TWL-CL-R

DEVICE

C + L Band Tunable Wavelength Laser

OVERVIEW

The Optilab TWL-CL-R is a high spectral purity and stable tunable wavelength laser source. The TWL-CL-R features wide wavelength tuning range, narrow laser linewidth, high Side Mode Suppression Ratio (SMSR), excellent wavelength stability and optical output level exceeding 30mW. With the standard Polarization Maintaining (PM) fiber output, the TWL-CL-R offers a linearly polarized output. These features make the cost-effective TWL-CL-R well-suited for many different applications, including DWDM device testing, optical sensing, and laboratory measurement applications. The TWL-CL-R tunable laser is available in a standard 1U 19" rack-mountable housing, and includes an easy-to-use LabVIEW control software and RS232 Interface for remote operation in laboratory environments. Contact Optilab for more information.

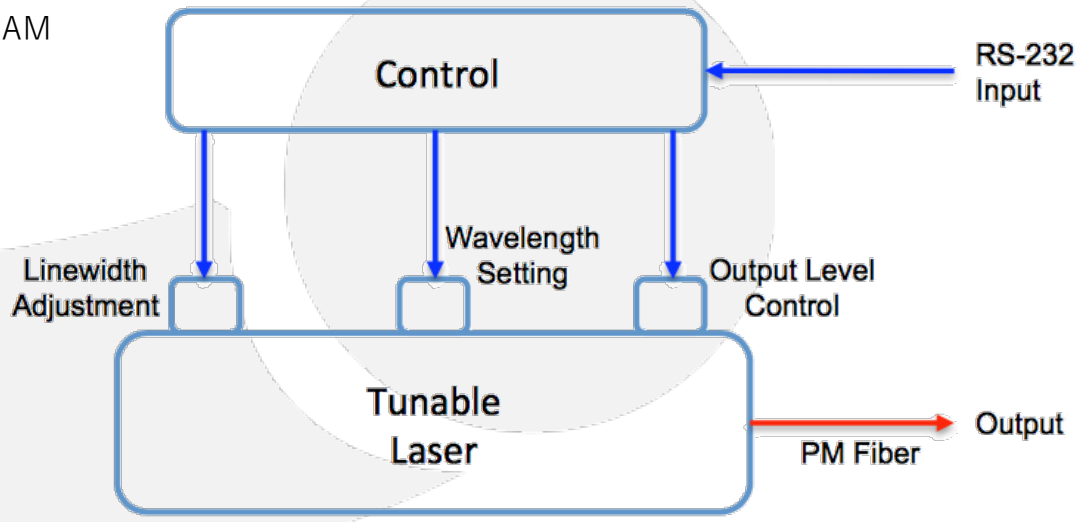
FEATURES

- Narrow laser linewidth of 100 kHz
- Excellent Side Mode Suppression Ratio of 55 dB
- High optical output power of 30 mW
- Wavelength range from 1530 to 1607 nm
- Polarization Maintaining (PM) Output
- Intuitive and easy to use USB interface

USE IN

- DWDM Networks
- Seed Lasers for modulators
- Fiber Sensors
- Laboratory testing and measurement
- Fiber Optics Components

FUNCTIONAL DIAGRAM



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SPECIFICATIONS

GENERAL

Laser Wavelength Range	1530 nm to 1607 nm
Wavelength Accuracy	± 1.5 GHz
Wavelength Stability	± 1 pm over 24 hours
Output Power Level	30 mW min., 40 mW typ.
Output Stability	0.02 dB over 8 hours
Laser Linewidth	<100 KHz
Relative Intensity Noise	-145 dB/Hz typ.
Side Mode Suppression Ratio	55 dB typ.
Polarization Extinction Ratio	20 dB typ.
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	C-Band: 196.1 THz to 191.5 THz L-Band: 191.1 THz to 186.4 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

MECHANICAL

Operating Temperature Range	0°C to +40 °C
Storage Temperature Range	-40°C to +70°C
Power Supply	80–240 V, 43–63 Hz AC, 2 A max.
Power Consumption	160 W max.
Display	Output Power Level, Wavelength
Controls	Output Power Level, Laser Wavelength, Dithering Freq.
Communication Interface	RS 232, Labview software via laser linewidth
Alarm	Over Temperature, Over Current
Dimensions	19" (W) x 14" (D) x 1.75" (H)

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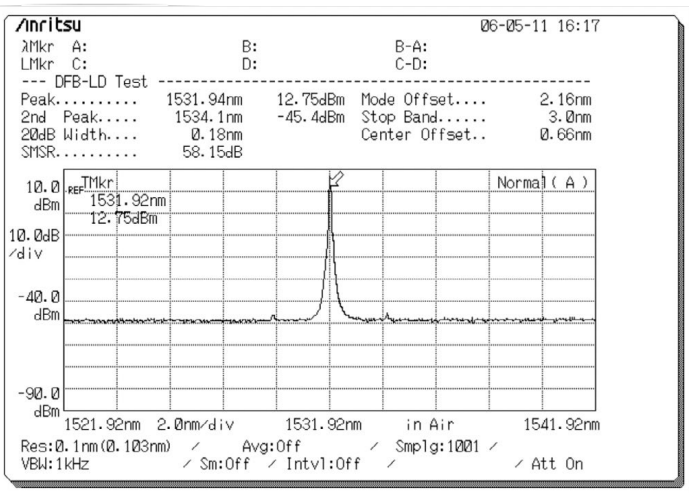
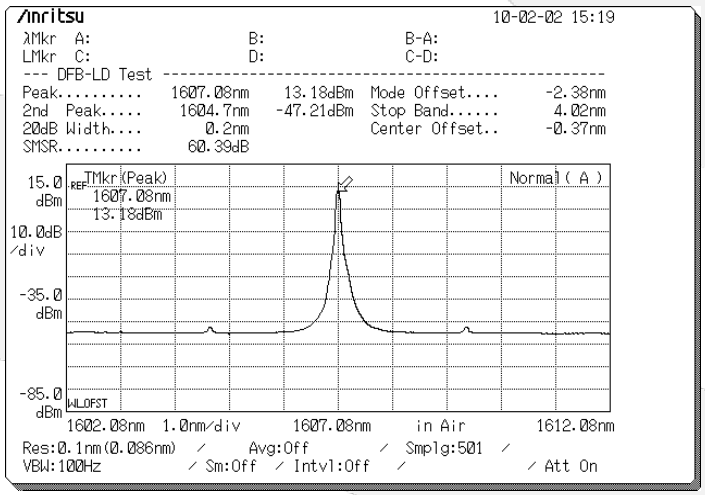
ADDITIONAL INFORMATION

TWL-CL-R has built-in wavelength locker also ensures precise wavelength setting of 10 pm over life time of the device, which is over 15 years. The laser linewidth can be broadened up to 750 MHz to address a variety of applications. Utilizing Telcordia qualified components, TWL-CL-R tunable laser offers exceptional reliability.

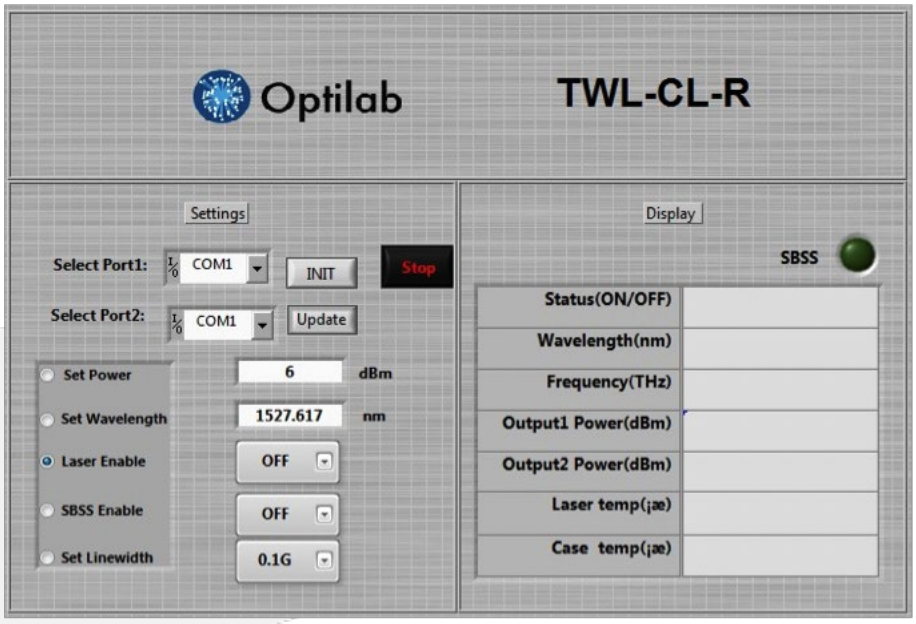
C-BAND CHANNEL (1531.91 NM)



L-BAND CHANNEL (1607.08 NM)



TWL LABVIEW INTERFACE



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