

TC-DFB Series 2000nm Laser Light Source

Product Description

TC-DFB series 2000nm laser light source adopts foreign high performance DFB laser chip, uniquely designed ATC and APC circuit and isolation control to ensure high power and wavelength stability. The light source is mainly used in water molecule detection and analysis and mid-infrared laser applications, and can provide power tuning and wavelength fine tuning functions according to customer requirements, suitable for low-cost 2μm application solutions.



Features

- Narrow line width: <2MHz
- Built-in optical isolator
- Modular, desktop package available

Applications

- 2000nm LIDAR
- Space optical communication
- Fiber optic sensing system
- Water molecule detection

Extreme Conditions

| Parameter | Symbol | Unit | Minimum Value | Typical Value | Maximum Value |
|-----------------------|-----------------|------|---------------|---------------|---------------|
| Operating Temperature | T _{op} | °C | -5 | | 55 |
| Storage Temperature | T _{st} | °C | -40 | | 85 |
| Humidity | RH | % | 5 | | 90 |



Performance Parameter

| Parameter | Symbol | Minimum Value | Typical Value | Maximum Value | Unit |
|---------------------------|-----------------|-------------------|---------------|---------------|---------|
| Operating Wavelength* | λ | 1980 | 2020 | 2050 | nm |
| Output Optical Power | P _o | 3 | - | 7 | dBm |
| Line Width | Δλ* | - | - | 2 | MHz |
| Side Mode Rejection Ratio | SMSR | 30 | 40 | - | dB |
| Relative Noise Intensity | RIN | - | -160 | -150 | dB/Hz |
| Power Stability** | P _{SS} | - | - | ±0.005 | dB/5min |
| | P _{LS} | - | - | ±0.01 | dB/8h |
| Isolation at The Output | ISO | 30 | - | - | dB |
| Specification | | Desktop | | Module | |
| Dimension L x W x H | | 320×220×90 mm | | 80×100×24 mm | |
| Power Requirements | | AC 220V ± 10% 30W | | DC +5V | |
| Output Fiber | | SMF/PMF | | | |
| Working Mode | | CW | | | |
| Optical Connectors | | FC/PC、 | | | |

*Working wavelength: In the 1980~2050nm band can be customized according to customer requirements center wavelength.

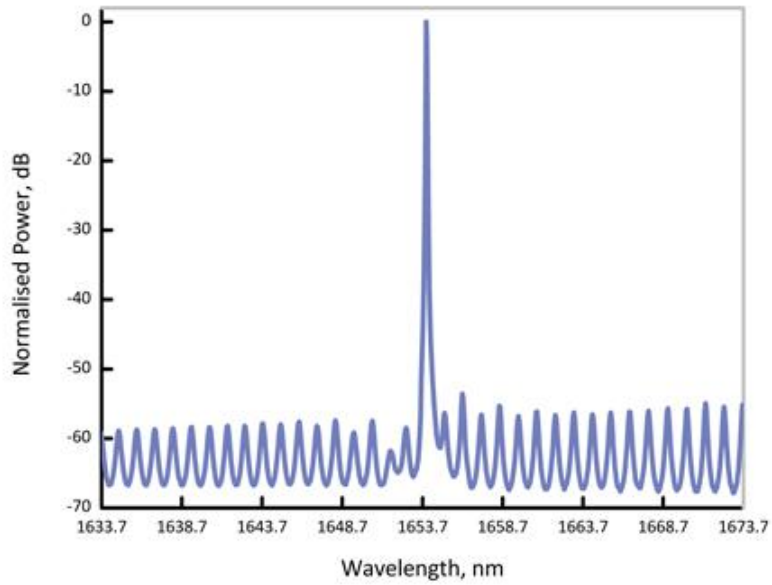
** Testing conditions: CW, Top=25°C.

Ordering Information

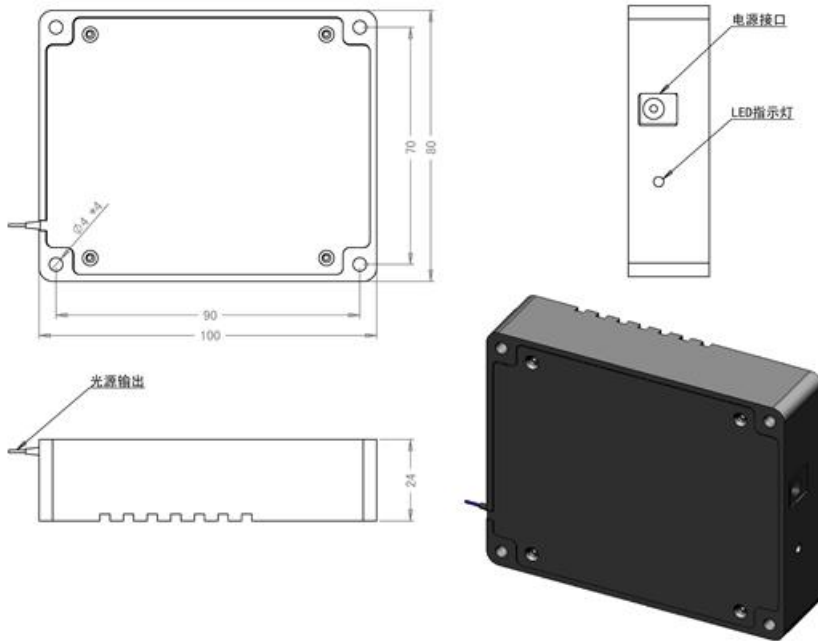
| TC | DFB | 1653 | X | X | X | XX | XX |
|----|-----|-----------------------------|---------------------------------------|--------------------------------|--------------------------------|---|--|
| | DFB | Wavelength: h: 1653nm | Package: M---Module D---Desktop | Power: 6---6mW 10---10mW | Pigtail: P---PMF S---SMF | Fiber optic connectors: FP---FC/PC FA---FC/APC SP---user specified | Line Width: Empty-- 2MHz 01--1MHz |



Typical Spectrum



Package Size



(单位: mm)

