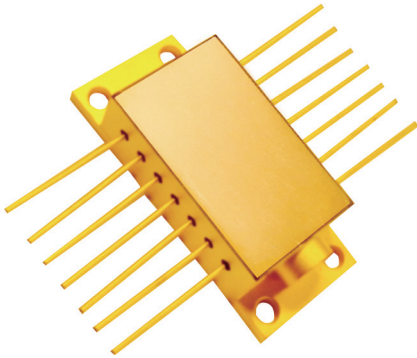


14SBTF Single Mode Free Space Diode Laser Components



14SBTF Single Mode Free Space Diode Laser Components, are featured products of RealLight's NL product line, utilizing wavelength-locking technique with volume Bragg gratings (VBG) and single-mode chip, delivering stabilized output spectrum and low temperature dependence of the lasing wavelength, making them ideal for Raman Microscopy.

Key Features

- ◆ Compact design
- ◆ High stability
- ◆ Excellent reliability

Applications

- Medical application
- Spectrum analysis
- Scientific research

Technical Specifications (25°C)

| Package Type | | 14SBTF (Free Space) | |
|--------------------------------------|---|---------------------|------|
| Center Wavelength (nm) | | 785 | 1064 |
| Optical | CW Output Power / P _{op} (mW) | 100 | 300 |
| | Wavelength Tolerance (nm) | ±0.5 | |
| | Spectral Width / Δλ (nm) | 0.1 | |
| | Temperature Drift of Wavelength / Δλ/ΔT (nm/°C) | ≤0.01 | |
| | Temperature Drift of Current / ΔI/ΔI _{op} (nm/A) | 0.05 | |
| Electrical | Threshold Current / I _{th} (mA) | 40 | 50 |
| | Operating Current / I _{op} (mA) | 150 | 500 |
| | Operating Voltage / V _{op} (V) | 2 | |
| | Slope Efficiency / η _{es} (W/A) | 0.9 | 0.7 |
| | PD Parameter / I _{pd} (μA) | <2000 | |
| | Thermistor Rt (kΩ/β(25°C)) | 10%±5/3930 | |
| | TEC Max Current I _{max} (A) | 2.5 | |
| TEC Max Voltage V _{max} (V) | 6.3 | | |

All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

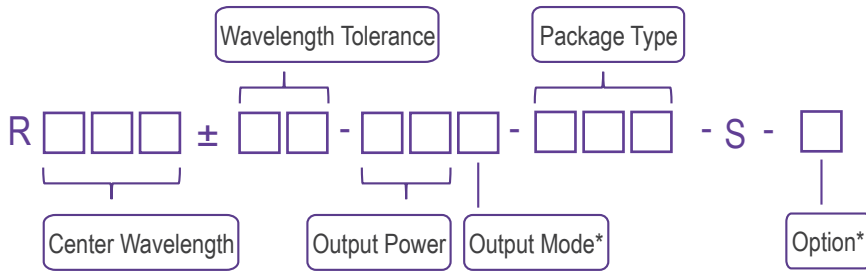
Other Parameters

| Parameter | Operating Temperature /°C | Operating Relative Humidity /% | Storage Temperature /°C | Storage Relative Humidity /% | Lead Soldering Temperature (max/°C) |
|-------------|---------------------------|--------------------------------|-------------------------|------------------------------|-------------------------------------|
| Min(785nm) | 25 | - | -20 | - | - |
| Max(785nm) | 30 | 75 | 70 | 90 | 250(10Sec.) |
| Min(1064nm) | 25 | - | -20 | - | - |
| Max(1064nm) | | 75 | 70 | 90 | 250(10Sec.) |

Order Information

| Package | Wavelength (nm) | Output Power (mW) | Part Number |
|---------|-----------------|-------------------|------------------------------|
| 14SBTF | 785 | 100 | R785±0.5-100mWW-14SBTF-S-TG |
| | 1064 | 300 | R1064±0.5-300mWW-14SBTF-S-TG |

Part Numbering Schema



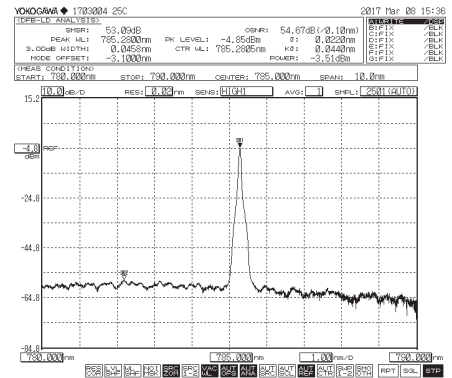
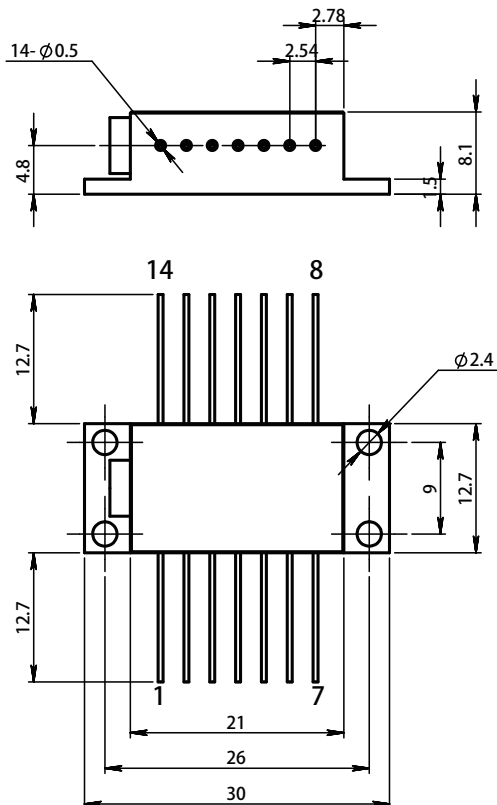
*Output Mode: W - Free Space

*Option: G - Narrow Linewidth

T - TEC

S - Single Mode

Mechanical Drawings (in mm)



785nm Spectrum (SMSR>40dB)

| Pin | Function | Pin | Function |
|-----|------------|-----|-----------|
| 1 | TEC (+) | 8 | - |
| 2 | Thermistor | 9 | - |
| 3 | PD(P) | 10 | Laser (+) |
| 4 | PD(N) | 11 | Laser (-) |
| 5 | Thermistor | 12 | - |
| 6 | - | 13 | Case |
| 7 | - | 14 | TEC (-) |

