high cooling efficiency.

Our cold plates feature a narrow-pitch microchannel fin structure that provides high cooling performance and excellent reliability in preventing water leaks, and are used by many customers.

Cold Plate

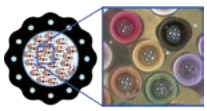
■ Points relevant to the 17 SDGs

Through the advancement of high-performance cooling systems, we will contribute to the development of environmentally friendly high-performance computers.

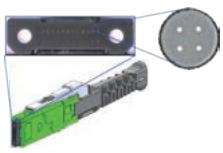
Products and technologies contributing to the realization of a highly degitalized society

MCF Solutions

With the advancement of a highly digitalized society, the utilization of AI (Artificial Intelligence) and ML (Machine Learning) is accelerating, driving the construction of data centers worldwide. To handle the ever-increasing data transmission capacity required for communication within and between these data centers, demand for small-diameter, high-density optical fiber cables is rising. Simultaneously, expectations are growing for MCF (Multi-Core optical Fiber) with multiple cores. This time, we introduce comprehensive MCF solution technologies centered on MCFs and optical fiber cables, including single-core and multi-core optical connectors, FIFO (Fan-In/Fan-Out) and other peripheral devices.



Multi Core Optical Fiber Cable



MMC Connector

■ Points relevant to the 17 SDGs

The evolution of optical fiber contributes to increasing network capacity and underpins the foundation of information and communications infrastructure.

Micro-coaxial cable (MCX) assemblies

Micro-coaxial cable (MCX) offers excellent transmission characteristics in the high-frequency band. Leveraging its small diameter and high flexibility, it is utilized in highly digitalized mobile devices, wearable devices, drones, and other compact equipment.

The SWR-MCX currently under development applies our proprietary SWR® intermittent bonding structure for fine-diameter, high-density optical fiber cables to the MCX connector, forming a unitized structure of multiple MCX connectors. This facilitates terminal processing for multi-core assembly cables transmitting high-resolution, large-capacity data, such as those used in ultrasonic probes.

This time, we introduce these Micro coaxial cables and their assembly products.

Micro-coaxial cable(MCX) assembly

SWR-MCX

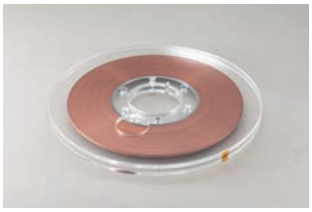
■ Points relevant to the 17 SDGs

Micro-coaxial cable (MCX) offers excellent transmission characteristics in the high-frequency band. Its small diameter and flexibility make it an indispensable wiring material for advanced digitalization. Furthermore, SWR-MCX holds potential for applications in medical ultrasonic probes and similar devices, contributing broadly to people's health and daily lives.

Products and technologies contributing to the realization of a sustainable society

Rare-earth-based high-temperature superconducting wires

Our company develops and manufactures rare-earth-based high-temperature superconducting wires. Rare-earth-based high-temperature superconducting wires exhibit high critical current characteristics at low temperatures and high magnetic fields, and have long been anticipated for various industrial applications. In recent years, their application in fusion energy (nuclear fusion power generation) as an energy technology to achieve carbon neutrality has drawn significant attention, leading to increased demand for rare-earth-based high-temperature superconducting wires. This rising demand has broadened the scope of exploration into other industrial equipment applications, such as medical magnetic resonance imaging (MRI) systems aiming to reduce helium usage and electric aircraft pursuing decarbonization. Our company aims to contribute to the coming carbon-neutral society by pursuing the practical application of rare-earth-based high-temperature superconducting wires across a wide range of industrial equipment.



Rare-Earth-based High-Temperature Superconductor Wire

■ Points relevant to the 17 SDGs

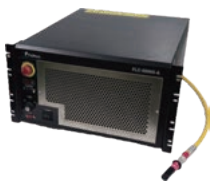
Our rare-earth-based high-temperature superconducting wires contribute to energy technologies that achieve carbon neutrality, including fusion energy, and to the high performance and high efficiency of medical and analytical equipment utilizing magnetic forces.

Fiber lasers

Our group manufactures and sells high-quality, highly reliable fiber lasers by integrating our unique optical design technologies, centered on optical fibers and semiconductor lasers, with our manufacturing expertise.

Processing with fiber lasers is an environmentally friendly method that generates less dust, waste, and noise compared to conventional methods using cutting tools or chemicals, while also offering high energy efficiency. Its application in the market is rapidly expanding, primarily for cutting and welding metal materials. In recent years, its scope is also broadening to include difficult-to-machine materials like ceramic materials and CFRP, which were challenging to process conventionally. Furthermore, it is suitable for microfabrication utilizing its high focusing capability as a laser and is also used for printing and marking on material surfaces, semiconductor wafer processing, and jewelry processing.

Going forward, our company will continue to provide high-quality processing.



CW Fiber Laser (Air Cooled)

Pulsed Fiber Laser

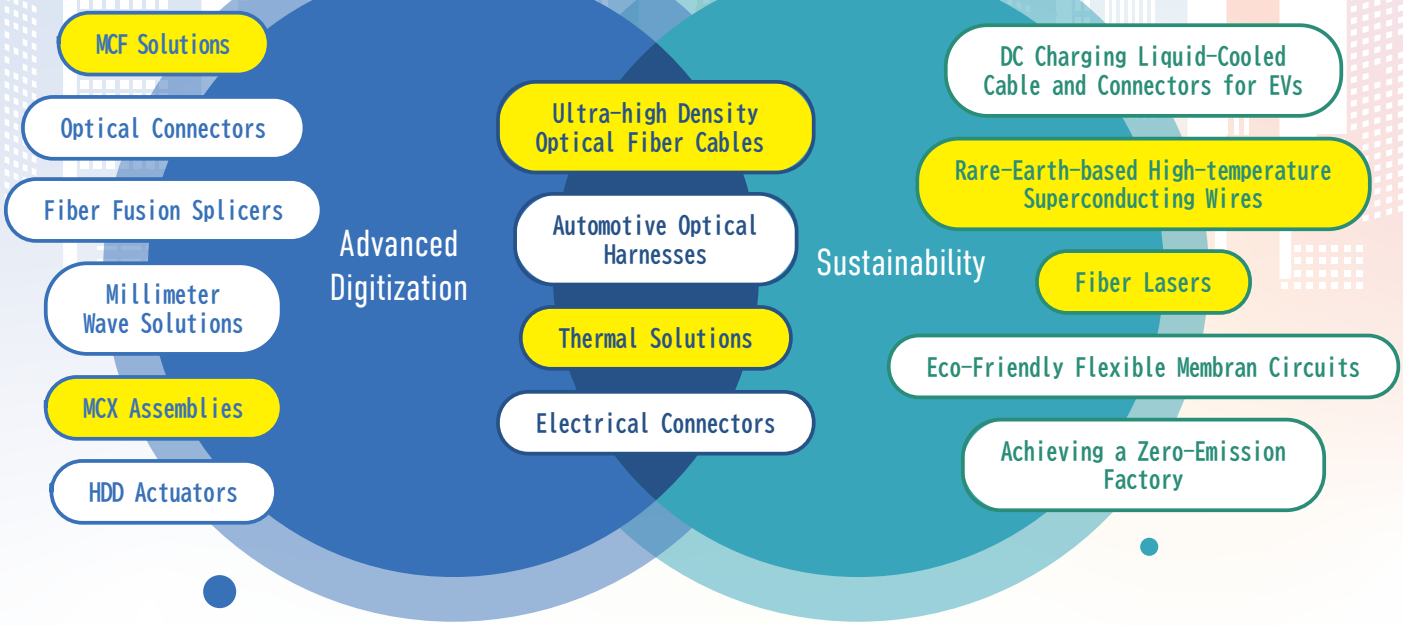
■ Points relevant to the 17 SDGs

Fiber lasers boast more than twice the energy efficiency of conventional lasers, significantly reducing power consumption to suppress CO2 emissions, contributing to the prevention of global warming and the development of a sustainable society.

Connecting Technology™ for the Future of Earth
～Toward the Realization of a Highly Digitalized and Sustainable Society～

A highly digitalized society refers to one that utilizes digital technologies (such as AI, IoT, cloud computing, big data, and 5G) across all sectors of society to enhance efficiency, convenience, and creativity. Furthermore, a sustainable society is one that maintains a balance between environmental, economic, and social aspects, enabling future generations to enjoy prosperous lives.

The figure below illustrates our products and technologies that contribute to the realization of an advanced digital and sustainable society. This time, we introduce: ultra-high density optical fiber cables and thermal products contributing to the realization of a highly digitalized and sustainable society; MCF (Multi Core Fiber) solutions and micro coaxial cable (MCX) assemblies contributing to the realization of a highly digitalized society; rare-earth-based high-temperature superconducting wires and fiber lasers contributing to a sustainable society.



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