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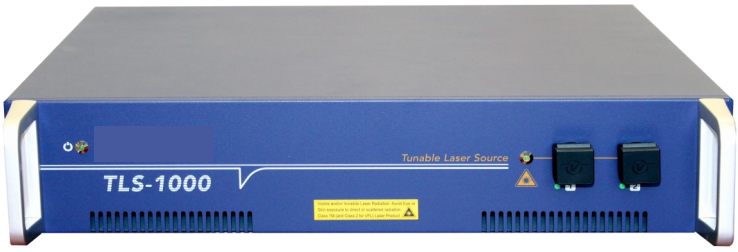
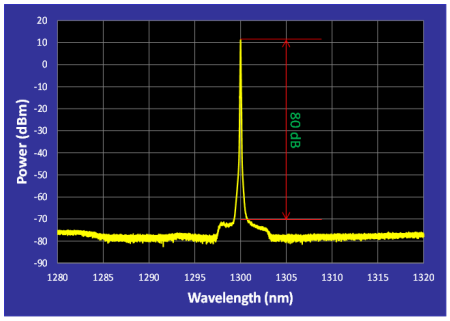
Tunable Light Sources (Type B)

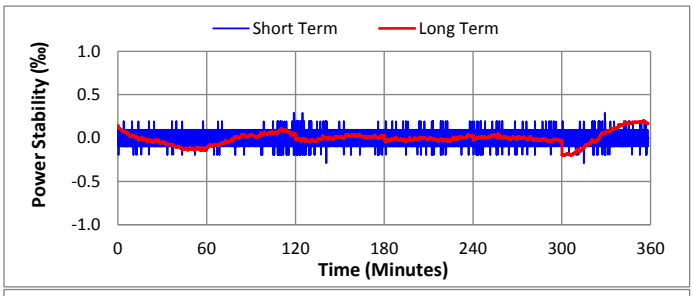


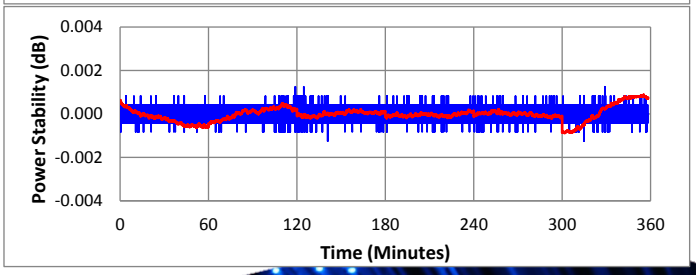


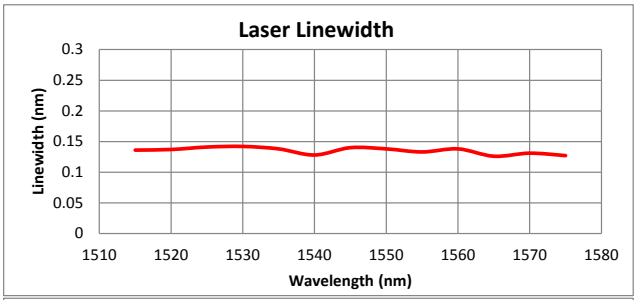
TLS-1000 tunable lasers are new-generation high performance continuous wave (CW) tunable laser sources for use in various single band or combined band windows, ranging from 1050 nm to 1660 nm. The innovative design employs the state-of-the-art tunable technology and gain continuation in wide wavelength range. With no moving parts, the voltage-controlled wavelength tuning enables rapid wavelength switching over the whole operating wavelength window.

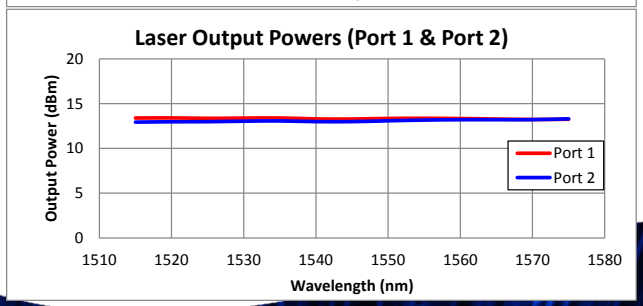
This datasheet describes and defines low coherent CW tunable light sources with applications to test and measurement. They provide fast wavelength tuning, high power output, and high power stability. Tunable laser products support O-band, E-band, S-band, C-band, L-band, and other single-band operation, as well as combined adjacent bands. A full-band tunable laser is also available, covering 1250~1650 nm wavelength range, with seamless wavelength tuning.

System control and communication is provided though the RS232 interface, which allows users to dynamically set operating wavelength with ease.









Low Coherent O/E/S/C/L/Full-Band Tunable Light Sources

Key Features

- Power stability: 0.004 dB
- High-speed scan: up to 400 nm/s
- Signal to source ASE ratio: > 70 dB
- De-coherence light sources

Key Applications

- Long-term process diagnosis
- Optical coating monitoring
- Dynamic alignment optimization
- Testing and measurements

Product Specifications and Key Parameters

Parameters		Unit	O-Band	E-Band	S-Band	C-Band	L-Band	Full-Band
Wavelength Range[1)]	Lower limit	nm	1250	1350	1450	1525	1565	1250
	Upper limit	nm	1350	1450	1530	1580	1625	1650
Wavelength Tuning Resolution		pm	≤ 5					≤ 20
Wavelength Stability[1), 2)]		pm	≤ 5					≤ 20
Linewidth (FWHM)		nm	0.1 ~ 0.3					
Minimum Power Output		mW	≥ 10	≥ 8	≥ 5	≥ 12	≥ 10	≥ 3
Signal to Total ASE Ratio[3)]		dB	≥ 60					≥ 50
Signal to Source ASE Ratio[4)]		dB	≥ 70					≥ 60
Absolute Wavelength Accuracy[2)]		pm	≤ 20					≤ 100
Relative Wavelength Accuracy[2)]		pm	± 20					± 80
Wavelength Repeatability[2)]		pm	± 10					± 50
Power Repeatability[2),5)]		dB	± 0.01					± 0.02
Power Stability[2),5)]		dB	± 0.004					
Maximum Sweep Speed		nm/s	400					
Step Tuning Time		ms	50					

Notes:

1) Wavelength is calibrated as “Mean wavelength”.
2) When measured after warm-up time, measurements over 1 hour at 25±1°C.
3) ASE is measured within 30 nm wavelength range.
4) ASE is measured within 0.1 nm wavelength bandwidth.
5) For output power at > 0 dBm.