

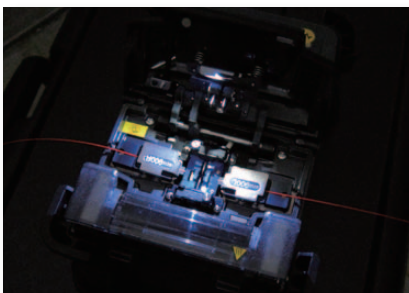
## Hand Held Active Alignment Splicer

### S153A ver.2 NEW features

The S153A Active 3 Axis Cladding Alignment Fusion Splicer has been enhanced and updated to version 2. The battery is automatically charged internally when connected to AC mains power even during operation. The new illumination lamp lights up a wide area around the V-grooves and helps operation in low light environment. The redesigned and strengthened heater simplifies the protection sleeve loading process.

### Features and applications

S153A is the first choice for low cost field splicing equipment. The Active V-Groove technology used on the S153A delivers low loss splices with ease while eliminating common Fixed V-Groove splicing errors.



Using the rugged metal body, the S153A is designed to endure harsh operating conditions by improving shock/impact resistance with rubber pads embedded on 4 corners of the splicer body. It also achieves water resistance compliant to IPX2 and dust resistance compliant to IP5X.

Another key feature of the S153A is the significantly reduced operation time. Protection sleeve shrink time is mere 25 seconds, while splicing requires only 9 seconds. Power saving technology used in these machines allows up to 200 splicing cycles (splicing and heating) with 2 built in rechargeable batteries.

By combining ease of use, improved speed, precision, durability and portability, the S153A Fusion Splicer becomes your first choice for a versatile low cost splicer with a wide range of applications.

**NEW**

## Key features

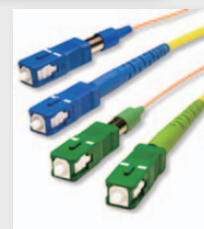
- NEW Internal battery charging**
- NEW Illumination lamp** lights up a wide area around V-grooves
- NEW User friendly LCD display** offers 4 different X/Y image layouts
- NEW Simplified splice result indicator** red / green icon
  - **Active V-groove**, More Reliable than conventional Fixed V-groove machines
  - **Rugged and compact hand held design** to endure harsh environmental conditions
  - **Fast splice (9 sec)** at super low loss and **Fast Heating (25 sec)**<sup>\*1</sup>
  - **200 cycles (Splicing & Heating)** with Internal batteries<sup>\*2</sup>
  - **Splice programs available for All METRO/LAN/FTTx fibers** including ultra bend-insensitive fibers (e.g. EZ-Bend™)
  - **Splicer is compatible with the Seikoh Giken and Diamond Splice-on-connector (SOC)**
  - **Easy maintenance** electrode replacement/mirror free alignment system
  - **Easy Software upgrade** via the Internet
- NEW Simplified program fusion and heater programming**
  - **Easily exchanged fiber holder systems** (Tight holder/Removable fiber holder/ SOC holder)
  - **PC interface software** to allow user manage splicing programs and results
  - **Auto-start** heater oven option
- NEW Improved GUI** enhancing ease-of-use
  - **Large memory** for storing 2,000 splice records and last 100 splice result images
  - **RoHS compliant**

<sup>\*1</sup> By using semi-auto mode for splicing and pre-heating mode for heating.

<sup>\*2</sup> By using 2-batteries, semi-auto mode for splicing and regular mode for heating.



### FITEC Splicer SOC partners



## Under Tough Environment

S153A passed criteria as below <sup>\*3</sup>;

### Drop Resistance

76 cm Drops from 5 different angles



### Water Resistance

IPX2 rating drip proof <sup>\*4</sup>



### Dust Resistance

IP5X rating dust proof <sup>\*5</sup>



<sup>\*3</sup> Above tests were performed at Furukawa Electric Co., Labs, and do not guarantee that the machine will be undamaged under these conditions.

<sup>\*4</sup> IPX2 rating drip proof means that the machine can be exposed to 3 mm/min drip from 4 different angles with 15° tilt for 2.5 min each and still functions.

<sup>\*5</sup> IP5X rating dust proof means that the machine can be exposed to dust particles with a diameter of 0.1 to 25 µm for 8 hours and still functions.

## SPECIFICATIONS

|                                  |                                                                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicable Fibers</b>         | SM (ITU-T G.652), MM (ITU-T G.651), DSF (ITU-T G.653), NZD (ITU-T G.655), BIF/UBIF (Bend insensitive fiber, ITU-T G.657)                                              |
| <b>Cladding Diameter</b>         | 80~150 $\mu\text{m}$                                                                                                                                                  |
| <b>Coating Diameter</b>          | 100~1,000 $\mu\text{m}$                                                                                                                                               |
| <b>Fiber Cleave Length</b>       | 5~16 mm                                                                                                                                                               |
| <b>Average Splice Loss</b>       | SM: 0.04 dB, MM: 0.02 dB, DSF: 0.06 dB, NZD: 0.06 dB                                                                                                                  |
| <b>Splice Time</b>               | 9 seconds (semi-auto mode)<br>11 seconds (regular mode)                                                                                                               |
| <b>Heat Time</b>                 | 25 seconds* <sup>6</sup> (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (Pre-heat mode)<br>31 seconds* <sup>6</sup> (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (regular mode) |
| <b>Splice Programs</b>           | Max. 150                                                                                                                                                              |
| <b>Heat Programs</b>             | Max. 18                                                                                                                                                               |
| <b>Automatic Heating Start</b>   | Available                                                                                                                                                             |
| <b>Applicable Sleeves</b>        | 20/40/60 mm                                                                                                                                                           |
| <b>Fiber Holding</b>             | Tight holder (Loose tube applicable) or Removal Fiber Holder System                                                                                                   |
| <b>Tension Test</b>              | 1.96 N                                                                                                                                                                |
| <b>Return Loss of Splice</b>     | 60 dB or greater                                                                                                                                                      |
| <b>Fiber Image Magnification</b> | 76X, 235X                                                                                                                                                             |
| <b>Splice Memory</b>             | Max. 2,000                                                                                                                                                            |
| <b>Image Capture Capacity</b>    | Last 100 images to be automatically captured + Up to 24 images to be stored permanently                                                                               |
| <b>Dimension</b>                 | 127W × 199D × 105H mm (not including shock absorber)<br>159W × 231D × 130H mm (including shock absorber)                                                              |
| <b>Weight</b>                    | 1.7 kg (without battery)<br>2.1 kg (with two batteries)                                                                                                               |
| <b>Monitor</b>                   | 3.5" color LCD monitor                                                                                                                                                |
| <b>Data Output</b>               | USB ver.2.0 mini                                                                                                                                                      |
| <b>Battery Capacity</b>          | Typical 80 splice/heat cycles with single battery* <sup>7</sup><br>Typical 200 splice/heat cycles with 2 batteries* <sup>8</sup>                                      |
| <b>Altitude</b>                  | 5,000 mh                                                                                                                                                              |
| <b>Wind Protection</b>           | Max. wind velocity of 15 m/s.                                                                                                                                         |
| <b>Operating Temperature</b>     | -10 to +50°C (0 to 95% Relative Humidity [Non-Condensing])                                                                                                            |
| <b>Storage Temperature</b>       | -40 to +60°C (0 to 95% Relative Humidity [Non-Condensing])                                                                                                            |
| <b>Humidity</b>                  | 0 to +95% RH (non-condensing)                                                                                                                                         |
| <b>Power Source</b>              | AC Input 100 to 240 V (50/60 Hz), DC Input 11 to 17 V without any change of hardware                                                                                  |

\*<sup>6</sup> The first heating after turning on the power can be longer than the usual heating time.

\*<sup>7</sup> The number of the splicing and heating the machine can produce using a fully charged brand new battery at room temperature of 20°C, semi-auto mode for splicing and regular mode for Heating. Depending on the condition of the batteries and operation environment, the number can vary.

\*<sup>8</sup> The number of the splicing and heating the machine can produce using 2 fully charged brand new batteries at room temperature of 20°C, semi-auto mode for splicing and regular mode for Heating. Depending on the condition of the batteries and operation environment, the number can vary.

## STANDARD PACKAGE

| Item                                       | P/N           | Quantity |
|--------------------------------------------|---------------|----------|
| ① S153A Main Body                          | S153-A-A-0001 | 1        |
| ② Hard Carrying Case                       | HCC-01        | 1        |
| ③ Battery Pack<br>Depending on the package | S943B         | 1 or 2   |
| ④ Spare Electrodes                         | S969          | 1pair    |
| ⑤ AC Adaptor for S153A and S958C           | S976A         | 1        |
| ⑥ AC Cable Cord                            | —             | 1        |
| ⑦ Electrode Sharpener                      | D5111         | 1        |
| ⑧ Cleaning Brush                           | VGC-01        | 1        |
| ⑨ Tool case                                | TCC-01        | 1        |
| User Manual                                | FTS-B409      | 1        |



## OPTIONAL COMPONENTS

| Item                                                                                                                                                                                                                                                                                                                                                                                  | P/N                                                                                                                                    | Quantity                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| ① Soft Carrying Case                                                                                                                                                                                                                                                                                                                                                                  | SCC-01                                                                                                                                 | 1                                          |
| ② Battery Charger                                                                                                                                                                                                                                                                                                                                                                     | S958C                                                                                                                                  | 1                                          |
| ③ AC Adaptor for S958C                                                                                                                                                                                                                                                                                                                                                                | S977A                                                                                                                                  | 1                                          |
| ④ Cooling Tray                                                                                                                                                                                                                                                                                                                                                                        | CTX-01                                                                                                                                 | 1                                          |
| ⑤ Angled Stand                                                                                                                                                                                                                                                                                                                                                                        | AGS-01                                                                                                                                 | 1                                          |
| ⑥ Working Belt                                                                                                                                                                                                                                                                                                                                                                        | WBT-01                                                                                                                                 | 1                                          |
| ⑦ USB Cable                                                                                                                                                                                                                                                                                                                                                                           | USB-01                                                                                                                                 | 1                                          |
| ⑧ Car Cigarette Cable                                                                                                                                                                                                                                                                                                                                                                 | CDC-01                                                                                                                                 | 1                                          |
| ⑨ Tripod Adapter                                                                                                                                                                                                                                                                                                                                                                      | TPA-01                                                                                                                                 | 1                                          |
| ⑩ Tight Holder<br>16 mm Cleave length<br>10 mm Cleave length                                                                                                                                                                                                                                                                                                                          | S712T-016<br>S712T-010                                                                                                                 | 1pair<br>1pair                             |
| ⑪ Removal Fiber Holder<br>160 μm coating diameter fiber<br>250 μm coating diameter fiber<br>500 μm coating diameter fiber* <sup>9</sup><br>900 μm coating diameter fiber<br>Loose Tube Fiber (Left side)<br>Loose Tube Fiber (Right side)                                                                                                                                             | S712S-160<br>S712S-250<br>S712S-500<br>S712S-900<br>S712S-LT-L<br>S712S-LT-R                                                           | 1pair<br>1pair<br>1pair<br>1pair<br>1<br>1 |
| ⑫ SOC Holder<br><For Ferrule><br>Seiko Giken FC/SC connector (9 mm)<br>Seiko Giken FC/SC connector (5 mm)<br>Seiko Giken LC connector (9 mm)<br>Seiko Giken LC connector (5 mm)<br>Diamond E-2000™/F-3000™ LC/SC connector<br><For Cordage><br>Seiko Giken Cordage (5 mm)<br>Seiko Giken Cordage (9 mm)<br>Diamond Cordage (5 mm cleave, 1.8~3 mm cordage)<br><Tool><br>Diamond Mount | S712C-SGS9-L<br>S712C-SGS5-L<br>S712C-SGL9-L<br>S712C-SGL5-L<br>S712C-DM25-L<br>S712C-SGC5-R<br>S712C-SGC9-R<br>S712C-DMC5-R<br>WTX-01 | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  |
| Smart Fuse<br>Software Interface for Machine                                                                                                                                                                                                                                                                                                                                          | SF-01                                                                                                                                  | 1                                          |

\*<sup>9</sup> Used for 400-500 μm cladding diameter fiber.



⑤ Angled Stand in Action



⑥ -1 Working Belt in Action



⑥ -2 Working Belt in Action

## ORDERING NUMBER FORM S153A-(X1)-(X2)

| Category | Code                           | Remark                                                                                    |
|----------|--------------------------------|-------------------------------------------------------------------------------------------|
| X1       | Fiber Holder Type              | 1 16 mm Tight Holder S712T-016<br>2 10 mm Tight Holder S712T-010<br>3 Fiber Holder System |
|          | Number of Battery Pack (S943B) | 1 1 pack<br>2 2 packs                                                                     |
|          |                                |                                                                                           |

The Furukawa Electric Group strives to develop environmentally considerate products.



### eFriendly Logo Mark

This logo mark indicates that the products and services satisfy the standards of environmentally friendly products of the Furukawa Electric Group.



Our Group has configured the environmental management system at each of our plants worldwide, and acquired ISO14001 certification.

### Contact Us:

#### Furukawa Electric Co., Ltd.

##### Head Office:

2-3, Marunouchi 2-chome,  
Chiyoda-ku, Tokyo,  
100-8322, Japan  
TEL: + 81 3 3286 3227  
FAX: + 81 3 3286 3978  
www.furukawa.co.jp  
comsales@ho.furukawa.co.jp

##### Europe:

#### Furukawa Electric Europe, Ltd.

3rd Floor, Newcombe House  
43-45 Notting Hill Gate,  
London W11 3FE U.K.  
TEL: + 44 20 7313 5320  
FAX: + 44 20 7313 5310  
www.furukawa.co.uk  
splicers@furukawa.co.uk

##### North & South America:

#### OFS Fitel, LLC

2000 Northeast Expressway  
Norcross, Georgia 30071, U.S.A  
TOLL FREE: + 1 866 452 9516  
TEL: + 1 678 783 1090  
FAX: + 1 678 783 1093  
www.ofsoptics.com  
splicers@ofsoptics.com

##### China:

#### Furukawa Shanghai, Ltd. Beijing Branch

1001A, Full Tower, No.09 Dong-  
sanhuan ZhongRoad, Chaoyang  
District, Beijing 100020, P.R. China  
TEL: + 86 10 8591 0608  
FAX: + 86 10 8591 0609  
www.furukawa-sh.cn

##### South East Asia:

#### Furukawa Electric Singapore Pte. Ltd.

10 Anson Road, #25-08  
International Plaza, Singapore  
079903  
Tel: + 65 6328 9870  
Fax: + 65 6224 2362  
comms@furukawa.com.sg

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