

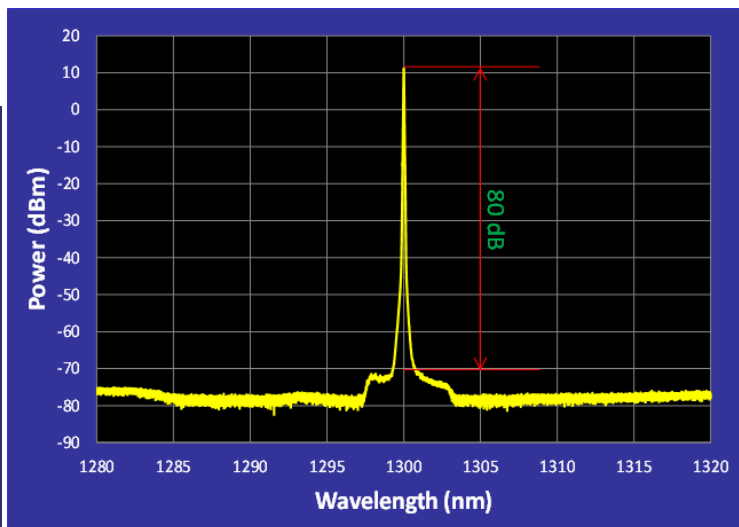
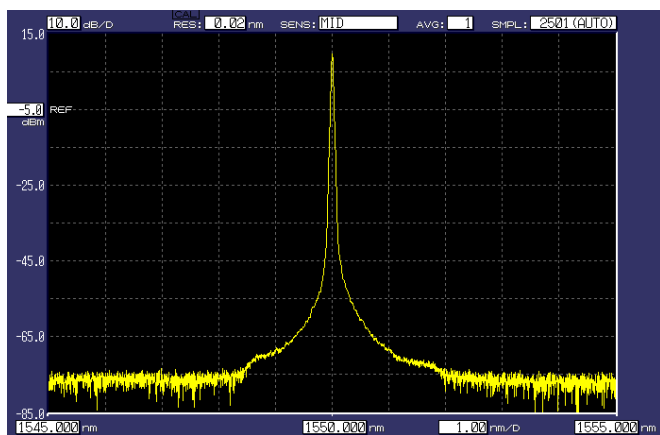
Small-Size Tunable Laser Modules



GouMax’s TLS-100 small-size 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 1250 nm to 1650 nm. Dimension is 140×90×26 mm for integration with line card or customer’s system. 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 GouMax’s high coherent (Type A: narrow linewidth) CW tunable light sources with applications to test and measurement. They provide fast wavelength tuning, high power output, high power stability, and high signal-to-ASE ratio. GouMax tunable laser products support O-band, E-band, S-band, C-band, L-band, and other single-band operation, combined adjacent bands as well as Full-band (1250~1650 nm).

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



O/E/S/CL/LU-Band Tunable Laser Modules

Key Features

- Power stability: 0.05 dB
- High-speed scan: up to 800 nm/s
- Signal to source ASE ratio: > 70 dB
- High coherent light sources

Key Applications

- Testing and measurements
- Long-term process monitoring
- Dynamic alignment optimization
- Integration and Instrumentation

Product Specifications and Key Parameters

Parameters		Unit	O-Band	E-Band	S-band	CL-band	LU-band
Wavelength Range	Lower limit	nm	1250	1350	1450	1520	1580
	Upper limit	nm	1350	1450	1530	1630	1650
Minimum Output Power		dBm	≥ 10	≥ 9	≥ 7	≥ 8	≥ 8
Power Stability ^{1), 2)}		dB	± 0.05				
Power Repeatability ^{2), 3)}		dB	± 0.01				
Wavelength Accuracy ^{1), 2)}		pm	± 5				
Wavelength Repeatability ^{2), 3)}		pm	± 3				
Wavelength Stability ^{1), 2)}		pm	≤ 5				
Wavelength Tuning Resolution		pm	≤ 1				
Linewidth (FWHM)		kHz	< 100				
Signal to Source ASE Ratio ⁴⁾		dB	≥ 70				
Maximum Sweep Speed ⁵⁾		nm/s	400				
Wavelength Tuning Time		ms	50				
Operation Modes		-	Manual Tuning/Continuous Sweep/Stepped Sweep				
Warm-up Time		Min	30				
Communication Interface		-	RS232/UART				

Notes:

- 1) When measured after warm-up time, measurements over 1 hour at 25±1°C.
- 2) For output power at > 0 dBm.
- 3) When measured after warm-up time, measurements over 100 times at 25±1°C.
- 4) ASE is measured within 0.1 nm wavelength bandwidth.
- 5) For continuous sweeping, up to 800 nm/s.