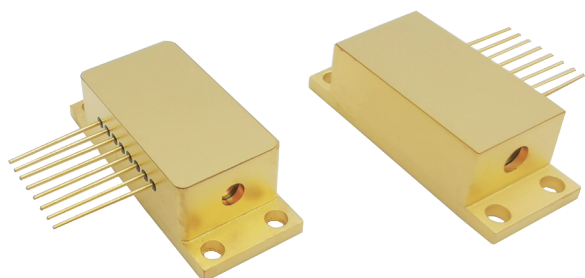


08LTR Free Space Narrow Linewidth Diode Laser Components



08LTR 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. The compact design makes them perfectly suitable for handheld devices.

Key Features

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

Applications

Medical application
Spectrum analysis
Scientific research

Technical Specifications (25°C)

Package Type		08LTR(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 / $\Delta\lambda$ (nm)	<0.1	<0.1	<0.3	<0.1	<0.3	<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} (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 ($k\Omega/\beta$ (25°C))	10 $\pm$ 1%/3930					
	TEC Max Current I_{max} (A)	2.5					
	TEC Max Voltage V_{max} (V)	6.3					

1. Higher power options available upon request.
2. 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.

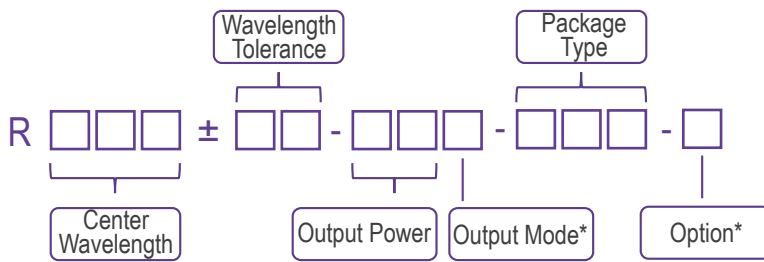
Other Parameters

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
08LTR	638	500	R638±0.5-500mWW-08LTR-TG
	785	600	R785±0.5-600mWW-08LTR-TG
	808	600	R808±0.5-600mWW-08LTR-TG
	830	600	R830±0.5-600mWW-08LTR-TG
	981	800	R981±0.5-800mWW-08LTR-TG
	1064	800	R1064±0.5-800mWW-08LTR-TG

Part Numbering Schema

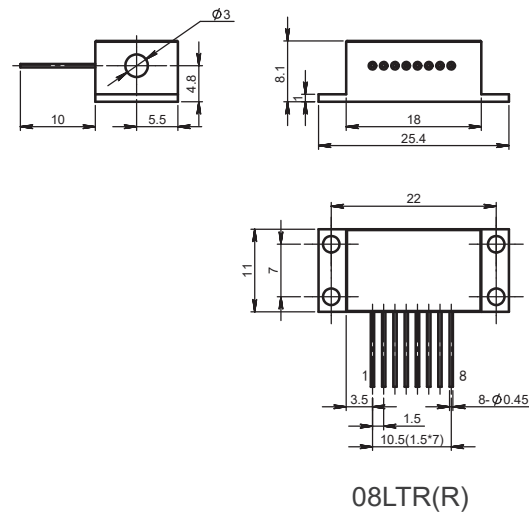
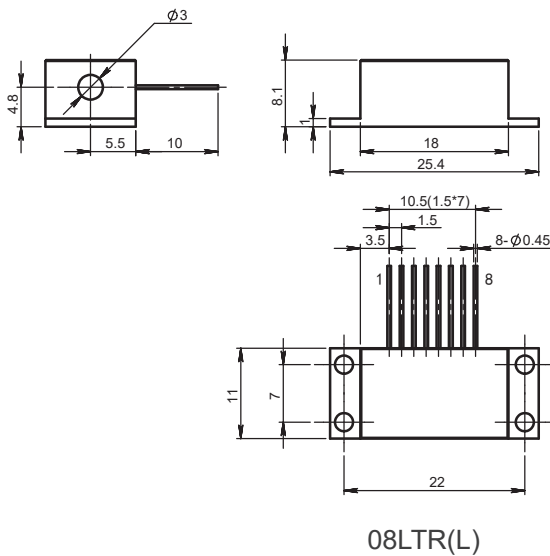


*Output Mode: W - Free Space

*Option: G - Narrow Linewidth

T - TEC

Mechanical Drawings (in mm)

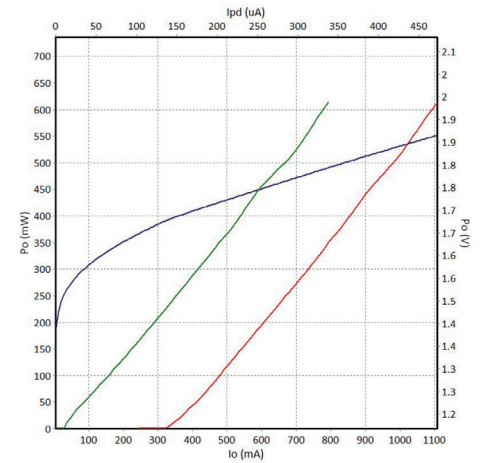


Pin	Function
1	Laser (-)
2	Laser (+)
3	Thermistor
4	Thermistor
5	PD(-)
6	PD(+)
7	TEC (+)
8	TEC (-)

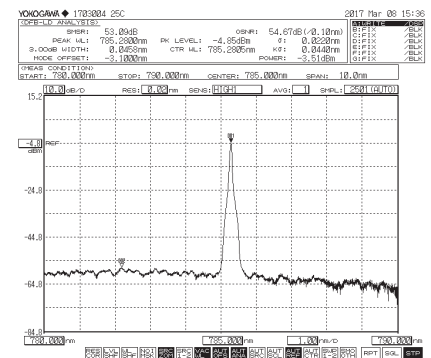
08LTR(L) Package Dimensions

Pin	Function
1	Laser (+)
2	Laser (-)
3	Thermistor
4	Thermistor
5	PD(-)
6	PD(+)
7	TEC (-)
8	TEC (+)

08LTR(R) Package Dimensions



785nm P-I-V Graph



785nm Spectrum (SMSR>40dB)

