

FLS-2100

OPTICAL LIGHT SOURCE



Exceptional selection of single- or dual-wavelength, singlemode and multimode light-emitting diodes (LEDs) and Fabry-Perot lasers, perfect for IL and ORL testing of passive components (singlemode and multimode)

KEY FEATURES

Single- or dual-wavelength LED or Fabry-Perot laser

10 dB variable output power

Excellent stability

Variable output power over a 10 dB range (6 dB range for LED sources)

COMPLEMENTARY PRODUCTS



Optical Light Source
IQS-2150



High-Performance
Power Meter
IQS-1700



Variable Attenuator
IQS-3150

EXFO

HIGH-PERFORMANCE OPTICAL LIGHT SOURCES

Advanced testing environments require a high-performance, stable light source to guarantee accurate and reliable test results. Designed for optimal stability, the benchtop FLS-2100 offer this and more. Steady drive circuitry maximizes optical output power and maintains excellent stability, while precision optical components ensure low-loss, narrow-beam, truly efficient output coupling.

The FLS-2100 Optical Light Source features variable output power over a 10 dB range (6 dB range for LED sources) to simulate power losses with precision. Fine-tune this output power in precise increments of 0.1 dB. Fabry-Perot laser sources are stabilized by thermo-electric coolers that regulate the submount's internal temperature. Both LED and laser versions come in various wavelengths to fit all singlemode and multimode applications.



APPLICATIONS:

- › Linearity measurements of variable attenuators and power meters
- › Insertion loss measurements
- › Return loss measurements
- › Spectral attenuation measurements in fibers
- › Component characterization
- › Splicing test stations
- › Stability measurements
- › Polarization-dependent loss measurements

AVAILABLE CONFIGURATIONS

Multimode LED sources

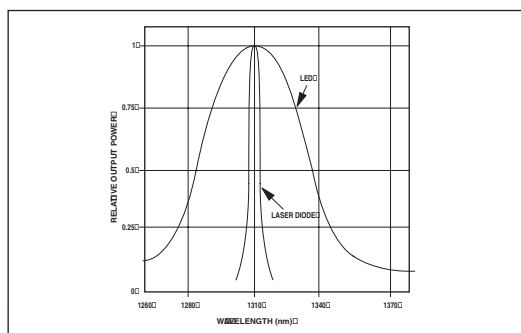
- › 850 nm LED
- › 850/1300 nm dual LED

Temperature-controlled lasers

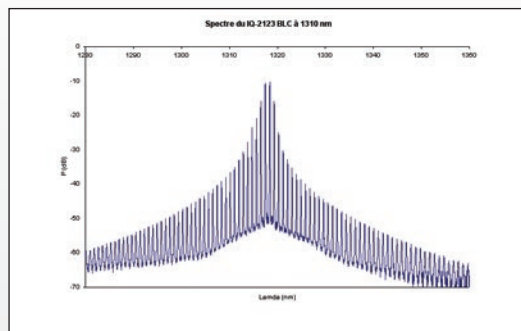
- › 1310/1550 nm dual Fabry-Perot laser
- › 1550/1625 nm dual Fabry-Perot laser
- › 1310/1550 nm dual Fabry-Perot laser (ORL)
- › 1550/1625 nm dual Fabry-Perot laser (ORL)

Excellent stability

- › ± 0.003 dB to ± 0.005 short-term stability (15 minutes)
- › ± 0.03 dB to ± 0.05 long-term stability (8 hours)
- › TEC lasers for guaranteed stability
- › ORL sources include an optical isolator



The difference between LED and laser spectral widths



Typical Fabry-Perot spectral distribution

SPECIFICATIONS

TEC Fabry-Perot Laser Specifications ^a

Model	23BLC	34BLC
Wavelength ^b (nm)	1310 +20/-30 1550 ± 20	1550 ± 20 1625 ± 15
Spectral width (rms) ^c (nm)	2/5	5/10
Output power (dBm)	≥ -1	≥ -4
Stability ^d (dB) (D/2)		
15 min	± 0.005	± 0.01
8 h	± 0.05	± 0.05
Temperature sensitivity ^e (dB)	± 0.25	± 0.25
Modulation	270 Hz, 1 kHz, 2 kHz (50 % duty cycle)	
Model	23ORL	34ORL
Wavelength ^b (nm)	1310 +20/-30 1550 ± 20	1550 ± 20 1625 ± 15
Spectral width (rms) ^c (nm)	2/5	5/10
Output power (dBm)	≥ -3	≥ -6
Stability ^d (dB) (D/2)		
15 min	± 0.01	± 0.01
8 h	± 0.05	± 0.03
Temperature sensitivity ^e (dB)	± 0.25	± 0.25

SURFACE-EMITTING LED SPECIFICATIONS ^a

Model	01C/D	12C	12D
Wavelength ^b (nm)	850 ± 25	850 ± 25 1300 +45/-60	850 ± 25 1300 +45/-60
Spectral width (FWHM) ^{f, g} (nm)	50	50/145	50/145
Output power (dBm)	≥ -17/≥ -14	≥ -18/-22	≥ -15/-18
Stability ^d (dB) (D/2)			
15 min	± 0.003	± 0.005	± 0.005
8 h	± 0.03	± 0.05	± 0.05
Temperature sensitivity ^e (dB)	± 0.4	± 0.4	± 0.4
Modulation	270 Hz, 1 kHz, 2 kHz (50 % duty cycle)		

Notes

- All specifications are applicable to a 2 m fiber output (specified type) with FC/UPC (singlemode) and FC/PC (multimode) connectors, without any attenuation applied.
- Valid over the operating temperature range.
- rms = root mean square. Spectral width is a typical value.
- Valid after a 1-hour warmup period at a constant temperature within the operating range. A 30-minute warmup period is needed if the module is stored beforehand at the same temperature. The stability is expressed as ± half the difference between the maximum and minimum values measured during the period.
- For a temperature variation between 0 °C to 40 °C.
- FWHM = full width at half maximum.
- Typical value.

FLS-2100 GENERAL SPECIFICATIONS

Size (H x W x D)	117 mm x 222 mm x 333 mm	(4 5/8 in x 8 3/4 in x 13 1/8 in)
Weight	1.2 kg	(2.6 lb)
Temperature		
Operating	0 °C to 40 °C	(32 °F to 104 °F)
Storage	-35 °C to 70 °C	(-31 °F to 158 °F)
Relative humidity	0 % to 80 % non-condensing	

INSTRUMENT DRIVERS

LabVIEW™ drivers and SCPI commands

REMOTE CONTROL

GPIB (IEEE-488.1, IEEE-488.2) and RS-232.

SAFETY

GPIB (IEEE-488.1, IEEE-488.2) and RS-232.

STANDARD ACCESSORIES

User guide, Certificate of Compliance and AC power cord.

ORDERING INFORMATION

FLS-21XXXX-XX

Source code

- 01C = 850 nm LED, 50/125 µm fiber
- 01D = 850 nm LED, 62.5/125 µm fiber
- 12C = 850/1300 nm dual LED, 50/125 µm fiber
- 12D = 850/1300 nm dual LED, 62.5/125 µm fiber
- 23BLC = 1310/1550 nm TEC laser
- 34BLC = 1550/1625 nm TEC laser
- 23ORL = 1310/1550 nm TEC laser for ORL measurements
- 34ORL = 1550/1625 nm TEC laser for ORL measurements

Connector or universal interface code

- 50 = FC/PC (multimode sources only)
- 58 = FC/APC narrow key
- 74 = ST/PC (multimode sources only)
- 89 = FC/UPC
- 90 = ST/UPC
- 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

Fiber code

- B = 9/125 µm fiber
- C = 50/125 µm fiber
- D = 62.5/125 µm fiber

Example: FLS-2103BLC-EI-EUI-89

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