



RLT780-150GS

TECHNICAL DATA



High Power Infrared Laser Diode

Features

- Lasing Mode Structure: single mode
- Peak Wavelength : typ. 780 nm
- Optical Output Power: 150 mW
- Package: 9 mm



Electrical Connection

Pin Configuration	Bottom View								
<div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <p><i>n-type</i></p> <table border="1"> <thead> <tr> <th>PIN</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LD Anode</td> </tr> <tr> <td>2</td> <td>LD Cathode, PD Cathode</td> </tr> <tr> <td>3</td> <td>PD Anode</td> </tr> </tbody> </table> </div>	PIN	Function	1	LD Anode	2	LD Cathode, PD Cathode	3	PD Anode	
PIN	Function								
1	LD Anode								
2	LD Cathode, PD Cathode								
3	PD Anode								

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

Item	Symbol	Value	Unit
CW Output Power	P_O	185	mW
LD Reverse Voltage	$V_{R(LD)}$	1.5	V
PD Reverse Voltage	$V_{R(PD)}$	10	V
Operating Case Temperature	T_C	-20 ... +50	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ... +80	$^\circ\text{C}$

Specifications ($T_C=25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max.	Unit
Optical Specification					
CW Output Power	P_O	-	150	-	mW
Peak Wavelength	λ_P	775	780	785	nm
Spectral Width (FWHM)	$\Delta\lambda$	-	0.5	2	nm
FWHM Beam Divergence	$\theta_{ }$	-	8	10	deg
	θ_{\perp}	-	25	30	deg
Emitting Aperture	W x H		5 x 1		μm
Lifetime		100000	-	-	hour
Electrical Specification					
Threshold Current	I_{th}	-	35	55	mA
Operating Current	I_{op}	-	170	200	mA
Slope Efficiency	η	1.0	1.1	-	W/A
Operating Voltage	U_{op}	-	1.9	2.2	V
Monitor Current	I_m	-	-	0.4	mA

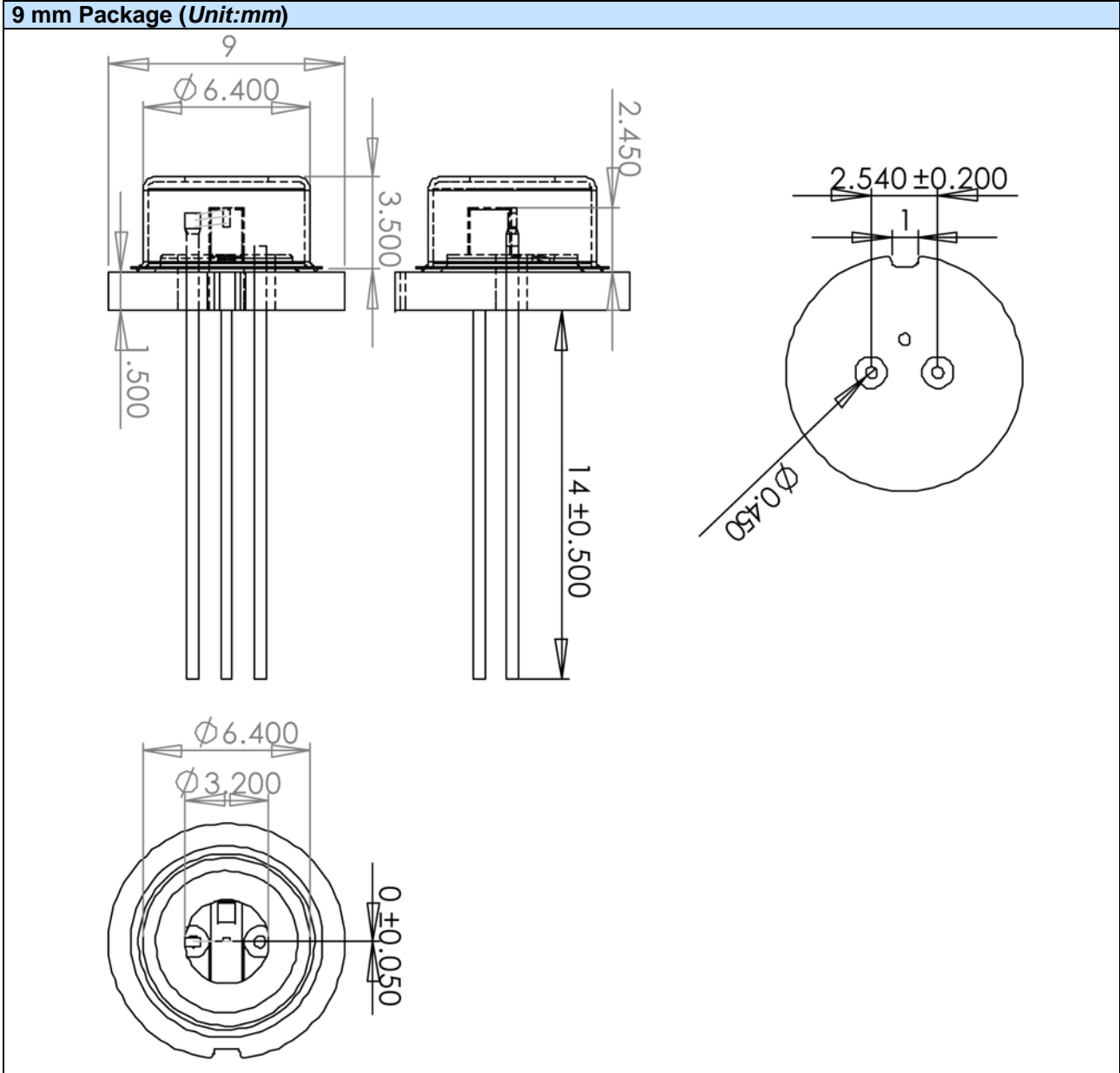
The above specifications are for reference purpose only and subjected to change without prior notice.





Package Dimensons

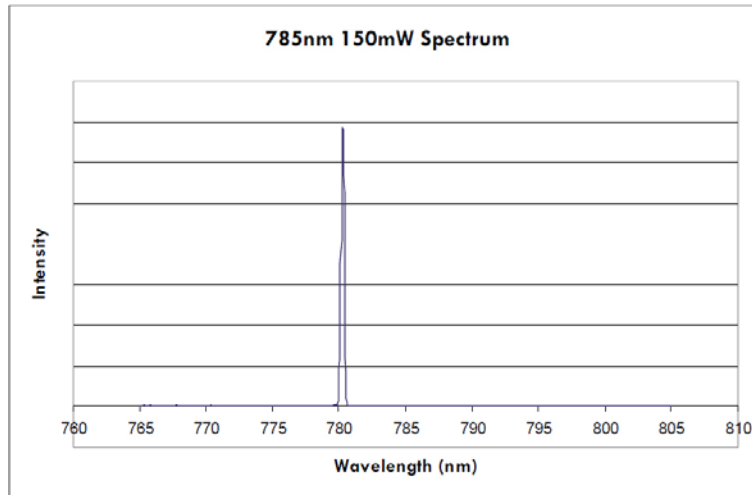
9 mm Package (Unit:mm)



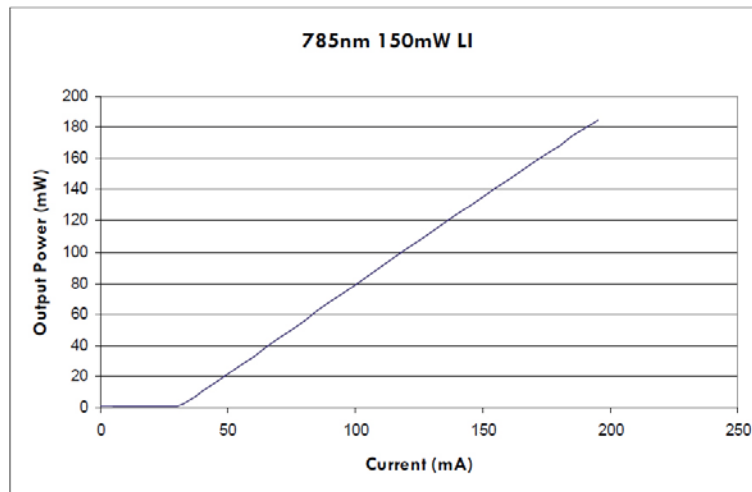


Typical Performance Curves

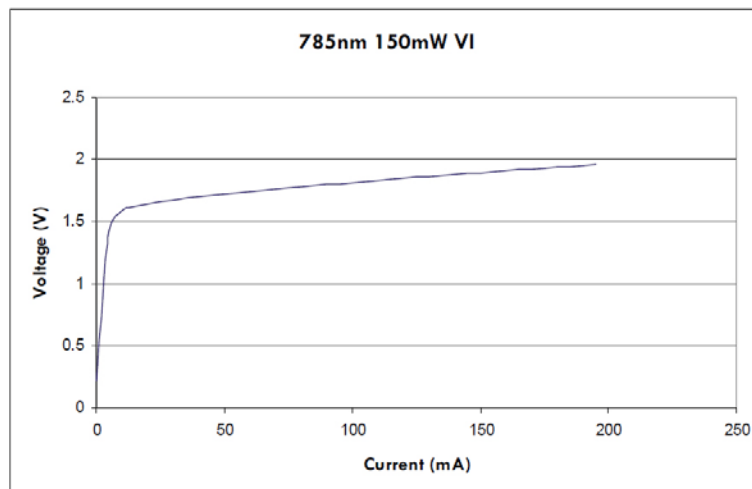
Spectrum



Operation Current vs. Output Power



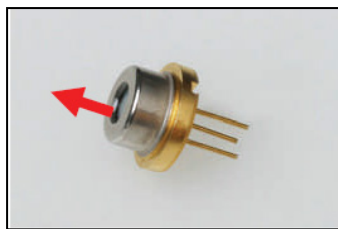
Operation Current vs. Operation Voltage





Safety of Laser light

- Laser Light can damage the human eyes and skin. Do not expose the eye or skin directly to any laser light and/or through optical lens. When handling the LDs, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.
- **WARNING: Laser diode is emitting invisible light**



Cautions

1. Operating method

- This LD shall change its forward voltage requirement and optical output power according to temperature change. Also, the LD will require more operation current to maintain same output power as it degrades.
- Confirm that electrical spike current generated by switching on and off does not exceed the maximum operating current level specified herein above as absolute maximum rating. Also, employ appropriate countermeasures to reduce chattering and/or overshooting in the circuit.

2. Static Electricity

- Static electricity or electrical surges will reduce and degrade the reliability of the LDs. It is recommended to use a wrist trap or anti-electrostatic glove when handling the product.

3. Absolute Maximum Rating

- Active layer of LDs shall have high current density and generate high electric field during its operation. In order to prevent excessive damage, the LD must be operated strictly below absolute maximum rating.