



## RLT1300-50G



### TECHNICAL DATA

## High Power Infrared Laser Diode

### Features

- Structure: GaInAsP/InP SQW structure
- Peak Wavelength : single mode, typ. 1300 nm
- Optical Output Power: 50 mW
- Package: 9 mm



### Electrical Connection

Pin Configuration		Bottom View
	<i>n-type</i>	
	<b>PIN</b>	
	1	
	2	
	3	
	<b>Function</b>	
	LD Cathode	
	LD Anode, PD Cathode	
	PD Anode	

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

Item	Symbol	Value	Unit
CW Output Power	$P_O$	60	mW
Maximum LD Current	$I_f$	260	mA
LD Reverse Voltage	$U_{R(LD)}$	1.5	V
PD Reverse Voltage	$U_{R(PD)}$	6	V
Operating Case Temperature	$T_C$	-20 ... +40	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 ... +70	$^\circ\text{C}$

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

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
<b>Optical Specification</b>						
CW Output Power	$P_O$	cw	-	50	-	mW
Peak Wavelength	$\lambda_P$	$P_O = 40 \text{ mW}$	1270	1300	1330	nm
Spectral Width (FWHM)	$\Delta\lambda$	$P_O = 40 \text{ mW}$	-	6	8	nm
FWHM Beam Divergence	$\theta_{\parallel}$	$P_O = 40 \text{ mW}$	-	25	-	deg
	$\theta_{\perp}$	$P_O = 40 \text{ mW}$	35	40	45	deg
Emitting Aperture	$W \times H$			1 x 5		$\mu\text{m}$
<b>Electrical Specification</b>						
Threshold Current	$I_{th}$	cw	-	35	55	mA
Operating Current	$I_{op}$	$P_O = 40 \text{ mW}$	-	-	230	mA
Operating Voltage	$U_{op}$	$P_O = 40 \text{ mW}$	-	1.5	2	V
Monitor Current	$I_m$	$P_O = 40 \text{ mW}$	>20	500	1500	$\mu\text{A}$

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



## 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.
- These LDs are emitting invisible light.



## Cautions

### 1. Operating methode

- 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. In order to maintain output power, use of APC (Automatic Power Control) is recommended. Which use monitor feedback to adjust the operation current.
- 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 strap 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.



**NOTE**  
LASERDIODE  
MUST BE COOLED