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Data Sheet

August 2, 2026

FUJIKURA

Fujikura FSM-50S SM MM Fiber Core Alignment Fusion Splicer

The Fujikura FSM-50S is a core alignment fusion splicer designed for both single-mode (SM) and multi-mode (MM) optical fibers. It offers precise fiber alignment, automated splicing programs, and reliable splice results. Ideal for field and lab use, ensuring low-loss splices with its solid design and user-friendly interface.



MODEL

Fujikura FSM-50S

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

FSM-50S

LISTING

<https://aumictechlabs.com/products/fsm-50s-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Fujikura FSM-50S is a core alignment fusion splicer engineered for precision splicing of single-mode, multi-mode, dispersion-shifted, and non-zero dispersion-shifted optical fibers. Operating across cladding diameters from 80 to 150 μm and coating diameters from 100 to 1000 μm , the unit delivers average splice losses of 0.02 dB for SM fiber and 0.01 dB for MM fiber, with return loss exceeding 60 dB. Splice completion occurs in approximately 9 seconds for SM fiber, with protection sleeve heating in typically 35 seconds. Technical Specifications Applicable Fiber Types Single-mode (SM) ITU-T G.652 Multi-mode (MM) ITU-T G.651 Dispersion Shifted (DS) ITU-T G.653 Non-Zero Dispersion Shifted (NZDS) ITU-T G.655 Fiber Parameters Cladding Diameter: 80 to 150 μm Coating Diameter: 100 to 1000 μm Cleaved Length: 8 to 16 mm (coating $\leq 250 \mu\text{m}$);

16 mm (coating 250–1000 μm); optional set-plate for 8 to 16 mm across full coating range Splice Performance Average Splice Loss: 0.02 dB (SM), 0.01 dB (MM), 0.04 dB (DS), 0.04 dB (NZDS) Return Loss: >60 dB Splice Time: ~9 seconds (SM fiber) Attenuation Splice Function: 0.1 to 15 dB in 0.1 dB steps Display & Optics Dual CCD cameras with 5.6-inch TFT color LCD monitor Magnification: 295 $\times$ (single view), 147 $\times$ (dual view) Simultaneous X/Y fiber display capability Operational Modes & Memory 40 user programmable modes; up to 60 reference modes Automatic fiber type identification Splice data storage: last 2000 results Heater & Protection Protection sleeve heating: ~35 seconds (FP-03 sleeve) Compatible with standard and micro splice protectors (60 mm, 40 mm, micro series) Environmental Operating Temperature: -10°C to $+50^{\circ}\text{C}$ Storage Temperature: -40°C to $+80^{\circ}\text{C}$ Automatic altitude compensation up to 3500 m

Features & description

From manufacturer datasheet

Features

- Fully automatic core alignment (PAS)
- Typical 9 s SM splice; about 35 s FP-03 heat
- Automatic fiber type identification
- Real-time arc calibration
- Atmospheric compensation to about 3500 m
- 5.6-inch color LCD; dual cameras; front or top monitor
- About 2000 splice result storage
- BTR-06(S)/(L) slot-in battery options
- Wind protection to 15 m/s
- Attenuator splice function 0.1-15 dB

FSM50S Characteristics / Specifications

PARAMETER	VALUE
Model	FSM-50S
Manufacturer	Fujikura / AFL
Instrument Type	PAS core-alignment fusion splicer
Applicable Fibers	SM (G.652), MM (G.651), DS (G.653), NZDS (G.655)
Fiber Count	Single
Cladding Diameter	80-150 um
Coating Diameter	100-1000 um
Cleave Length	8-16 mm (250 um or less); 16 mm (250-1000 um)
Typical Average Splice Loss	0.02 dB SM; 0.01 dB MM; 0.04 dB DS; 0.04 dB NZDS (cut-back, ITU-T/IEC)
Splicing Time	typically 9 s with standard SM
Return Loss	greater than 60 dB
Splicing Modes	40 user programmable + factory reference
Attenuator Mode	intentional 0.1-15 dB in 0.1 dB steps
Storage	last 2000 results
Magnification	295X single X/Y; 147X simultaneous
Display	two cameras; 5.6-inch color LCD
Operating	0-5000 m; 0-95% RH; -10 to 50 C
Proof Test	2 N standard / 4.4 N option
Tube Heater	10 heating modes (+ reference); typically 35 s FP-03
Sleeves	60 mm, 40 mm, micro
Battery Cycles	typically 80 with BTR-06(S); 160 with BTR-06(L) (OEM tables; some UK sheets cite 60/120)
Power	100-240 VAC or 10-15 V DC with ADC-11; 13.2 V with BTR-06
Wind Protection	max 15 m/s
Dimensions	150 × 150 × 150 mm

PARAMETER	VALUE
Weight	about 2.3-2.8 kg with ADC-11
Terminals	USB 1.1; RCA NTSC video Standard Operating Conditions Clean V-grooves and cameras. Use matched cleaver and clamps. Charge BTR-06 with ADC-11 and DCC-10. Replace electrodes per Fujikura intervals. Operational Notes User title "Core Alignment" matches PAS core alignment. Confirm monitor orientation (front vs top) on the unit.
Humidity	compensation. Dual CCD/CMOS cameras and a 5.6-inch TFT color LCD support multi-position (front or top) monitor mounting. Typical average splice loss is 0.02 dB SM, 0.01 dB MM, and 0.04 dB DS/NZDS (cut-back).
Fiber type	identification - Real-time arc calibration - Atmospheric compensation to about 3500 m - 5.6-inch color LCD; dual cameras; front or top monitor - About 2000 splice result storage - BTR-06(S)/(L) slot-in battery options - Wind protection to 15 m/s - At

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.