RTL-1550

DEVICE

1550 nm Rapid Tunable Laser

OVERVIEW

The Optilab RTL-1550 is a tunable laser source that is capable of rapid wavelength tuning across the expanded C-band (1520 nm to 1575 nm) wavelength windows. Driven by an external voltage signal source or a functional generator, it can produce dynamically sweeping wavelength up to the rate of 5 kHz. RTL-1450 is extremely reliable and require no routine maintenance. By combining a reliable Erbium Dope Fiber Amplifier (EDFA) and fast Tunable Filter (TF), RTL-1550 provides excellent Side Mode Suppression Ratio (SMSR) of 50 dB and high output level of 30 mW. These performance enables excellent signal-to-noise ratio in Fiber Bragg Grating (FBG) sensor interrogation system, optical coherence system and optical frequency domain ranging.

FEATURES

- Hight output power up to 30 mW
- Tunable spectral range up to 60 nm
- Fast sweep rate up to 5.0 kHz
- Can be driven by general purpose function generator or a voltage source
- Easy to use and reliable

USE IN

- Seed Laser
- Fiber Sensors
- Fiber Optics Components
- Laboratory testing and measurement
- Optical coherence topography

ORDERING OPTIONS

RTL-1550-xx

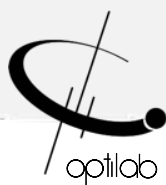**xx**   Power Level (mW)

RTL-1550

SPECIFICATIONS

OPTICAL

Laser Wavelength Range	1520 nm to 1575 nm typ.
Spectral Tuning Range	55 nm min. @ 200 Hz
Laser Linewidth	0.15 nm typ.
Output Power Variation	< +/- 1 dB over full wavelength range
Optical Signal Noise Ratio	50 dB typ.
Output Polarization	Depolarized
Fiber Type	SMF-28 with 900 μm jacket
Optical Connectors	FC/APC
Output Power Level	Up to 30 mW
Side Mode Suppression	50 dB

ELECTRICAL

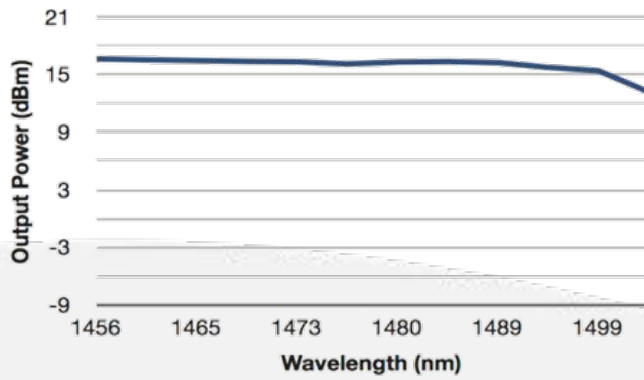|	
External Input Waveform	Saw Tooth, DC
Sweep Voltage Input	12 V p-p typ.
Sweep Frequency	Up to 5 KHz
Bias Voltage Range	25 V max.
Voltage Input Connector	SMA Female

MECHANICAL

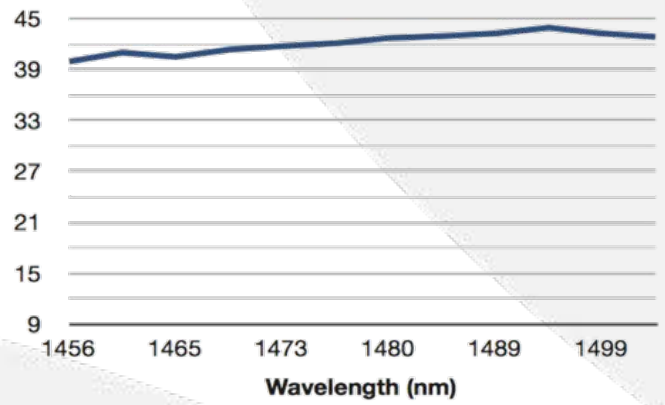|	
Operating Temperature	0ºC to +50ºC
Storage Temperature	-10ºC to +70ºC
Power Supply	90 – 240 V AC, 47 – 63 Hz AC
Power Consumption	40 W max.
Connector (RS-232)	DB-9
Display	LCD for power control and monitor
Remote Control	Optional RS-232 for laser control & status monitoring
Dimensions	1 U 19" x 14" x 1.75"
Housing	Steel Frame

OUTPUT POWER VS. WAVELENGTH

OS VS. WAVELENGTH

λ = 1480 nm