OSICS TLS–50
WDM Tunable Laser Source

The Missing Link Between a Tunable Laser and a Fixed DFB.

The OSICS TLS-50 modules are tunable laser sources with high output power and very good wavelength accuracy based on the ITU-T grid. The wavelength can be tuned over about 90 channels of the ITU-T grid by 50 GHz steps, covering around 35 nm in C or L band. With +13 dBm (20 mW) output power as well as high power and wavelength stability, this is the ideal laser for WDM testing, with performance better or equal to fixed wavelength DFB.

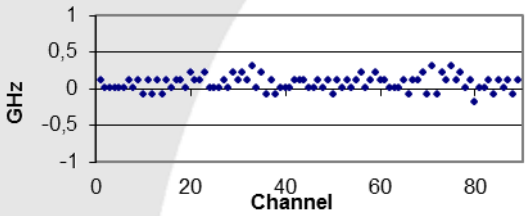
Key Parameters

- **High power : More than +13 dBm in C band**

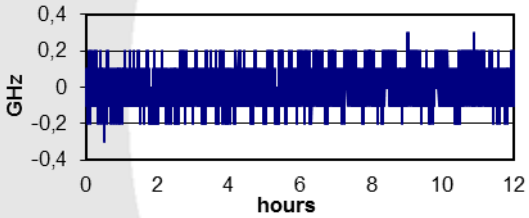
Ideal for optical amplifier testing or WDM channel emulation.

- **Ultra-fast tuning: down to 20 ms.**
- **Wavelength locked on 50GHz ITU-T grid.**
- **Polarization Maintaining output for use with external modulator.**
- **SBS suppression.**
- **Internal AM and FM modulation.**
- **Real Time & Easy Operation.**

The platform user-friendly interface allows real time adjustment of the laser; as well as simultaneous display of all power and wavelength values on the Osics front panel.



Absolute frequency accuracy over C band



Frequency stability over 12 hours

		Band C	Band L
Number of ITU channels		89 (50 GHz spacing)	93 (50 GHz spacing)
Wavelength range		196.1 to 191.7 THz (1528.77 to 1563.86 nm)	191.1 to 186.5 THz (1568.77 to 1607.47 nm)
Output power		20 mW (+13 dBm)	10 mW (+10 dBm)
Power range (typ.)		+8 to +14 dBm	+5 to +11 dBm
Wavelength accuracy[1]		± 1.8 GHz	
Wavelength setting resolution		50 GHz	
Switching speed (typ. between two channels)		< 20 ms	
Power stability[1, 2]		±0.05 dB	
Absolute output power deviation across tuning range		0.5 dB	
Linewidth (FWHM)		<5 MHz (1 MHz typ.)	
Stimulated Brillouin scattering (SBS) Suppression[4]		Yes	
Frequency Modulation[5]		10 kHz to 100kHz	
Trace Tone (Amplitude Modulation) [5,-]		10 kHZ to 500 kHz	
Side Mode Suppression Ratio[1]		> 40 dB (45 dB typ.)	
Relative Intensity Noise[1, 2,3] (RIN)		-145 dB/Hz	
Operating temperature range		+15 to +35°C (+59 to +95°F)	
Interfaces	Optical interface	FC/APC connector on polarization maintaining fiber. PER >20dB	
	Dimensions (W x H x D) and Weight	35 x 130 x 250 mm3 (single slot), 1 kg	
Osics Platform Specifications	Dimensions (W x H x D) and Weight	448 x 133 x 370 mm3 , 8.1 kg	
	Power supply	100 to 240 V, 50 to 60 Hz	
	Control	Instrument front panel, RS-232 C, and IEEE-488.2	

1 After warm-up of 60 s.
2 Over two hours at a constant temperature
3 Average RIN on 1-100GHz. -110 dB/Hz on 10MHz-1GHz
4 Enable : on/off. Linewidth from 250 to 1000MHz depending on Frequency Modulation selected.
5 Waveshape Selection: Sinusoidal or Triangular.
6 Tone depth : up to 10%

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