

OSICS TLS– WDM Tunable Laser Source

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

The OSICS-TLS modules are tunable laser sources with very high output power and very good wavelength accuracy based on the ITU-T grid. The wavelength could be tuned over 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.

As part of the Osics family, this module has been designed to be used in all testing setups: high specs and low cost laser for every day lab applications to intensive field testing with multiple channels emulation. You can have as many as 8 OSICS TLS module in an OSICS mainframe and each module can be controlled from the front panel of the mainframe through an intuitive interface, or through the remote RS-232 C and IEEE-488.2 interfaces.



Key Parameters

▪ High power : +13dBm in C band

Ideal for optical amplifier testing or WDM channel emulation.

▪ Polarization Maintaining output for use with external modulator.

▪ SBS suppression.

▪ Wavelength stabilized for 50GHz ITU-T channel spacing.

▪ 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.

	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)
Output power attenuation (<i>option</i>)	6 dB	
Wavelength accuracy ¹	± 1.8 GHz	
Wavelength setting resolution	50 GHz	
Tuning speed (typ. between two channels)	< 10 ms	
Power stability ^{1,2}	±0.05 dB	
Absolute output power deviation across tuning range	0.5 dB	
Line width (FWHM)	<5 MHz (1 MHz typ.)	
Stimulated Brillouin Scattering (SBS) Suppression ⁴	Yes	
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
	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

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 between 250 to 1000MHz with SBS suppression on.

OSICS – 8-Channel Modular Platform



The OSICS platform offers the highest flexibility and largest choice of plug-ins required in fiberoptic system testing, particularly for Dense Wavelength Division Multiplexing (DWDM). Up to 8 plug-in modules can be mixed and matched in a single OSICS mainframe, thus fulfilling all needs for applications requiring multi-wavelength sources.

OSICS features a complete line of modular sources including:

- **OSICS-ECL**, stepper tunable external cavity lasers based on TUNICS technology covering all telecom band;
- **OSICS-DFB**, High power distributed feedback laser diodes;
- **OSICS-TLS**, high power lasers tunable on ITU grid;
- **OSICS-SWT**, smart optical switch featuring Automatic Power Control to be used with 2 to 4 Osics ECL modules .

Key features:

- Affordable price – even if only one laser is used.
- Ease of use : simultaneous reading of Power and Wavelength info of the 8 modules.
- Full band telecom laser: 380 nm in one single compact instrument (ECL Full Band).

OSICS mainframe	Dimensions (W x H x D)		448 x 133 x 370 mm3
	Power supply		100 to 240 V, 50 to 60 Hz
	Control		Instrument front panel RS-232 C IEEE-488.2*1
	Weight (without any module)		8.1 kg
OSICS modules	Optical interface	ECL, DFB 1310	FC-APC connector on Corguide™ SMF-28 fiber
		DFB (C & L band), TLS	FC-APC connector on polarization maintaining fiber
	Output isolation		35 dB
	Return loss		60 dB
	Analog modulation	ECL, DFB	150 Hz - 200 MHz (external modulation)
	Digital modulation	ECL	500 Hz - 1 MHz (internal or external)
		DFB	1 Hz - 1 MHz (internal or external)
	Dimensions (W x H x D)		35 x 130 x 250 mm3 (single slot)
	Weight		1 kg (0.7 kg for OSICS-DFB)
Environment	Operating temperature range*2		+15 to +35°C (+59 to +95°F)
	Warm up time (room temperature)		2 hours max (1 hour typ.)

*1 : Tested and validated with National Instruments GPIB board.

*2 : ECL module operates from +15 to +30°C (+59 to 86° F).

Contact Information

We are happy to discuss your laser source requirements, please contact YENISTA OPTICS at sales@yenista.com

All information and specifications are subject to change without notice

Yenista
OPTICS

YENISTA OPTICS
BP 80429, 4 rue Louis de Broglie
22304 Lannion, France
Phone: +33 296 483 719
Fax: + 33 296 487 304
www.yenista.com

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