FiberMini™

Mini Optical Time Domain Reflectometer

Three products in one: OTDR, BreakFinder and a unique EventFinder.

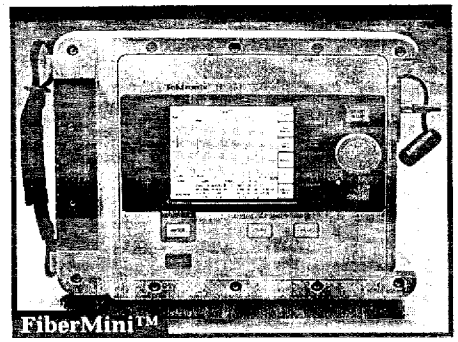
FiberMini™

FEATURES

- Automatic Fiber Analysis of Entire Fiber Link
- 0.05 dB Fault Threshold
- Extended Dynamic/Measurement Range
- Single or Dual Wavelength Available:
  – 1310 nm,
  – 1550 nm or
  Both from a Single Optical Port
- True OTDR Waveform
- Internal Data Storage
- Field Changeable/Cleanable Optical Connector Adapter
- Rugged, Handheld and Easy to Use
- Interactive/Context Sensitive HELP
- Backlit High-resolution LCD Display
- Real-time Display
- RS-232 Output Port for a PC or Printer
- Powered from Internal Battery, AC, Vehicle Cigarette Lighter or CO Station Battery

MULTIMODE

- Available Early 1995



FiberMini™

The TFS3030 FiberMini™ is a portable, user-friendly, mini-optical time domain reflectometer (OTDR) that offers single or dual wavelength fiber analysis.

The FiberMini™ functions as three products in one: an OTDR, BreakFinder and a unique EventFinder.

Patented algorithms and a specialized digital signal processor combine to offer an automated EventFinder mode that accurately reports more events across greater fiber lengths than any other mini-OTDR.

TRUE OTDR CAPABILITIES

FiberMini™ features multiple automatic measurements, OTDR versatility, user-selectable measurement parameters, dual cursor function and a high-resolution display with variable zoom.

The user interface offers easy-to-use features, soft keys, windowed menus for setup and operation and context-sensitive on-screen help. These features significantly reduce training time for first-time users.

AUTOMATED EVENTFINDER MODE

Only FiberMini™ has single-button automated location of events as small as 0.05 dB. Information is displayed as either an easily understandable event table or symbolic display format. Because EventFinder dynamically selects the acquisition parameters (such as pulse width and number of averages), it gives superior performance for measurement range and two-event distance resolution, eliminating the need to acquire multiple waveforms to see splices/connectors close in and further out on the fiber.

RUGGED, FIELD-FRIENDLY FEATURES

Small and light, the FiberMini™ weighs only 9.2 lb. (4.2 kg) and measures 11.5 x 4.5 x 9.5 in. (29.2 x 11.4 x 24.1 cm). An internal eight-hour NiCad battery frees you from the need for an AC power source. It can also operate from a 10 V to 60 V DC power source. Its case is dust-, shock- and water-resistant.

The FiberMini™ features a backlit 640 x 400 high-resolution, high-contrast LCD display. New technology allows the optical connector to be easily cleaned and changed in the field without tools, eliminating the time, expense and trouble of carrying multiple optical jumper cables.

Tektronix offers the FiberMini™ in four distinct configurations to meet your price and performance needs:

- A low-cost 1310 nm version (Opt. 01)
- A high-performance 1310 nm version (Opt. 03)
- A high-performance 1550 nm version (Opt. 05)
- A high-performance dual-wavelength 1310 nm and 1550 nm version (Opt. 06)

All versions have an RS-232 port allowing data output to a PC, portable or desktop printer.

Waveforms, as well as EventFinder and BreakFinder results, can easily be stored in the internal memory and uploaded to a PC over the RS-232 interface and/or recalled to the display. Additional Waveform analysis and documentation can be performed on a PC with the optional FMTAP Trace Analysis Software.

The FiberMini™ is the best possible choice for users adopting the Bellcore Mini-OTDR TR (TR-NWT-001138).

The FiberMini™ is well suited for users in the telecommunications and CATV industries. Its low price will allow users to deploy mini-OTDRs more broadly throughout their systems.

ISO 9001
Tektronix Measurement products are manufactured in ISO registered facilities.

Mini Optical Time Domain Reflectometer

FiberMini™

Characteristics

1310 nm optical output – 1310 ±25 nm*1.
1550 nm optical output – 1545 ±25 nm*1.

Dynamic Range*2/Measurement Range*3 –

	–15°C to 45°C Minimum Spec.		Room Temp. Typical
	Dynamic Range*2	Measmt. Range*3	Measmt. Range*3
1310 nm (Opt. 01)	23 dB	18 dB	20 dB
1310 nm (Opt. 03)	26 dB	21 dB	23 dB
1550 nm (Opt. 05)	24 dB	19 dB	21 dB
1310/1550 nm (Opt. 06)	26/24 dB	21/19 dB	23/21 dB

Dead Zone –	Event	Loss
5 m Pulse	15 m	50 m
Reflection	≤–35 dB	return loss

Loss Threshold – 0.05 dB (minimum).

Loss Resolution – 0.001 dB.

Readout Resolution (Waveform Mode) – 0.1 m (High Density Acquisition).

OTDR Distance Range Setting – 2 km to 140 km.

Distance Resolution (EventFinder) – 1 m for any range.

Measurement Time (Auto Measurement Mode) – Approximately 3 min. (20 dB accumulated loss).

Power Options – AC (100 to 240 V; 50 to 60 Hz); 10 to 60 V DC; Battery (8 hours typ).

ENVIRONMENTAL

Operating Temperature Range – –15°C to 45°C.

Storage Temperature Range – –20°C to 60°C.

Relative Humidity – 5% to 95%, ±5% non-condensing.

Weight – 9.2 lb. (4.2 kg).

Dimensions – 11.5 x 4.5 x 9.5 in. (29.2 x 11.4 x 24.1 cm).

Field Usage – Tested to Bellcore Mini-OTDR TR Environmental Specifications (i.e., 30-inch drop, dust, rain-proof, etc.).

OPERATING CHARACTERISTICS

Measurements Reported:

- All losses greater than user-selected threshold
- Loss tolerance for each reported event
- Distance to/from front panel as well as surrounding events
- Distance tolerance for each reported event
- Grouped events
- Echo identification
- Return loss for each reported event
- Loss/km for previous fiber segment
- Total link loss to each event
- Distance, loss and loss/km between two cursors in waveform mode

Display – High resolution (640 x 400), high contrast black on fluorescent white, backlit LCD.

Selectable Pulse Widths (Waveform Mode) – 5 m, 20 m, 100 m, 500 m, 1 km, 2 km.

Memory Capacity – 200 traces typical.

**1 Performance accurate at room temperature (25°C).*

**2 Dynamic Range is defined as the distance (in dB) from the backscatter level at the front panel to an imaginary line which lies above 98% of the displayed noise (2.3 sigma).*

**3 Measurement Range is defined (per Bellcore TR-NWT-001138) as follows: Operating at 1310 nm, find a 0.5 dB loss with a ±0.1 dB tolerance, within three minutes, meeting the TR's single event distance accuracy and multiple event distance resolution.*

ORDERING INFORMATION

FiberMini™
Base Unit. Order TFS3030 ..... **$5,750**
Includes: Operator Manual (070-8724-01), Reference Card (063-1462-01, NiCad Battery Pack (146-0095-00, Power/Charger Adapter (119-4545-00), Power Cord for Charger/Adapter (161-0228-00, Soft Carrying Case (016-1215-00).

OUTPUT PORT OPTIONS (CHOOSE ONE)
Opt. 01 – Single Wavelength 1310 nm ..... **+$2,500**
Opt. 03 – Single Wavelength 1310 nm ER ..... **+$5,150**
Opt. 05 – Single Wavelength 1550 nm ..... **+$7,900**
Opt. 06 – Dual Wavelength 1310/1550 nm ..... **+$10,700**
Opt. TS – 1310 nm, FMTAP, FSTIP ..... **+$3,000**
Opt. TD – 1310/1550 nm, FMTAP, FSTIP ..... **+$11,200**

CONNECTOR OPTIONS (CHOOSE ONE)*1
Opt. 20 – Biconic (119-4515-00) ..... **+$160**
Opt. 21 – FCPC (119-4516-00) ..... **+$160**
Opt. 22 – D4PC (119-4514-00) ..... **+$160**
Opt. 23 – SMA 2.5 (119-4517-00) ..... **+$160**
Opt. 24 – STPC (119-4513-00) ..... **+$160**
Opt. 25 – DINPC 47256 (119-4546-00) ..... **+$160**
Opt. 26 – Diamond 3.5 (119-4558-00) ..... **+$160**
Opt. 27 – Diamond 2.5 (119-4556-00) ..... **+$160**
Opt. 28 – SCPC (119-4518-00) ..... **+$160**
**1 Additional Connectors may be ordered by 9-digit part number.*

SERVICE ASSURANCE OPTIONS
REP4500 – Provides one year of post-warranty Repair Protection ..... **+$200**
CAL4500 – Provides one year of Calibration Services ..... **+$210**

INTERNATIONAL POWER PLUG OPTIONS
Opt. A1 – Euro 220 V Order 161-0066-09 ..... **NC**
Opt. A2 – UK 240 V Order 161-0066-10 ..... **NC**
Opt. A3 – Australian 240 V Order 161-0066-11 ..... **NC**
Opt. A4 – Switzerland 220 V Order 161-0154-00 ..... **NC**
Opt. A6 – Japanese 110 V Order 161-0154-00 ..... **+$200**

OPTIONAL ACCESSORIES
Hard Travel Case – Order 016-1210-00 ..... **$260**
FSTIP Test Interface Package, PC Software – **$95**
FMTAP PC Software – **$1,495**
Seiko DPU411 Cable, 9-Pin male to 25-Pin male – Order 174-2562-00 ..... **$60**
PC/AT Cable, 9-Pin male to 9-Pin female – Order 174-2561-00 ..... **$60**
Seiko DPU411 Printer – Order 119-4594-00 ..... **$470**

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