



RLA4116

■ Features

- Peak Wavelength: 473nm
- Optical Output Power: 100mW
- Can Type: $\phi 5.6$ mm Floating Mounted with Photo Diode and Zener Diode

■ Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Ratings	Unit
Optical Output Power	Po	120	mW
Allowable Reverse Current	Ir (LD)	85	mA
PD Reverse Voltage	Vr (PD)	5	V
Storage Temperature	Tstg	-40 ~ 85	°C
Operating Case Temperature	Tc	0 ~ 60	°C

■ Initial Electrical/Optical Characteristics

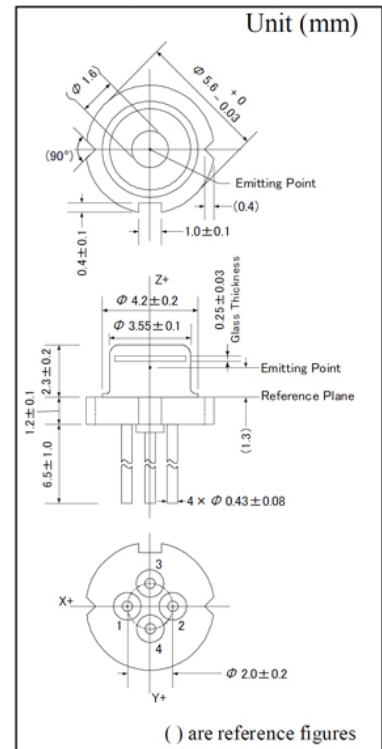
(Tc=25°C)

Item	Condition	Symbol	Min	Typ.	Max	Unit	
Optical Output Power	CW	Po	-	-	100	mW	
Peak Wavelength	Po=100mW	λ_p	468	473	478	nm	
Threshold Current	CW	I _{th}	-	20	45	mA	
Operating Current	Po=100mW	I _{op}	-	120	150	mA	
Slope Efficiency	CW	η	0.8	1.0	-	W/A	
Operating Voltage	Po=100mW	V _{op}	5.0	5.7	6.5	V	
Beam Divergence*	Parallel	Po=100mW	$\theta_{//}$	8.0	9.5	12.0	°
	Perpendicular			20.0	23.5	27.0	°
Beam Pointing Accuracy	Parallel	Po=100mW	$\Delta\theta_{//}$	-2.5	-	2.5	°
	Perpendicular			$\Delta\theta_{\perp}$	-3.0	-	3.0
Monitor Current**	Po=100mW	I _m	0.2	1.0	2.0	mA	

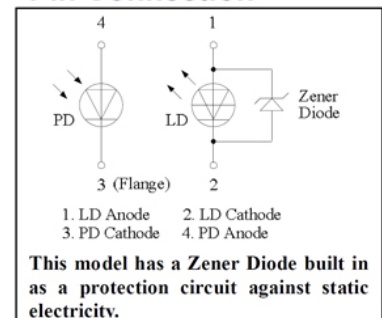
* Full angle at 50% from peak intensity

** Monitor Current is short time power reference purpose only. Not guaranteed for accuracy.

Outline Dimension



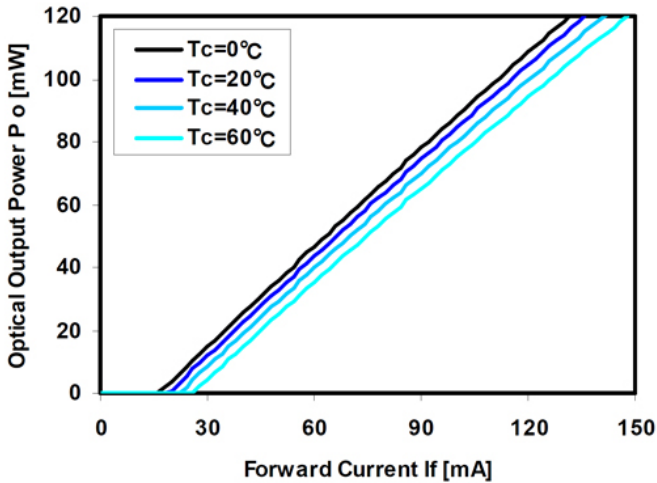
Pin Connection



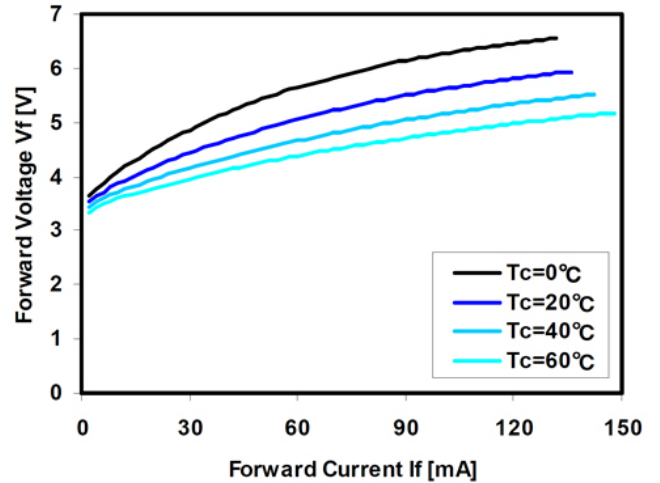


Typical Characteristics

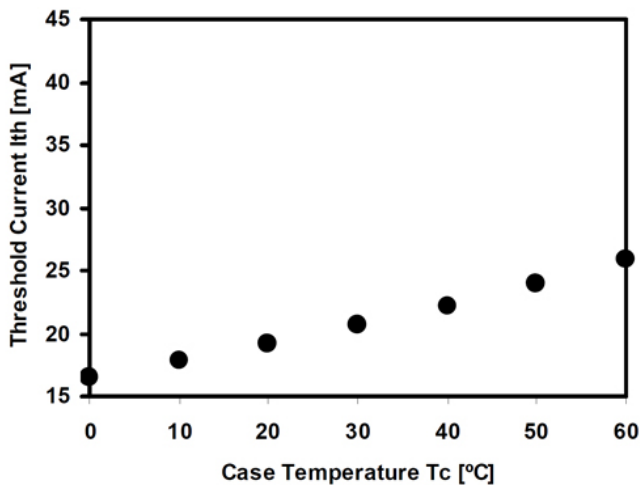
Optical Output Power vs. Forward Current



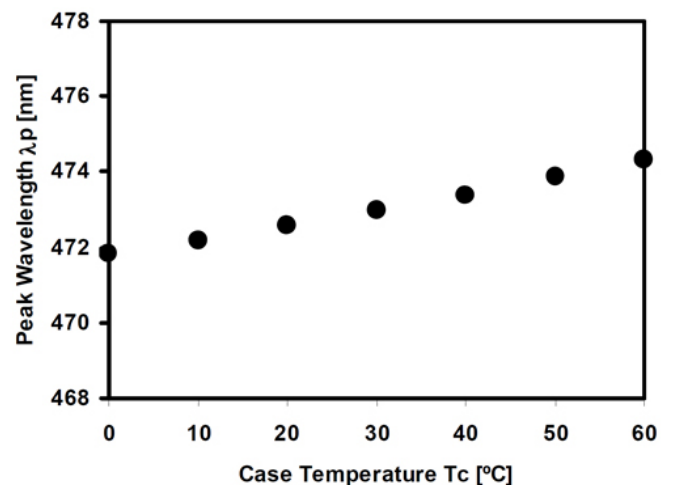
Forward Voltage vs. Forward Current



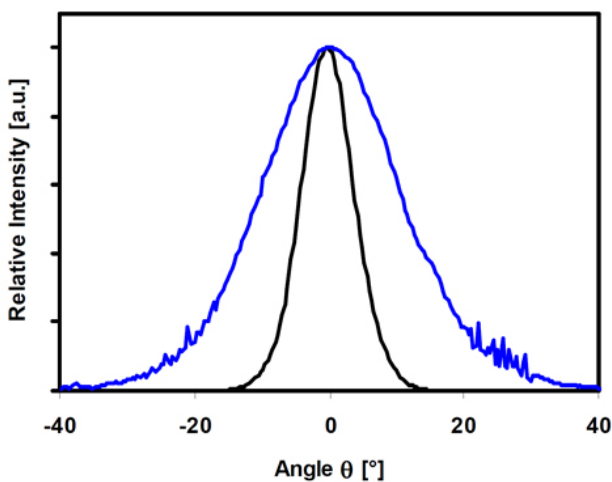
Threshold Current vs. Case Temperature



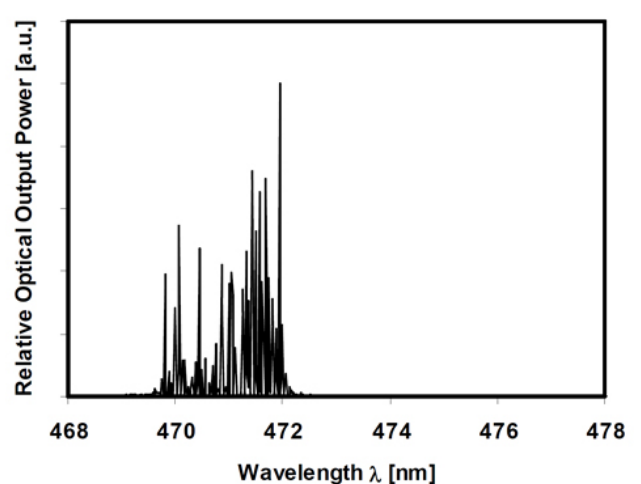
Peak Wavelength vs. Case Temperature



Far Field Pattern



Spectrum





■ Cautions

(1) Safety of Laser light

- **Laser beam are extremely dangerous to human eyes.** Never look at laser beam directly 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.**
- LDs are classified in **Class 3B of IEC60825-1 and 21 CFR Part 1040.10 Safety Standards.** It is absolutely necessary to take overall safety measures against User's modules, equipment and systems into which LDs are incorporated and/or integrated.



(2) Operating method

- The 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 the optical output power generated by spike current when switching on and off does not exceed the maximum absolute rating. Also, employ appropriate countermeasures to reduce chattering and/or overshooting in the Circuit.

(3) 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.

(4) 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 Max Rating.

© All Rights Reserved

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