

## Tunable Laser Source

### TLI1550 Series



#### Key Features

- **Up to 40 channels at 100 GHz spacing or up to 80 channels at 50GHz spacing**
- **C- or L-band**
- **Self-contained control electronics**
- **Build-in control PC with touch screen**
- **Control software included**

#### Applications

- **TOSA evaluation**
- **Tunable laser source**
- **Test and measurement**
- **Other laboratory applications**

Widely wavelength tunable semiconductor lasers are key components for next-generation optical networks. Conventional tunable lasers require complex fabrication processes such as non-uniform gratings and multiple epitaxial growths, and need multiple electrodes with complex control algorithms for wavelength tuning. As the dense wavelength division multiplexing (DWDM) technology extends towards access and data center networks, the cost reduction and operational simplicity become more and more important.

Lightip has developed a simple and compact tunable laser based on patented proprietary technologies. It consists of a half-wave coupled V-cavity laser with only three electrodes: one for gain and direct modulation, one for channel selection corresponding to the ITU grid, and the third for fine tuning when needed. The laser structure does not involve any grating or epitaxial regrowth, and has a size of only about  $500\mu\text{m} \times 300\mu\text{m}$ . The advantages of compactness, fabrication simplicity and easy wavelength control offer cost-effective tunable laser solutions for many applications in access and data center networks, and beyond.

The TLI1550 series tunable laser source is designed for laboratory tests and measurements. It includes a controller for the laser currents and temperature, with a complete portable touch-screen PC. The optical output has a FC/APC connector type. It can provide up to 40 channels at 100GHz spacing or 80 channels at 50GHz spacing in C- or L- band. Quasi-continuous tuning is also available.

## Specifications

Parameters	Min.	Typ.	Max.	Unit
Optical Output Power	1 - 5			mW
Operating Temperature	10	25	40	°C
Wavelength	C- or L-band			-
Channel Spacing (GHz)	50 or 100			GHz
Number of Channels	16, 32, 40 @100GHz, or 32, 64, 80@50GHz			-
Side Mode Suppression Ratio	35	38 - 40	-	dB
Optical Isolation	25	-	-	dB
Relative Intensity Noise	-	-	-135	dB/Hz
Total Power Consumption	-	40	75	W
Dimensions	300x255x160 (11.8x10x6.3) WxDxH			mm (in.)
Weight	2.9 (6.5)			kg (lbs)
Electrical Input	100~240V, 50/60Hz AC			-

\* Product specifications are subject to change without notice.