

# S183PMII ver.2 /S184PM-SLDF ver.2

## S183PMII ver.2 Fusion Splicer S184PM-SLDF ver.2 Fusion Splicer

- A New Standard in the Field for High-End/  
Super High-End Fusion Splicing Applications

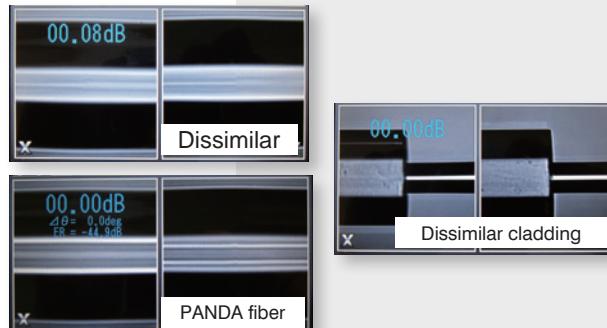
### • Features of ver.2

1. Optimization of rotational adjustment for PANDA fiber
2. Intuitive manual splicing
3. Splicing dissimilar fiber mode
- Splicing various types of fiber  
(Similar/Dissimilar, Dissimilar cladding, Polarization,  
High-strength, Very large diameter)
- Intuitive GUI interface
- Interlocking of measuring instrument
- Improving reliability and productivity for the manufacture of  
optical components
- RoHS compliant

## Features and applications

### Speciality Splicing Mode Easy

The advanced features of the S183PMII and S184PM-SLDF allow you to splice today's and tomorrow's most exotic fiber types. Whether performing high-strength splices, splicing small cladding fibers (80 µm), large cladding fibers (S183PMII: 500 µm, S184PM-SLDF: 1200 µm), PM fibers or erbium doped fibers, the S183PMII or S184PM-SLDF is the splicer for your high-end application.



### Quick Loading & Automatic Machine Adjustment

S183PMII and S184PM-SLDF automatically adjust for different fiber coating and cladding sizes. There is no need to exchange v-grooves or fiber clamps. In addition, the S183PMII and S184PM-SLDF have been designed so that the user simply loads the fiber and closes the lid to begin the splice process. There is no need to lower or set fiber clamps before starting to splice.

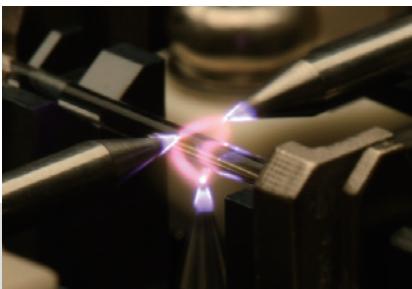


### Automatic Fiber Holder Release

S183PMII and S184PM-SLDF automatically perform a tensile proof test on the fiber and releases the holder lid to avoid twisting the fiber after the splice. This automation eliminates the need for the user to manually open and reset the splicer after each fusion splice.

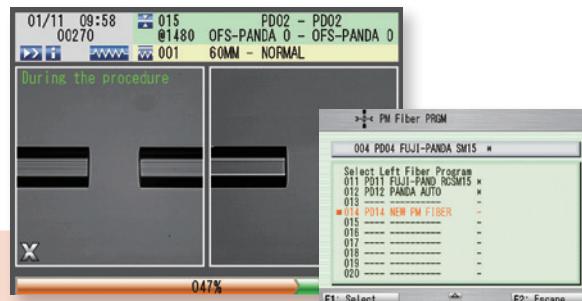


**S183PMII ver.2 and S184PM-SLDF ver.2 are designed especially for the demanding OEM, R&D, production and other special applications in the optical components industry**



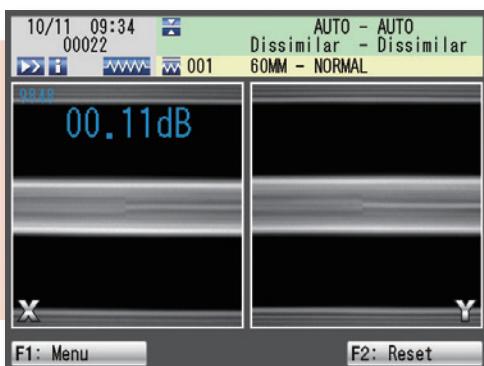
### **Three electrodes "Ring of fire"**

The S184PM-SLDF ver.2 Fusion Splicer has three electrodes instead of the standard two electrodes. This groundbreaking technology makes the plasma field (temperature field) wider, adjustable and realizes splicing super large diameter fiber.



### **Automatic Optimization of rotational adjustment for PANDA fiber**

New PANDA fiber is analyzed and the optimum program for rotational adjustment is automatically created. Unknown PANDA fiber can be easily spliced.



### **Splicing dissimilar fiber mode**

This function adjusts the parameters automatically based on the setting fibers, and achieves accurate splicing with dissimilar core diameter splicing. If there is no fusion program, this function is useful for any combination of fibers with dissimilar core diameters.



### **Intuitive Manual Splicing**

The new design uses intuitive operation to control motors. With many support tools (such as alignment and Automatic rotational adjustment), a complex fiber can be spliced effortlessly by Manual splicing.



### **Advanced of control and workability via PC connection**

"SmartFuse" has many functions: Export images, splice data and existing splice programs. Modify and import (to the splicer) new splice programs. Connect the splicer to feedback measurement instruments.

New functions are available for existing S183PMII and S184PM-SLDF by updating software. Please contact us for more information.

## SPECIFICATIONS

Description	S183PMII ver.2	S184PM-SLDF ver.2
Applicable Fibers <sup>*1)</sup>	SM, MM, DSF, NZD, EDF, PMF, LDF, PCF, HighΔ	SM, MM, DSF, NZD, EDF, PMF, LDF, PCF, HighΔ
Cladding Diameter	80 to 500 $\mu\text{m}$	80 to 1200 $\mu\text{m}$ <sup>*4)</sup>
Coating Diameter	160 to 2000 $\mu\text{m}$	160 to 2000 $\mu\text{m}$
Fibers Cleave Length	3 to 5 mm with coating clamping 9 to 11 mm with bare fiber clamping	5 mm with coating clamping 9 to 11 mm with bare fiber clamping
Sweep Length	$\pm 1.9$ mm	$\pm 1.9$ mm
Typical Insertion Loss <sup>*2)</sup> (Similar Fiber Splicing)	0.02 dB for identical SM/0.01 dB for identical MM 0.04 dB for identical DSF/0.05 dB for identical PMF	0.03 dB for identical SM
Typical Insertion Loss <sup>*2)</sup> (Dissimilar Fiber Splicing)	0.15 dB (SMF to DSF) 0.25 dB (SMF to HI980 Fiber)	0.15 dB (SMF to DSF) 0.25 dB (SMF to HI980 Fiber)
Extinction Ratio (Cross Talk) <sup>*2)</sup> (Similar Fiber Splicing)	-40 dB (0.6 degree) (PANDA Fiber) -32 dB (1.4 degree) (BOW-TIE Fiber)	-35 dB (1.0 degree) (PANDA Fiber) -30 dB (1.8 degree) (BOW-TIE Fiber)
Extinction Ratio (Cross Talk) <sup>*2)</sup> (Dissimilar Fiber Splicing)	-30 dB (1.8 degree) (PANDA Fiber to BOW-TIE Fiber)	-28 dB (2.3 degree) (PANDA Fiber to BOW-TIE Fiber)
Return Loss	>60dB	>60dB
Splice Time <sup>*3)</sup>	15 seconds for identical SM Fibers 35 seconds for identical PM Fibers (cladding clamping) 55 seconds for identical PM Fibers (coating clamping)	20 seconds for identical SM Fibers 45 seconds for identical PM Fibers (cladding clamping)
Heating Time	51 seconds for 60 mm sleeves 40 seconds for 40 mm sleeves	51 seconds for 60 mm sleeves 40 seconds for 40 mm sleeves
Manual Splicing Mode	Gap setting Manual alignment (X, Y, θ) Support Tool for Manual splicing	Gap setting Manual alignment (X, Y, θ) Support Tool for Manual splicing
Auto Splicing Mode	SM+MM+DSF automatic recognition Splicing dissimilar fiber PANDA fiber Auto	SM+MM+DSF automatic recognition Splicing dissimilar fiber PANDA fiber Auto
Splice Programs	72 Default/150 Available	43 Default/150 Available
Heating Programs	10 Default/12 Available	10 Default/12 Available
Sleeve	20, 40, 60 mm	20, 40, 60 mm
Magnification	215X & 430X	215X & 430X
Splice Memory	Maximum 2000 splices	Maximum 2000 splices
Size	350W × 197D × 154H mm	350W × 197D × 154H mm
Weight	8.5 kg	8.8 kg
Monitor	6.5" colour LCD monitor	6.5" colour LCD monitor
Video Output	Analog RGB	Analog RGB
Data Interface	USB ver.1.1 end Ethernet	USB ver.1.1 end Ethernet
Operating Temperature	0 to +40°C (without excessive humidity)	0 to +40°C (without excessive humidity)
Storage Temperature	-40 to +60°C (without excessive humidity)	-40 to +60°C (without excessive humidity)
Power Source	AC 100 to 240 V (50/60 Hz, AC Adaptor)	AC 100 to 240 V (50/60 Hz, AC Adaptor)

\*1) It applies the fiber specified in the ITU-T standard. Regarding the type of fibers, it is necessary to optimize the splice program.

\*2) These are typical data values. Depending on the fibers, the values can vary.

\*3) Depending on program setting, the time can vary.

\*4) The maximum value of cladding diameter can be 500 $\mu\text{m}$  depending on the type of fiber (PHOTONIC CRYSTAL and non-circle fiber, etc.).

## STANDARD PACKAGE

Item	P/N	Quantity	
		S183PMII ver.2	S184PM-SLDF ver.2
① S183PMII Main Body <sup>*5)</sup>	S183-P2-A-0001	1	—
① S184PM-SLDF Main Body <sup>*6)</sup>	S184-PS-A-0001	—	1
② 250 $\mu\text{m}$ Coating Fiber Holders	S710S-250	—	1 pair
② 400 $\mu\text{m}$ Coating Fiber Holders	S710S-400	—	1 pair
② 900 $\mu\text{m}$ Coating Fiber Holders	S710S-900	—	1 pair
Fiber Holders for LDF	S710S-LDF	—	1 pair
③ AC Adaptor	S976A	1	1
④ AC Adaptor	S975A	—	1
⑤ AC Cable	—	1	2
⑥ Electrodes for Regular Fiber (Spare)	S960	1 pair (2 pieces)	—
⑧ Electrodes Set for Regular Fiber	S184-X-A-0012	—	1 set (3 pieces)
⑨ Electrodes Set for LDF (Spare)	S184-X-A-0011	—	1 set (3 pieces)
⑩ Z Stage Lock	S183-X2-A-0010	1 pair	1 pair
⑪ Change Tool for Vertical Electrode	S184-X-A-0004	—	1
Electrode Sharpener	D5111	1	1
Operation Manual	FTS-331	1	—
	FTS-340	—	1

\*5) Electrodes for regular fiber(S960) are installed in S183PMII Main Body.

\*6) Electrodes set for LDF(S184-X-A-0010) are installed in S184PM-SLDF Main Body.

## OPTIONAL ACCESSORIES

Item	P/N	Quantity	
		S183PMII ver.2	S184PM-SLDF ver.2
② 160 $\mu\text{m}$ Coating Fiber Holders	S710S-080	1 pair	1 pair
② 250 $\mu\text{m}$ Coating Fiber Holders	S710S-250	1 pair	1 pair
② 400 $\mu\text{m}$ Coating Fiber Holders	S710S-400	1 pair	1 pair
② 900 $\mu\text{m}$ Coating Fiber Holders	S710S-900	1 pair	1 pair
Special Fiber Holder (custom-made) <sup>*7)</sup>	—	1 pair	1 pair
Fiber Holders for LDF	S710S-LDF	1 pair	1 pair
Fiber Holders for Loose Tube	S710S-LT	1 pair	1 pair
⑥ Electrodes for Regular Fiber	S960	1 pair (2 pieces)	—
⑦ Electrodes for LDF	S968	1 pair (2 pieces)	—
⑧ Electrodes Set for Regular Fiber	S184-X-A-0012	—	1 set (3 pieces)
⑨ Electrodes Set for LDF	S184-X-A-0011	—	1 set (3 pieces)
⑩ Fiber Transporter	S183-X2-A-0002	1	1
SmartFuse (Software)	SF-01	1	1

\*7) This is a custom-made item. Please inform us about the coating diameter within the range of 100-2000  $\mu\text{m}$ .



## ■ Related product

### Tool for preparing optical fiber

Stripper: S218R



Thermal stripper for single fiber (0.25 to 0.40 mm).

Stripper: S218H



Thermal stripping of single fiber (0.25, 0.90 mm) can strip high-strength by exclusive.

LDF Stripper: Thermal Stripper



Large Diameter Stripper made by 3SAE Technologies. Stripper for 80 to 1000 $\mu$ m cladding fiber.

Cleaver: S326A



For cleaving 125um cladding fiber. There is another model for 80um cladding fiber.

LDF Cleaver : ProCleave LD



Large Diameter Cleaver made by NorthLab Photonics. Cleaver for 125 to 550 $\mu$ m cladding fiber.

LDF Cleaver: LCCII



Large Diameter Cleaver made by 3SAE Technologies. Cleaver for 125 to 1000  $\mu$ m cladding fiber.

Protection Sleeves

Sleeve: S921/S922



Sleeve for single fiber of 0.25 to 0.90 mm.  
S921: 60mm  
S922: 40mm

Sleeve: for small diameter fiber S928 Series



Sleeve for small diameter single fiber of 0.25 to 0.40 mm.  
S928A-20: 20mm  
S928A-25: 25mm  
S928A-35: 35mm

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