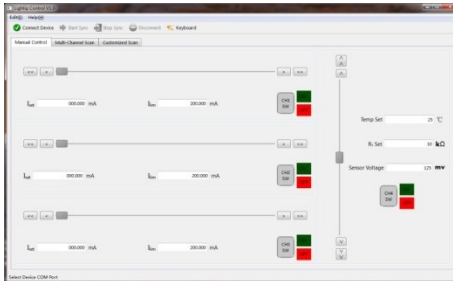


Tunable Laser TL1550 Series



Key Features

- **C- or L-band**
- **Self-contained control electronics**
- **USB interface**
- **PC based control software**

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 TL1550 series laser module is designed for evaluation of TLDX155 series TOSA. It includes a microprocessor controller for the laser currents and temperature with an USB interface for PC communication. The optical output has a FC/APC connector type. The product also includes a 100~240V 50/60 Hz AC adaptor.

This device can also be used as a tunable laser source for test and measurement, and other laboratory applications.

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) | 100 | | | GHz |
| Number of Channels | 8, 16, 32, 40 | | | - |
| Side Mode Suppression Ratio | 35 | 38 - 40 | - | dB |
| Optical Isolation | 25 | - | - | dB |
| Relative Intensity Noise | - | - | -135 | dB/Hz |
| Total Power Consumption | - | 3 | 10 | W |
| Dimensions | 92 x 150 x 40 (3.6x5.9x1.57) (W x D x H) | | | mm (in.) |
| Weight | 0.5 (1.1) | | | kg (lbs) |
| Electrical Input | 12V DC | | | V |

* Product specifications are subject to change without notice.