

# FLS-2800

BENCHTOP ITLA TUNABLE LIGHT SOURCE

100G



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

## KEY FEATURES AND BENEFITS

Narrow linewidth of less than 100 kHz

1 pm tuning resolution

Up to 15 dBm output power

Remote PC control via USB or Ethernet

SPEC SHEET

EXFO

## INTEGRATED TUNABLE LASER ASSEMBLY

The FLS-2800 is a benchtop, 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 offers a cost-effective and versatile solution for various applications, including coherent/orthogonal frequency-division multiplexing (OFDM) transmission and WDM network emulation.

The FLS-2800 is available in single- or dual-laser configurations.

## EASE OF USE

### Local Control

The FLS-2800 is easy to directly control using the knob on the front panel. Each laser is controlled separately, and both wavelength and power can be adjusted quickly and precisely.

### Remote Control

Using the EXFO Tunable Instrument Manager (TIM) application, which is also fully compatible with the IQS-2800, it is possible to control the FLS-2800 remotely via the USB or Ethernet ports at the back of the unit. SCPI commands are also available when automation is required. The EXFO TIM user interface makes it very easy to view the status and control the lasers.

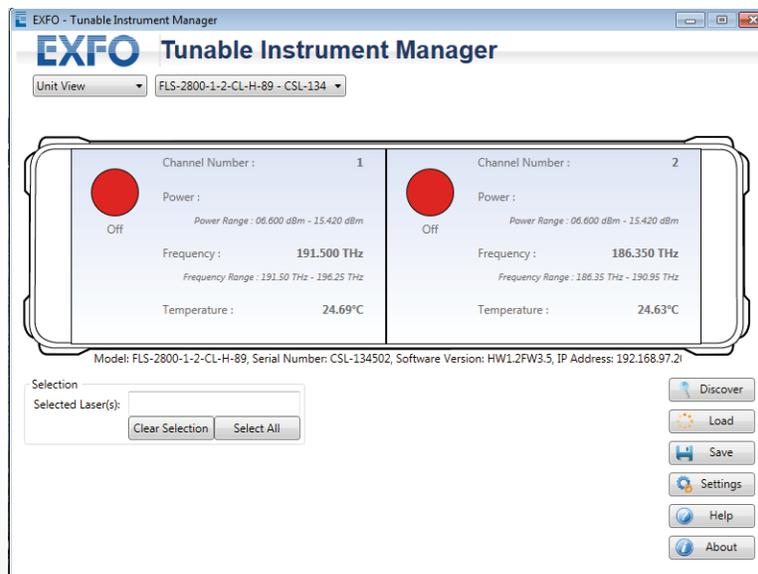


Figure 1. EXFO TIM user interface

SPECIFICATIONS <sup>a</sup>	
<b>Wavelength tuning</b>	
<b>C band</b>	
Operating wavelength range	1527.605 nm - 1567.133 nm
Operating frequency range	191.30 THz - 196.25 THz
<b>L band</b>	
Operating wavelength range	1567.133 nm - 1608.760 nm
Operating frequency range	186.35 THz - 191.30 THz
Laser type	Thermally tuned external cavity diode laser (ECDL)
Frequency tuning resolution (wavelength)	100 MHz (1 pm) <sup>b</sup>
Tuning time	< 25 s
<b>Spectral characteristics</b>	
Linewidth (FWHM), instantaneous <sup>c</sup>	< 100 kHz
Side-mode suppression ratio	40 dB (55 dB typ.)
Frequency linearity (wavelength)	$\pm 1.5$ GHz ( $\pm 13$ pm) <sup>b</sup>
Frequency uncertainty (wavelength)	$\pm 2.5$ GHz ( $\pm 22$ pm) <sup>b</sup>
Frequency stability (wavelength)	$\pm 0.3$ GHz ( $\pm 3$ pm) <sup>b</sup> over 24 hours
<b>Optical power</b>	
Maximum optical output power	S: $\geq 13$ dBm H: $\geq 15$ dBm (C and CC models only)
Minimum optical output power	S: $\leq 7$ dBm H: $\leq 8$ dBm (C and CC models only)
Optical power uncertainty after calibration <sup>d</sup>	$\pm 0.6$ dB
Power stability	$\pm 0.1$ dB over 24 hours (2 $\sigma$ )
Output power tuning resolution	0.01 dB
Polarization extinction ratio	> 20 dB at the PM fiber output
Power flatness, peak-to-peak	0.5 dB over entire wavelength range
Relative intensity noise RIN (for 13 dBm)	-145 dB/Hz (10 MHz - 40 GHz)
Power monitoring	Built-in

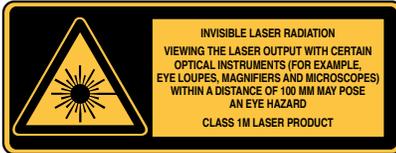
**Notes**

- a. Specifications are valid at 23 °C  $\pm$  3 °C.
- b. Varies slightly according to wavelength.
- c. The laser uses a small FM dithering as part of its wavelength-locking mechanism. The instantaneous linewidth is measured in 1 ms (integration time).
- d. At maximum output power.

## GENERAL SPECIFICATIONS

Dimensions (H x W x D)	115 mm x 220 mm x 332 mm (4 1/2 in x 8 3/4 in x 13 1/16 in)
Weight	4 kg (8.8 lb)
PC interface method	USB 2.0, Ethernet
Minimum PC requirements	Pentium 4, 1 GB RAM, USB 2.0 running Windows 7 or later
Power supply	~100 - 240 V; 50/60 Hz; 60 W
Operating temperature range	5 °C to 45 °C (41 °F to 113 °F)
Storage temperature range	-40 °C to 70 °C (-40 °F to 158 °F)

## LASER SAFETY



## ORDERING INFORMATION

FLS-2800-1-XX-XX-XX-XX

**Number of Lasers** ■

1 = 1 laser  
2 = 2 lasers

**Wavelength Band** ■

C = C band  
L = L band  
CC = Dual laser, C + C band  
CL = Dual laser, C + L band  
LL = Dual laser, L + L band

**Connector Type**

58 = PM-FC/APC  
89 = PM-FC/UPC  
91 = PM-SC/UPC

**Output Power**

S = standard (13 dBm)  
H = high (15 dBm)<sup>a</sup>

Example: FLS-2800-1-2-CL-S-89

**Note**

a. Available for C and CC models only.

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)

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