

# Full-band TSL

## Full-band Tunable Laser System

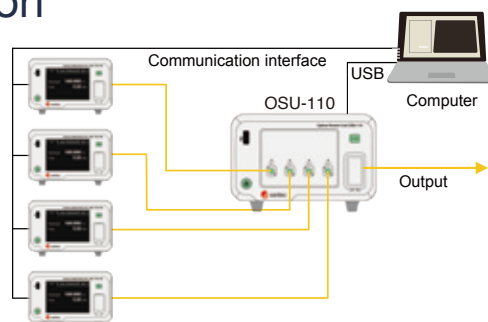


### Product Overview

The Full-band TSL is a full-band, high performance tunable laser system that covers the ultra-wide tuning range of 1240 to 1680 nm (O-band to U-band). The system combines up to four Santec tunable lasers (TSL-570) with an optical switch module (OSU-110) and control software. The complete Full-band TSL has excellent cost performance, high wavelength accuracy and fast sweeping for use in both R&D and production environments. The Full-band TSL can be easily controlled via GPIB, USB and Ethernet on PC.

The Full-band TSL can be configured with Santec's Swept Test System hardware to provide WDL measurements over the entire tuning range from 1240 to 1680 nm.

### Typical configuration



### Features

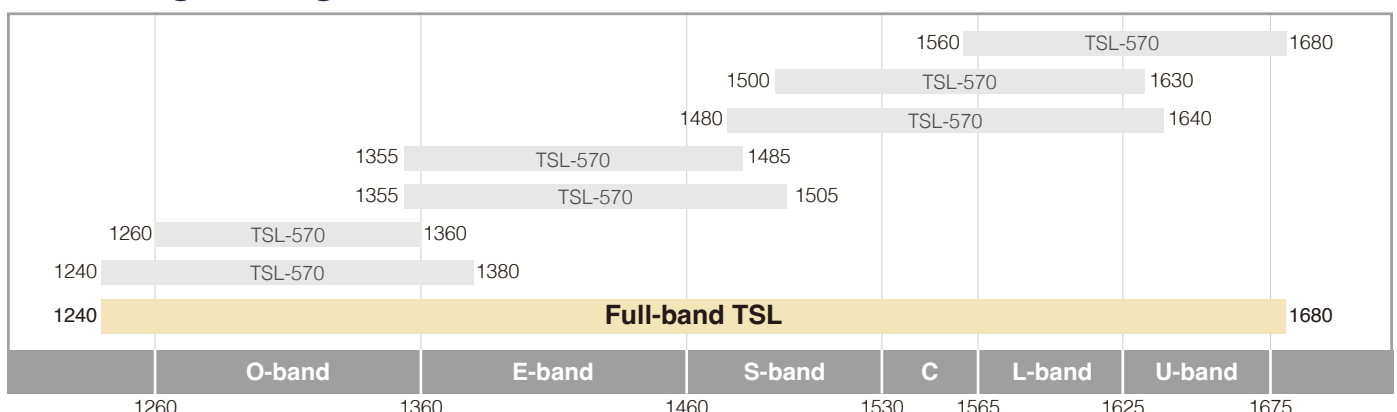
- Wide wavelength range  
1240 to 1680 nm
- Mode-hop-free wavelength sweeps
- 200 nm/s sweep speed
- Easy and automatic operation by exclusive



### Applications

- Optical component characterization
- Fiber optic transmission testing
- Photonic material characterization
- Optical spectroscopy

### Wavelength range



# Specifications

Category	Parameter	Unit	Performance
Tunable Laser TSL-570	All Specifications	-	Please refer to the TSL-570 catalog for full specifications
Optical Switch OSU-110	Wavelength Tuning Range	nm	1240 to 1680
	Full Tuning Range	nm	440
	Insertion Loss <sup>*1</sup>	dB	< 3 (typ. 1.5)
	Insertion Loss Stability <sup>*2</sup> (typ.)	dB	±0.01
	Repeatability (typ.)	dB	±0.01
	Crosstalk (typ.)	dB	-55
	Maximum Input Power (Optical)	mW	300
	Return Loss (typ.)	dB	> 45
	Lifetime (typ.)	cycle	No wear out
	Switching Time (typ.)	ms	10
	Optical Fiber	-	PMF <sup>*3</sup>
	Optical Output Connector	-	FC / APC or SC / APC
	Communication	-	GP-IB (IEEE 488.2), USB, Ethernet
	Operating	Temperature	15 to 35
		Humidity	< 80 (non-condensing)
	Power Supply	-	AC100 to 120 / 200 to 240 V ±10 %, 50/60 Hz
	Dimensions (W x H x D)	mm	210 x 130 x 350
	Weight	kg	3.5

\*All specifications are quoted after 1 hour warm-up period.

\*1: From 1260 to 1630 nm.

\*2: For period of 1 hour. Within ± 0.5 °C.

\*3: Polarization extinction ratio 17 dB (typical). Polarization axis in alignment with connector key.

## Laser safety information



This product is classified class 1M laser product according to IEC 60825-1 (2014). This product complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 56 dated May 8, 2019.

## Ordering Code

**Tunable Laser** Ordering code can be found on the brochure of TSL-570.

**Optical Switch OSU-110** - **A** - **B** - **C**

Connector Polish: **AP**: APC (Angled PC)

Connector Type: **F**: FC / **S**: SC

Fiber: **P**: PMF

### PMF Patch cord (Tunable Laser (TSL) <---> OSU-110)

Please select the ordering code for PMF patch cord if purchasing the OSU-110. Regarding the connector selection, select the same options for one port as the TSL code ("A" and "B") and the other port as the OSU-110 ("C" and "D"). Fiber length 1.0 m, Fiber jacket φ2.0 mm.

**PPC** - **A** - **B** - **C** - **D**

Connector 2 Polish: **AP**: APC (Angled PC)

Connector 2 Type: **F**: FC / **S**: SC

Connector 1 Polish: **SP**: SPC / **AP**: APC (Angled PC)

Connector 1 Type: **F**: FC / **S**: SC



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