

FTBx-2150

OPTICAL LIGHT SOURCE



- Exceptional selection of single- or multi-wavelength, multimode light-emitting diodes (LEDs) and singlemode distributed feedback (DFB) lasers, perfect for IL and ORL testing, as well as FTTx component verification.

KEY FEATURES

Single-, dual- or multi-wavelength LEDs or IL/ORL optimized DFB lasers

Individual output port for DFB lasers

Combines two sources on a single output for LED

Continuous-wave or modulated output power

Variable output power over a 9 dB range for singlemode fiber

RELATED PRODUCTS



Optical switch
FTBx-9150



Power meter
FTBx-1750



Variable attenuator
FTBx-3500



Platform
LTB-8

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 modular FTBx-2150 offers 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 FTBx-2150 optical light source features variable output power over range of 9 dB for singlemode with power level setting resolution of 0.1 dB. FTBx-2150 module must be inserted inside an LTB-8 platform to operate.

APPLICATIONS

- Insertion loss measurements
- Return loss measurements
- Spectral attenuation measurements in fibers
- FTTx component characterization
- Splicing test stations
- Stability measurements
- Polarization-dependent loss measurements

ENCIRCLED FLUX COMPLIANCE

Using the FTBx-2150-0012C-1 (50 μm output) with EXFO's 50 μm and 62.5 μm output mode conditioner will guarantee Encircled-Flux compliance as per IEC-61280-4-1 Ed.2.

Compatible part numbers:

- FTBx-2150-0012C-1-EI-EUI-89 with MC-FC-50-N
- FTBx-2150-0012C-1-EI-EUI-91 with MC-SC-50-N
- FTBx-2150-0012C-1-EI-EUI-91 with MC-SC-LC-50-N
- FTBx-2150-0012C-1-EI-EUI-89 with MC-FC-62-N
- FTBx-2150-0012C-1-EI-EUI-91 with MC-SC-62-N
- FTBx-2150-0012C-1-EI-EUI-91 with MC-SC-LC-62-N

ORL MEASUREMENTS

Since the FTBx-2150 singlemode light sources have been designed using DFB lasers which have narrow spectral width, ORL optimized modulation needs to be used when performing ORL measurements.

SPECIFICATIONS

SPECIFICATIONS ^a						
IL/ORL optimized DFBs		0023B-2	0234B-3	0236B-3	2346B-4	
	Wavelength (nm)	1310 ± 6.5 1550 ± 6.5	1310 ± 6.5 1550 ± 6.5 1625 ± 10	1310 ± 6.5 1490 ± 6.5 1550 ± 6.5	1310 ± 6.5 1490 ± 6.5 1550 ± 6.5 1625 ± 10	
	Spectral width (nm)	< 1	< 1	< 1	< 1	
	Output power (dBm) ^b	≥ 1	≥ 1	≥ 1	≥ 1	
	Stability (dB) ^{b,c}	15 minutes	±0.07	±0.07	±0.07	±0.07
	Attenuation range (dB)	> 9	> 9	> 9	> 9	
	Modulation	None, 270 Hz, 330 Hz, 1 kHz, 2 kHz, ORL optimized				
LED light sources		0012C-1				
	Wavelength (nm)	850 ± 25 1300 -20/+30				
	Spectral width (nm)	850 nm 1300 nm	30 to 60 100 to 140			
	Output power (dBm) ^b	≥ -25.0				
	Stability (dB) ^{b,c}	15 minutes	±0.06			
	Modulation	None, 270 Hz, 330 Hz, 1 kHz, 2 kHz				
	Launching conditions ^d	Controlled launch condition to be typically within IEC 61280-4-1Ed.2 Encircled-Flux template limits				

GENERAL SPECIFICATIONS

Size (H x W x D)	25 mm x 159 mm x 175 mm (1 in x 6 1/4 in x 6 7/8 in)	
Weight	0.35 kg (0.77 lb)	
Temperature	Operating	0 °C to 40 °C (32 °F to 104 °F)
	Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Relative humidity	0 % to 80 % non-condensing	
LTB-8 operation	Windows 10	
Instrument drivers	IVI Drivers, LabVIEW™ drivers and SCPI commands	
Remote control (automation)	With LTB-8: GPIB (IEEE-488.1, IEEE-488.2), Ethernet and RS-232	

a. Guaranteed unless otherwise specified. Specifications valid at 23 °C ± 1 °C at maximum power after 30-minute warm-up period with a FC/APC connector (except for multimode sources, for which a PC connector is used).

b. Only when source modulation is set to none (CW).

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

d. At output connector for 850 nm.

e. For the FTBx-2150-0012C-1 model, storage temperature is -30 °C to 70 °C (-22 °F to 158 °F).

LASER SAFETY



ACCESSORIES	
MC-FC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm FC connector at both ends of mode conditioner
MC-FC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm FC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-FC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm FC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon serial number
MC-SC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at both ends of mode conditioner
MC-SC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-SC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon serial number
MC-SC-LC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner
MC-SC-LC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-SC-LC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner Certificate of conformance and test report, attached to ModCon serial number
MC-FC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm FC connector at both ends of mode conditioner
MC-FC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm FC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-FC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm FC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon serial number
MC-SC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at both ends of mode conditioner
MC-SC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-SC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon serial number
MC-SC-LC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner
MC-SC-LC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner Certificate of conformance, attached to ModCon serial number
MC-SC-LC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 μm SC connector at input of mode conditioner & LC connector at output of mode conditioner Certificate of conformance and test report, attached to ModCon serial number

ORDERING INFORMATION

FTBx-2150-XX-XX

Model

- 0012C-1 = Single output LED source, 850/1300 nm, 50/125 µm fiber type, multimode model
- 0023B-2 = Dual output IL/ORL optimized DFB, 1310/1550 nm, 9/125 µm fiber type, one wavelength per output
- 0234B-3 = Triple output IL/ORL optimized DFB, 1310/1550/1625 nm, 9/125 µm fiber type, one wavelength per output
- 0236B-3 = Triple output IL/ORL optimized DFB, 1310/1490/1550 nm, 9/125 µm fiber type, one wavelength per output
- 2346B-4 = Quad output IL/ORL optimized DFB, 1310/1490/1550/1625 nm, 9/125 µm fiber type, one wavelength per output

Other wavelengths and configurations may be available upon request. Please call factory.

Example: FTBx-2150-0023B-2-EI-EUI-89

Connector

- EI-EUI-28 = UPC/DIN 47256
- 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^a
- EA-EUI-89 = APC/FC narrow key^a
- EA-EUI-91 = APC/SC^a
- EA-EUI-95 = APC/E-2000^a
- EA-EUI-98 = APC/LC^a

a. Available for singlemode models only.

EXFO headquarters T +1 418 683-0211 **Toll-free** +1 800 663-3936 (USA and Canada)

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

For the most recent patent marking information, please visit www.EXFO.com/patent. 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. **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 www.EXFO.com/specs.

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