

Full-band Tunable Laser System

NEW Full-band TSL

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.



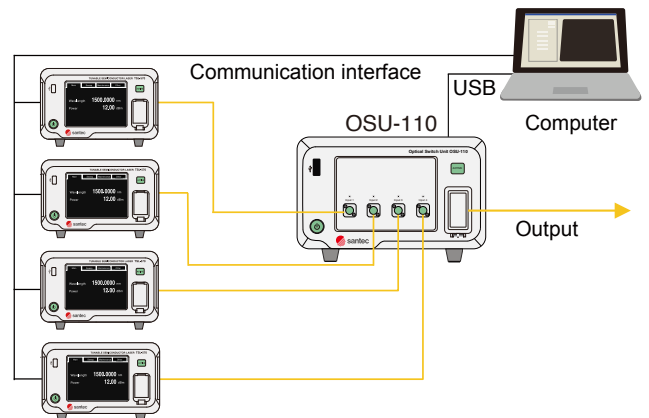
Features

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

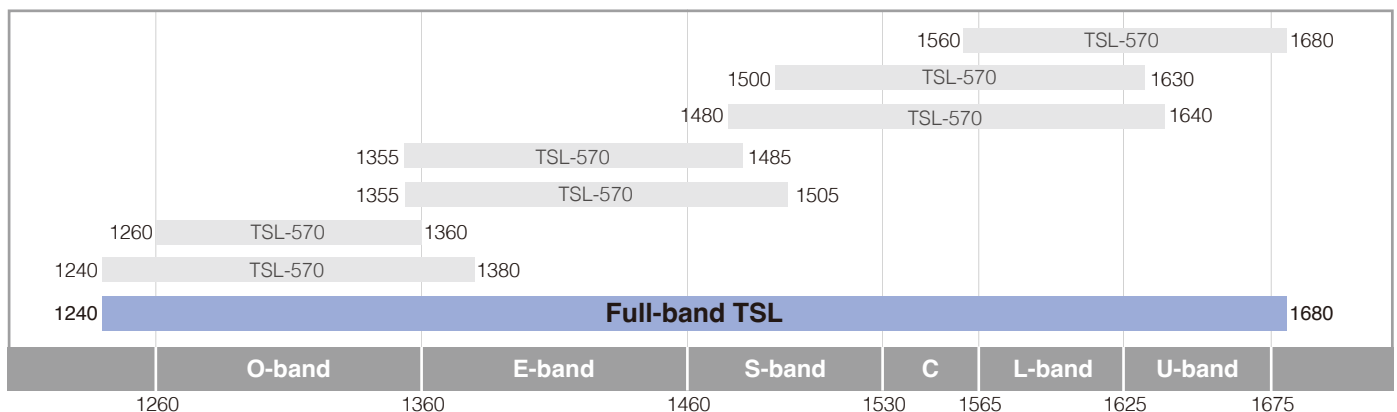
Applications

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

Typical configuration



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 ^{*1}	dB	< 3 (typ. 1.5)	
	Insertion Loss Stability ^{*2} (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 ^{*3}	
	Optical Output Connector	-	FC / APC or SC / APC	
	Communication	-	GP-IB (IEEE 488.2), USB, Ethernet	
	Operating	Temperature	°C	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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