

# FLS-600

LIGHT SOURCE



Part of EXFO's 600 handheld series, the FLS-600 Light Source is designed for first-class versatility—it offers laser and LED models, as well as various wavelength options.

## KEY FEATURES

Up to three singlemode wavelengths (1310 nm, 1550 nm, and 1490 nm 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

EF Ready: use with external launch mode conditioner for EF-compliant multimode results

## COMPLEMENTARY PRODUCTS



FPM-600  
Power Meter



Encircled Flux (EF) Conditioner  
SPSB-EF-C30



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

### Automatic Wavelength Switching

Using the FLS-600 in Auto-Switching mode allows the unit 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 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 and perfect for the harshest test conditions. It also features a backlit keypad/LCD, for easy operation in darker environments.

## TROUBLESHOOTING OF HIGH-SPEED MULTIMODE NETWORKS WITH ENCIRCLED FLUX (PRELIMINARY)



Whether it's for an expanding enterprise-class business or a large-volume data center, new high-speed data networks built with multimode fibers are running under tighter tolerances than ever before. In case of failure, intelligent and accurate test tools are needed to quickly find and fix the fault.

Multimode fibers are the trickiest links to test because the test results are highly dependent on each device's output conditions. Troubleshooting with a different unit than the construction unit may mislead the technician or result in the inability to find the fault, creating longer network downtimes. For multimode fibers, EXFO recommends using an external launch mode conditioner that is encircled flux (EF) compliant. The encircled flux standard (as recommended in TIA-568 via TIA-526-14-B and IEC 61280-4-1 Ed. 2.0) is a way of controlling the source launch conditions so that Tier-2 troubleshooting can be performed with maximum accuracy and consistency.

The use of an external EF-compliant device\* such as the SPSB-EF-C30 will ensure a fast and easy way to fix faulty networks.

\*The FLS-600 light source is also available with built-in Encircled Flux launch conditions under model FLS-600-NS1548. To get more information about FLS-600-NS1548 or for more detailed information about encircled flux compliance, please read Encircled Flux (EF) test solution specification sheet.

## SPECIFICATIONS<sup>a</sup>

Model	12D	23BL	234BL	235BL
Central wavelength (nm)	850 ± 25 1300 +50/-20	1310 ± 20 1550 ± 20	1310 ± 20 1550 ± 20 1625 ± 15	1310 ± 20 1490 ± 10 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	±0.03	±0.03	±0.03
8 h	±0.1	±0.1	±0.1	±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

### NOTES

- a. Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.
- b. rms for FP lasers; and -3 dB width for LEDs (typical values for LEDs).
- c. 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.



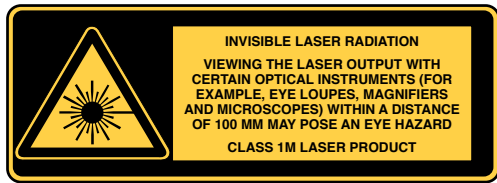
## GENERAL SPECIFICATIONS<sup>a</sup>

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

## STANDARD ACCESSORIES

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

## SAFETY



### NOTE

a. Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.

## ORDERING INFORMATION

### FLS-60X-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  
 EI-EUI-98 = UPC/LC  
 EA-EUI-28 = APC/DIN 47256  
 EA-EUI-89 = APC/FC narrow key  
 EA-EUI-91 = APC/SC  
 EA-EUI-95 = APC/E-2000  
 EA-EUI-98 = APC/LC

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

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

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | info@EXFO.com | [www.EXFO.com](http://www.EXFO.com)

EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to [www.EXFO.com/contact](http://www.EXFO.com/contact).

EXFO is certified ISO 9001 and attests to the quality of these products. 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 [www.EXFO.com/specs](http://www.EXFO.com/specs).

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