

FUSION SPLICER FURUKAWA



FUSION SPLICER FURUKAWA FITEL S179



FITEL[®] S179 Fusion Splicer

Hand-Held, Core Alignment Fusion Splicer



Features and Benefits

- Exceptional performance for fast and consistent fiber splicing
- Enhanced ease of use and portability
- High-speed splicing and heating¹
- Ruggedized body design
- Easy, intuitive operation
- Compatible with Splice-On-Connectors (SOC)
- State-of-the-art communication methods
- Quick and easy maintenance

Overview

The FITEL S179 Hand-Held, Core Alignment Fusion Splicer offers powerful performance, delivering fast and reliable optical fiber splicing even under harsh environmental conditions. By combining speed, precision, durability, portability and state-of-the-art communication methods in one unit, this fusion splicing machine opens the door to an entirely new range of applications. The FITEL S179 Fusion Splicer is highly effective for use in data centers, long-haul operations, Metro, LAN, and FTTx fiber, including ultra bend-insensitive fibers as well as large area effective fibers.

Applications

- Fiber sensors
- Manufacture of optical components
- FTTx
- LAN
- Backbone
- Enterprise
- Long-haul
- Data Centers

Product Description

Designed with users in mind, the FITEL S179 Fusion Splicer delivers rapid splicing and heating ability with consistent results, splice after splice. A large-capacity battery system helps save time by allowing 200 splicing cycles (splicing/heating) in one charge.¹ While a 4.3-inch wide LCD screen with touch panel offers easy and intuitive operation, a proportionately wide splicing chamber makes optical fiber easy to load. For improved visibility in low-light conditions, 3+1 LED lights illuminate the entire splicing chamber. A detachable, left-side V-groove makes cleaning and maintenance a breeze.

The S179 Fusion Splicer is also designed to meet the rigors of use in the field. While a substantially lower profile and lighter weight enhance portability, this splicer's canopy design and ruggedized body provide resistance to shock, water and dust exposure. A powerful, high propulsion motor (8N) helps ensure stable splicing for the most rigid indoor and drop cables. Internal battery charging, embedded Near Field Communication (NFC) and Smartphone readiness combine with other features to make the S179 one of the most powerful and user-friendly fusion splicing machines available today.

¹ In semi-auto splicing mode and regular heating mode

New Features

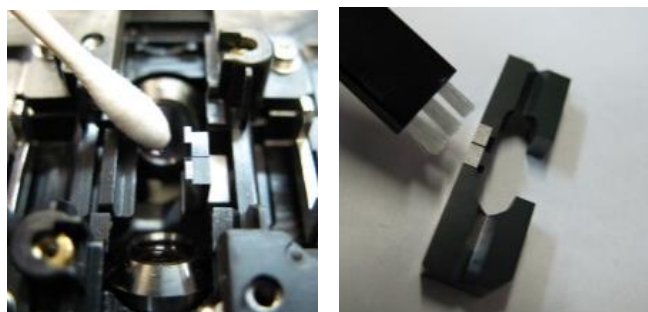
- **Touch Screen:** 4.3-inch wide LCD screen
- **Illumination lamp:** 3 upper + 1 lower LED
- **Detachable V-groove:** Easy maintenance and lens cleaning
- **NFC:** Lock and unlock splicer via smartphone (only for Android phone ver. 4.1 or after)
- **WiFi Networking:** Communication between splicer and smartphone
- **High speed:** 6 sec of splicing time and 9 sec of heating time



Touch Screen



Illumination lamp: 3+1 LED



Detachable V-groove and Easy Cleaning



NFC: Lock and Unlock

Under Tough Environments

- **Shock Resistant:** Equivalent to IK07 rating Mechanical impact²
- **Drop Resistant:** 76 cm drop tests from 5 different angles³
120 cm drop tests with hard carrying case³
- **Water Resistant:** Equivalent to IPX2 rating drip proof⁴
- **Dust Resistant:** Equivalent to IP5X rating dust proof⁵



Shock Resistant



Drop Resistant



Water Resistant



Dust Resistant

² IK07 rating Mechanical impact means that the machine protects against 2 jour impact, it is equivalent to 500g force from 40cm. This does not guarantee that the machine will always be undamaged under these conditions.

³ Standard operations could be carried out after conducting the above tests. These tests were performed at the Furukawa Electric Co., Ltd. laboratories with no significant damage resulting. This does not guarantee that the machine will always be undamaged under these conditions.

⁴ IPX2 rating drip proof means that the machine can be exposed to 3 mm/min drips for 10 minutes with 15 degree tilt and still function.

⁵ IP5X rating dust proof means that the machine can be exposed to dust particles with a diameter of 0.1 μm to 25 μm and still function.

FITEL® S179 Fusion Splicer

Product Specifications

| | |
|-------------------------------|--|
| Applicable Fibers | SM (ITU-T G.652, G.657A1 and G.657A2), MM (ITU-T G.651), DSF (ITU-T G.653), Cut-off Shifted Fiber (ITU-T G.654, Large Area type), NZD (ITU-T G.655), BIF/UBIF (Bend Insensitive Fiber ITU-T G.657B3) |
| Cladding Diameter | 80 - 150 μm |
| Coating Diameter | 100 - 3000 μm |
| Fiber Cleave Length | 5 - 16 mm |
| Average Splice Loss | SM:0.02dB, MM:0.01dB, DSF:0.04dB, NZD:0.04dB |
| Splice Time | 6 seconds (Semi-auto mode) |
| Heat Time ⁶ | 9 (60mm, Tyco SMOUV1120-01, coating diameter 250-900 μm , Power mode) 13 (60mm, FITEL S921, coating diameter 250 μm , Power mode) 15 (60mm, FITEL S921, coating diameter 900 μm , Power mode) |
| Splice Programs | Max. 300 |
| Automatic Splicing Selection | Available |
| Heat Programs | Max. 100 |
| Automatic Heating Start | Available |
| Applicable Sleeves | 20/40/60 mm |
| Fiber Holder | Tight Holder (loose tube applicable) or Removable Fiber Holder System |
| Tension Test | 1.96 N |
| Splice Return Loss | 70 dB or more |
| Attenuation Splice Function | Intentional high splice loss of 0.1dB to 15dB(0.1dB step) can be made for an inline fixed attenuator |
| Fiber Image Magnification | 104X, 278X, 556X |
| Splice Result Storage | 20,000 |
| Image Capture Capacity | Last 100 images to be automatically captured + up to 100 images to be stored permanently |
| Dimension | 139W x 209D x 114H mm (not including shock absorber) 179W x 246D x 131H mm (including shock absorber) |
| Weight | 1.7 kg (without battery), 2.0 kg (with battery) |
| Monitor | 4.3" wide color LCD monitor with touch screen |
| Propulsion (motor) | 8 N (designed value) |
| Data Output | USB ver. 2.0 mini B x 1 port, Standard A x 1 port |
| Battery Capacity ⁷ | Typical 220 splice/heat cycles, 90sec/cycle |
| Altitude | 5000 m |
| Wind Protection | 15 m/s |
| Operating Temperature | -10 to + 50 °C (without excessive humidity) |
| Storage Temperature | -40 to +60 °C (without excessive humidity) |
| Humidity | 0 to + 95% RH (non-condensing) |
| Power Source | AC Input 100 to 240V (50/60Hz), DC Input 11 to 24 V |

⁶ The heating time may vary depending on the type of sleeve. In addition, the first heating time after turning the power on can be longer than the standard heating time.

⁷ The number of splicing and heating cycles the machine can perform with a fully charged battery at 20 °C in semi-auto splicing mode and regular heating mode. The number of cycles may vary depending on the battery status and operating conditions.



Standard Package

Standard Package

| Item | P/N | Quantity |
|---------------------------|----------|----------|
| FITEL S179 Fusion Splicer | S179A | 1 |
| Built-in Battery Pack | S947B | 1 |
| Hard Carrying Case | HCC-05 | 1 |
| Spare Electrodes | ELR-01 | 1 |
| AC Adapter | S979A | 1 |
| AC Power Cord | - | 1 |
| Cooling Tray | CTX-03 | 1 |
| Cleaning Brush | VGC-01 | 1 |
| Electrode Sharpener | D5111 | 1 |
| Tool Case | TCC-01 | 1 |
| LCD ant-reflective sheet | ARS-01 | 1 |
| Instruction Manual | UMC-02 | 1 |
| Quick Reference Guide | FTS-B526 | 1 |



Optional Components

| Item | P/N | Quantity |
|--|---------------|----------|
| USB Cable | USB-01 | 1 |
| Battery Charger | S980A | 1 |
| Soft Carrying Case | SCC-01 | 1 |
| Angled Stand | AGS-02 | 1 |
| Working Belt | WBT-01 | 1 |
| Car Cigarette Cable | CDC-04 | 1 |
| Heater Clamp Base for SOC | HBS-01 | 1 |
| Tight Holder | | |
| 16 mm Cleave Length | S712T-016 | 1 pair |
| 10 mm Cleave Length | S712T-010 | 1 pair |
| Universal | S712T-UN | 1 pair |
| Fiber Holder | | |
| 160 μm coated fiber | S712S-160 | 1 pair |
| 250 μm coated fiber | S712S-250 | 1 pair |
| 500 μm coated fiber | S712S-500 | 1 pair |
| 900 μm coated fiber | S712S-900 | 1 pair |
| Fiber Holder Loose Tube Fiber (Left side) | | |
| Loose Tube Fiber (Left side) | S712S-LT-L | 1 |
| Loose Tube Fiber (Right side) | S712S-LT-R | 1 |
| SOC Holder | | |
| Seiko Giken FC/SC ferrule (9mm) | S712C-SGS9-L | 1 |
| Seiko Giken FC/SC ferrule (5mm) | S712C-SGS5-L | 1 |
| Seiko Giken LC ferrule (9mm) | S712C-SGL9-L | 1 |
| Seiko Giken LC ferrule (5mm) | S712C-SGL5-L | 1 |
| Seiko Giken TOUCH Plus SC (9mm) | S712C-SGS9C-R | 1 |
| Diamond E2000™/E3000™ ferrule | S712C-DM25-L | 1 |
| Seiko Giken Cordage (5mm) | S712C-SGC5-R | 1 |
| Seiko Giken Cordage (9mm) | S712C-SGC9-R | 1 |
| Diamond Cordage (5mm) | S712C-DMC5-R | 1 |
| WiFi dongle | WFD-01 | 1 |

Ordering Number Form S179A-(X1)-(X2)

| Category | Code | Description |
|-------------------|------|------------------------|
| Fiber holder type | 1 | 16 mm Tight Holder |
| | 2 | 10 mm Tight Holder |
| | 3 | Fiber Holder System |
| | 4 | Universal Tight Holder |
| WiFi dongle | 0 | W/O WiFi dongle |
| | 1 | W/ WiFi dongle |

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