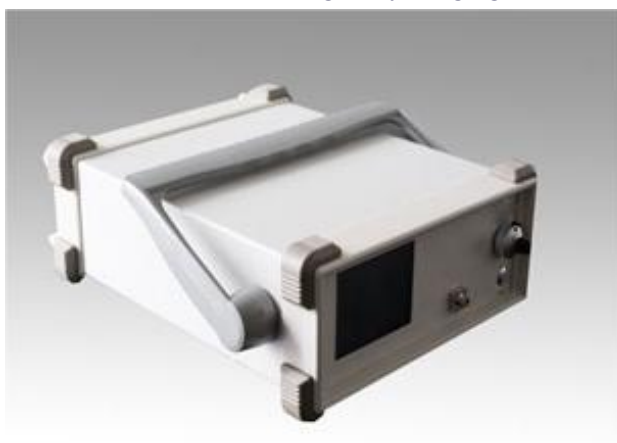


## TC-TLS Series Tunable Laser Light Source

### Product Description

TC-TLS type tunable laser light source adopts high performance DFB laser, wavelength tuning range >34nm, fixed wavelength interval (1GHz \ 50 GHz \ 100GHz) tunable laser light source, its wavelength internal locking function can ensure the output light wavelength or frequency on the ITU grid of DWDM channel. It features high output optical power (20mW), narrow linewidth, high wavelength accuracy, and good power stability. It can realize remote control of the instrument and is mainly used in WDM device testing, fiber optic sensing, PMD and PDL measurement and optical coherence chromatography imaging (OCT).



### Features

- Wavelength tuning range >34nm
- Output power >20mW
- Narrow linewidth: <1MHz
- Wavelength internal locking
- Can be remotely controlled

### Applications

- WDM device testing
- Fiber Optic Sensing Systems
- PMD and PDL testing
- Optical Coherence Chromatography (OCT)

### Extreme Conditions

| Parameter             | Symbol | Unit | Minimum value | Typical value | Maximum value |
|-----------------------|--------|------|---------------|---------------|---------------|
| Operating temperature | Top    | °C   | -5            |               | 55            |
| Storage temperature   | Tst    | °C   | -40           |               | 85            |
| Humidity              | RH     | %    | 5             |               | 90            |



## Performance Parameter

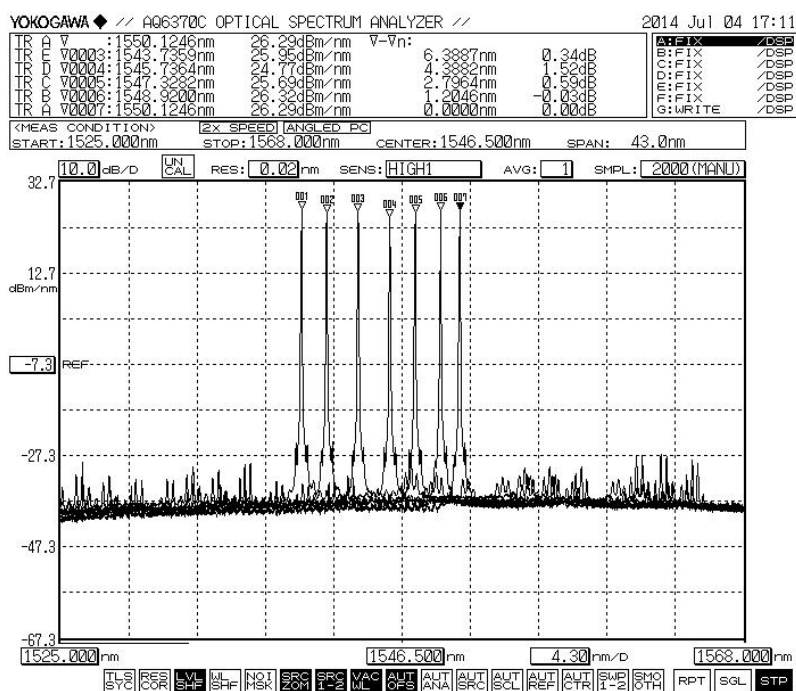
| Parameter                     |        | Symbol          | Minimum Value                                 | Typical Value | Maximum Value | Unit    |
|-------------------------------|--------|-----------------|-----------------------------------------------|---------------|---------------|---------|
| Wavelength*                   | C-band | I               | 1529                                          |               | 1567          | nm      |
|                               | L-band | I               | 1563                                          |               | 1607          | nm      |
| Wavelength                    | C-band |                 | 34                                            | 40            |               | nm      |
| Tuning Range*                 | L-band |                 |                                               | 40            |               |         |
| Wavelength Conversion Speed   |        |                 |                                               | 2             |               | s       |
| Wavelength Accuracy           |        |                 | -1.8                                          |               | 1.8           | GHz     |
| Tuning Stepper                |        |                 | 1                                             | 50            | 100           | GHz     |
| Output Optical Power**        |        | P <sub>o</sub>  | 10                                            | 13            | 16            | dBm     |
| 3dB Spectral Width            |        | DI*             | 0.1                                           | 1             | 3             | MHz     |
| Side Mode Rejection Ratio     |        | SMSR            | 40                                            | 50            |               | dB      |
| Polarization Extinction Ratio |        | PEX             | 20                                            |               |               | dB      |
| Relative Noise Intensity      |        | RIN             |                                               | -145          | -135          | dB/Hz   |
| Power Stability               |        | P <sub>SS</sub> |                                               |               | ±0.01         | dB/5min |
|                               |        | P <sub>LS</sub> |                                               |               | ±0.02         | dB/8h   |
| Isolation at The Output       |        | ISO             | 30                                            | 35            |               | dB      |
| Specification                 |        |                 | Desktop or module                             |               |               |         |
| Dimension L x W x H           |        |                 | 320×220×90 mm (Desktop) 100×82×30 mm (Module) |               |               |         |
| Power Requirements            |        |                 | AC 220V ± 10% (Desktop) DC+5V (module)        |               |               |         |
| Output Fiber                  |        |                 | PMF                                           |               |               |         |
| Optical Connectors            |        |                 | FC/APC                                        |               |               |         |

## Ordering Information

| TC | TLS                  | X                        | XX                                 | XX                                                         | XX                                     | X                                          |
|----|----------------------|--------------------------|------------------------------------|------------------------------------------------------------|----------------------------------------|--------------------------------------------|
|    | Tunable light source | C---C Wave<br>L---L Wave | Power:<br>13---13dBm<br>16---16dBm | Tuning Stepper:<br>01---1GHz<br>50---50GHz<br>100---100GHz | Fiber optic connectors:<br>FA---FC/APC | Package Type:<br>D---Desktop<br>M---Module |



## Typical Spectrum



## Structure Size

