

## Full-band High Performance Tunable Laser System

# Full-band TSL

The Full-band TSL is a full-band, high performance tunable laser system that covers the ultra-wide tuning range of 1260 to 1680nm (O-band to U-band). The system combines up to four Santec tunable lasers (TSL-550 and TSL-710) with an optical switch module (OSU-100) 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 and USB on PC using the custom GUI.

The Full-band TSL can be configured with Santec's Swept Test system hardware to provide WDL measurements over the entire tuning range from 1260 to 1680nm.



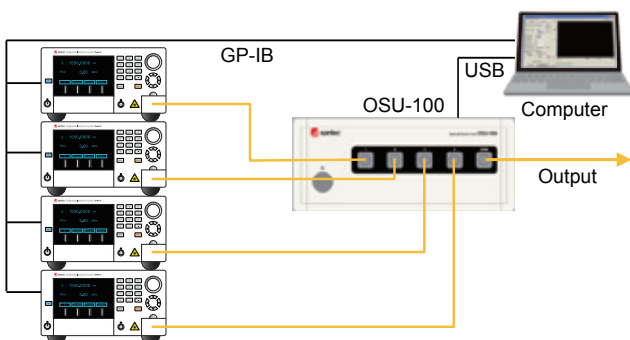
### Features

- ▶ Wide wavelength range 1260-1680nm
- ▶ Mode-hop-free wavelength sweeps
- ▶ 100nm/s sweep speed
- ▶ Easy and automatic operation by exclusive

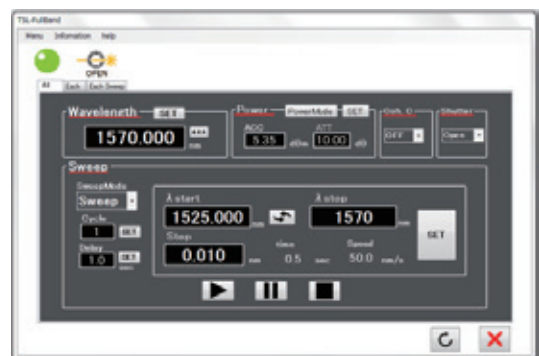
### Applications

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

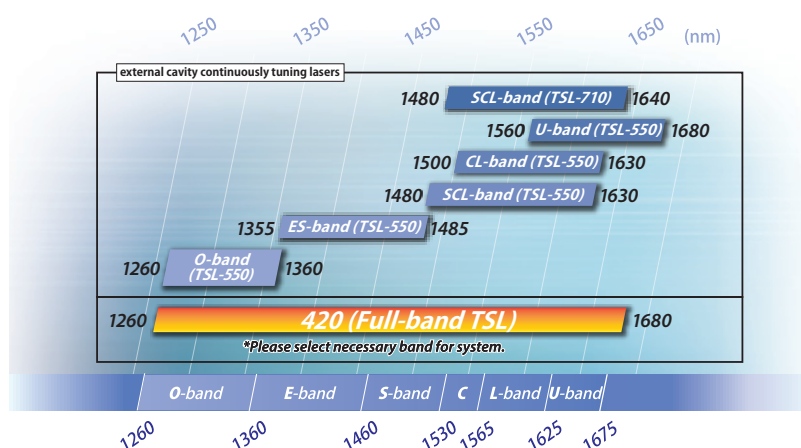
### Typical configuration



### Control software



## Wavelength range



## Specifications

| Category                      | Parameter                                     | Unit  | Performance                                                            |
|-------------------------------|-----------------------------------------------|-------|------------------------------------------------------------------------|
| <b>Tunable Laser</b>          | All Specifications                            | -     | Please refer to the TSL-550 or TSL-710 catalog for full specifications |
| <b>Optical Switch OSU-100</b> | Wavelength Tuning Range                       | nm    | 1260-1680                                                              |
|                               | Maximum Tuning Range                          | nm    | 420                                                                    |
|                               | 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    | >50                                                                    |
|                               | Lifetime (typ.)                               | cycle | > 100,000,000                                                          |
|                               | Switching Time (typ.)                         | ms    | 5                                                                      |
|                               | Optical Fiber                                 | -     | PMF <sup>*3</sup>                                                      |
|                               | Optical Output Connector                      | -     | FC / APC or SC / APC                                                   |
|                               | Communication                                 | -     | USB (USB 2.0 High Speed)                                               |
|                               | Operating Temperature                         | °C    | 15 to 35                                                               |
|                               | Operating Humidity                            | %     | < 80 (non-condensing)                                                  |
|                               | Power Supply                                  | -     | AC 100-240V±10%, 50 / 60Hz                                             |
|                               | Dimensions (W x H x D)                        | mm    | 210 x 88 x 350                                                         |
|                               | Weight                                        | kg    | 3.1                                                                    |

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

\*1: From 1260-1630nm

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

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

## Ordering Code

### Tunable Laser

Ordering code can be found on the following brochures:

1. TSL 550
2. TSL 710
3. TSL 770

### Optical Switch

**OSU-100 -**   -   -  

**A      B      C**

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

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

Fiber : **P** : PMF

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