

## Tunable Laser Source



The TLS-101 is a compact tunable laser source for daily test and measurement applications. The laser can be step-tuned across the C-band communication channels with a tuning resolution of 50 GHz in less than 20 ms. The internal wavelength locker assures that the wavelengths or frequencies of the output light are exactly on the ITU grid of the DWDM channels. The light source has three operation modes: fixed wavelength output for the user to select any of the 89 wavelengths (or frequencies) as the output, single-trip wavelength (frequency) scan with a user-set range,

step, and speed, and round-trip frequency scan. Finally, the TLS-101 comes with USB, RS-232, Ethernet, and GPIB communication ports for easy, flexible interface with computers and other instruments. In particular, the Ethernet port allows the instrument to be controlled remotely, from home, office or a hotel room when on travel. The TLS-101 is an ideal source for WDM component testing, sensor interrogation, optical coherence tomography (OCT), PMD and PDL characterization, and for use in general purpose test and measurement applications.

## Specifications:

Wavelength/Frequency Tuning Range <sup>1</sup>	C band, 1528.77 to 1563.86nm, 191.7 to 196.1THz
Number Of ITU Channels	89
Tuning Resolution (Minimum Tuning Step)	50 GHz
Optical Power	20 mW
Power Ripple	0.3 dB typical 0.5 dB max. } over tuning range
Side Mode Suppression Ratio (SMSR)	> 40 dB
Output Linewidth (Lorentz)	< 5 MHz (1MHz typical)
Average Relative Intensity Noise (RIN) (1MHz -1GHz)	< -110 dB/Hz
(1-10GHz)	< -145 dB/Hz
OSNR (0.1nm Bandwidth)	> 50 dB
Polarization Extinction Ratio	> 20 dB
Return Loss	> 40 dB
Locked Frequency Accuracy	-1.8 to 1.8 GHz
Shuttered Output Power	< -30 dBm
Tuning Speed	20 ms
Operating Mode	Single wavelength output; Single trip & round trip wavelength scanning
Operating Temperature	5 ~ 50 °C
Storage Temperature	0 ~ 70 °C
Output Optical Interface	PM, FC/APC connector
Communication Interface	USB, RS-232, Ethernet, GPIB
Electrical Power Supply	100 - 120 VAC, 50 - 60 Hz or 200 - 240 VAC, 50 - 60 Hz
Dimensions	2U 19" half rack width 14" (L) x 8.5" (W) x 3.5" (H)

Note:

1. Contact General Photonics for availability of L-band or other tunable lasers.

## Ordering Information:

TLS – 101

Note: Please specify power supply when ordering.

## Features:

- Fast tuning speed (20 ms)
- High output power (20 mW)
- ITU grid locking
- Ethernet interface for remote control
- GPIB, USB, and RS-232 interfaces for flexibility

## Applications:

- WDM component testing and QA
- Fiber sensors
- PMD and PDL measurement
- Test & measurement
- Optical coherence tomography (OCT)
- R&D

## Accessories:

NoTail™ Coupler	p. 72
NoTail™ PM coupler	p. 73
NoTail™ Isolator	p. 79
NoTail™ Polarizer	p. 78
NoTail™ Circulator	p. 81
NoTail™ PBC/S	p. 74
NoTail™ Faraday Mirror	p. 76

