ROITHNER LASERTECHNIK
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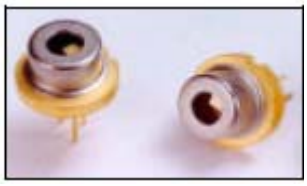
Tel.: ++43 1 586 52 43-0, Fax -44, office@roithner-laser.com

RLT831000G



TECHNICAL DATA

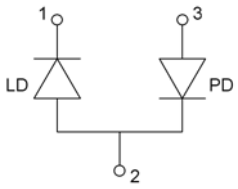
High Power Infrared Laser Diode

Features

- Lasing Mode Structure: multi mode
- Peak Wavelength : typ. 830 nm
- Optical Ouput Power: 1 W
- Package: 9 mm

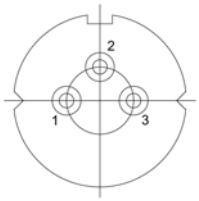
Electrical Connection

Pin Configuration	Bottom View



n-type

PIN	Function
1	LD Cathode
2	LD Anode, PD Cathode
3	PD Anode



Absolute Maximum Ratings (T_C=25°C)

Item	Symbol	Value	Unit
CW Output Power	P_O	1	W
Reverse Voltage	U_R	2	V
Operating Case Temperature	T_C	-20 … +30	°C
Storage Temperature	T_{stg}	-40 … +70	°C

Specifications (T_C=25°C)

Item	Symbol	Min.	Typ.	Max.	Unit
Optical Specification					
CW Output Power	P_O	-	1.5	-	W
Peak Wavelength	λ_P	825	830	835	nm
Spectral Width (FWHM)	$\Delta\lambda$	-	2	4	nm
Wavelength Temperature Coefficient	$\partial\lambda / \partial T$	-	0.3	-	nm/°C
FWHM Beam Divergence	$\theta_{\parallel}$	-	10	-	deg
	$\theta_{\perp}$	-	40	-	deg
Emitting Aperature	W x H		100 x 1		µm
Polarization			TE		
Electrical Specification					
Threshold Current	I_{th}	-	-	400	mA
Operating Current	I_{op}	-	-	1.6	A
Slope Efficiency	η	0.8	-	-	W/A
Operating Voltage	U_{op}	-	-	2.1	V
Series Resistanve	R_D	-	0.8	-	Ω

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

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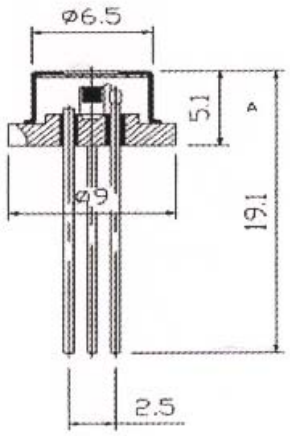
Package Dimensons

9 mm Package (*Unit:mm*)



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 ouput power according to temperature change. Also, the LD will require more operation current to maintain same ouput 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 appropriat 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 handeling 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 stricly below absolute maximum rating.