

# L Band Tunable Wavelength Laser

The Optilab TWL-L series are high spectral purity and very stable tunable wavelength laser sources.

TWL-L L Band Tunable Wavelength Laser



## Product Description

The Optilab TWL-L series are high spectral purity and very stable tunable wavelength laser sources. TWL-L features wide wavelength tuning range, narrow laser linewidth, high Side Mode Suppression Ratio (SMSR), excellent wavelength stability and optical output level exceeding 20mW. With the standard Polarization Maintaining (PM) fiber output, TWL-L offers a linearly polarized output. These features makes TWL-L well-suited for many different applications, including DWDM device testing, optical sensing and laboratory measurement applications.

TWL tunable laser is available in a standard 1U 19" rack-mountable housing. It includes easy-to-use Labview control software and RS232 Interface for remote operation in laboratory environments.

## Features

- Wide wavelength tuning range from 1570.01 nm to 1607.04 nm
- High optical output power of 20 mW
- Narrow laser linewidth < 100 kHz
- Linewidth broadening to 750 MHz
- Excellent Side Mode Suppression Ratio of 55 dB
- Polarization Maintaining (PM) Output
- Intuitive and easy to Labview interface

## Applications

- Laboratory Testing and Measurement
- DWDM Networks
- Seed Lasers for modulators
- Fiber Optics Components
- Fiber Sensors

## PRODUCT SPECIFICATIONS

### Optical Specifications

Laser Wavelength Range	1570.01 nm to 1607.04 nm
Wavelength Accuracy	± 1.5 GHz
Wavelength Stability	± 1 pm over 24 Hours
Output Power Level	20 mW (+13 dBm) max.
Output Stability	0.02 dB over 8 hours
Laser Linewidth	< 100 KHz w/o SBS < 750 MHz w/ SBS
Carrier to Noise Ration (CNR)	50 dBc typ. @ -5 dBm
Relative Intensity Noise (RIN)	-145 dB/Hz
Side Mode Suppression Ratio (SMSR)	55 dB typ.
SSER	55 dB typ.
Linewidth Frequency	750 MHz max.
Polarization Extinction Ratio (PER)	20 dB min.
Optical Isolation	30 dB min.
Fiber Type	Panda 1550 PM Fiber
Optical Connectors	PM Narrow Key, FC/APC or Customer Specified

### Control Functions

Base Frequency Range	196.1 THz to 191.5 THz,
Channel Spacing	25 GHz (0.2 nm)
Channel Grid	1 to 192
Channel Setting Time	10 sec. typ.
Output Power Adjustment	5 dB from max.
Dithering Frequency	0 to 375 MHz
Remote Control Interface	LabView includes RS-232

## Ordering Information

### TWL-L-R



To order this product online, visit our site at [oequest.com](http://oequest.com)



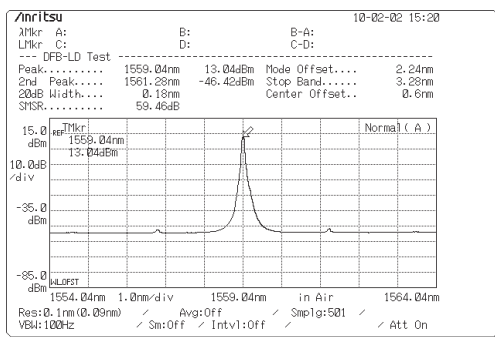
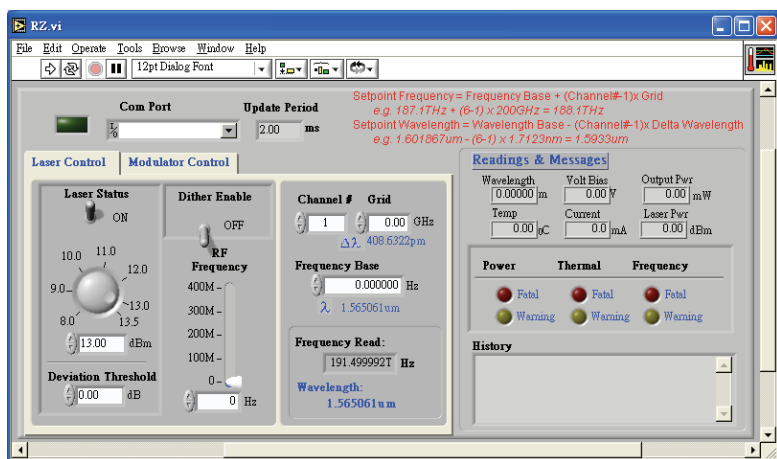
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Product specifications and description are subject to change without notice.  
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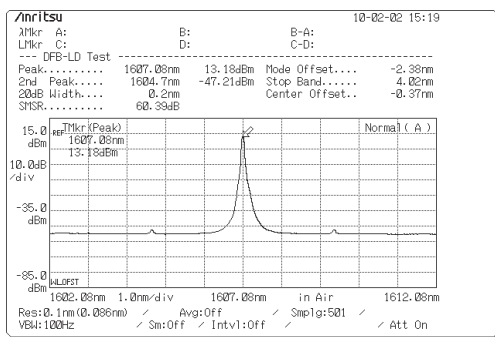
## Additional Information

TWL-L has built-in wavelength locker also ensures precise wavelength setting of 10 pm over life time of the device, which is 15 years along. The laser linewidth can be broadened up to 750 MHz to address a variety of applications. Utilizing Telcordia qualified components, TWL-L tunable laser offers exceptional reliability and come with a standard 3-year limited warranty.

## TWL LabView Interface



Channel on Extended L-Band (1559.04 nm)<sup>1</sup>



Channel on Extended L-Band (1607.08 nm)<sup>1</sup>

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### Mechanical Specifications

Operating Temperature	0° to +40° C
Storage Temperature	-40° to +70° C
Power Supply	80-240 V, 43-63 Hz AC, 1.5 A max.
Power Consumption	80 W max.
Display	Output Power Level, Wavelength
Controls	Output Power Level, Laser Wavelength, Dithering Freq.
Communication Interface	RS232, Labview software via laser linewidth
Alarms	Over Temperature, Over Current
Dimensions	1U Rackmount: 19"(W) x 14"(D) x 1.75"(H)
Housing	Steel Frame

<sup>1</sup> (Wavelength Measured by OSA)