

## S184 Fusion Splicers

## Advanced Solution for Next Generation Splicing Technology (for Large Diameter Fibers)

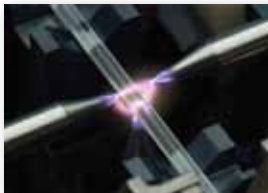
NEW

The FITEL S184 Fusion Splicer features 3SAE Technologies' "Ring of Fire"<sup>®</sup>. This three-phase wide area plasma technology enables splicing of large cladding fibers, as well as flame polishing and core diffusion capability. It is the perfect solution for advanced OEM, R&D, and other specialized applications. It delivers:

- Extremely stable, controllable, and repeatable heating over a large range of intensity
- Wide area heat zone to enable advanced splicing techniques
- Uniformly wide arc coverage to allow for splicing of larger diameter fibers
- Extremely high thermal power with negligible tungsten deposits compared to competing processes



### Features and Applications



**Three electrodes** – Three electrodes have been used in the S184PM, instead of two. This groundbreaking technology generates a wide plasma field that completely surrounds the splice zone, even for large cladding fibers.

**Applicable fiber** – Silica optical fibers with clad diameter 80  $\mu\text{m}$  to 1200  $\mu\text{m}$ .



**Smooth rotation mechanism** – The new rotation mechanism on the S184PM allows PM fiber to rotate while keeping it straight and stable. This minimizes fiber twist, to protect delicate and expensive fibers and components.

**Flat fiber holder platform** – The S184 uses a flat fiber holder platform, so that the larger size fibers do not have to be forced to bend, which can cause fiber breaks and poor angular alignment.



**Automatic adjustment for fiber size/length** – The S184PM automatically adjusts for fiber coating diameter, cladding diameter, and cleave length. There is no need to exchange electrodes, V-grooves, or fiber clamps.

**Simple operation** – The S184PM has been designed so that the user simply loads the fiber and closes the lid to begin the fusion process. After splicing, it is equally easy to remove the spliced fibers.

**Intuitive interface** – As with all FITEL fusion splicers, the S184PM features a new GUI (graphical user interface) and transreflective LCD screen technology that makes all operations straightforward and intuitive. Function keys are simple and information displays are crisp and clear.





**Large monitor** – The high resolution large color 6.5” (165mm) monitor is clearly visible in all conditions. The splicer can be configured with the monitor on the front or rear, to adapt to different workstation layouts.



**Advanced “SmartFuse” functionality** – The S184 includes an optional PC-based software platform. This sophisticated software allows the users to manage all of their splicing “recipes”, perform “live” splicing with real-time feedback from GPIB compatible test equipment, and to write scripts that automate optimization procedures and specialty splice applications.

## SPECIFICATIONS

<b>Applicable Fibers</b>	SMF, MMF, DSF, HighΔF, PMF, LDF		
<b>Fibers Cleave Length</b>	5 mm with coating clamping / 9 to 11 mm with bare Fiber clamping		
<b>Cladding Diameter</b>	80 ~ 1200 μm (S184PM covers up to 600 μm)		
<b>Coating Diameter</b>	160 ~ 2000 μm		
<b>Typical Insertion Loss (Similar Fiber Splicing)</b>	0.03 dB for identical SMF		
<b>Typical Extinction Ratio (Cross Talk) (Similar Fiber Splicing)</b>	-35 dB (1.0 degree) for identical PANDA Fiber		
<b>Loss Estimation Parameters</b>	Cleave angle, fiber offset, tilt, micro-bending, fiber end gap, bubbling at splice point		
<b>Dimensions / Weight</b>	350W × 197D × 154H mm / 8.8 kg		
<b>Splice Time</b>	20 sec for identical SMF, 40 sec for identical PMF (cladding clamping)		
<b>Heating Time</b>	51 seconds for 60 mm sleeves 40 seconds for 40 mm sleeves	<b>Tensile Strength</b>	Typical 250 kpsi (25 N) with high strength splice (5 mm with coating clamping)
<b>Return Loss</b>	> 60 dB	<b>Splice Programs</b>	11 Default / 150 Available
<b>Data Interface</b>	USB ver 1.1 and Ethernet	<b>Splice Memory</b>	Maximum 2000 splices
<b>Magnification</b>	215X & 430X	<b>Operating Temperature</b>	0 to +40° C (without excessive humidity)
<b>Monitor</b>	6.5” color LCD monitor	<b>Storage Temperature</b>	-40 to +60° C (without excessive humidity)
<b>Video Output</b>	Analog RGB	<b>Power Source</b>	AC 100 to 240V (50 / 60Hz) with AC adaptor

## STANDARD PACKAGE

P/N	Description	Quantity
S184-P-A-0001	S184PM Main body	1
S968	Spare electrode (2.2 mm)	1 pair
S184-X-A-0005	Spare electrode (3.0 mm)	1 pair
S184-X-A-0003	Spare vertical electrode (2.2 mm)	1
S184-X-A-0006	Spare vertical electrode (3.0 mm)	1
S974A	AC adaptor	1
S975A	AC adaptor	1
—	AC cable	2
S183-X2-A-0010	Z stage lock	1 pair
S710S-250	250 μm fiber holders	1 pair
S710S-400	400 μm fiber holders	1 pair
S710S-900	900 μm fiber holders	1 pair
S710S-LDF	Fiber holders for LDF	1 pair
S184-X-A-0004	Change tool for vertical electrode	1
D5111	Electrode sharpener	1
—	User's manual	1

## MACHINE MODELS

Model	Functionality
S184 PM	Up to 600 um fiber, including PM fibers
S184 PM-SLDF	Up to 1200 um fiber, including PM fibers
S184 K-SLDF	Up to 1200 um fiber, not including PM fibers

## OPTIONAL COMPONENTS

P/N	Description	Quantity
S710S-080	160 μm Coating fiber holders	1 pair
S183-X2-A-0002	Fiber transporter	1 pair
S968	Electrode (2.2 mm)	1 pair
S184-X-A-0005	Electrode (3.0 mm)	1 pair
S184-X-A-0003	Vertical electrode (2.2 mm)	1
S184-X-A-0006	Vertical electrode (3.0 mm)	1
SF-01	SmartFuse software	1

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