PXM/LXM

DUPLEX AND MULTI-FIBER OPTICAL LOSS TEST SET (OLTS)

■ Full-featured duplex and multi-fiber power meter and light source with the industry's fastest test speeds.

■ Tier-1 duplex and multi-fiber certification with loss, polarity, and length measurement and on-board certification standards.

FASTEST

2024 LIGHTWAVE 4.0 INNOVATION REVIEWS

ISE 4.0 NETWORK INNOVATORS AWARDS

FastReporter Data post-processing software

PXM: duplex and multi-fiber power meter

LXM: duplex and multi-fiber light source (singlemode or multimode)

KEY FEATURES

Supports native duplex and 8/12 fiber-based testing.

Supports 16 and 24 fiber-based testing in 1 second using loopback or dual test set methods.

Click-Out adapters compatible with duplex MDC, SN and LC as well as MPO and SYSTIMAX MTP

Leading FasTesT™ performance: test duplex and multi-fiber cables at 2 wavelengths in just 1 second

Dual wavelength on light source (850/1300 nm or 1310/1550 nm)

Insertion loss measurement

Polarity type validation (duplex and multi-fiber)

Up to 25 km in length measurement

On-board certification standards with dynamic loss calculator

In-line visual fault locator (VFL) for fiber tracing on source (LXM)

Comprehensive results combined on one page

4-inch color touchscreen

3-year warranty and calibration interval

Complies with one-cord reference method

APPLICATIONS

AI supercomputer clusters

Hyperscaler data centers

Enterprise

Private networks

ON-BOARD CERTIFICATION STANDARDS

Network standards

40GBASE-SR4

100G-PSM4 2.0

100GBASE-SR2/SR4

200GBASE-SR2/DR4

400GBASE-DR4/SR4.2/SR8

128GFC-PSM4/SW4

256GFC-SW4

Cabling standards

ISO/IEC 14763-3:2014

TIA-568.3-D (inside plant)

TIA-568.3-D (outside plant)

EN50173:2011

RELATED PRODUCTS

Fiber inspection scope—FIP-500

MPO cleaning kits

EXFO

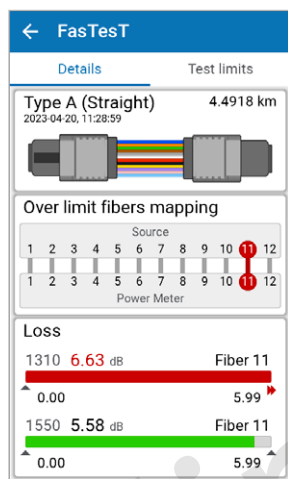## FasTesT™: DUPLEX AND MPO TESTING MADE SIMPLE AND FAST

The PXM/LXM combo is a duplex and multi-fiber tester designed to efficiently qualify a large number of duplex and multi-fiber links. It tests duplex and multi-fibers (MTP/MPO-8, 12, 16, 24) cables at 2 wavelengths in just 1 second, the fastest test time in the industry. The FasTesT feature provides loss per channel at the 2 selected wavelengths, as well as the length and polarity type of the link under test automatically when continuity is detected.

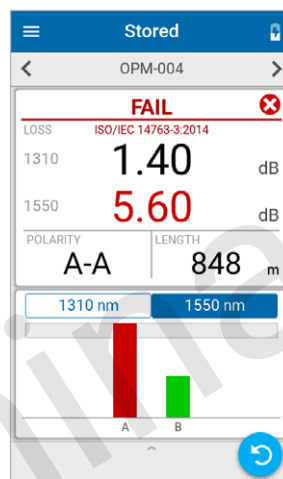## COMPREHENSIVE DUPLEX OR MULTI-FIBER PASS/FAIL RESULTS, ALL ON ONE PAGE

• Global pass/fail status and pass/fail per fiber with length measurement

• Insertion loss per wavelength

• Polarity type (A, B, C or U) for multi-fiber and polarity type (A-A, A-B) for duplex fibers with graphical representation

• Pass/fail on actual polarity type versus expected polarity type

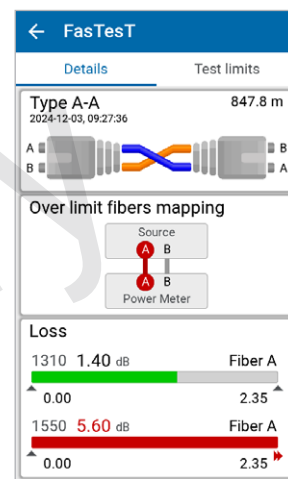• Full details available on FasTesT results and fiber results page

FasTesT multifiber main screen

Multifiber polarity

FasTesT duplex main screen (P12 model)

Duplex polarity (P12 model)

IN-LINE VISUAL FAULT LOCATORS

The LXM light source includes a VFL that is in-line on the same port as the MPO source itself. Combining those two features on the same port makes them convenient to use. The VFL can trace a fiber right to the other end of the link so that the technician on the other end can easily find the MPO port to which they need to connect the PXM. The VFL also makes it easy to locate macrobends or breaks in the fiber.

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VERSATILE MULTI-FIBER TESTING

AI and data center applications are driving new fiber-optic cabling requirements and the adoption of various types of multi-fiber links for a range of parallel optic applications. EXFO's versatile test solution makes it easy to test and certify a variety of trunk and fiber-optic multi-fiber cables and addresses the needs of base 8, 12, 16, and even 24, fiber applications.

UNIQUE CLICK-OUT ADAPTER SYSTEM

The PRO version offers a unique Click-Out adapter system allowing to adapt the instrument connectivity to fiber assemblies under test. Click-Out adapters are offered in a variety of connector models including duplex MDC, SN, LC as well as MPO and SYSTIMAX MTP.

PXM/LXM includes

FasTesT multifiber testing

Native MPO-12 fixed port

Loss measurement

Length measurement

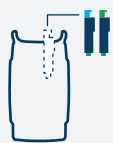Polarity validation

Visual fault locator

Pro version also includes

FasTesT duplex testing

Click-Out adapter port

EXFO

The fastest

Measure loss, length, and polarity on duplex and multi-fiber links at two wavelengths in just 1 second.

1 s

Multi-connector compatibility

Switch within seconds between duplex and multi-fiber testing with patented Click-Out connectors, compatible with duplex MDC, SN, LC as well as MPO and SYSTIMAX MTP.

First-time-right polarity

The industry's only tester capable of detecting duplex and multi-fiber polarity issues hidden in trunk cabling, ensuring fibers are correctly connected before the network goes live.

Standards compliance

EXFO's Click-Out connectors enable one-cord referencing for duplex and multi-fiber cabling, eliminating adapter cords to match pinned and unpinned gender types ensuring compliance with TIA, ISO, and IEC standards.

Hybrid contactless connector

The PXM power meter's hybrid contactless connector supports APC and UPC connectors for multimode and singlemode testing, with a large-core detector for precise, low-uncertainty measurements.

FastReporter Reporting

Measurements made by the PXM power meter when measuring either power or loss can be processed in FastReporter post-processing PC software to generate reports.

Long battery life

The PXM and LXM are powered by lithium-ion rechargeable batteries that can support 8 hours of continuous use.

Field-replaceable batteries

The battery is field-replaceable, so there's no need to send it back to the factory when the battery reaches the end of its lifecycle (counted in years).
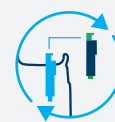
4-inch color touchscreen

The PXM and LXM feature high-quality color touchscreens designed to be visible in full sun or dark areas, from any angle.

3-year calibration

Cut costs related to factory returns and downtime.

Field-replaceable Click-Out adapters

Patented, field-replaceable Click-Out adapter allows replacing worn out connectors when and where needed.

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SPECIFICATIONS

PXM POWER METER SPECIFICATIONS [c]

Optical connector	Contactless MPO-12 male (pinned) supporting both APC and UPC. Connector with protective shutter.
Detector type	InGaAs
Power measurement range (dBm)	5 to −45
Power uncertainty (dB) [a]	±0.35
Linearity (dB) [b]	±0.1
Display resolution (dB)	0.01
Wavelength measurement range (nm)	850 to 1550
Calibrated wavelengths (nm)	850, 1300, 1310, 1550
Tone detection	270 Hz, 330 Hz, 1 kHz, 2 kHz
Auto-wavelength recognition and switching [c]	Yes
Length measurement	Up to 25 km depending on conditions with singlemode and 1 km with multimode
Warm up time (s)	0
Storage capacity	10,000 measurements at two wavelengths
Warranty (years)	3
Calibration interval (years)	3

LXM LIGHT SOURCE SPECIFICATIONS [d]

	LXM-SM1 (singlemode)	LXM-MM1 (multimode) [g]
Optical connector	APC MPO-12 male (pinned). Connector with protective shutter.	UPC MPO-12 male (pinned). Connector with protective shutter.
Emitter type	Laser	LED
Wavelength (nm) [e]	1310 ± 20 1550 ± 20	850 ± 25 1300 ± 20
Output power (dBm)	≥ −13/ ≥ −13	≥ −33/ ≥ −33
Stability (8 h) (dB) [f]	±0.1	±0.1
Warmup time (minutes)	15	15
Tone generation	270 Hz, 330 Hz, 1 kHz, 2 kHz	270 Hz, 330 Hz, 1 kHz, 2 kHz
Warranty (years)	3	3
Calibration interval (years)	3	3

IN-LINE VFL SPECIFICATIONS (included on each LXM light source) [h]

Laser type (nm) [e]	635 ± 10
Modulation	CW, 1 Hz, 4 Hz
Typical power output (mW)	≤ 0.4
Laser safety	IEC 60825-1: Class 1

LASER SAFETY

LASER 1 — IEC 60825-1: Class 1

a. For calibrated wavelengths.

b. For the range −5 dBm to −40 dBm.

c. When used with an LXM MPO light source in FasTesT mode.

d. At 23 °C ± 2 °C.

e. Typical.

f. After a 15-minute warm-up.

g. Preliminary version.

h. VFL is only on certain channels not all 12.

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GENERAL SPECIFICATIONS

Display		4-in touchscreen
Display type		Color display with capacitive touchscreen
Dimensions		171 mm × 93 mm × 48 mm (6 $^3/_4$ in x 3 $^{11}/_{16}$ in x 1 $^7/_8$ in)
Weight (with battery)		0.5 kg (1 lb)
Interfaces		Bluetooth® 5.1 with BLE
Data sharing		Via USB interface to PC (reporting via FastReporter 3)
Test speed		Loss and polarity measurement for MPO-12 cable at 2 wavelengths in 1 second
Temperature	Operating Storage	−10 °C to 45 °C (14 °F to 113 °F) −40 °C to 60 °C (−40 °F to 140 °F)

GP-3151 GP-10-061 GP-2249 GP-153 GP-2269 GP-3157 GP-3198 GP-3199 GP-3150 FIP-500

ACCESSORIES

Carrying pouches and cases	GP-3151	Soft pouch
	GP-10-061	Medium soft carrying case • Can contain a pair of PXM and LXM with related accessories and test cords
Cleaning kits	GP-2249	MPO cleaning supplies including: • ½ size QbE™ cube (qty: 1) • MX cleaning pen (qty: 1) • IBC™ brand cleaner for 1.25 mm connectors (qty: 1) • IBC™ brand cleaner for 2.5 mm connectors (qty: 1) • IBC™ brand cleaner for MPO style connectors (qty: 1)
	GP-153	IBC™ brand cleaner for MPO style connectors
MPO test cord kits	MPO-12-SM-TJ-KIT1	Singlemode MPO-12 test jumper kit • Covers pinned and unpinned configurations Includes: • TJ-B92F-12-92F MPO-12 singlemode test jumper APC connectors unpinned/unpinned (qty: 2) • TJ-B92F-12-92M MPO-12 singlemode test jumper APC connectors pinned/unpinned (qty: 2) • TJ-B92M-12-92M-A MPO-12 singlemode adapter cord test jumper APC connectors pinned/pinned (qty: 1) • RAC-MPO-12-TypeA MPO-12 bulkhead type A: opposite key (key up to key down) (qty: 3)
Wrist strap	GP-3157	Wrist strap
Data transfer cable	GP-2269	USB-A to USB-C cable
Power adapters	GP-3199	USB AC adapter
	GP-3198	USB-C to USB-C cable
Battery	GP-3150	Battery (qty: 1)

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ORDERING INFORMATION

PXM-XX-XX-XX

Model
PXM = Multi-fiber power meter

Optical port
00 = Fixed MPO port
P12 = Pro version with Click-Out

Click-Out
APXM12-LC = LC duplex
APXM12-MPO12M = MPO-12 male (pinned)
APXM12-MPO12F = MPO-12 female (unpinned)
APXM12-SN = SN duplex
APXM12-MDC = MDC duplex
APXM12-MPO12FI = MPO-12 inverted female (unpinned)

Bluetooth
00 = With Bluetooth
NRF = Without Bluetooth hardware

Example: PXM-P12-ALXM12-LC-NRF

LXM-XX-XX-XX-XX

Configuration
SM1 = Singlemode multi-fiber light source 1310/1550 nm
MM1 = Multimode multi-fiber light source 850/1300 nm

Optical port
00 = Fixed MPO port
P12 = Pro version with Click-Out

Click-Out
ALXM12-SM-LCA = LC/APC duplex
ALXM12-SM-LCU = LC/UPC duplex
ALXM12-SM-MPO12AM = MPO-12 APC male (pinned)
ALXM12-MM-LCU = LC/UPC duplex
ALXM12-MM-MPO12UM = MPO-12 UPC male (pinned)

Bluetooth
00 = With Bluetooth
NRF = Without Bluetooth hardware

Example: LXM-SM1-P12-ALXM12-SM-LCA-NRF