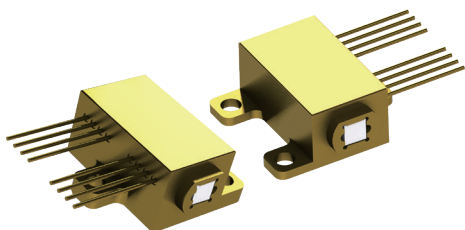


08LTR-mini Single-Mode Free Space Narrow Linewidth Diode Laser Components



The 08LTR-mini module is RealLight's NL series of single-mode free space narrow linewidth diode laser. Utilizing VBG wavelength locking technology combined with a single-mode chip, this product can integrate a TEC cooler, PD, and thermistor. It delivers stable output under continuous operation, featuring narrow linewidth, low temperature dependence of the lasing wavelength, and a compact size. It is particularly suitable for Raman spectroscopy applications.

Key Features

- ◆ Linewidth < 0.1 nm
- ◆ Stable output
- ◆ Single-mode output
- ◆ Compact design, easy to integrate

Applications

- Raman spectroscopy
- Medical applications
- Scientific research applications

Technical Specifications (25°C)

Package Type		08LTR-mini (Single Mode Free Space)	
Center Wavelength (nm)		785	1064
Optical	CW Output Power / P_{op} (mW)	100	300
	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} (A)	0.05	0.05
	Operating Current / I_{op} (A)	0.17	0.5
	Operating Voltage / V_{op} (V)	1.8	1.8
	Slope Efficiency / η_{es} (W/A)	0.8	0.7
	PD Parameter / I_{pd} (μA)	<2000	
	Thermistor / R_t (k Ω/β (25°C))	10	
	TEC Max Current I_{max} (A)	1.2	
	TEC Max Voltage V_{max} (V)	4.2	

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.

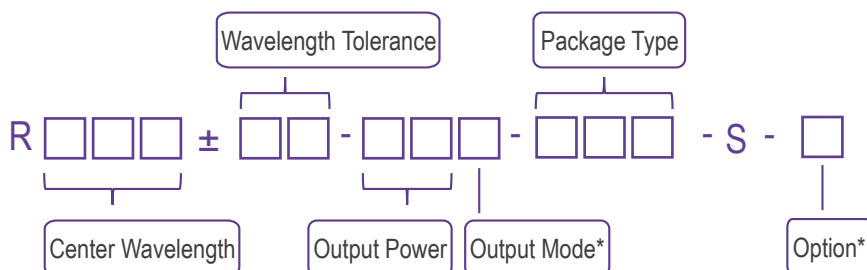
Other Parameters

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

Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
08LTR-mini	785	100	R785±0.5-100mWW-08LTR-mini-S-TG
	1064	300	R1064±0.5-300mWW-08LTR-mini-S-TG

Part Numbering Schema

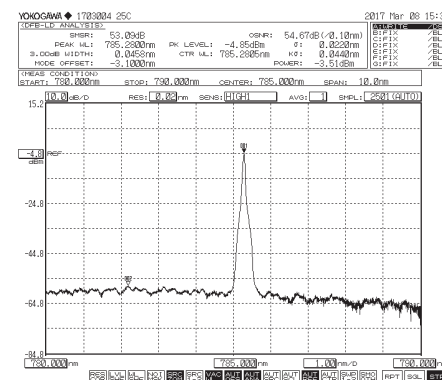


*Output Mode: W - Free Space

*Option: G - Narrow Linewidth

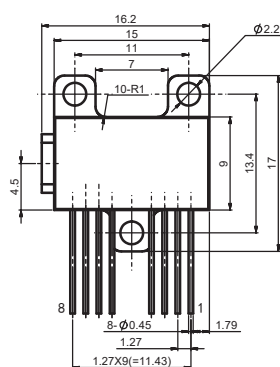
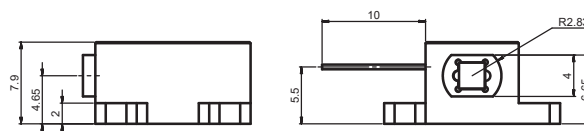
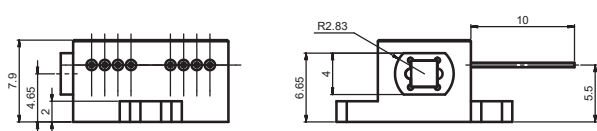
T - TEC

S - Single Mode

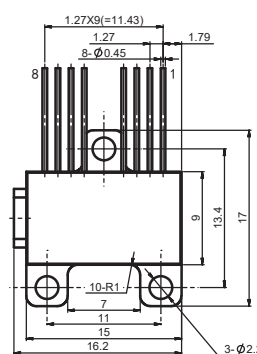


785nm Spectrum

Mechanical Drawings (in mm)



08LTR(L)-mini



08LTR(R)-mini

08LTR(L)-mini	
Pin	Function
1	TEC (+)
2	Laser (-)
3	Laser (+)
4	Thermistor
5	Thermistor
6	PD (+)
7	PD (-)
8	TEC (-)

08LTR(R)-mini	
Pin	Function
1	TEC (-)
2	Laser (-)
3	Laser (+)
4	Thermistor
5	Thermistor
6	PD (+)
7	PD (-)
8	TEC (+)

