



## RLT850-100GS

### TECHNICAL DATA



## High Power Infrared Laser Diode

### Features

- Lasing Mode Structure: single mode
- Peak Wavelength : typ. 852 nm
- Optical Output Power: 100 W
- Package: 9 mm



### Electrical Connection

Pin Configuration	Bottom View										
<table border="1"> <thead> <tr> <th colspan="2">n-type</th> </tr> <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>	n-type		PIN	Function	1	LD Anode	2	LD Cathode, PD Cathode	3	PD Anode	
n-type											
PIN	Function										
1	LD Anode										
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### Absolute Maximum Ratings ( $T_C=25^\circ\text{C}$ )

Item	Symbol	Value	Unit
CW Output Power	$P_O$		mW
LD Reverse Voltage	$V_{R(LD)}$		V
PD Reverse Voltage	$V_{R(PD)}$		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
<b>Optical Specification</b>					
CW Output Power	$P_O$	-	100	-	mW
Peak Wavelength	$\lambda_P$	847	852	857	nm
Spectral Width (FWHM)	$\Delta\lambda$	-	0.5	2	nm
FWHM Beam Divergence	$\theta_{  }$	-	8	10	deg
	$\theta_{\perp}$	-	28	30	deg
Emitting Aperture	W x H		5 x 1		$\mu\text{m}$
Lifetime		100000	-	-	hour
<b>Electrical Specification</b>					
Threshold Current	$I_{th}$	-	20	40	mA
Operating Current	$I_{op}$	-	120	170	mA
Slope Efficiency	$\eta$	0.9	1.0	-	W/A
Operating Voltage	$V_{op}$	-	1.9	2.2	V
Monitor Current	$I_m$				mA

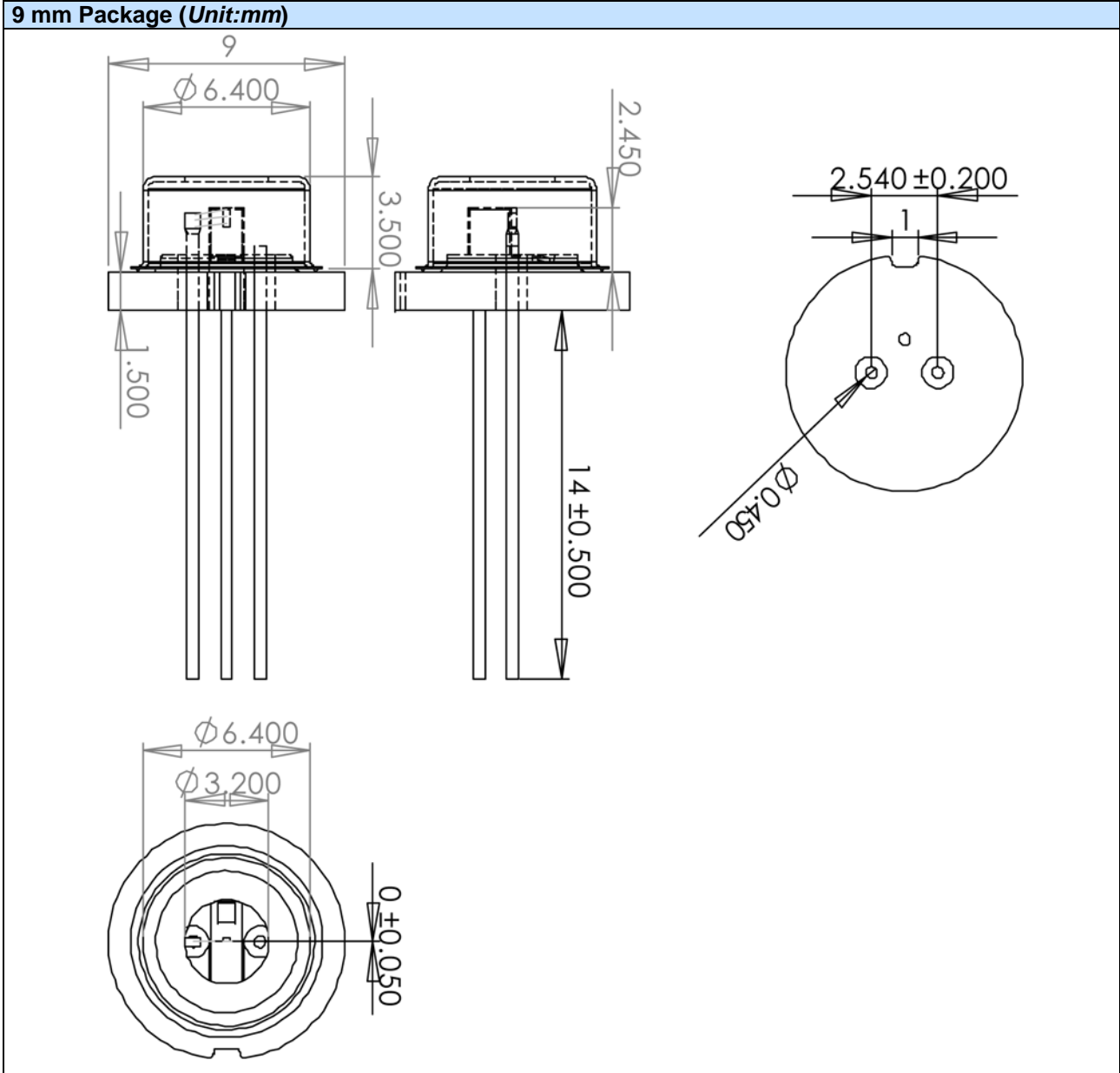
The above specifications are for reference purpose only and subjected to change without prior notice.





## Package Dimensions

### 9 mm Package (Unit:mm)

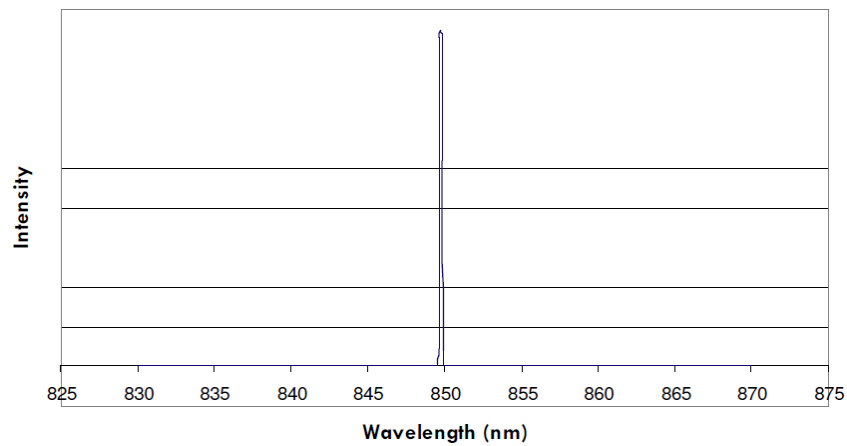




## Typical Performance Curves

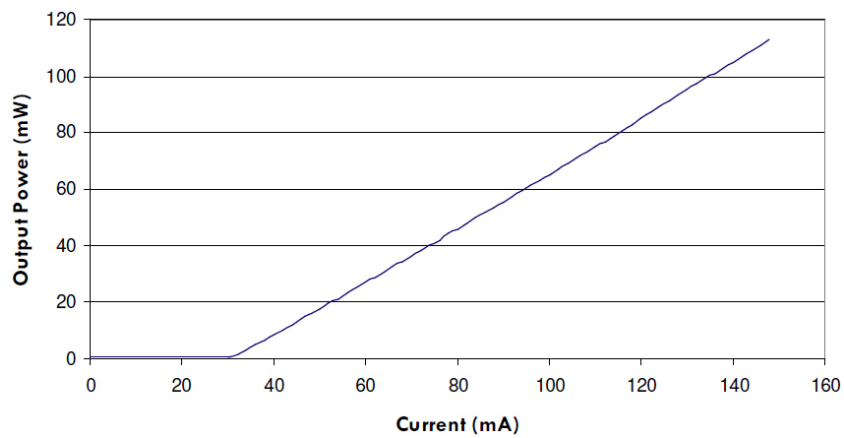
### Spectrum

850nm 150mW Single Mode Spectrum



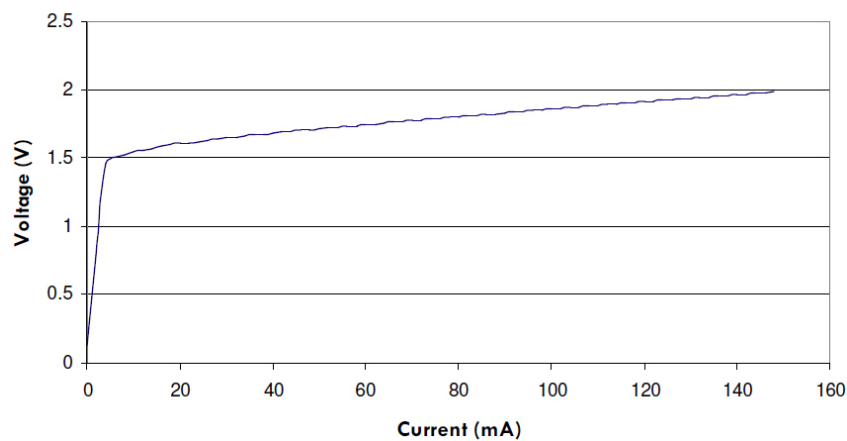
### Operation Current vs. Output Power

850nm Single Mode LI



### Operation Current vs. Operation Voltage

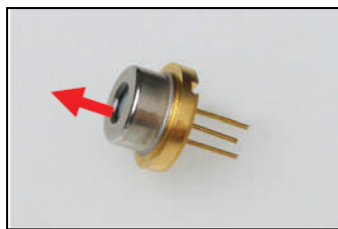
850nm 150mW Single Mode VI





## 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.