



RTL-1450



DEVICE

1450 nm Rapid Tunable Laser

OVERVIEW

The Optilab RTL-1450 is a swept laser source that is capable of rapid tuning from 1450nm to 1500nm wavelength window. 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. Using external cavity laser design and fast Tunable Filter (TF), RTL-1450 provides excellent Side Mode Suppression Ratio (SMSR) of 40 dB and high output level of 20 mW. These performance enables excellent signal-to-noise ratio in Fiber Bragg Grating (FBG) sensor interrogation system, optical coherence tomography, optical coherence system and optical frequency domain ranging.

FEATURES

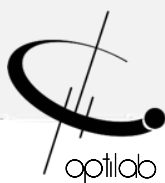
- Output power level of 20 mW
- Tunable spectral range up to 60 nm
- Fast sweep rate up to 2.5 kHz
- Can be driven by general purpose function generator or a voltage source
- Easy to use and reliable

USE IN

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

ORDERING OPTIONS

RTL-1450-xx
xx Power Level (mW)





RTL-1450

SPECIFICATIONS

Laser Wavelength Range	1450 nm to 1500 nm typ.
Spectral Tuning Range	50 nm min.
Laser Linewidth	0.15 nm typ.
Output Power Variation	< +/- 1 dB over full wavelength range
Optical Signal Noise Ratio	40 dB typ.
Output Polarization	Depolarized
Fiber Type	SMF-28 with 900 μ m jacket
Optical Connectors	FC/APC or SC/APC
Output Power Level	Up to 20 mW
Side Mode Suppression	50 dB

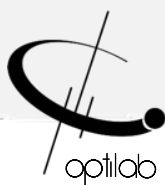
OPTICAL

ELECTRICAL

External Input Waveform	Saw Tooth, DC
Sweep Voltage Input	12 V p-p typ.
Sweep Frequency	Up to 5 KHz
Bias Voltage Range	9 V min., 15 V typ., 25 V max.
Voltage Input Connector	SMA Female

MECHANICAL

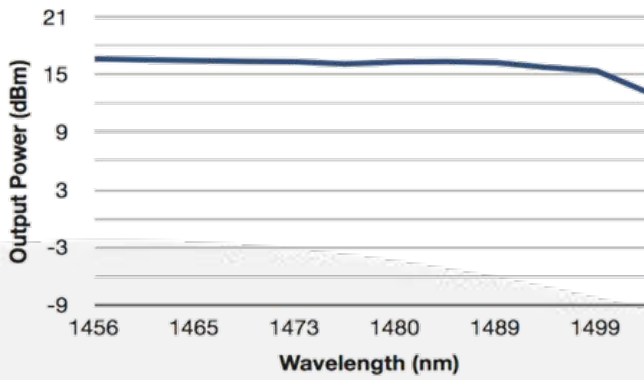
Operating Temperature	0°C to +50°C
Storage Temperature	-10°C to +70°C
Power Supply	90 - 240 V AC, 47 - 63 Hz AC
Power Consumption	40 W max.
Connector (RS-232)	DB-9
Display	LCD for power control and monitor
Remote Control	Optional RS-232 for laser control & status monitoring
Dimensions	1 U 19" x 14" x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



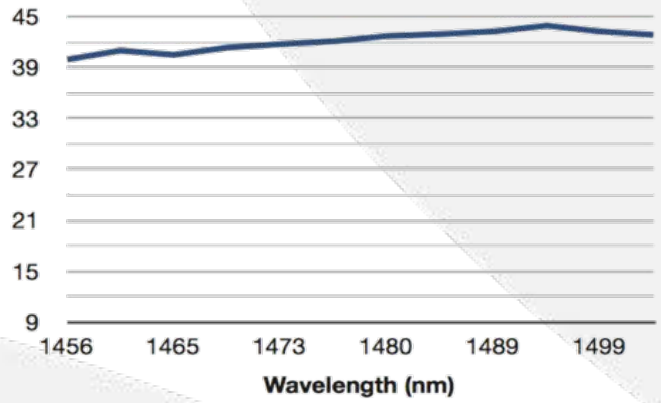


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OUTPUT POWER VS. WAVELENGTH



OS VS. WAVELENGTH



$$\lambda = 1480 \text{ nm}$$

