

# 100

NETWORK TESTING

## FiberBasix 100 TESTERS

EOT-100 Optical Loss Test Set  
ELS-100 Light Source  
EPM-100 Power Meter



- Cost-effective, rugged handheld instruments designed for reliable performance
- Easy-to-use interface for error-free testing
- Interchangeable connectors, for first-class flexibility
- Particularly suited to the testing and troubleshooting of fiber-optic networks located within the premises

Introducing EXFO's FiberBasix testers, a series of handheld instruments designed to meet your basic day-to-day test requirements while helping you stay within budget. These worry-free, straightforward solutions provide the tools you need to accurately measure signal attenuation during fiber-optic cable installation.

The FiberBasix 100 series includes three highly convenient instruments:

- The **EOT-100 Optical Loss Test Set**, a versatile instrument that combines a power meter and a light source
- The **ELS-100 Light Source**, combining up to four wavelengths and available in four specific configurations
- The **EPM-100 Power Meter**, which offers high accuracy and referencing capabilities

### FTTx Ready

EXFO's FiberBasix testers allow 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.

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Telecommunications Test and Measurement



# EXFO

EXPERTISE REACHING OUT

## ELS-100 Light Source: Multiwavelength Capability

EXFO's ELS-100 Light Source provides excellent stability and high measurement accuracy for up to three singlemode wavelengths or two multimode wavelengths. It is the perfect complement to the FiberBasix EPM-100 Power Meter when it comes to measuring attenuation on fiber-optic links.



*The ELS-100 Light Source*

## EOT-100 OLTS: Integrating a Power Meter and a Multiwavelength Light Source

The EOT-100 Optical Loss Test Set delivers power meter functionalities and your choice of up to three wavelengths from the following: 850 nm, 1300 nm, 1310 nm, 1490 nm or 1550 nm. Thanks to the EOT-100's highly flexible design, you can simultaneously measure the attenuation on two fiber links using two units.



*The EOT-100 OLTS*

## EPM-100 Power Meter: High Accuracy and Easy Referencing

The EPM-100 Power Meter provides highly accurate power measurements, as well as reference value setting capabilities. What's more, this convenient unit requires no offset nulling, and it offers power autonomy of 300 hours, for reliable, long-lasting performance in the field.



*The EPM-100 Power Meter*

ELS-100 SPECIFICATIONS<sup>1</sup>

Model <sup>2</sup>	23BL	235BL	12D	01-VCL
Central wavelength (nm)	1310 ± 20 1550 ± 20 1550 ± 20	1310 ± 20 1490 ± 10	850 ± 25 1300 +50/-10	850 ± 20
Spectral width <sup>3</sup> (nm)	≤ 5	≤ 5	50/135	≤ 1
Output power (dBm)	≥ 1/≥ 1	≥ 1/≥ -4.5/≥ -3	≥ -20/≥ -20 (62.5/125 μm)	≥ -3 (50/125 μm)
Power stability <sup>4</sup> (dB)				
8 hours	± 0.10	± 0.10	± 0.10	± 0.25
Battery life (hours) (typical)	50	45	55	250
Warranty and recommended calibration interval (years)	1	1	1	1

EOT-100 SPECIFICATIONS<sup>1</sup>

Model <sup>5</sup>	EOT-102	EOT-102X
<b>Power meter port</b>	<b>Ge</b>	<b>GeX</b>
Power range (dBm) <sup>6</sup>	10 to -60	26 to -50
Range displayed (dBm)	Down to -65	Down to -50
Number of calibrated wavelengths <sup>7</sup>	6	6
Power uncertainty <sup>8</sup>	± 5 % ± 1 nW	± 5 % ± 10 nW
Resolution (dB)	0.01 <sup>9</sup>	0.01 <sup>10</sup>
Automatic offset nulling <sup>11</sup>	Yes	Yes
Warmup time (s) <sup>11, 12</sup>	0	0
Display units	dB/dBm/W	dB/dBm/W
Screen refresh rate (Hz)	3	3
Battery life (hours) (typical)	260	260
Warranty and recommended calibration interval (years)	1	1

Model <sup>2</sup>	23BL	235BL	12D	01-VCL
Central wavelength (nm)	1310 ± 20 1550 ± 20	1310 ± 20 1490 ± 10 1550 ± 20	850 ± 25 1300 +50/-10	850 ± 20
Spectral width (nm) <sup>3</sup>	≤ 5	≤ 5	50/135	≤ 1
Output power (dBm)	≥ 1/≥ 1	≥ 1/≥ -4.5/≥ -3	≥ -20/≥ -20 (62.5/125 μm)	≥ -3 (50/125 μm)
Power stability (dB) <sup>4</sup>				
8 hours	± 0.10	± 0.10	± 0.10	± 0.25
Battery life (hours) (typical)	50	45	55	250
Warranty and recommended calibration interval (years)	1	1	1	1

EPM-100 SPECIFICATIONS<sup>1</sup>

Model <sup>5</sup>	EPM-102	EPM-102X
<b>Power meter port</b>	<b>Ge</b>	<b>GeX</b>
Power range <sup>6</sup> (dBm)	10 to -60	26 to -50
Range displayed (dBm)	Down to -65	Down to -50
Number of calibrated wavelengths <sup>7</sup>	6	6
Power uncertainty <sup>8</sup>	± 5 % ± 1 nW	± 5 % ± 10 nW
Resolution (dB)	0.01 <sup>9</sup>	0.01 <sup>10</sup>
Automatic offset nulling <sup>11</sup>	Yes	Yes
Warmup time <sup>6</sup> (s)	0	0
Display units	dB/dBm/W	dB/dBm/W
Screen refresh rate (Hz)	3	3
Battery life (hours) (typical)	> 300	> 300
Warranty and recommended calibration interval (years)	1	1

## GENERAL SPECIFICATIONS

Size (H x W x D)	18.5 cm x 10.0 cm x 5.5 cm	(7 1/8 in x 4 in x 2 1/8 in)
Weight	0.4 kg	(0.9 lb)
Temperature		
operating	-10 °C to 50 °C	(14 °F to 122 °F)
storage	-40 °C to 70 °C	(-40 °F to 158 °F)
Relative humidity	0 % to 95 % non-condensing	

## STANDARD ACCESSORIES

User guide, Certificate of Calibration, instrument stickers in four languages, AC adapter, connector adapter (FOA-XX), three AA batteries, wrist strap, alcohol cleaning pads.

## SAFETY

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001:  
CLASS 1M LASER PRODUCT

## Notes

- Guaranteed unless otherwise specified.
- All specifications valid at 23 °C ± 1 °C, with an FC connector.
- rms for lasers and FWHM for LEDs; typical values for LEDs.
- After 15 minutes warmup; expressed as ± half the difference between the maximum and minimum values measured during the period, with an APC connector on the power meter.
- All specifications valid at 1550 nm and 23 °C ± 1 °C, with an FC connector.
- In CW mode; sensitivity defined as 6 x rms noise level.
- Wavelengths: 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1625 nm.
- Traceable to NIST; EOT-102X: up to 20 dBm.
- From 10 dBm to -50 dBm.
- From 26 dBm to -35 dBm.
- Power > -40 dBm for EOT-102, and > -25 dBm for EOT-102X.
- For ± 0.05 dB, from 18 °C to 28 °C.

**ORDERING INFORMATION**

**ELS-100-XX-XX**

**Model**

ELS-100-12D = 850/1300 nm LED (62.5/125 µm)  
 ELS-100-23BL = 1310/1550 nm laser (9/125 µm)  
 ELS-100-235BL = 1310/1490/1550 nm laser (9/125 µm)  
 ELS-100-12D-23BL = 850/1300 nm LED (62.5/125 µm), 1310/1550 nm laser (9/125 µm)  
 ELS-100-01-VCL = 850 nm VCSEL (50/125 µm)

Example: ELS-100-12D-23BL-EI-EUI-89

**Connector\***

50 = FC/PC<sup>1</sup>  
 54 = SC/PC<sup>1</sup>  
 74 = ST/PC<sup>1</sup>  
 89 = FC/UPC<sup>2</sup>  
 90 = ST/UPC<sup>2</sup>  
 91 = SC/UPC<sup>2</sup>

EI-EUI-89 = UPC/FC narrow key<sup>3</sup>  
 EI-EUI-90 = UPC/ST<sup>3</sup>  
 EI-EUI-91 = UPC/SC<sup>3</sup>  
 EI-EUI-95 = UPC/E-2000<sup>3</sup>

**Notes**

1. Multimode only
2. Singlemode only
3. Interchangeable connection

**EOT-10X-XX-XX**

**Model**

EOT-102-12D = Ge detector, 850/1300 nm LED (62.5/125 µm)  
 EOT-102-23BL = Ge detector, 1310/1550 nm laser (9/125 µm)  
 EOT-102-235BL = Ge detector, 1310/1490/1550 nm laser (9/125 µm)  
 EOT-102X-23BL = High-power Ge detector, 1310/1550 nm laser (9/125 µm)  
 EOT-102X-235BL = High-power Ge detector, 1310/1490/1550 nm laser (9/125 µm)  
 EOT-102-01-VCL = Ge detector, 850 nm VCSEL (50/125 µm)

Example: EOT-102X-235BL-FOA-22-EI-EUI-89

**Connector Adapter (Power Meter)\***

FOA-22 = FC (PC/SPC/UPC/APC), NEC-D3  
 FOA-32 = ST (PC/SPC/UPC)  
 FOA-54 = SC (PC/SPC/UPC/APC)  
 FOA-96B = E-2000  
 FOA-98 = LC

**Connector (Source)\***

50 = FC/PC<sup>1</sup>  
 54 = SC/PC<sup>1</sup>  
 74 = ST/PC<sup>1</sup>  
 89 = FC/UPC<sup>2</sup>  
 90 = ST/UPC<sup>2</sup>  
 91 = SC/UPC<sup>2</sup>  
 EI-EUI-89 = UPC/FC narrow key<sup>3</sup>  
 EI-EUI-90 = UPC/ST<sup>3</sup>  
 EI-EUI-91 = UPC/SC<sup>3</sup>  
 EI-EUI-95 = UPC/E-2000<sup>3</sup>

**Notes**

1. Multimode only
2. Singlemode only
3. Interchangeable connection

**EPM-10X-XX**

**Model**

EPM-102 = Ge detector  
 EPM-102X = High-power Ge detector

Example: EPM-102X-FOA-22

**Connector Adapter\***

FOA-22 = FC (PC/SPC/UPC/APC), NEC-D3  
 FOA-32 = ST (PC/SPC/UPC)  
 FOA-54 = SC  
 FOA-96B = E-2000  
 FOA-98 = LC

**Test Kit Ordering Information**

**FBK-101-XX LAN Test Kit**

- EPM-102-XX Power Meter, Ge detector
- ELS-100-12D-XX Light Source, 850/1300 nm LED (1 port)
- One TJ-DXX-XX Test Jumper
- Carrying case GP-10-061

**FBK-102-XX Outside Plant Test Kit**

- EPM-102-XX Power Meter, Ge detector
- ELS-100-23BL-XX Light Source, 1310/1550 nm laser (1 port)
- One TJ-BXX-XX Test Jumper
- Carrying case GP-10-061

**FBK-103-XX Contractor Test Kit**

- EPM-102-XX Power Meter, Ge detector
- ELS-100-12D-23BL-XX Light Source, 850/1300 nm LED and 1310/1550 nm laser (2 ports)
- One TJ-BXX-XX Test Jumper
- One TJ-DXX-XX Test Jumper
- Carrying case GP-10-061

**FBK-104-XX GigE Test Kit**

- EPM-102-XX Power Meter, Ge detector
- ELS-100-01-VCL-XX Light Source, 850 nm VCSEL (1 port)
- One TJ-CXX-XX Test Jumper
- Carrying case GP-10-061

**FBK-105-XX CATV Test Kit**

- EPM-102X-XX Power Meter, high-power Ge detector
- ELS-100-23BL-XX Light Source, 1310/1550 nm laser (1 port)
- One TJ-BXX-XX Test Jumper
- Carrying case GP-10-061

**FBK-106-XX Bidirectional MM Premise Test Kit**

- Two EOT-102-12D-XX OLTs, Power Meter with Ge detector, 850/1300 nm LED source
- Two TJ-DXX-XX Test Jumpers
- Carrying case GP-10-061

\*Other connectors and connector adapters available. Consult our website at [www.exfo.com/accessories](http://www.exfo.com/accessories) for details.

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at [www.exfo.com](http://www.exfo.com).

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EXFO is certified ISO 9001 and attests to the quality of these 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. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. All of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit [www.exfo.com/recycle](http://www.exfo.com/recycle). 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.

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