

14SBTF Fiber Pigtailed Diode Laser Components

14SBTF Fiber Pigtailed 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 (Fiber Pigtailed)						
Center Wavelength (nm)		532*	638	785	808	830	976	1064
Optical	CW Output Power / P _{op} (mW)	100	500	600	600	600	800	800
	Wavelength Tolerance (nm)	±0.5						
	Spectral Width / Δλ (nm)	<0.1	<0.1	<0.1	<0.3	<0.1	<0.3	<0.1
	Temperature Drift of Wavelength / ΔNΔT (nm/°C)	0.01						
	Temperature Drift of Current / ΔNΔI _{op} (nm/A)	0.05	0.06	0.05	0.05	0.05	0.05	0.05
Electrical	SMSR	-	>35	>40				
	Threshold Current / I _{th} (A)	0.6	0.5	0.4	0.3	0.4	0.2	0.2
	Operating Current / I _{op} (A)	1	1.1	1.1	1.2	1.2	1	1.5
	Operating Voltage / V _{op} (V)	2	2.2	2	2	1.8	1.9	1.8
	Slope Efficiency / η _{es} (W/A)	-	0.8	0.7	0.9	0.8	0.9	0.6
	PD Parameter / I _{pd} (μA)	-	<2000					
	Thermistor / Rt (kΩ/β (25°C))	10±5%/3450						
	TEC Max Current I _{max} (A)	2.5						
TEC Max Voltage V _{max} (V)	6.3							
Fiber	Fiber Core Diameter / d _{core} (μm)	105						
	Fiber Cladding Diameter / D _{clad} (μm)	125						
	Fiber Coating Diameter / D _{buffer} (μm)	250						
	Fiber Length / L (cm)	100±10 (Customizable)						
	Numerical Aperture / NA	0.22						
Connector	FC/PC, SMA905							

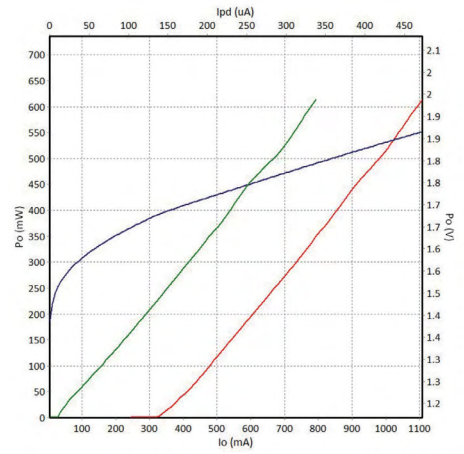
*532nm is diode pumped solid-state laser.

Other Parameters

Parameter	Operating Temperature / °C	Operating Relative Humidity / %	Storage Temperature / °C	Storage Relative Humidity / %	Lead Soldering Temperature (max/°C)
Min (785/808/830/976/1064nm)	10	-	-20	-	-
Max (785/808/830/976/1064nm)	30	75	70	90	250(10Sec.)
Min(638nm)	25	40	-20	-	-
Max(638nm)	30	55	70	60	250(10Sec.)

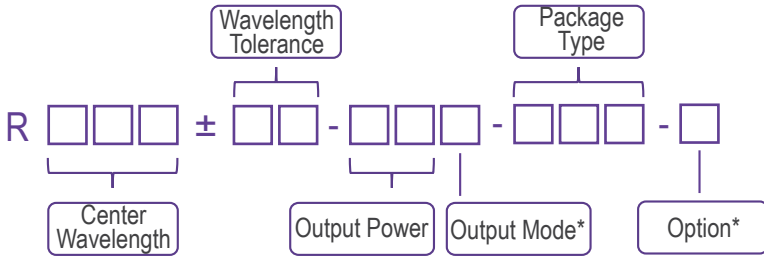
Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
14SBTF	532	100	R532±0.5-100mWF-14SBTF-TG
	638	500	R638±0.5-500mWF-14SBTF-TG
	785	600	R785±0.5-600mWF-14SBTF-TG
	808	600	R808±0.5-600mWF-14SBTF-TG
	830	600	R830±0.5-600mWF-14SBTF-TG
	976	800	R976±0.5-800mWF-14SBTF-TG
	1064	800	R1064±0.5-800mWF-14SBTF-TG



785nm P-I-V Graph

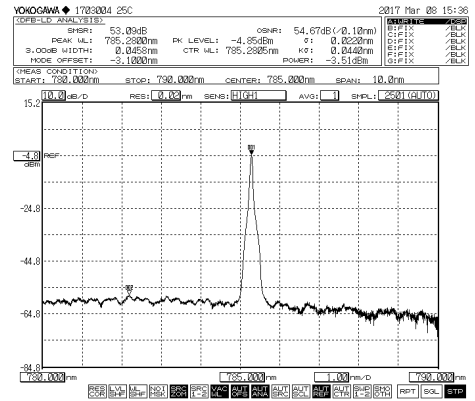
Part Numbering Schema



*Output Mode: F - Fiber Pigtailed

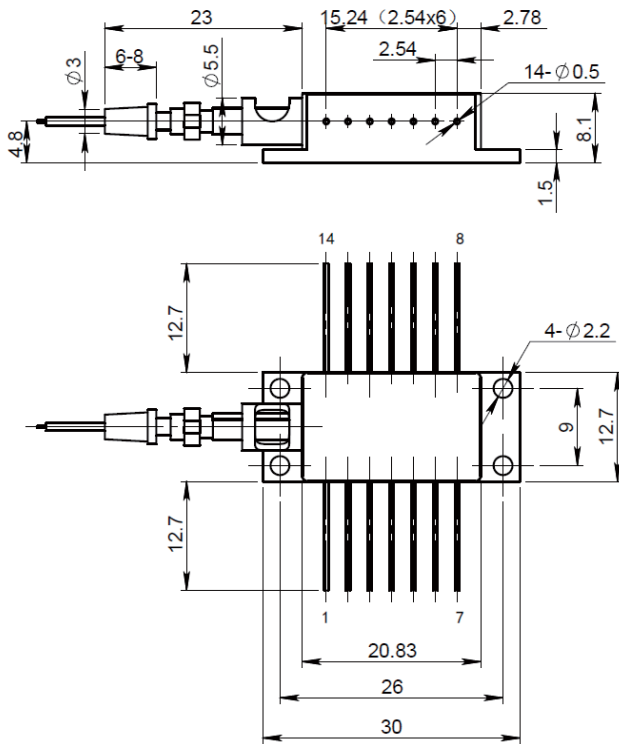
*Option: G - Narrow Linewidth

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 (-)

