

OSICS T100

TUNABLE LASER MODULE



Cost effective, external cavity tunable laser modules utilizing a patented T100 cavity. Minimum of 100 nm tuning range with narrow linewidth, high output power and ultra-low optical noise (significantly increases measurement dynamic range). Its kinematic chain has been designed for step-by-step wavelength tuning.

SPEC SHEET

KEY FEATURES

Narrow linewidth

External cavity design

O, E, S, C, L & U bands

≥ 100 nm step-by-step tuning

6 dBm output power

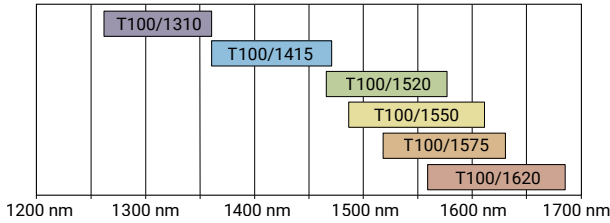
Ultra-low SSE noise

Digital modulation up to 1 MHz

Easy front panel or remote control

OVERVIEW OF AVAILABLE MODELS

The laser models cover the main telecom bands and are designed to be included in the OSICS platform, particularly in a **Full Band Laser** setup.



Specifications apply after 60-minute warm-up and for wavelengths not equal to any water absorption line.

SPECIFICATIONS		T100 1310	T100 1415	T100 1520	T100 1550	T100 1575	T100 1620
Wavelength range (nm)	P= 3 dBm	1260–1360	1360–1470	1465–1575	1490–1610	1520–1630	1560–1680
	P= 6 dBm	1290–1340	1390–1445	1495–1555	1520–1590	1540–1610	1580–1660
Signal to source spontaneous emission ratio ^a		≥ 90 dB (0.1 nm typical)					
Side mode suppression ratio ^a		≥ 45 dB					
Stability ^{b, c}	Wavelength	±0.01 nm/h (±0.01 nm / 24 h typical)					
	Output power	±0.01 dB/h (±0.01 dB / 24 h typical)					
Relative intensity noise ^d		< -140 dB/Hz					
Spectral width (FWHM)		150 kHz typical (coherence control off)					
		> 100 MHz (coherence control on)					
Wavelength setting accuracy ^c		±0.2 nm					
Wavelength setting repeatability		±0.01 nm typical					
Wavelength setting resolution		0.01 nm (0.001 nm option R)					
Tuning speed (step-by-step) ^{e, f}		10 nm/s typical					
Analog modulation		50 Hz to 50 MHz (external)					
Digital modulation		50 Hz to 1 MHz (internal and external)					
Output fiber type		SMF or PMF (option M)					
Output connector		FC/APC narrow key					
Laser safety classification		Class 1M					

Notes

- a. Measured over a 0.1 nm bandwidth ±1nm from the signal.
- b. At constant temperature.
- c. Measured at 0 dBm output power.
- d. RIN within the range 100 MHz–3 GHz measured at +3 dBm output power with RBW = 30 kHz.
- e. With the high resolution option (R) the tuning speed is 2.5 nm/s typical.
- f. The kinematic chain of the laser does not allow for sweep.

LASER SAFETY

This instrument is a Class 1M laser product in compliance with the IEC 60825-1: 2007 and 21 CFR 1040.10, except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007 and IEC 60825-1: 2014



ORDERING INFORMATION

OS-T100-XXXX-XX-58

Wavelength range

1310 = 1260–1360 nm
 1415 = 1360–1470 nm
 1520 = 1465–1575 nm
 1550 = 1490–1610 nm
 1575 = 1520–1630 nm
 1620 = 1560–1680 nm

Connector

58 = FC/APC

Option

00 = SMF28 singlemode fiber with standard wavelength resolution (10 pm)
 M = Polarization maintaining fiber with standard wavelength resolution (10 pm)
 R = SMF28 singlemode fiber with high wavelength resolution (1 pm)
 MR = Polarization maintaining fiber with high wavelength resolution (1 pm)

Example: OS-T100-1310-00-58

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

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