FTB-3930

FasTest™: three-wavelength measurement of optical loss, ORL and fiber length in 10 seconds

All-in-one portable test solution: up to eight instruments combined in a single module

FTTx ready: allows for the testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs

Cost of ownership: lowest in the industry, thanks to three-year warranty and recommended calibration interval, error-free testing and minimized training time

Platform Compatibility

- FTB-400 Universal Test System
- FTB-200 Compact Platform
EXFO’s Next-Generation MultiTest Module: Much More Features, Much Bigger Performance

The new FTB-3930 MultiTest Module is designed to help network service providers address CAPEX and OPEX issues, enable installers to easily adapt to all network types, and provide CATV operators with a single-module solution to their backreflection, fiber-length, high-power and bidirectional loss measurement needs. Combined with a video fiber inspection probe and an OTDR, this solution lets you easily detect dirty or damaged connectors, providing a clear view of connectors and fiber ends and enabling complete link characterization.

All-in-one unit: combines up to eight instruments
- Loss meter
- Power meter
- Optical return loss (ORL) meter
- Visual fault locator
- Multimode and singlemode light sources
- Digital talk set
- Fiber-length meter

Future-proof: next-generation features meeting the latest industry requirements
- User-configurable pass/fail thresholds that can be adjusted to different industry standards
- FTTx ready, allowing for the testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs

Cost of ownership: lowest on the market
- Three-year warranty and recommended calibration interval
- Error-free testing achieved through visual loss and ORL pass/fail analysis
- Minimized training time, thanks to a single user interface for the eight instruments included in this all-in-one unit

FasTesT function*: one-touch, automated measurements in 10 seconds
- Bidirectional loss and ORL testing at up to three singlemode wavelengths
- Bidirectional loss testing at two multimode wavelengths
- Fiber-length measurement

Flexible solution: five-wavelength multimode and singlemode configurations meeting the requirements of installers/contractors for all test situations
- Up to three singlemode wavelengths—1310 nm, 1550 nm and a choice between 1490 nm and 1625 nm—on one port
- Two multimode wavelengths—850 nm and 1300 nm—on a second port

With countless configurations and combinations available, the FTB-3930 is ideal for today’s network service providers, fiber-optic network installers/contractors and CATV operators.

*Protected by US patent(s) 5,305,078 and/or 5,455,672.

www.EXFO.com
FTTx-Ready: Optimized for Testing Passive Optical Networks (PONs)

**FTTX-MODE OPERATION**

This mode lets you configure your FTB-3930 module to suit your FTTx wavelengths and test-unit locations, as well as choose your preferred data presentation options for on-screen display or report generation. Key benefits include:

- Display of test data according to FTTx terminology
- Similar test-data presentation, regardless of the location of master and remote units

**INTEGRATED DATA STORAGE MANAGEMENT**

This feature enables the FasTesT initiator to save results on a remote unit—even when multiple remote units are used. Key benefits include:

- The possibility to store test data in a single unit
- Easier data post-processing and transfer from the FTB-3930 module (see figure below)

**POINT-TO-MULTIPOINT TESTING WITH MULTIPLE REFERENCING**

Implemented in the FTB-3930 MultiTest Module, multiple referencing lets you coordinate the FTB-3930 with up to 10 remote FOT-930 MaxTester units. Key benefits include:

- First-class efficiency, as several technicians can simultaneously install and test distribution fibers

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The FTB-3930 allows for automated bidirectional loss and ORL testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs.
Because learning how to operate only one instrument is easier and much faster, test specialists should choose an all-in-one tool that enables them to perform tasks such as installing long-haul high-speed networks, testing 1310/1490/1550 nm transmission in FTTH networks, performing multimode testing in enterprise networks, etc.—a do-it-all solution such as the FTB-3930 MultiTest Module.

**Key Advantages for All Network Types**

- Fast, three-wavelength loss and ORL testing
- User-configurable pass/fail thresholds for error-free testing
- The only unit designed for testing both multimode and singlemode fiber
- Video fiber inspection probe, for easy viewing of connectors and fiber ends on the FOT-930’s high-resolution display
- GeX detector, for high-power measurement up to +26 dBm
- Complete report generation capabilities
- Talk set and VFL options
- Ease of use, for faster testing, reduced training, minimum error potential, etc.

**Talk Set Port**

For crystal-clear voice communication.

**Power Meter Detector Port**

Compatible with almost every connector on the market. Manually and efficiently perform power and loss testing. Accurately measure power up to +26 dBm.

**FasTesT Ports**

Perform loss, ORL and fiber-length measurements for up to three singlemode wavelengths on one port, and for two multimode wavelengths on a second port.

**VFL**

Built-in 650 nm visual fault location on a universal connector.

In 10 seconds, the FTB-3930’s FasTesT function provides insertion loss and ORL values for up to three wavelengths— including either 1490 nm or 1625 nm—on a single port (FTB-400 interface).
KEY FEATURES

- Two FasTesT ports: a three-wavelength singlemode port, including either 1625 nm or 1490 nm, and a two-wavelength multimode port, for a total of up to five wavelengths
- Automatic measurement of ORL and fiber length during FasTesT
- Visual loss and ORL pass/fail analysis
- Field-swappable rechargeable batteries
- Easily accessible connectors
- Options: high-power detector, talk set and visual fault locator (VFL)
- No offset nulling required

While performing FasTesT measurements, the FTB-3930 can launch automated loss and ORL measurements on all three wavelengths and perform fiber-length measurements.

The FTB-3930’s intuitive communication functionalities—full-duplex talk set and message exchange—increase user efficiency.

World-leading OTDRs (FTB-7000B/C/D series).
When used in the FTB-400 platform, the FTB-3930’s software automatically sets up test data in an easy-to-read, well-organized table. What’s more, thousands of test results can be saved directly on both the FTB-400 and FTB-200 platforms.

Testing is simplified thanks to the highly intuitive user interface and integrated test functions, taking software user-friendliness to the next level.

- Select predefined test parameters and pass/fail thresholds
- Customize user settings and cable identification parameters
- Add operator comments
- Generate reports for ORL, bidirectional loss (three wavelengths) and fiber-length measurement
- Interface available in English and Russian

REPORT GENERATION
Growing fiber deployment in NSP and CATV networks sometimes leads installation companies to hire subcontractors. These subcontractors must produce proper test documentation to corroborate the tests were performed as specified.

EXFO’s FTB-3930 MultiTest Module easily and efficiently provides complete, high-quality test documentation (integrated feature on the FTB-400 platform; through Optical Report Viewer software on the FTB-200 platform). Its data logging and management features help users quickly access test results for in-depth analysis and first-class report generation.

Online Help Menu, for Enhanced User-Friendliness
The FTB-3930 MultiTest Module features a comprehensive, easy-to-use on-line help menu providing all the necessary information required for highly efficient instrument operation. This feature contributes to the FTB-3930’s unequalled user-friendliness.
## SPECIFICATIONS

### External Power Meter

<table>
<thead>
<tr>
<th>FTB-3932</th>
<th>FTB-3932X</th>
<th>FTB-3933</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector type</td>
<td>Ge</td>
<td>GeX</td>
</tr>
<tr>
<td>Measurement range (dBm)</td>
<td>-10 to -70</td>
<td>-26 to -55</td>
</tr>
<tr>
<td>Uncertainty (^{b,c})</td>
<td>± 5 % ± 0.1 nW</td>
<td>± 5 % ± 0.3 nW</td>
</tr>
<tr>
<td>Wavelength range (nm)</td>
<td>800 to 1650</td>
<td>800 to 1650</td>
</tr>
<tr>
<td>Display resolution (^{b}) (dB)</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Calibrated wavelengths</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>

### Recommended

- recalanulation period (years): 3
- Autoic offset nulling \(^{d}\): Yes

### Measurement-distance units

- kilometers, meters, kilofeet, feet, miles

### Sources

<table>
<thead>
<tr>
<th>Standard</th>
<th>-4</th>
<th>-5</th>
<th>-12C (second port)</th>
<th>-12D (second port)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelengths (nm)</td>
<td>1310 ± 20</td>
<td>1310 ± 20</td>
<td>850 ± 25</td>
<td>850 ± 25</td>
</tr>
<tr>
<td>Minimum output power (dBm)</td>
<td>-1/-1</td>
<td>-1/-4/-7</td>
<td>-1/-3/-4</td>
<td>-27/-27 (50/125 µm)</td>
</tr>
<tr>
<td>Spectral width (nm)</td>
<td>± 5/± 5</td>
<td>± 5/± 5/± 5</td>
<td>50/135</td>
<td>50/135</td>
</tr>
<tr>
<td>Stability (8 hours) (dB)</td>
<td>± 0.05</td>
<td>± 0.05</td>
<td>± 0.05</td>
<td>± 0.05</td>
</tr>
</tbody>
</table>

### FastES Test

<table>
<thead>
<tr>
<th>Standard</th>
<th>-4</th>
<th>-5</th>
<th>-12C (second port)</th>
<th>-12D (second port)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelengths (nm)</td>
<td>1310</td>
<td>1310</td>
<td>850</td>
<td>850</td>
</tr>
<tr>
<td>Loss range (dB)</td>
<td>60</td>
<td>56</td>
<td>56</td>
<td>40</td>
</tr>
<tr>
<td>Loss precision (repeatability) (dB)</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Length measurement range (km)</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>5</td>
</tr>
<tr>
<td>Length measurement uncertainty (dBm)</td>
<td>± (10 m + 1 % x length)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Dedicated ORL Wavelengths

<table>
<thead>
<tr>
<th>All SM</th>
<th>Talk Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emitter type</td>
<td>Laser</td>
</tr>
<tr>
<td>Wavelength (nm)</td>
<td>1550 ± 20</td>
</tr>
<tr>
<td>Dynamic range at 1550 nm (dB)</td>
<td>45</td>
</tr>
<tr>
<td>Dynamic range MM (^{11}) (dB)</td>
<td>40</td>
</tr>
</tbody>
</table>

### General Specifications

- Size (H x W x D): 96 mm x 25 mm x 260 mm (3 3/4 in x 1 in x 10 1/4 in)
- Weight: 0.5 kg (1.1 lb)
- Temperature: 0 °C to 50 °C (32 °F to 122 °F)
- Temperature: -40 °C to 70 °C (~40 °F to 158 °F)
- Relative humidity: 0 % to 95 % non-condensing
- Warranty (years): 3

### Standard Accessories

- User guide, Certificate of Calibration, connector adapter (FOA) according to chosen connector, mandrel and alcohol cleaning pads.

### NOTES

- a. At 23 °C ± 1 °C and 1550 nm with FC connector and on batteries, unless otherwise specified.
- b. Resolution, uncertainty and linearity are functions of input power; uncertainty is valid at calibration conditions.
- c. Up to 20 dBm for GeX.
- d. Power of >-45 dBm for Ge, >-30 dBm for GeX and >-47 dBm for InGaAs.
- e. In High source mode.
- f. As defined by Telcordia TR-330-000887, rms for lasers and at ~3 dB for LEDs; typical values for LEDs.
- g. After a warmup time of 6 minutes, in CW source mode.
- h. Typical value, at 1550 nm for SM and 850 nm for MM.
- i. Typical value.
- j. For fiber length ≤120 km.
- k. For graded-index MM fibers; typical.
- l. Without batteries.
**ORDERING INFORMATION**

**FTB-3930** - Multitest Module

<table>
<thead>
<tr>
<th>Model</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTB-3932</td>
<td>Ge detector, dual-wavelength 1310/1550 nm</td>
</tr>
<tr>
<td>FTB-3932-B</td>
<td>Ge detector, triple-wavelength 1310/1490/1550 nm</td>
</tr>
<tr>
<td>FTB-3932-X</td>
<td>Ge detector, dual-wavelength 1310/1550 nm</td>
</tr>
<tr>
<td>FTB-3932X-2</td>
<td>GeX detector, dual-wavelength 1310/1550 nm</td>
</tr>
<tr>
<td>FTB-3932X-6</td>
<td>GeX detector, triple-wavelength 1310/1490/1550 nm</td>
</tr>
<tr>
<td>FTB-3933</td>
<td>InGaAs detector, dual-wavelength 1310/1550 nm</td>
</tr>
<tr>
<td>FTB-3933-2</td>
<td>InGaAs detector, triple-wavelength 1310/1490/1550 nm</td>
</tr>
<tr>
<td>FTB-3932-MM</td>
<td>Ge detector (with multimode second source only)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 = Without second source</td>
<td></td>
</tr>
<tr>
<td>12C = 850/1300 nm LED 50/125 mm</td>
<td></td>
</tr>
<tr>
<td>12D = 12C + VFL</td>
<td></td>
</tr>
<tr>
<td>12E = 12D + talk set and VFL (with talk set and VFL c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Talk Set and Visual Fault Locator b</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 = Without talk set and VFL</td>
<td></td>
</tr>
<tr>
<td>VFL = With visual fault locator</td>
<td></td>
</tr>
<tr>
<td>VFT = With talk set and VFL (universal 2.5 mm connector)</td>
<td></td>
</tr>
</tbody>
</table>

- a. Not available with second source.
- b. Connector type for the talk set is the same as the one specified for the main source.
- c. Not available when equipped with second source.
- d. Second source must be selected.

**Example:** FTB-3932-5-VFT-FOA-22-EIU-89

**NOTES**

- Refer to specifications for output power.
- The FTB-3930’s optional VFL is a Class 3R laser product. Output power level is lower than the maximum specified on label. Refer to specifications for output power.

**SAFETY**


- Emitters used for sources, FaTest, ORL, and talk set
- CLASS 1 LASER PRODUCT
- CLASS 1 LED PRODUCT

The FTB-3930's optional VFL is a Class 3R laser product. Output power level is lower than the maximum specified on label. Refer to specifications for output power.

**AVOID DIRECT EYE EXPOSURE**

*EXFO Universal Interface is protected by US patent 6,612,750.*

DFO is certified ISO 9001 and attests to the quality of its products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. DFO has every reason to ensure that the information contained in this specification sheet is accurate. All of DFO's manufactured products are compliant with the European Union’s WEEE directive. For more information, please visit www.EXFO.com. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. Contact DFO for prices and availability or to obtain the phone number of your local DFO distributor.

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