FI-10

Fiber Identifier

Application

The Viavi Solutions hand-held optical fiber identifier FI-10 probe is a rugged, easy-to-use installation and maintenance instrument which identifies optical fibers by detecting the optical signals being transmitted through a single mode fiber. By utilizing local detection technology (non-destructive macro-bend detection), the unit eliminates the need to open the fiber at the splice point for identification; eliminating the probability of interrupting service.

Signals detected by the FI-10 include continuous wave (CW), live optical transmission, and low frequency modulated tones at 270, 1000, and 2000 Hz.

When traffic is present on the fiber tested, the direction of transmission is indicated by LEDs illuminating on the probe.

During maintenance, installation, rerouting, or restoration it is often necessary to isolate a specific fiber from a bundle without disrupting service. By simply clamping the FI-10 onto a fiber, the unit will indicate if there is no signal, a 270, 1000, or 2000 Hz tone, or traffic and show signal direction.

The FI-10 has the widest environmental operating range of any optical fiber identifier on the market today.

The Viavi Fiber Identifier was tested to Bellcore requirements under technical reference TR-NWT-000764, 'Generic Criteria for Optical FI-10/FI-11s' of attaching the FI to a bare 1" section of fiber 20 times without causing damage to the fiber that is visible under a microscope. For old and new fibers, there was no microscopically visible damage to the fiber coating noted as required by TR-NWT-000764.

Viavi FI's minimum bend radius is almost twice the minimum radius of 3 mm acceptable per the Bellcore Technical Reference. Referencing Corning, Inc. white paper WP5053 (February 2001).

Key Benefits

- Easy identification of a specific fiber without disrupting the service for your customers
- Non-destructive marcro-bend detection prevent damage or overstress of the fiber
- Only one unit for single-mode and multimode application
- No need to open the fiber at the splice point for identification; eliminating the probability of interrupting service

Benefits

- Handheld, lightweight, rugged, and battery-powered
- Interchangeable adapter heads for: jacketed, coated, or ribbon fiber
- Complete with carrying case
- Operates with one hand
- Live Fiber Identifier
- Operates from 850 nm to 1700 nm
- Compatible with most AT&T and Corning optical fiber
- Bidirectional traffic indication
- High-intensity LED indication of active signal transmission
- Detects presence of 270 Hz, 1000 Hz, and 2000 Hz modulated tones
- Low-battery indication

Specifications

Optical characteristics	
(using Corning 1528)	
Detection technique	non-destructive macro-bending
Typical loss	<0.6 dB @ 1310 nm typical
Spectral response	850 nm to 1700 nm
Detector sensitivity (MDSP)*	-40 dBm typical (equivalent core power)
Optical tone receiver	270 Hz, 1 kHz, 2 kHz
Minimum fiber slack	0.75 inches/19 mm required for detection
Fiber compatibility	
Dual window single mode	8 to 10 µm core diameter
Coating diameter	250 µm diameter
Coating	High refractive index acrylate
Electrical characteristics	
Power	one 9 V Alkaline battery
Operation	approx. 10,000 readings
Environmental conditions	
Operating temperature	-20 to +50°C
Storage temperature	-40 to +60°C
Humidity	0 to 90% non-condensing
Physical length	7.5 inches/190 mm
Width	11/4 inches/32 mm
Depth	1 inch/25 mm
Weight	7.5 oz/213 grams

*Mean detectable signal power for single mode fiber at 1310 nm

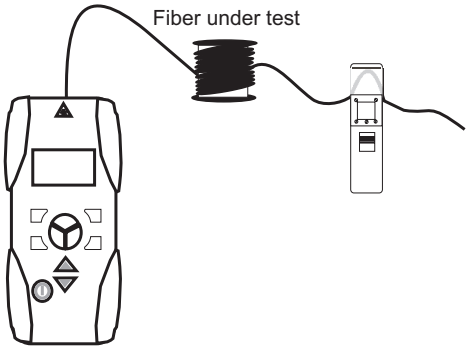
Ordering Information

Description	Part Number
FI-10 (includes fiber optic probe, carrying case and three interchgangeable adapter heads for jacketed (3 mm), coated (900 µm) or ribbon fiber (250 µm) and a 9 V battery)	BN 2255/90.05
Accessories	
2 mm adapter (optional head with 2 mm groove)	BN 2255/90.10

Fiber identification using the Viavi optical power sources

Single mode fibers can be easily identified when using an OLS-35 or OLS-55 FP laser source. Both models allow tone modulation at 270 Hz, 1 kHz and 2 kHz for fiber recognition by the hand-held optical fiber identifier FI-10.

The recommended wavelength is 1550 nm for tone identification.



Ordering Information for optical laser sources

Description	Part Number
OLS-35 (connector type PC) Includes: operating manual, 2 × Alkaline battery AA size (UM3), belt bag Select: one type of "connector/adapter" series 2150/00.xx. Connector is free of charge and is automatically included.	BN 2303/11
OLS-55 (connector type PC)	BN 2279/01
OLS-55 (connector type APC) Includes: operating manual, 4 × Alkaline battery AA size (UM3), exchangeable adapter Select: one type of "connector/adapter" series 2150/00.xx. Connector is free of charge and is automatically included.	BN 2279/21
Measuring adapters	
DIN 47256, HRL-10/DIN	BN 2150/00.50
FC-PC/APC	BN 2150/00.51
ST-PC/APC	BN 2150/00.32
SC-PC/APC	BN 2150/00.58
LC-PC/APC	BN 2150/00.59

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To reach the Viavi office nearest you, visit viavisolutions.com/contacts.

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FI-11

Fiber Identifier

Application

The Viavi Solutions handheld optical fiber identifier FI-11 probe is a rugged, easy-to-use installation and maintenance instrument which identifies optical fibers by detecting the optical signals being transmitted through a single mode fiber. By utilizing local detection technology (non-destructive macro-bend detection), it eliminates the need to open the fiber at the splice point for identification; eliminating the probability of interrupting service.

Signals detected include continuous wave (CW), live optical transmission, and low-frequency modulated tones at 270, 1000, and 2000 Hz.

When traffic is present on the fiber tested, the direction of transmission is indicated by LEDs illuminating on the probe.When modulated tones are present on the fiber under test, the unit will detect and illuminate the corresponding LED for 270, 1000 or 2000 Hz. The relative core power in the fiber is measured and displayed on a two-digit, seven-segment LED display. This allows for the measurement of power loss through a splice or connector.

The Viavi Fiber Identifier was tested to Bellcore requirements under technical reference TR-NWT-000764, 'Generic Criteria for Optical FI-10/FI-11s' of attaching the FI to a bare 1" section of fiber 20 times without causing damage to the fiber that is visible under a microscope. For old and new fibers, there was no microscopically visible damage to the fiber coating noted as required by TR-NWT-000764.

Viavi FI's minimum bend radius is almost twice the minimum radius of 3 mm acceptable per the Bellcore Technical Reference. Referencing Corning, Inc. white paper WP5053 (February 2001).

Key Benefits

- Easy identification of a specific fiber without disrupting the service for your customers
- Non-destructive macro-band detection prevent damage or overstress of the fiber
- Only one unit for single-mode and multimode application
- No need to open the fiber at the splice point for identification; eliminating the probability of interrupting service

Key Features

- Handheld, lightweight, rugged, battery-powered
- Interchangeable adapter heads for: jacketed, coated or ribbon fiber
- Attaches to belt or tool pouch
- Relative zero power reading
- Operates with one hand
- Live fiber identifier
- Operates from 850 nm to 1700 nm
- Compatible with most AT&T and Corning optical fiber
- Easy-to-use
- Core power measurement
- Bidirectional traffic indication
- High-intensity LED indication of active signal transmission
- Detects presence of 270 Hz, 1000 Hz, and 2000 Hz modulated tones

Specifications

Optical characteristics	
(using Corning 1528)	
Detection technique	non-destructive macro-bending
Typical loss	<0.6 dB @ 1310 nm typical
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Accessories	
2 mm adapter (optional head with 2 mm groove)	BN 2255/90.10

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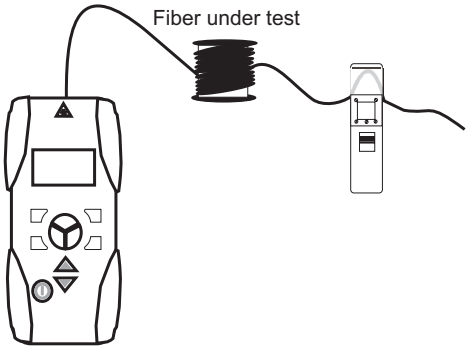

Ordering Information for optical laser sources

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DIN 47256, HRL-10/DIN	BN 2150/00.50
FC-PC/APC	BN 2150/00.51
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LC-PC/APC	BN 2150/00.59

VIAVI

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