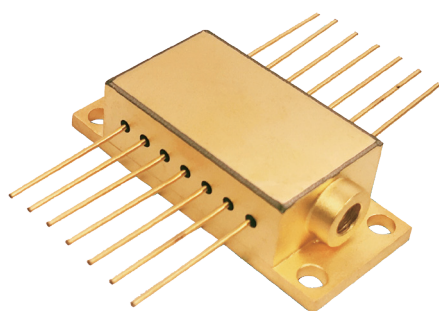


14SBTF Free Space Diode Laser Components



14SBTF Free Space Diode Laser Components, are featured products of RealLight's NL product line, utilizing wavelength-locking technique with volume Bragg gratings (VBG) and TE cooling, delivering stabilized power output, high Side-Mode Suppression Ratio, low temperature dependence of the lasing wavelength and various wavelengths.

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)		638	785	808	830	981	1064
Optical	CW Output Power / P _{op} (mW)	500	600	600	600	800	800
	Wavelength Tolerance (nm)	±0.5					
	Spectral Width / Δλ (nm)	<0.1	<0.1	<0.3	<0.1	<0.3	<0.1
	Temperature Drift of Wavelength / Δλ/ΔT (nm/°C)	0.01					
	Temperature Drift of Current / Δλ/ΔI _{op} (nm/A)	0.05					
	SMSR	>35	>40				
Electrical	Threshold Current / I _{th} (A)	0.5	0.4	0.3	0.4	0.3	0.4
	Operating Current / I _{op} (A)	1.1	1.1	1	1.2	1.2	1.5
	Operating Voltage / V _{op} (V)	2.2	2	2	1.8	1.5	1.8
	Slope Efficiency / η _{es} (W/A)	0.8	0.9	0.9	0.8	0.9	0.7
	PD Parameter / I _{pd} (μA)	<2000					
	Thermistor / R _t (kΩ/β (25°C))	10±1%/3930					
	TEC Max Current I _{max} (A)	2.5					
	TEC Max Voltage V _{max} (V)	6.3					

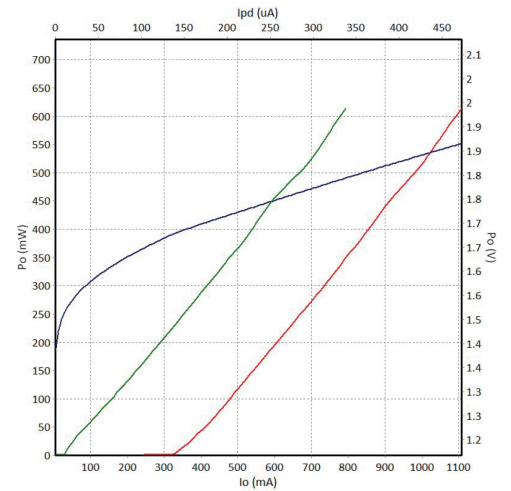
- Higher power options available upon request.
- All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

Other Parameters

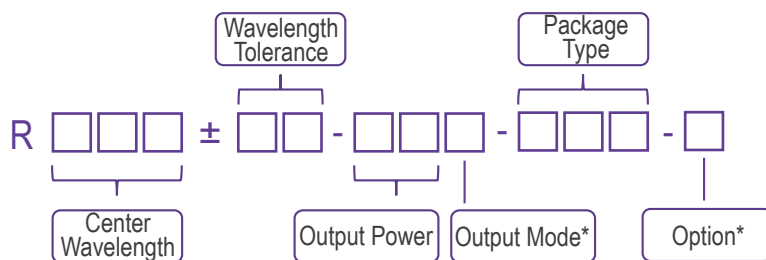
Parameter	Operating Temperature /°C	Operating Relative Humidity /%	Storage Temperature /°C	Storage Relative Humidity /%	Lead Soldering Temperature (max/°C)
Min	10	-	-20	-	-
Max	30	75	70	90	250(10Sec.)

Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
14SBTF	638	500	R638±0.5-500mWW-14SBTF-TG
	785	600	R785±0.5-600mWW-14SBTF-TG
	808	600	R808±0.5-600mWW-14SBTF-TG
	830	600	R830±0.5-600mWW-14SBTF-TG
	981	800	R981±0.5-800mWW-14SBTF-TG
	1064	800	R1064±0.5-800mWW-14SBTF-TG



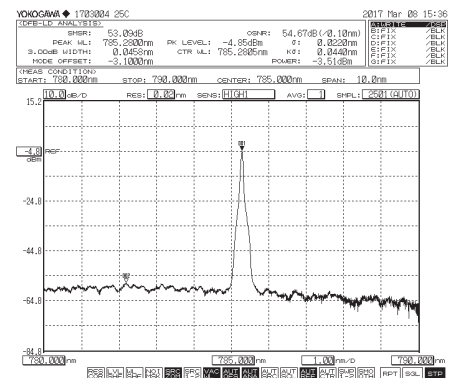
785nm P-I-V Graph



*Output Mode: W - Free Space

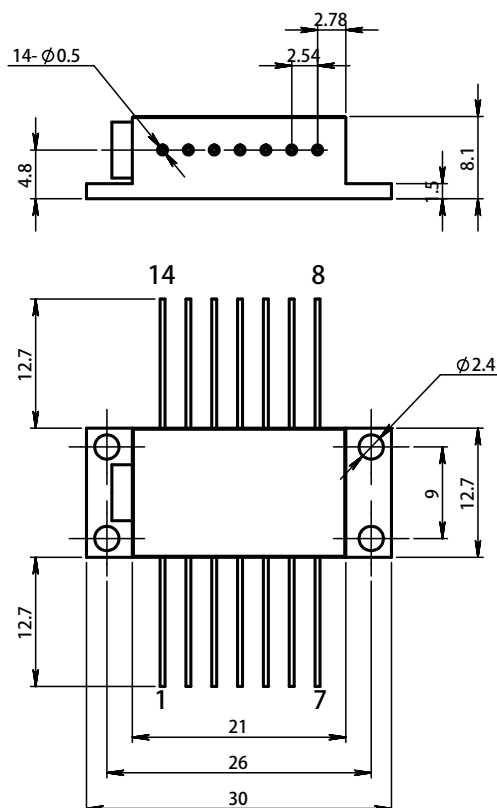
*Option: G - Narrow Linewidth

T - TEC



785nm Spectrum (SMSR>40dB)

Mechanical Drawings (in mm)



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 (-)

