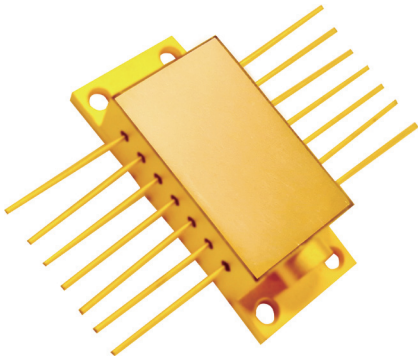


14SBTF Single Mode Free Space Diode Laser Components



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)		532*	785	1064
Optical	CW Output Power / P_{op} (mW)	100	100	350
	Wavelength Tolerance (nm)	±0.5		
	Spectral Width / $\Delta\lambda$ (nm)	0.1		
	Temperature Drift of Wavelength / $\Delta\lambda/\Delta T$ (nm/°C)	≤0.01		
	Temperature Drift of Current / $\Delta I/\Delta I_{op}$ (nm/A)	0.05		
Electrical	Threshold Current / I_{th} (mA)	600	40	100
	Operating Current / I_{op} (mA)	1000	150	800
	Operating Voltage / V_{op} (V)	2		
	Slope Efficiency / η_{es} (W/A)	-	0.9	0.6
	PD Parameter / I_{pd} (μA)	-	<2000	
	Thermistor R_t (kΩ/β(25°C))	10±5%/3450	3930	3450
	TEC Max Current I_{max} (A)	2.5		
	TEC Max Voltage V_{max} (V)	6.3		

*532nm is diode pumped solid-state laser.

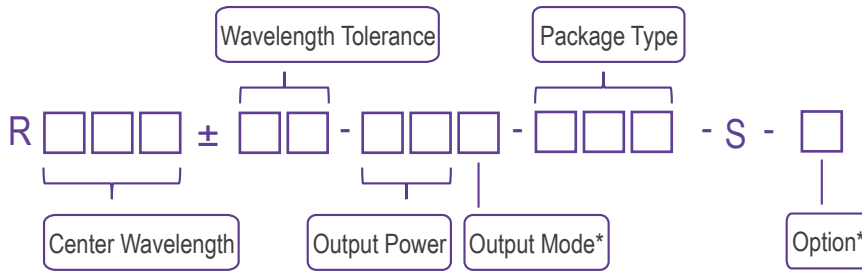
Other Parameters

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

Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
14SBTF	532	100	R532±0.5-100mWW-14SBTF-TG
	785	100	R785±0.5-100mWW-14SBTF-S-TG
	1064	350	R1064±0.5-350mWW-14SBTF-S-TG

Part Numbering Schema



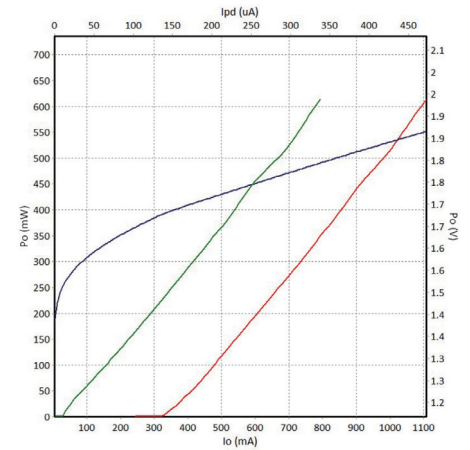
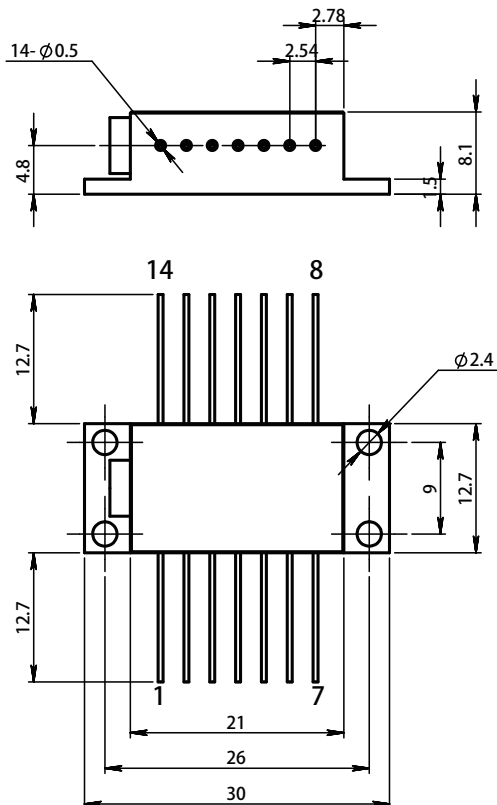
*Output Mode: W - Free Space

*Option: G - Narrow Linewidth

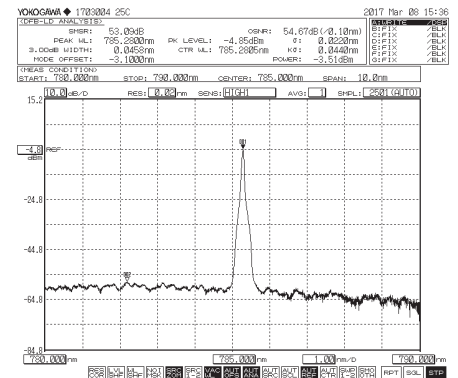
T - TEC

S - Single Mode

Mechanical Drawings (in mm)



785nm P-I-V Graph



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 (-)

