

## MFIS Multi-fiber Identification System



### Features

- Easy to use
- Powered by common batteries
- One-hand operation
- Hand-held and lightweight
- Three-year calibration interval

### Applications

- Multi-fiber network continuity assurance
- Various fan-out connectors for easy application
- Optimized for use on 250  $\mu\text{m}$ , 900  $\mu\text{m}$  and ribbon fiber
- Fiber identification on both Power Meter and MFI
- Multi-fiber network for FTTx deployment

Multi-Fiber network construction is time consuming, complicated, and often built by more than one contractor with mixed sets of documentation. However carefully the build-out is done, mistakes such as mislabeling can happen. How can the network operator have full confidence in their network continuity? AFL's Multi-Fiber Identification System (or MFIS) can provide 100% multi-fiber network continuity assurance and senior management peace-of-mind. The MFIS test system is a simple user-friendly way to verify network construction quickly, correctly, and efficiently.

### MFT — Multi-Fiber Tracer

The MFT is a single connector (MTP), twelve-fiber source. It is designed around 12 discrete laser sources (1550 nm single-mode) with an MTP fan-out connector. It is packaged in a light and sturdy case. Single button operation is designed to quickly sending signals down the network for MFI (Multi-Fiber Identifier) and MFP (Multi-Fiber Power Meter) to provide automatic fiber identification.

### MFI — Multi-Fiber Identifier

The MFI is designed to detect the presence of digitally coded laser light in optical fiber ribbon as used in FTTx deployments. The unit is activated by inserting the ribbon under test into the clamp and pulling the trigger, located on the underside of the MFI. The LCD displays the fiber identification number.

MFI detects the digitally coded data bursts transmitted by the MFT when the MFI is clamped on the ribbon fiber under test.

### MFP — Multi-Fiber Power Meter

The MFP is designed to detect the presence of digitally coded laser light emitted from the MFT while in Fiber ID mode. It is also designed to be used as a regular power meter.

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### MFT Multi-Fiber Tracer Specifications<sup>a</sup>

<b>OPTICAL</b>	
Wavelength	1550 ±20 nm
Spectral Width	5 nm (maximum)
Output Power	+1.75 dBm ±1 dB peak into 9/125 µm fiber @ +25 °C
<b>GENERAL</b>	
Power Supply	2 X 1.5 V AA alkaline batteries
Battery Life (Alkaline)	@ +25 °C: 40 hours (minimum); 50 hours (typical)
Connectors	SM: MTP/MPO-APC (unpinned) 12-fiber connector.
Size (without boot) W x L x H	96 x 145 x 35 mm (3.8 x 5.7 x 1.4 in)
Weight	307 g (0.676 lb) without boot; 458 g (1.01 lb) with boot
Operational Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)

### MFI Multi-Fiber Identifier Specifications<sup>a, b</sup>

FIBER TYPE	PARAMETER	WAVELENGTH, SIGNAL	DETECTABLE SIGNAL RANGE
250 µm ribbon fiber, SMF28e+	Minimum data detect level (peak power, typical)	1550 nm, Data – Fiber ID	-35 dBm (typical)
	Insertion loss (typical/maximum)	1550 nm	2.5 dB/3.0 dB

<b>OPTICAL</b>	
Detector Type	InGaAs
Calibrated Fiber Size and Wavelength	250 µm @1550 nm (SMF-28/28E) ribbon fiber
Working Fiber Size	250 µm ribbon fiber
Data Detection Range	+2 to -35 dBm
<b>GENERAL</b>	
Display Type	Multi 7-segment LCD, 3 LEDs
Power Supply	2 X 1.5 V AAA, alkaline batteries
Battery Life (backlight off)	>10,000 operations <sup>c</sup>
Operation Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)
Dimensions (H x W x D)	22 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)
Weight	168 g (6 oz)

#### Notes:

- All specifications valid at 25 °C unless otherwise specified.
- All specs are typical unless otherwise noted. Actual results can vary by several dB depending on fiber type, coating material, jacket color, jacket hardness, active fiber position, and other factors.
- Operation is defined as turning unit on by taking 1 reading in a 10 second period.

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### MFP Multi-Fiber Power Meter Specifications<sup>a</sup>

OPTICAL	
Detector Type	InGaAs
Detector Size	1 mm
OPM Mode	
Calibrated Wavelength	850, 1300, 1310, 1490, 1550, 1625 nm
Measurement Range	+10 to -75 dBm
Accuracy <sup>b</sup>	±0.25 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW
Fiber ID Mode <sup>e</sup>	
Wavelength	1550 nm
Measurement Range <sup>c</sup>	+10 to -35 dBm
Accuracy <sup>d</sup>	±0.5 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW

GENERAL	
Power	2 x AA batteries, accepts standard mini-USB power adapter
Adapter Caps	Order with one: 1.25 mm Universal, 2.5 mm Universal, FC, SC, ST, LC. Other connector adapters available
Battery Life	300 hours
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.26 kg (0.58 lb)

**Notes:**

- a. All specifications valid at 25 °C unless otherwise specified.
- b. Accuracy measured at 25 °C and -10 dBm per N.I.S.T. standards.
- c. Measured using MFT (Multi-Fiber Tracer) as the light source.
- d. Accuracy measured at 25 °C with MFT (Multi-tiber Tracer).
- e. Subject to change.

### Ordering Information

DESCRIPTION	AFL NO.
Multi-Fiber Identifier, no case	MF11-00-0900MR
Multi-Fiber Power Meter, no case	MFP1-12-0900MR
Multi-Fiber Tracer & Identifier with soft case	MFTI-12-BAS
Multi-Fiber Tracer & Power Meter with soft case	MFTP1-12-BAS
Multi-Fiber Tracer, Identifier, & power meter with soft case	MFTIP1-12-BAS
ACCESSORIES	
Cable, MPO/APC(M)-SC/APC, 12-fiber, SM, fan-out, 3 meters	8700-00-0198MR
Cable, MPO/APC (M) - SC/UPC, 12-fiber, SM, fan-out, 3 meters	8700-00-0200MR
Cable, MPO/APC (M) - LC/UPC, 12-fiber, SM, fan-out, 3 meters	8700-00-0201MR
One-Click Cleaner MPO (500+ cleans)	8500-05-0030MZ
One-Click Cleaner Mini-100 SC, ST, FC (100+ cleans)	8500-05-0005MZ



### International Sales and Service Contact Information

Available at [www.AFLglobal.com/Test/Contacts](http://www.AFLglobal.com/Test/Contacts)