FTBx-2850

µITLA TUNABLE LIGHT SOURCE

Modular, continuous wave (CW), tunable laser with a high-power output, narrow linewidth and high-resolution tunability for coherent/OFDM transmission and WDM network emulation.

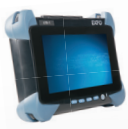
SPEC SHEET

KEY FEATURES AND BENEFITS

- Up to 32 lasers in one LTB-8 platform
- Narrow linewidth of less than 100 kHz
- 1 pm tuning resolution
- Up to 15 dBm of output power
- Remote PC control via VXI-11 (Ethernet)

RELATED PRODUCT

Rackmount platform
LTB-8



Benchtop optical kit
LTK-1

INTEGRATED TUNABLE LASER ASSEMBLY

The FTBx-2850 is a modular, continuous wave (CW), tunable laser with a high-power output, narrow 100 kHz linewidth and 1 pm resolution tunability over the C or L bands. This laser is a cost-effective and versatile solution for various applications, including coherent/OFDM transmission and WDM network emulation.

The LTB-8 rackmount platform can host FTBx-2850 modules and operate them using a dedicated software. Other FTBx modules from EXFO's optical family of products (e.g., FTBx-3500 variable attenuator, FTBx-1750 high-performance power meter, . . .) are handled using ToolBox software, which is not installed on the dedicated LTB-8 platform.

Up to eight FTBx-2850 modules can be inserted into an LTB-8 platform, for a total of 32 lasers. Multiple LTB-8 platforms can be cascaded and individually controlled.

EASY-TO-USE SOFTWARE

The FTBx-2850 light sources are locally controlled using software. Using the software application, operators can easily control multiple lasers and its graphical interface allows for fast and easy access to the system status and control of lasers.

Users can control each laser individually, or control multiple lasers to create tilt over a wavelength range and automatically spread the lasers over the entire C band for example.

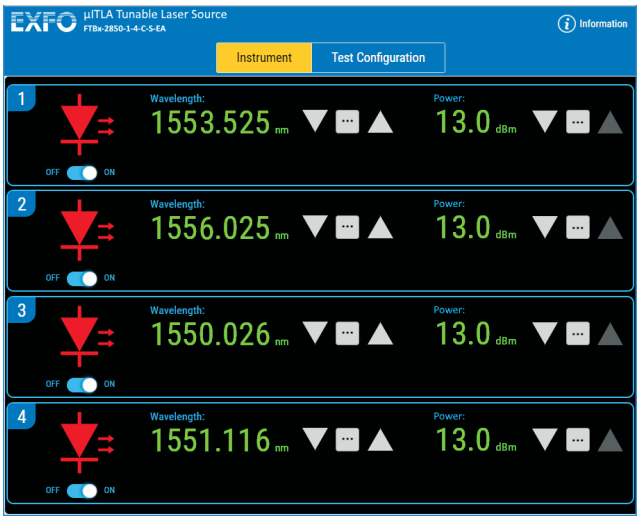


Figure 1. Unit view

SPECIFICATIONS [a]

Wavelength tuning	
C band	
Operating wavelength range	1527.605 nm – 1568.772 nm
Operating frequency range	191.100 THz – 196.250 THz
L band	
Operating wavelength range	1568.772 nm – 1611.787 nm
Operating frequency range	186.000 THz – 191.100 THz
Laser type	Thermally tuned external cavity diode laser (ECDL)
Frequency tuning resolution (wavelength)	100 MHz (1 pm) [b]
Tuning time	< 30 s
Spectral characteristics	
Linewidth (FWHM), instantaneous [d]	< 100 kHz
Side-mode suppression ratio	40 dB (55 dB typical)
Frequency uncertainty (wavelength)	± 2.5 GHz (± 22 pm) [b, c]
Frequency stability (wavelength)	± 0.3 GHz (± 3 pm) [b] over 24 hours
Optical power	
Maximum optical output power	S: ≥ 12.5 dBm H: ≥ 15 dBm (C-band only)
Minimum optical output power	S: ≤ 8 dBm H: ≤ 11 dBm (C-band only)
Optical power uncertainty after calibration [e]	± 0.6 dB
Power stability	± 0.1 dB over 24 hours (2 σ)
Output power tuning resolution	0.01 dB
Power flatness, peak-to-peak	0.5 dB over entire wavelength range
Polarization extinction ratio	> 18 dB at the polarization maintained fiber output
Relative intensity noise RIN (for 13 dBm)	–140 dB/Hz (10 MHz – 40 GHz)
Power monitoring	Built-in

GENERAL SPECIFICATIONS

Dimensions (H x W x D)	25 mm X 159 mm X 187 mm (1 in x 6 1/4 in x 7 5/16 in)
Weight [f]	0.5 kg (1.1 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
LTB-8 operation	Windows 10, customized software only compatible with FTBx-2850 modules. ToolBox, EXFO Connect and Multilink are unavailable. Other FTBx modules are not compatible with this LTB-8 software configuration.

Notes

a. Specifications are valid at 23 °C ± 3 °C.
b. Varies slightly according to wavelength.
c. Frequency uncertainty includes frequency linearity.
d. The laser uses a small FM dithering as part of its wavelength-locking mechanism. The instantaneous linewidth is measured with a 1 ms integration time.
e. At maximum output power.
f. Maximum weight for quad lasers; other configurations will be lighter.

LASER SAFETY

ORDERING INFORMATION

FTBx-2850-1-XX-XX-XX-XX

Number of Lasers
2 = 2 lasers
4 = 4 lasers

Wavelength Band
C = C band
L = L band
CL = C&L band [a]

Connector Type
EA-EUI-89 = APC/FC narrow key, polarization maintained fiber output
EI-EUI-89 = UPC/FC narrow key, polarization maintained fiber output
EI-EUI-91 = UPC/SC, polarization maintained fiber output

Output Power
S = Standard (12.5 dBm)
H = High (15 dBm) [b]

Example: FTBx-2850-1-2-C-S-EA-EUI-89

Notes

a. Available for 2 lasers configuration only.

b. Available for C-band models only.

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SPFTBX2850.4AN Printed in Canada 19/11