

# FLS-600

NETWORK TESTING—OPTICAL



- Up to three singlemode wavelengths (1310, 1550, and 1490 or 1625 nm) on a single port, or four wavelengths (850/1300 nm and 1310/1550 nm) on two ports
- Three-year warranty for low cost of ownership
- Error-free, time-saving test features
- Controlled multimode launching output
- Compliant with the IEC 61280-4-1 standard—a first in the industry\*

Part of EXFO's 600 handheld series, the FLS-600 Light Source is designed for first-class versatility. Choose among laser, LED models, as well as various wavelength options. What's more, you can save time by building a list of your "favorite" wavelengths and only sweeping through these wavelengths when testing.

## Automatic Wavelength Switching

Using the FLS-600 in Auto-Switching mode allows to automatically toggle between available wavelengths. When using this source with a compatible power meter (FPM/FOT-600), the latter recognizes the wavelength in use and switches to the proper calibration parameter.

## Distant Referencing

Signal encrypting can also give the receiving-end information on the power to be used as reference, helping ensure efficient referencing, even when the two units are far apart.

## FTTx-Ready

EXFO's FLS-600 allows 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.

## Rugged and Versatile

Like all EXFO portable instruments, the FLS-600 is built for ruggedness, perfect for the harshest test conditions. It also features a keypad/LCD backlight, for easy operation in darker environments.

\* Loss measurements performed on 50/125  $\mu$ m multimode fiber using an external conditioner are in compliance with the encircled flux requirements for launch conditions of the IEC 61280-4-1 standard.



**SPECIFICATIONS<sup>a</sup>**

| Model                                       | 12D                      | 23BL                   | 234BL                               | 235BL                               |
|---|--------------------------|------------------------|-------------------------------------|-------------------------------------|
| Central wavelength (nm)                     | 850 ± 25<br>1300 +50/-10 | 1310 ± 20<br>1550 ± 20 | 1310 ± 20<br>1550 ± 20<br>1625 ± 15 | 1310 ± 20<br>1490 ± 10<br>1550 ± 20 |
| Spectral width <sup>b</sup> (nm)            | 50/135                   | ≤5                     | ≤5                                  | ≤5                                  |
| Output power (dBm)                          | ≥-20/≥-20 (62.5/125 μm)  | ≥1/≥1                  | ≥1/≥-3/≥-5                          | ≥1/≥-4.5/≥-3                        |
| Power stability <sup>c</sup> (dB)           | 15 min ±0.05<br>8 h ±0.1 | ±0.03<br>±0.1          | ±0.03<br>±0.1                       | ±0.03<br>±0.1                       |
| Auto-switching                              | Yes                      | Yes                    | Yes                                 | Yes                                 |
| Tone generation                             | 270 Hz, 1 kHz, 2 kHz     | 270 Hz, 1 kHz, 2 kHz   | 270 Hz, 1 kHz, 2 kHz                | 270 Hz, 1 kHz, 2 kHz                |
| Battery life (hours) (typical in Auto mode) | 50                       | 50                     | 50                                  | 50                                  |
| Warranty (years)                            | 3                        | 3                      | 3                                   | 3                                   |

**GENERAL SPECIFICATIONS<sup>a</sup>**

|                   |  |   |
|-------------------|--|---|
| Size (H x W x D)  | 190 mm x 100 mm x 62 mm                              | (7 1/2 in x 4 in x 2 1/2 in)            |
| Weight            | 0.48 kg  | (1.1 lb)                                |
| Temperature       | operating -10 °C to 50 °C<br>storage -40 °C to 70 °C | (14 °F to 122 °F)<br>(-40 °F to 158 °F) |
| Relative humidity | 0 % to 95 % non-condensing                           |   |

**SAFETY**

21 CFR 1040.10 and IEC 60825-1:2007  
CLASS 1M LASER PRODUCT

**STANDARD ACCESSORIES**

User guide, Certificate of Calibration, instrument stickers in six languages, AC adapter/charger, lithium ion battery, shoulder strap, carrying case.

**ORDERING INFORMATION**

**FLS-600-XX-XX**

■ **Model**

FLS-600-12D = 850/1300 nm LED source 62.5/125 μm  
 FLS-600-23BL = 1310/1550 nm laser 9/125 μm  
 FLS-600-234BL = 1310/1550/1625 nm laser 9/125 μm  
 FLS-600-235BL = 1310/1490/1550 nm laser 9/125 μm  
 FLS-600-12D-23BL = 850/1300 nm LED source 62.5/125 μm,  
 1310/1550 nm laser 9/125 μm

■ **Connector\***

EI-EUI-28 = UPC/DIN 47256  
 EI-EUI-76 = UPC/HMS-10/AG  
 EI-EUI-89 = UPC/FC narrow key  
 EI-EUI-90 = UPC/ST  
 EI-EUI-91 = UPC/SC  
 EI-EUI-95 = UPC/E-2000

EA-EUI-28 = APC/DIN 47256<sup>d</sup>  
 EA-EUI-89 = APC/FC narrow key<sup>d</sup>  
 EA-EUI-91 = APC/SC<sup>d</sup>  
 EA-EUI-95 = APC/E-2000<sup>d</sup>

Example: FLS-600-234BL-EI-EUI-89

\* EXFO Universal Interface is protected by US patent 6,612,750.

**NOTES**

- Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.
- rms for FP lasers; and -3 dB width for LEDs (typical values for LEDs).
- After a 15-minute warm-up period, and using an APC connector on the power meter (except for multimode sources, for which a PC connector is used). Expressed as ± half the difference between the maximum and minimum values measured during the period.
- EA-EUI only available for 234BL or 235BL models.

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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.

For the most recent version of this spec sheet, please go to the EXFO website at <http://www.EXFO.com/specs>

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