

# ELS-100

Light Source

# EPM-100

Power Meter

NETWORK TESTING—OPTICAL



- 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 two highly convenient instruments:

- 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, 1490 and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs.

## 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

## 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>a</sup>

Model <sup>b</sup>	23BL	12D
Central wavelength (nm)	1310 ± 20 1550 ± 20	850 ± 25 1300 +50/-10
Spectral width <sup>c</sup> (nm)	≤ 5	50/135
Output power (dBm)	≥ 1/≥ 1	≥ -20/≥ -20 (62.5/125 μm)
Power stability <sup>d</sup> (dB)		
8 hours	± 0.10	± 0.10
Battery life (hours) (typical)	50	55
Warranty and recommended calibration interval (years)	1	1

### EPM-100 SPECIFICATIONS <sup>a</sup>

Model <sup>e</sup>	EPM-102	EPM-102X
<b>Power meter port</b>	<b>Ge</b>	<b>GeX</b>
Power range <sup>f</sup> (dBm)	10 to -60	26 to -50
Range displayed (dBm)	Down to -65	Down to -50
Number of calibrated wavelengths <sup>g</sup>	6	6
Power uncertainty <sup>h</sup>	±5 % ± 1 nW	±5 % ± 10 nW
Resolution (dB)	0.01 <sup>i</sup>	0.01 <sup>j</sup>
Automatic offset nulling	Yes	Yes
Warm-up time <sup>f</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

#### Notes

- a. Guaranteed unless otherwise specified.
- b. All specifications valid at 23 °C ± 1 °C, with an FC connector.
- c. rms for lasers and FWHM for LEDs; typical values for LEDs.
- d. After 15 minutes warm-up; expressed as ± half the difference between the maximum and minimum values measured during the period, with an APC connector on the power meter.
- e. All specifications valid at 1550 nm and 23 °C ± 1 °C, with an FC connector.
- f. In CW mode, sensitivity defined as 6x rms noise level.
- g. Wavelengths: 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1625 nm.
- h. Traceable to national standards.
- i. From 10 dBm to -50 dBm.
- j. From 26 dBm to -35 dBm.

### GENERAL SPECIFICATIONS

Size (H x W x D)	185 mm x 100 mm x 55 mm	(7 <sup>1</sup> / <sub>4</sub> in x 4 in x 2 <sup>1</sup> / <sub>8</sub> 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, EUI-XX (ELS), connector adapter (FOA-XX) (EPM), three AA batteries, wrist strap, alcohol cleaning pads.

### SAFETY

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001:  
ELS-500: CLASS 1 LASER PRODUCT

## ORDERING INFORMATION

### ELS-100-XX-XX

#### Model

ELS-100-12D = 850/1300 nm LED (62.5/125 mm)  
 ELS-100-23BL = 1310/1550 nm laser (9/125 mm)  
 ELS-100-12D-23BL = 850/1300 nm LED (62.5/125 mm), 1310/1550 nm laser (9/125 mm)

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

#### Connector <sup>a</sup>

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

### EPM-10X-XX

#### Model

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

Example: EPM-102X-FOA-22

#### Connector Adapter <sup>a</sup>

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

#### Notes

- Other connectors and connector adapters available. Consult our website at [www.EXFO.com/accessories](http://www.EXFO.com/accessories) for details.
- Interchangeable connection.

## 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-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

#### Rugged Handheld Solutions

<b>OPTICAL</b>	<b>COPPER ACCESS</b>
- OTDRs	- ADSL/ADSL2+, SHDSL, VDSL test sets
- OLTSs	- VoIP and IPTV test sets
- Power meters	- Ethernet test sets
- Light sources	- POTS test sets
- Talk sets	

#### Platform-Based Solutions

<b>OPTICAL FIBER</b>	<b>DWDM TEST SYSTEMS</b>	<b>TRANSPORT AND DATACOM</b>
- OTDRs	- OSAs	- Next-generation SONET/SDH and OTN testers
- OLTSs	- PMD analyzers	- SONET/DSn (DS0 to OC-192) testers
- ORL meters	- Chromatic dispersion analyzer	- SDH/PDH (64 kbit/s to STM-64) testers
- Variable attenuators		- T1/T3, E1 testers
		- 10/100 Mbit/s and Gigabit Ethernet testers
		- Fibre Channel testers
		- 10 Gigabit Ethernet testers

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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. 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. In addition, 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). Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

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 In case of discrepancy, the Web version takes precedence over any printed literature.