

# FiberBasix 50 handheld testers

SERIES COMPRISING THE ELS-50 LIGHT  
SOURCE AND EPM-50 POWER METER

- Delivering simple, accurate measurement of signal attenuation during fiber-optic cable installation.



## KEY FEATURES

- Easy-to-use interface for error-free testing
- Interchangeable connectors, for first-class flexibility
- Cost-effective, rugged and highly reliable
- Ideal for testing and troubleshooting optical premises networks
- Available as stand-alone units or in all-in-one test kits including all required accessories (adapters, carrying case, etc.)
- Five test kits designed for specific users/testing needs: LAN, outside plant, contractors, FTTH and CATV

## APPLICATIONS

- Link-loss characterization (ELS-50 light source)
- Power measurement (EPM-50 power meter)

## COMPLEMENTARY PRODUCTS



Fiber inspector scope  
FIP-400B (WiFi or USB)



Visual fault locator  
FLS-140

## ☞ Worry-free, simple and good to go ☞

EXFO's FiberBasix 50 series meets your basic day-to-day test requirements while helping you stay within budget. These worry-free, straightforward handheld testers enable accurate measurement of signal attenuation during fiber-optic cable installation. The FiberBasix 50 series includes two highly convenient instruments:

- The ELS-50 light source, which offers up to three wavelengths for singlemode testing and two wavelengths for multimode testing
- The EPM-50 power meter, which offers high accuracy and referencing capabilities

### ELS-50 LIGHT SOURCE: MULTIWAVELENGTH CAPABILITY

EXFO's ELS-50 light source provides excellent stability and high measurement accuracy for up to three singlemode wavelengths (1310, 1490 and 1550 nm) or two multimode wavelengths (850 and 1300 nm). It is the perfect complement to the FiberBasix 50 EPM-50 power meter when it comes to measuring attenuation on fiber-optic links.

### EPM-50 POWER METER: HIGH ACCURACY AND EASY REFERENCING

The EPM-50 power meter provides highly accurate power measurements, as well as reference value setting capabilities. It offers power autonomy of 300 hours, for reliable, long-lasting performance in the field.



ELS-50 SPECIFICATIONS



- 1 Rubber boot protector
- 2 Wrist strap
- 3 Cap protector
- 4 Stand

| SPECIFICATIONS <sup>a</sup>          |                        |                                     |                          |
|--------------------------------------|------------------------|-------------------------------------|--------------------------|
| Model                                | 23BL                   | 235BL                               | 12C                      |
| Central wavelength (nm) <sup>b</sup> | 1310 ± 20<br>1550 ± 20 | 1310 ± 20<br>1490 ± 10<br>1550 ± 20 | 850 ± 25<br>1300 +50/-20 |
| Spectral width (nm) <sup>b, c</sup>  | ≤5                     | ≤5                                  | ≥40/120                  |
| Output power (dBm)                   | ≥-5                    | ≥-5                                 | ≥-24<br>(50/125 μm)      |
| Power stability (dB) <sup>b, d</sup> | ±0.10                  | ±0.10                               | ±0.10                    |
| Battery life (hours) <sup>b</sup>    | 60                     | 60                                  | 45                       |
| Tone generation (Hz)                 | 270, 1 k, 2 k          | 270, 1 k, 2 k                       | 270, 1 k, 2 k            |
| Warranty (year)                      | 1                      | 1                                   | 1                        |

| GENERAL SPECIFICATIONS |                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Size (H x W x D)       | 189 mm x 78 mm x 37 mm (7 <sup>7</sup> / <sub>16</sub> in x 3 <sup>1</sup> / <sub>16</sub> in x 1 <sup>7</sup> / <sub>16</sub> in) |
| Weight                 | 0.4 kg (0.9 lb)                                                                                                                    |
| Temperature            | operating -10 °C to 50 °C (14 °F to 122 °F)<br>storage -40 °C to 70 °C (-40 °F to 158 °F)                                          |
| Relative humidity      | 0 % to 95 % non-condensing                                                                                                         |
| Power supply           | 3 AA alkaline batteries                                                                                                            |

| STANDARD ACCESSORIES                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soft pouch, LSA-89 FC connector adapter, quick reference sticker in five languages, certificate of compliance, three AA batteries, rubber boot protector |

| OPTIONAL ACCESSORIES                                        |
|-------------------------------------------------------------|
| LSA-89 (FC connector adapter for ELS-50 light source)       |
| LSA-90 (ST connector adapter for ELS-50 light source)       |
| LSA-91 (SC connector adapter for ELS-50 light source)       |
| Manual (user guide)                                         |
| GP-10-081 (soft pouch)                                      |
| GP-2124 (rubber protective boot)                            |
| GP-2131 (pack of 10 replacement ceramic sleeves for ELS-50) |



a. All specifications valid at 23 °C ± 3 °C, with an FC/UPC connector.  
b. Typical.  
c. Rms for lasers and -3 dB width for LEDs.  
d. After 15 minutes warmup; expressed as ± half the difference between the maximum and minimum values measured over 8 hours.

EPM-50 SPECIFICATIONS



- 1 Rubber boot protector
- 2 Wrist strap
- 3 Cap protector
- 4 Stand
- 5 Soft pouch
- 6 Connector adapter
- 7 Carrying case (supplied with any all-in-one test kit)

| SPECIFICATIONS <sup>a</sup>                   |               |               |
|-----------------------------------------------|---------------|---------------|
| Model                                         | EPM-53        | EPM-53X       |
| Power meter port                              | InGaAs        | InGaAsX       |
| Power range (dBm) <sup>b</sup>                | 10 to -60     | 26 to -50     |
| Number of calibrated wavelengths <sup>c</sup> | 5             | 5             |
| Power uncertainty <sup>d</sup>                | ±5 %          | ±5 %          |
| Resolution (dB)                               | 0.01          | 0.01          |
| Display units                                 | dB/dBm/W      | dB/dBm/W      |
| Tone detection (Hz)                           | 270, 1 k, 2 k | 270, 1 k, 2 k |
| Battery life (hours) <sup>d</sup>             | >300          | >300          |
| Warranty (year)                               | 1             | 1             |

| GENERAL SPECIFICATIONS |                                                                                                                                    |                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Size (H x W x D)       | 189 mm x 78 mm x 37 mm (7 <sup>7</sup> / <sub>16</sub> in x 3 <sup>1</sup> / <sub>16</sub> in x 1 <sup>7</sup> / <sub>16</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                                                                                                         |                                    |
| Power supply           | 3 AA alkaline batteries                                                                                                            |                                    |

| STANDARD ACCESSORIES                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Soft pouch, PMA-22 FC connector adapter, quick reference sticker in five languages, certificate of calibration, certificate of compliance, three AA batteries |  |

| OPTIONAL ACCESSORIES                                 |  |
|------------------------------------------------------|--|
| PMA-22 (FC connector adapter for EPM-50 power meter) |  |
| PMA-32 (ST connector adapter for EPM-50 power meter) |  |
| PMA-54 (SC connector adapter for EPM-50 power meter) |  |
| Manual (user guide)                                  |  |
| GP-10-081 (soft pouch)                               |  |
| GP-2124 (rubber boot)                                |  |

a. All specifications valid at 23 °C ± 3 °C, with an FC/UPC connector.  
b. In CW mode.  
c. Wavelengths: 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm.  
d. Typical.



## ORDERING INFORMATION

## ELS-50-XX-LSA-89-RB

## Model ■

ELS-50-23BL = 1310/1550 nm laser (9/125 µm)  
 ELS-50-235BL = 1310/1490/1550 nm laser (9/125 µm)  
 ELS-50-12C = 850/1300 nm LED (50/125 µm)

■ RB = With rubber boot protector  
 ■ LSA-89 = FC connector adapter for light source

Example: ELS-50-12C-LSA-89-RB

## EPM-XX-PMA-22-RB

## Model ■

EPM-53 = InGaAs detector  
 EPM-53X = High-power InGaAs detector

■ RB = With rubber boot protector  
 ■ PMA-22 = FC connector adapter for power meter

Example: EPM-53X-PMA-22-RB

## TEST KIT ORDERING INFORMATION

## FBK-51 LAN test kit

- EPM-53-RB power meter, InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot, soft pouch
- ELS-50-12C-RB light source, 850/1300 nm LED (one port), FC adapter, rubber boot, soft pouch
- Carrying case (GP-10-061)
- Extra power meter adapters: one PMA-54 (SC) and one PMA-32 (ST)
- Extra light source adapters: one LSA-91 (SC) and one LSA-90 (ST)

## FBK-52 outside plant test kit

- EPM-53-RB power meter, InGaAs detector, Universal 2.5 mm push-pull adapter and FC adapter, rubber boot, soft pouch
- ELS-50-23BL-RB light source, 1310/1550 nm laser (one port), FC adapter, rubber boot, soft pouch
- Carrying case (GP-10-061)
- Extra power meter adapters: one PMA-54 (SC) and one PMA-32 (ST)
- Extra light source adapters: one LSA-91 (SC) and one LSA-90 (ST)

## FBK-53 contractor kit

- EPM-53-RB power meter, InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot, soft pouch
- ELS-50-12C-RB light source, 850/1300 nm LED (one port), FC adapter, rubber boot
- ELS-50-23BL-RB light source, 1310/1550 nm laser (one port), FC adapter, rubber boot, soft pouch
- Carrying case (GP-10-061)
- Extra power meter adapters: one PMA-54 (SC) and one PMA-32 (ST)
- Extra light source adapters: two LSA-91 (SC) and two LSA-90 (ST)

## FBK-54 FTTH test kit

- EPM-53X-RB power meter, High-power InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot, soft pouch
- ELS-50-235BL-RB light source, 1310/1490/1550 nm laser (one port), FC adapter, rubber boot, soft pouch
- Carrying case (GP-10-061)
- Extra power meter adapters: one PMA-54 (SC) and one PMA-32 (ST)
- Extra light source adapters: one LSA-91 (SC) and one LSA-90 (ST)

## FBK-55 CATV test kit

- EPM-53X-RB power meter, high-power InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot, soft pouch
- ELS-50-23BL-RB light source, 1310/1550 nm laser (1 port), FC adapter, rubber boot, soft pouch
- Carrying case (GP-10-061)
- Extra power meter adapters: one PMA-54 (SC) and one PMA-32 (ST)
- Extra light source adapters: one LSA-91 (SC) and one LSA-90 (ST)

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