SPEC SHEET

FLS-2200

BROADBAND SOURCE

- Compact, rugged and highly reliable—an essential lab testing building block.

KEY FEATURES

- Covers all bands
- Single superluminescent light emitting diode (SLED): 980, 1300, 1485, 1550 and 1610 nm
- Dual SLED: 1300 nm/1550 nm and coarse wavelength-division multiplexing (CWDM) range (1460 to 1620 nm)
- Variable output power
- Optimized for power stability

BROAD SPECTRAL RANGE, IMPRESSIVE POWER

The high-power, SLED-based FLS-2200 broadband source family covers all the bands needed for telecommunications applications. It provides a broader spectral range and more spectral density in a singlemode fiber than a white light source. The highly stable FLS-2200 is ideal for broadband applications, CWDM network testing, and passive optical networks (PON) component manufacturing and testing, as well as fiber-optic sensing and spectroscopy.

Two sources, one box

For CWDM testing, the dual-SLED option, covering the S, C and L bands, enables accurate characterization of fiber links and their passive components, with a very cost-effective test setup. Use the 1300 nm/1550 nm source for dual-window couplers and for PON components.

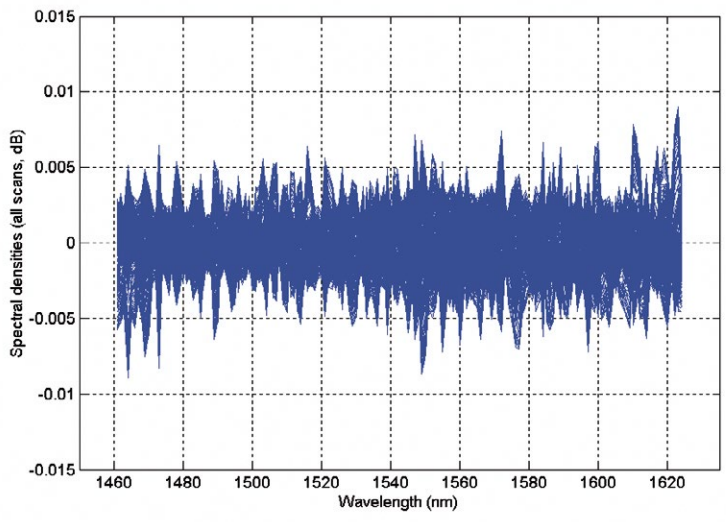
Designed for component testing

EXFO's FLS-2200 offers enough power along the spectrum to measure high-level insertion loss. By combining the FLS-2200 with an optical spectrum analyzer (OSA), you can efficiently qualify your components during development or perform pass/fail testing during production.

High spectral density stability

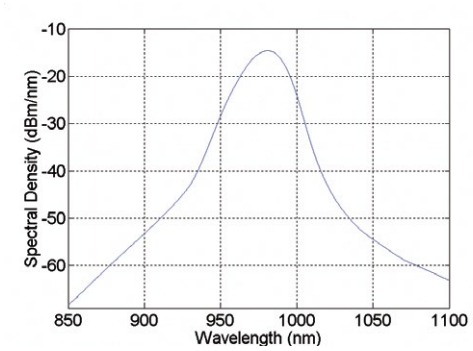
High spectral density stability is essential to ensure that the test setup produces accurate measurements, time and again. The more stable the spectrum, the less often a reference trace has to be acquired. This translates into better productivity.

After a reference trace is acquired with the OSA, it can be subtracted to all subsequent traces. With no device under test (DUT) in the system, the resulting traces, centered around the averaged value, present the typical spectral fluctuations of the source.

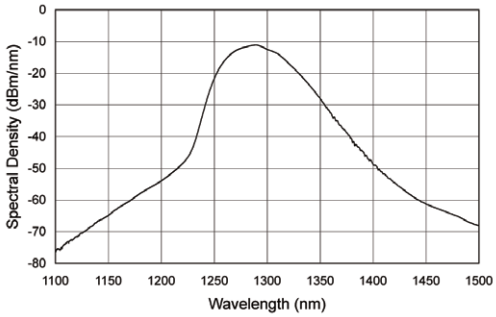


Impressive spectral density stability of the FLS-2200 broadband source (compilation of 30 scans, one per minute).

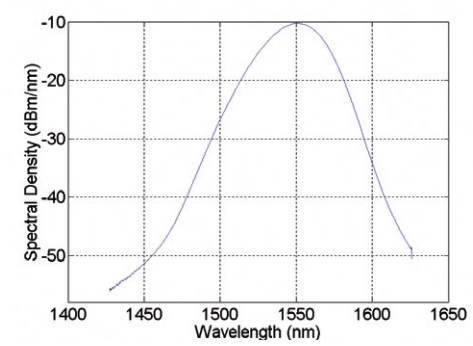
TAKE A LOOK AT THE SPECTRA [a] OF OUR FLS-2200 MODELS!



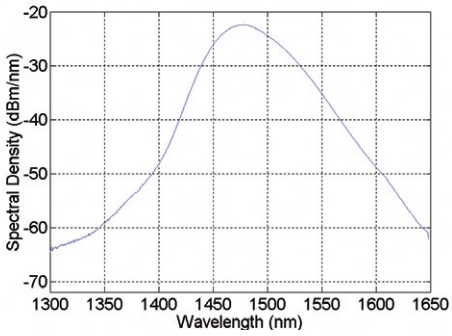
FLS-2200-06-P1



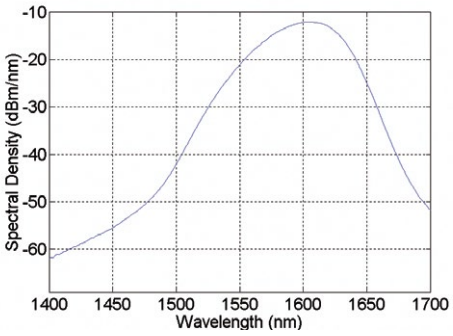
FLS-2200-02-P1-IS



FLS-2200-03-P1-IS



FLS-2200-05-P1-IS



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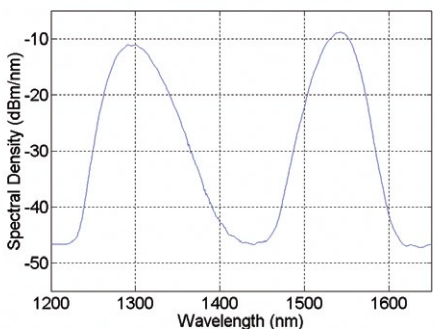
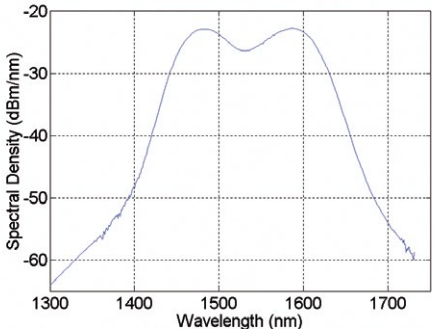


FLS-2200-23-P1-IS



FLS-2200-SCL-P1-IS

a. These are typical spectra.

SPECIFICATIONS [a]

Single SLED		FLS-2200-06 [c]	FLS-2200-02	FLS-2200-05	FLS-2200-03	FLS-2200-04
Center wavelength (nm)		980 ± 10	1300 ± 20	1485 ± 15	1550 ± 20	1610 ± 15
3 dB spectral width (nm)		≥ 20 (25 typ.)	≥ 40 (45 typ.)	≥ 50 (60 typ.)	≥ 50 (56 typ.)	≥ 50 (55 typ.)
Output power (dBm)		0	4	−3.5	5	5
Minimum spectral density (dBm/nm) [b]		−18 (970-990 nm)	−25 (1260-1360 nm)	−27 (1450-1510 nm)	−27 (1510-1590 nm)	−20 (1565-1640 nm)
Peak spectral density (dBm/nm) [b]		−13	−12	−21	−9	−10
Total power stability (dB) [d]	15 min 8 hours	± 0.01 ± 0.01	± 0.01 ± 0.01	± 0.01 ± 0.01	± 0.01 ± 0.01	± 0.01 ± 0.01
Spectral density stability (dB) [b, d, e]	15 min 8 hours	± 0.01 ± 0.015	± 0.01 ± 0.015	± 0.01 ± 0.015	± 0.01 ± 0.015	± 0.01 ± 0.015
Ripple (dB) [e, g]		0.3	0.3	0.3	0.3	0.3
Fiber type (µm)		5/125	9/125	9/125	9/125	9/125

Dual SLED		FLS-2200-23	FLS-2200-SCL
Center wavelength (nm)		1300 ± 20/1550 ± 20	1485 ± 15/1570 ± 10
Output power (dBm) [f]		≥ 8	≥ −3.5
Minimum spectral density (dBm/nm) [b]		−28 (1260-1360, 1510-1590 nm)	−29 (1460-1625 nm)
Peak spectral density (dBm/nm) [b]		−10	−23
Total power stability (dB) [d]	15 min 8 hours	± 0.01 ± 0.015	± 0.01 ± 0.015
Spectral density stability (dB) [b, d, e]	15 min 8 hours	± 0.01 ± 0.01	± 0.01 ± 0.01
Ripple (dB) [e, g]		0.3	0.3
Fiber type (µm)		9/125	9/125

a. Specifications are valid at 23 °C ± 2 °C, at maximum power after warmup time (30 minutes), with isolator, for return loss of ≥ 30 dB.

b. Typical value.

c. Specifications for the 980 nm source are set without an isolator.

d. Stability is expressed as ± half the difference between the maximum and minimum values measured in the period.

e. Measured in a 0.1 nm resolution bandwidth.

f. Output power of dual SLED source is the sum of the power output of each individual SLED.

g. The ripple is specified over a spectral range limited to 3 dB below the peak power density.

GENERAL SPECIFICATIONS

Size (H x W x D)		117 mm x 222 mm x 333 mm (4 5/8 in x 8 ¾ in x 13 1/8 in)
Weight [b]		2.7 kg (5.9 lb)
Temperature	operating storage	0 °C to 40 °C (32 °F to 104 °F) −40 °C to 70 °C (−40 °F to 158 °F)
Relative humidity		0 % to 80 % non-condensing

SAFETY

IEC 60825-1:A2: 2001

Class 1M LED Product

ORDERING INFORMATION

FLS-2200-XX-P1-IS-XX

Wavelength
02 = 1300 nm
03 = 1550 nm
04 = 1610 nm
05 = 1485 nm
23 = 1300/1550 nm dual-window SLEDs
SCL = 1460 nm to 1620 nm dual SLED

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

Example: FLS-2200-03-P1-IS-EA-EUI-89

FLS-2200-XX-P1-00-XX

Wavelength
06 = 980 nm

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

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