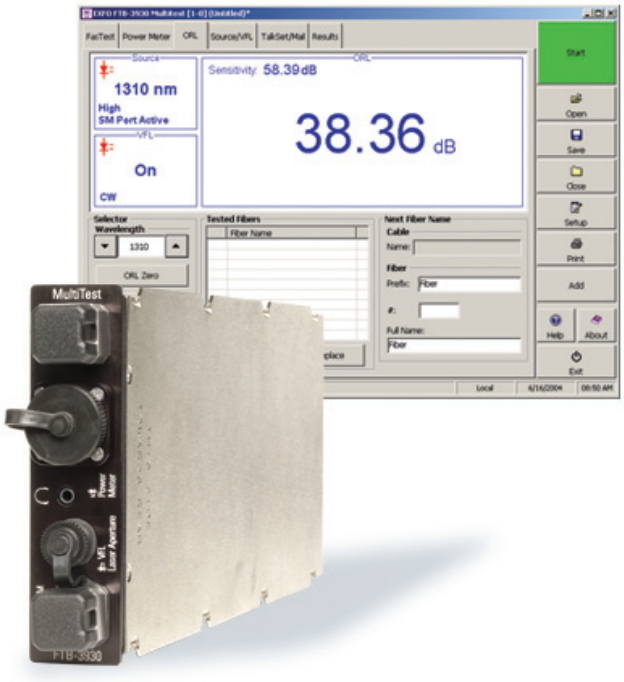
FTB-3930

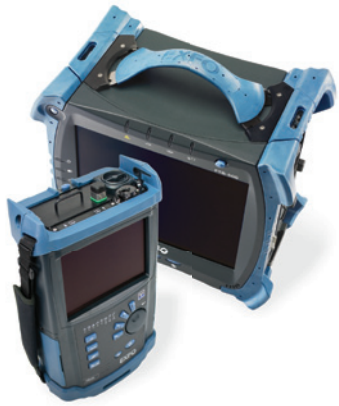
NETWORK TESTING–OPTICAL



- 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-200 Compact Platform
- FTB-500 Platform



FROST & SULLIVAN
2011 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET SHARE LEADERSHIP AWARD

Next-Generation Network Assessment

FTTx TEST SOLUTIONS

EXFO
EXPERTISE REACHING OUT

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

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

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

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.

FTB-200 Compact Platform

FTB-500 Platform

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

Master date: 10/16/2004 10:59:15 AM

FasTesT

λ (nm)	Loss CO ->Premise (dB)	Loss Premise ->CO (dB)	Loss Average (dB)	ORL CO ->Premise (dB)	ORL Premise ->CO (dB)
1310 (Up stream)	21.47	**22.73**	22.71	41.23	**37.76**
1490 (Down stream)	**21.04**	21.47	21.25	**32.51**	41.23
1550 (Down stream)	**21.04**	21.47	21.25	**32.51**	41.23

FasTesT 3930 (SM)

Integrated Data Storage Management

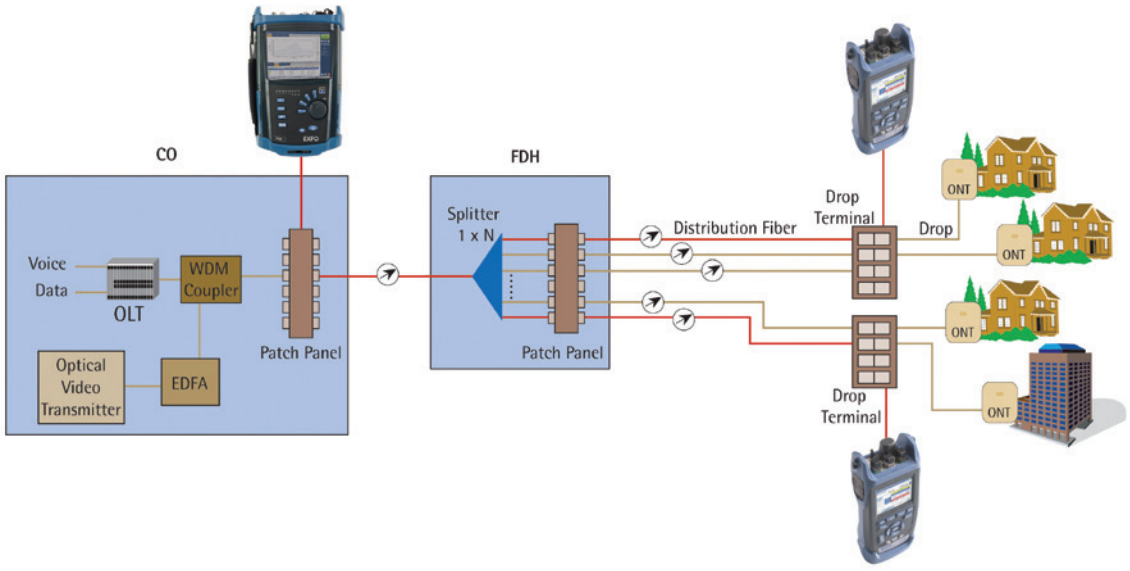
This feature enables the FasTesT initiator to save results on a remote unit–even when multiple remote units are used. Key benefits include:

- 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



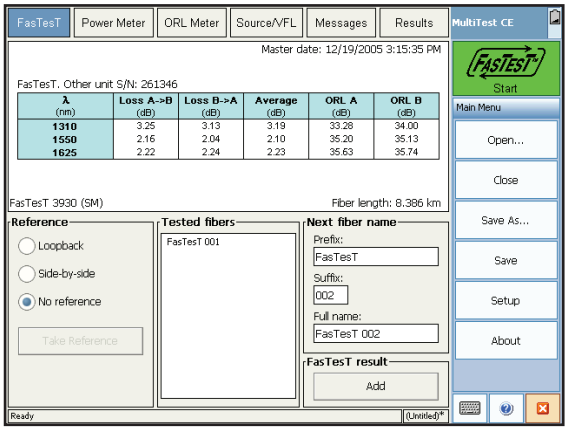
The FTB-3930 allows for automated bidirectional loss and ORL testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs.

A Single Tool for All Backreflection, Fiber-Length and Loss Measurement Needs

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

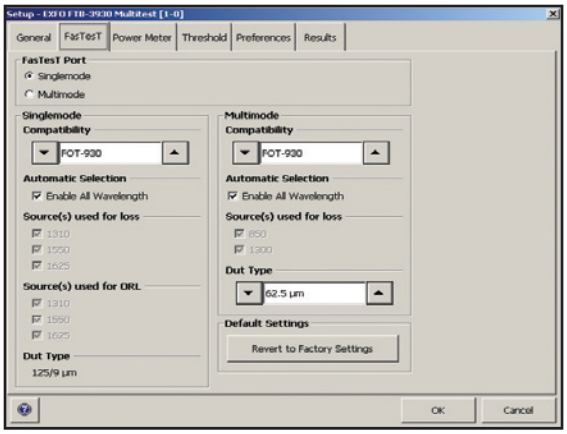
- Fast, three-wavelength loss and ORL testing
- User-configurable pass/fail thresholds for error-free testing
- The only unit designed for testing both multimode and singlemode fiber
- Video fiber inspection probe, for easy viewing of connectors and fiber ends on the FOT-930's high-resolution display
- 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.



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-500 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



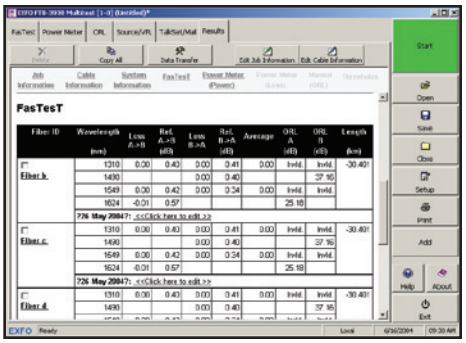
While performing FasTesT measurements, the FTB-3930 can launch automated loss and ORL measurements on all three wavelengths and perform fiber-length measurements.

Standard Data Reporting Features

When used in the FTB-500 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

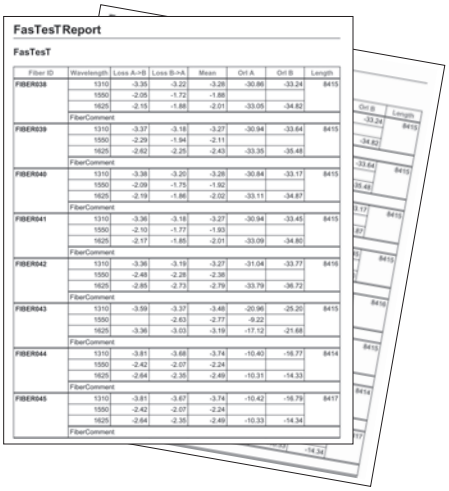


Display comprehensive test results thanks to the FTB-3930's data management software (FTB-500).

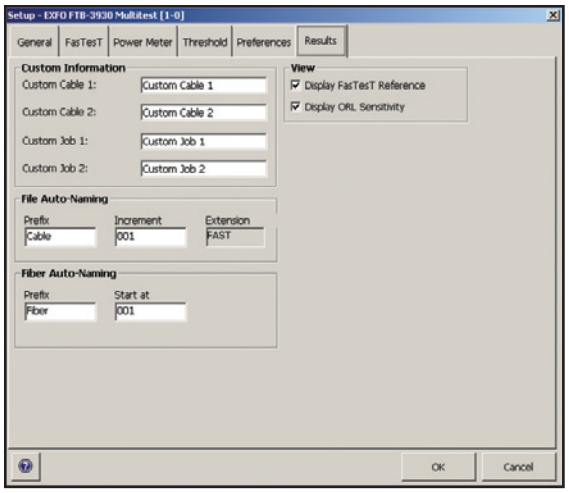
Report Generation

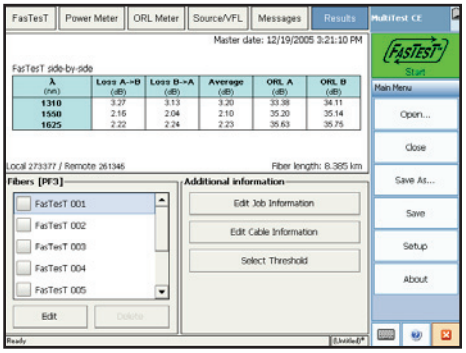
Growing fiber deployment in NSP and CATV networks sometimes leads installation companies to hire subcontractors. These subcontractors must produce proper test documentation to corroborate the tests were performed as specified.

EXFO's FTB-3930 MultiTest Module easily and efficiently provides complete, high-quality test documentation (integrated feature on the FTB-500 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.



Quickly and easily generate detailed reports (integrated feature on the FTB-500, through Optical Report Viewer software on the FTB-200).





View fiber results alternately when using the FTB-200 platform.

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 unequaled user-friendliness.

Fast-Track Data Post-Processing with FastReporter Software

FastReporter includes a powerful tool that **automates repetitive operations on large numbers of OTDR test files**. You can process an unlimited number of files in a session, and combine single operations into multi-operation batch sessions. In a nutshell, FastReporter optimizes your productivity.

Batch documentation

–Document an entire cable/project in a matter of seconds

–Save time in the field by documenting your files at the office

–Manage different measurements simultaneously

Get uniformity in your results

–Adjust cable and fiber parameters

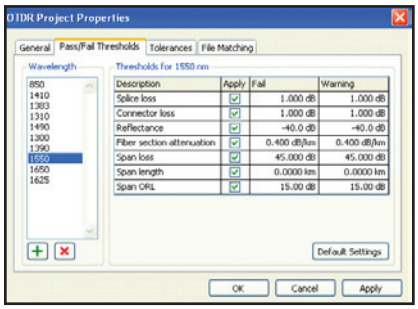
–Set detection thresholds for all measurements at once

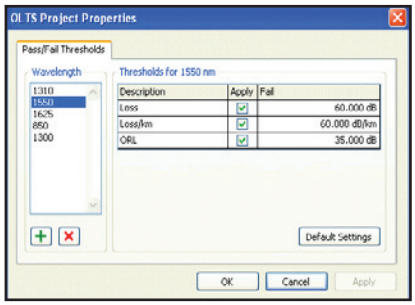
Batch analysis

–Adjust parameters for all cables at once

–Adjust detection thresholds

–Set pass/fail thresholds for OTDR, OLTS, CD and PMD testing and characterize your link. Make sure you meet the link's requirements.





Flexible Reporting

Various report templates to choose from

√ Loss and ORL (including EXFO's FasTesT function)

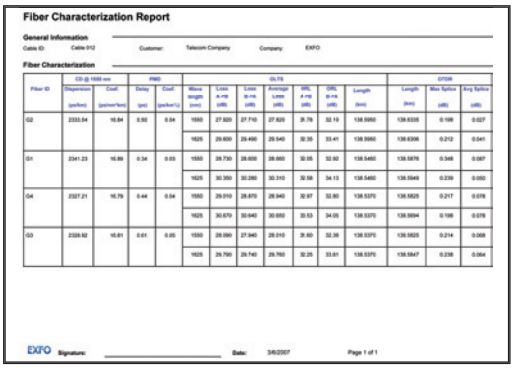
√ OTDR

√ PMD

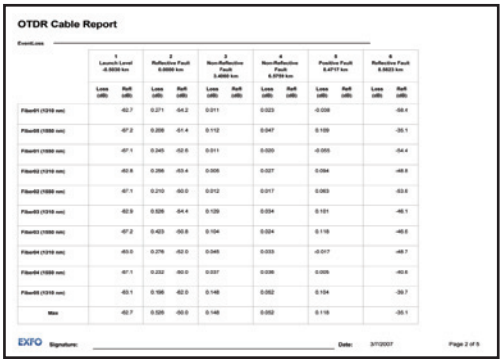
√ Chromatic dispersion (CD)

√ Fiber characterization

√ Cable report



Fiber characterization report.



OTDR cable report.

One cable report replaces hundreds of single-fiber test printouts, simplifying and speeding up high-fiber-count data management. This report automatically provides per-event and per-fiber statistics and flags threshold-exceeding values. It also generates end-to-end reports for one or many wavelengths.

Report customization

Create your own report template with external reporting software such as Crystal Reports®.

Format saving

Easily create comprehensive **PDF**, **Excel** or **HTML** reports, with no additional formatting.

Copy Graph function

Customize your reports by integrating your graphs into documents such as Excel, Word, etc.

For more details on FastReporter, visit the FastReporter product page on EXFO's website.

SPECIFICATIONS [a]

External Power Meter	FTB-3932	FTB-3932X	FTB-3933
Detector type	Ge	GeX	InGaAs
Measurement range (dBm)	10 to –70	26 to –55	6 to –73
Uncertainty [b, c]	± 5 % ± 0.1 nW	± 5 % ± 3 nW	± 5 % ± 0.05 nW
Wavelength range (nm)	800 to 1650	800 to 1650	800 to 1650
Display resolution [b] (dB)	0.01	0.01	0.01
Calibrated wavelengths	40	42	40
Recommended recalibration period (years)	3	3	3
Automatic offset nulling [d]	Yes	Yes	Yes
Measurement-distance units	kilometers, meters, kilofeet, feet, miles		

Sources	Standard	-4	-5	-12C (second port)	-12D (second port)
Wavelengths [e] (nm)	1310 ± 20	1310 ± 20	1310 ± 20	850 ± 25	850 ± 25
	1550 ± 20	1550 ± 20	1490 ± 10	1300 +50/–10	1300 +50/–10
		1625 ± 10	1550 ± 20		
Emitter type	Laser	Laser	Laser	LED	LED
Minimum output power [e] (dBm)	–1/–1	–1/–4/–7	–1/–7/–4	–27/–27 (50/125 µm) [i]	–21/–21 (62.5/125 µm) [i]
Spectral width [f] (nm)	≤ 5/≤ 5	≤ 5/≤ 5/≤ 5	≤ 5/≤ 5/≤ 5	50/135	50/135
Stability [g] (8 hours) (dB)	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05

FasTesT	Standard	-4	-5	-12C (second port)	-12D (second port)
Wavelengths (nm)	1310	1310	1310	850	850
	1550	1550	1490	1300	1300
		1625	1550		
Loss range [h] (dB)	60	56	56	40	46
Loss precision [i] (repeatability) (dB)					
side-by-side	0.15	0.15	0.15	0.15	0.15
loopback	0.25	0.25	0.25	0.25	0.25
Length measurement range (km)	200	200	200	5	5
Length measurement uncertainty (typical) [j]	± (10 m + 1 % x length)				

Dedicated ORL Wavelengths	All SM	Talk Set		VFL [i]	
ORL range (APC / UPC) (dB)	65/55	Emitter type	Laser	Emitter type	Laser
ORL uncertainty [i] (dB)	± 0.5	Wavelength (nm)	1550 ± 20	Wavelength (nm)	650
Resolution [b] (dB)	0.01	Dynamic range at 1550 nm (dB)	45	Output power (dBm)	3
		Dynamic range MM [k] (dB)	40		

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		
operating	0 °C to 50 °C	(32 °F to 122 °F)
storage [l]	–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 and mandrel.

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-TSY-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.

FTB-3930X-XX-XX-XX

Model
FTB-3932 = Ge detector, dual-wavelength 1310/1550 nm
FTB-3932-4 = Ge detector, triple-wavelength 1310/1550/1625 nm
FTB-3932-5 = Ge detector, triple-wavelength 1310/1490/1550 nm
FTB-3932X = GeX detector, dual-wavelength 1310/1550 nm
FTB-3932X-4 = GeX detector, triple-wavelength 1310/1550/1625 nm
FTB-3932X-5 = GeX detector, triple-wavelength 1310/1490/1550 nm
FTB-3933 = InGaAs detector, dual-wavelength 1310/1550 nm
FTB-3933-4 = InGaAs detector, triple-wavelength 1310/1550/1625 nm
FTB-3933-5 = InGaAs detector, triple-wavelength 1310/1490/1550 nm
FTB-3932-12C = Ge detector, dual-wavelength 1310/1550 nm (first port), dual-wavelength 850/1300 nm (50/125 µm) (second port)
FTB-3932-12D = Ge detector, dual-wavelength 1310/1550 nm (first port), dual-wavelength 850/1300 nm (62.5/125 µm) (second port)
FTB-3932X-12C = GeX detector, dual-wavelength 1310/1550 nm (first port), dual-wavelength 850/1300 nm (50/125 µm) (second port)
FTB-3932X-12D = Ge detector, dual-wavelength 1310/1550 nm (first port), dual-wavelength 850/1300 nm (62.5/125 µm) (second port)

Talk Set and Visual Fault Locator [a]
00 = Without talk set and VFL
VFL = With visual fault locator
VFT = With talk set and VFL [b] (universal 2.5 mm connector)

Connector Adapter (description standard)
FOA-12, FOA-14, FOA-16, FOA-22, FOA-28, FOA-32, FOA-54, FOA-78, FOA-96B, FOA-98, FOA-99

Connector*
EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000

Example: FTB-3932-12C-FOA-22-EI-EUI-89

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

Notes

a. Connector type for the talk set is the same as the one specified for the main source.

b. Not available when equipped with second port.

SAFETY

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001:
Emitters used for sources, FasTesT, 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.

If VFL option is available

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