ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
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ADL-63301TL

TECHNICAL DATA

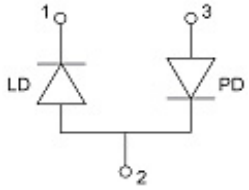
Red Laser Diode

Features

- AlGaAlP laser diode
- Peak Wavelength: 640 nm
- Single Transverse/Longitudinal Mode
- Optical Ouput Power: 30 mW
- Package: 5.6 mm, with Photo Diode

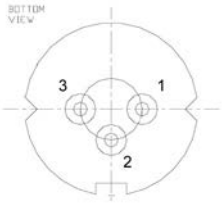
Electrical Connection

Pin Configuration	Bottom View



m-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
Optical Output Power	P_O	35	mW
LD Reverse Voltage	V_R (LD)	2	V
PD Reverse Voltage	V_R (PD)	30	V
PD Forward Current	I_{PD}	10	MA
Operating Case Temperature	T_C	-10 … +40	°C
Storage Temperature	T_{stg}	-40 … +85	°C

Specifications (T_C=25°C, P_O=30mW)

Item		Symbol	Min.	Typ.	Max.	Unit
Optical Specifications						
Optical Output Power (CW)		P_O	-	30	-	mW
Peak Wavelength		λ_P	630	640	645	nm
FWHM Beam Divergence		$\Theta_{\parallel}$	5	8	12	deg
		$\Theta_{\perp}$	25	33	38	deg
Emission Point Accuracy	Angle	$\Delta\theta_{\parallel}$	-3	-	+3	deg
		$\Delta\theta_{\perp}$	-3	-	+3	deg
Astigmatism		A_S	-80	-	+80	µm
Electrical Specifications						
Threshold Current		I_{th}	-	50	70	mA
Operating Current		I_{op}	-	100	120	mA
Slope Efficiency		η	0.3	0.6	1.2	W/A
Operating Voltage		V_{op}	-	2.3	2.7	V
Monitor Current		I_m	0.1	0.25	0.5	mA

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

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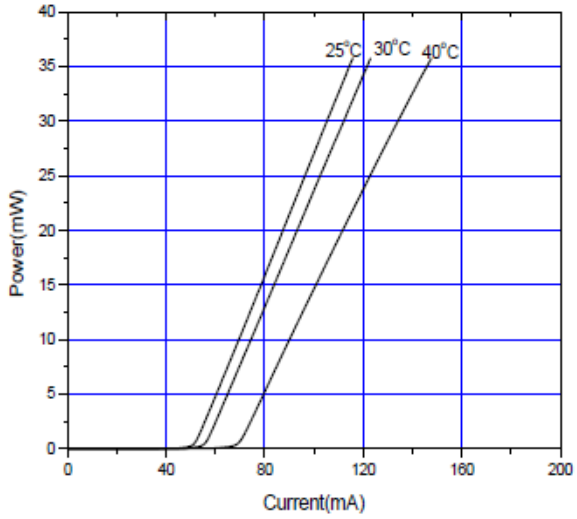
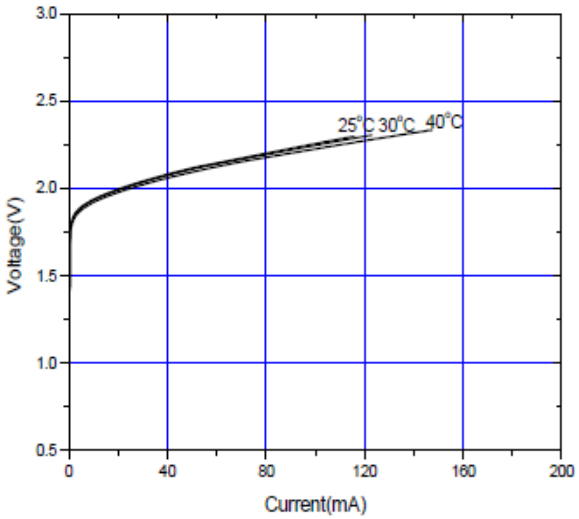
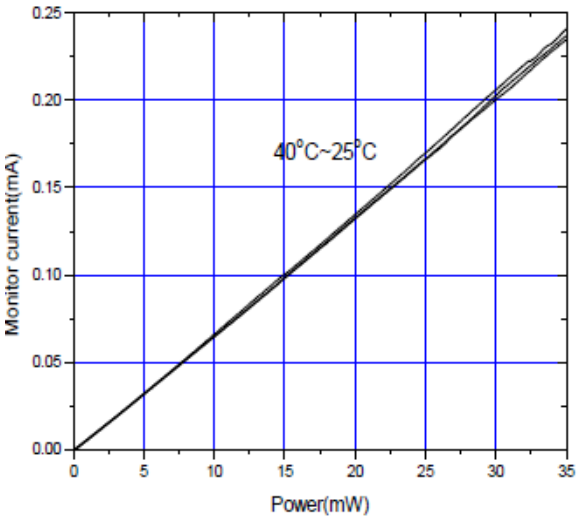
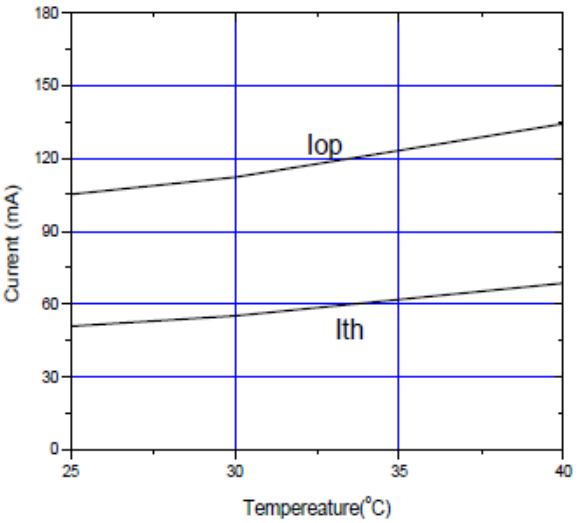
NOTE
LASERDIODE
MUST BE COOLED

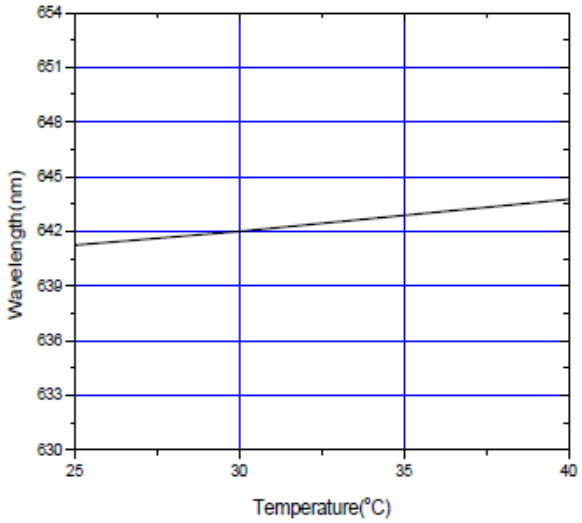
Typical Performance Characteristics

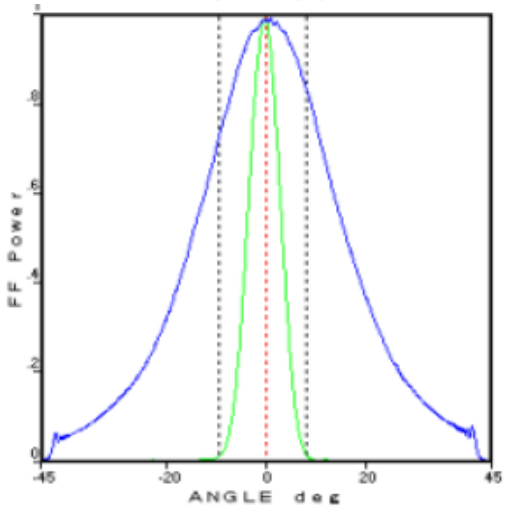












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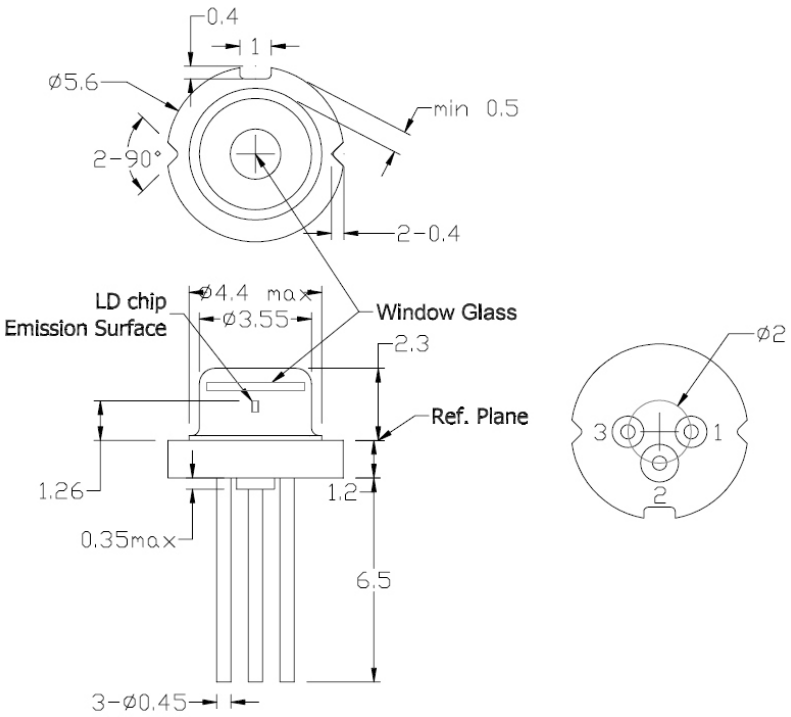
Package Dimensons

5.6 mm TO (all dimensions in 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.

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 striclty below absolute maximum rating.