FTB-7400E—Metro/CWDM OTDR

METRO/CORE AND CWDM NETWORK FIBER CHARACTERIZATION

iOLM READY

EXFO Connect Compatible

40G

FTTx Test Solutions

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

SPEC SHEET

High-resolution OTDR covering longer metro distances and ITU-based CWDM networks

KEY FEATURES

- Industry-leading linearity of ± 0.03 dB/dB
- Up to 256 000 sampling points
- Event dead zone of 0.8 m and attenuation dead zone of 4 m
- Low-water-peak fiber testing at 1383 nm
- Dynamic range of up to 42 dB for long-haul testing
- Tests through CWDM-based multiplexers and demultiplexers at ITU-recommended wavelengths
- EXFO Connect-compatible: automated asset management; data goes through the cloud and into a dynamic database
- iOLM-ready: one-touch multiple acquisitions, with clear go/no go results presented in a straightforward visual format

APPLICATIONS

- Metro/core network testing
- CWDM network testing

PLATFORM COMPATIBILITY

Platform
FTB-500

Compact Platform
FTB-200

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INTELLIGENT OPTICAL LINK MAPPER—GOING BEYOND OTDR

iOLM intelligent Optical Link Mapper

Powered by LINK AWARE™ TECHNOLOGY

Using an automated multipulse acquisition approach and filled with advanced algorithms, the iOLM is an OTDR-based application that delivers detailed information on every element of the link through a single button operation–providing maximum intelligence and simplicity for expert-level link characterization.

- Hardware optimized for field upgradability to the optional iOLM software application
- Multiple acquisitions with one button–all automated
- Expert-level characterization results in a single, comprehensive report
- The highest single-ended fiber testing performance available
- No training required: self-setting device with clear go/no go results
- Minimized truck rolls, thanks to the smartest analysis, powered by Link Aware™ technology
- No more trace misinterpretation: prompt diagnosis and clear optical link view

Three ways to benefit from the iOLM on this module:

iOLM only	OTDR combo	Upgrade
FTB-7400E with iOLM application	FTB-7400E with iOLM and OTDR applications	iOLM software option for your existing FTB-7400E OTDR

AUTOMATE ASSET MANAGEMENT. PUSH TEST DATA IN THE CLOUD. GET CONNECTED.

EXFO Connect

EXFO Connect pushes and stores test equipment and test data content automatically in the cloud, allowing you to streamline test operation from build-out to maintenance.

ADDITIONAL SOFTWARE TEST CAPABILITIES ON THE FTB-200 PLATFORM

EXpert VoIP TEST TOOLS

EXpert VoIP generates a voice-over-IP call directly from the test platform to validate performance during service turn-up and troubleshooting.

- Supports a wide range of signaling protocols, including SIP, SCCP, H.248/Megaco and H.323
- Supports MOS and R-factor quality metrics
- Simplifies testing with configurable pass/fail thresholds and RTP metrics

EXpert IP TEST TOOLS

EXpert IP integrates six commonly used datacom test tools into one platform-based application to ensure that field technicians are prepared for a wide range of testing needs.

- Rapidly performs debugging sequences with VLAN scan and LAN discovery
- Validates end-to-end ping and traceroute
- Verifies FTP performance and HTTP availability

EXpert IPTV TEST TOOLS

This powerful IPTV quality assessment solution enables set-top-box emulation and passive monitoring of IPTV streams, allowing quick and easy pass/fail verification of IPTV installations.

- Real-time video preview
- Analyzes up to 10 video streams
- Comprehensive QoS and QoE metrics including MOS score

All specifications valid at 23 °C ± 2 °C with an FC/PC connector, unless otherwise specified.

TECHNICAL SPECIFICATIONS

Model [a]	FTB-7400E-XXXX	FTB-7400E-CWS	FTB-7400E-CWCL
Wavelengths (nm) [b]	1310 ± 20/1383 ± 1/1550 ± 20/1625 ± 10	1470 ± 3/1490 ± 3/1510 ± 3/1530 ± 3	1550 ± 3/1570 ± 3/1590 ± 3/1610 ± 3
Dynamic range at 20 µs (dB) [c]	42/40/41/41	41/41/ 41/41	41/41/ 40/40
Event dead zone (m) [d]	0.8	0.8	0.8
Attenuation dead zone (m) [d]	4/4/4.5/4.5	4/4.5/4.5	4/4.5/4.5
Distance range (km)	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400
Pulse width (ns)	5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000	5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000	5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000
Linearity (dB/dB) [b]	± 0.03	± 0.03	± 0.03
Loss threshold (dB)	0.01	0.01	0.01
Loss resolution (dB)	0.001	0.001	0.001
Sampling resolution (m)	0.04 to 5	0.04 to 5	0.04 to 5
Sampling points	Up to 256 000	Up to 256 000	Up to 256 000
Distance uncertainty (m) [e]	± (0.75 + 0.001 % x distance + sampling resolution)	± (0.75 + 0.001 % x distance + sampling resolution)	± (0.75 + 0.001 % x distance + sampling resolution)
Measurement time	User-defined (5 sec. minimum to 60 min. maximum)	User-defined (5 sec. minimum to 60 min. maximum)	User-defined (5 sec. minimum to 60 min. maximum)
Typical real-time refresh (Hz)	4	4	4
Stable source output power (dBm) [f]	–4.5 (7400E-0023B)		
Visual fault locator (optional) [b]	Laser, 650 nm ± 10 nm CW, P_{out} in 62.5/125 µm: 1.5 dBm (1.4 mW)		

Notes

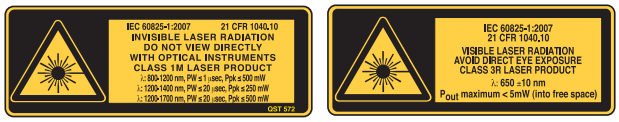
a. For complete details on all available configurations, refer to the Ordering Information section.
b. Typical.
c. Typical dynamic range with a three-minute averaging at SNR = 1.
d. Typical dead zone of singlemode modules for reflectance below –45 dB, using a 5 ns pulse.
e. Does not include uncertainty due to fiber index.
f. Typical output power value at 1550 nm.

GENERAL SPECIFICATIONS

Size (H x W x D)		97 mm x 25 mm x 260 mm (3 $^{13}/_{16}$ in x 1 in x 10 ¼ in)
Weight		0.55 kg (1.2 lb)
Temperature	operating storage	0 °C to 50 °C (32 °F to 122 °F) –40 °C to 70 °C (–40 °F to 158 °F)
Relative humidity		0 % to 95 % non-condensing

LASER SAFETY

21 CFR 1040.10 AND IEC 60825-1:2007
CLASS 1M WITHOUT VFL OPTION
CLASS 3R WITH VFL OPTION



ORDERING INFORMATION

Singlemode (METRO/CWDM)

FTB-7400E-XX-XX-XX

Model
Dual Wavelength
FTB-7400E-0023B = SM OTDR module, 1310/1550 nm (9/125 µm)

Triple Wavelength
FTB-7400E-0234B = SM OTDR module, 1310/1550/1625 nm (9/125 µm)

Quadruple Wavelength
FTB-7400E-2347B = SM OTDR module, 1310/1383/1550/1625 nm (9/125 µm)
FTB-7400E-CWS = CWDM SM OTDR module, 1470/1490/1510/1530 nm (9/125 µm)
FTB-7400E-CWCL = CWDM SM OTDR module, 1550/1570/1590/1610 nm (9/125 µm)

Base Software
OTDR = Enables the OTDR application only
iOLM = Enables the iOLM application only
Oi = Enables iOLM and OTDR applications

Software Option [a, b]
00 = Without software option
AD = Macrobend finder and linear view

Connector
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC

EI: See note below

Example: FTB-7400E-2347B-Oi-EI-EUI-89-AD

Notes

a. Available only on the FTB-200 platform.

b. Only available with OTDR base software.

EI CONNECTORS

To maximize the performance of your OTDR, EXFO recommends using APC connectors. These connectors generate lower reflectance, which is a critical parameter that affects performance, particularly dead zones. APC connectors provide better performances than UPC connectors, thereby improving testing efficiency.

Note: UPC connectors are also available, simply replace EA-XX by EI-XX in the ordering part number. Additional connectors available are the EI-EUI-76 (UPC/HMS-10/AG) and EI-EUI-90 (UPC/ST).

EXFO Corporate Headquarters > 400 Godin Avenue, Quebec City (Quebec) G1M 2K2 CANADA | Tel.: +1 418 683-0211 | Fax: +1 418 683-2170 | info@EXFO.com

Toll-free: +1 800 663-3936 (USA and Canada) | www.EXFO.com

EXFO America	3400 Waterview Parkway, Suite 100	Richardson, TX 75080 USA	Tel.: +1 972 761-9271	Fax: +1 972 761-9067
EXFO Asia	100 Beach Road, #22-01/03 Shaw Tower	SINGAPORE 189702	Tel.: +65 6333 8241	Fax: +65 6333 8242
EXFO China	36 North, 3rd Ring Road East, Dongcheng District Room 1207, Tower C, Global Trade Center	Beijing 100013 P. R. CHINA	Tel.: + 86 10 5825 7755	Fax: +86 10 5825 7722
EXFO Europe	Omega Enterprise Park, Electron Way	Chandlers Ford, Hampshire S053 4SE ENGLAND	Tel.: +44 23 8024 6810	Fax: +44 23 8024 6801
EXFO Finland	Elektroniikkatie 2	FI-90590 Oulu, FINLAND	Tel.: +358 (0)403 010 300	Fax: +358 (0)8 564 5203
EXFO Service Assurance	270 Billerica Road	Chelmsford, MA 01824 USA	Tel.: +1 978 367-5600	Fax: +1 978 367-5700

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