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RLV4212

TECHNICAL DATA

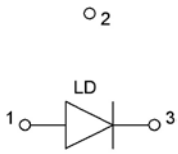
Violet Laser Diode

Features

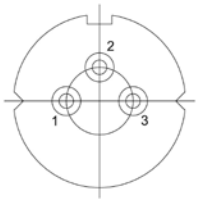
- Peak Wavelength: 405 nm
- Optical Output Power: 120 mW
- Package: 5.6 mm, without Photodiode

Electrical Connection

Pin Configuration	Bottom View



PIN	Function
1	LD Anode
2	Case
3	LD Cathode



Absolute Maximum Ratings (T_C=25°C)

Item	Symbol	Value	Unit
CW Output Power	P_O	120	mW
LD Reverse Voltage	V_R (LD)	2	V
Operating Case Temperature	T_C	-10 … +70	°C
Storage Temperature	T_{stg}	-40 … +85	°C

Specifications (T_C=25°C)

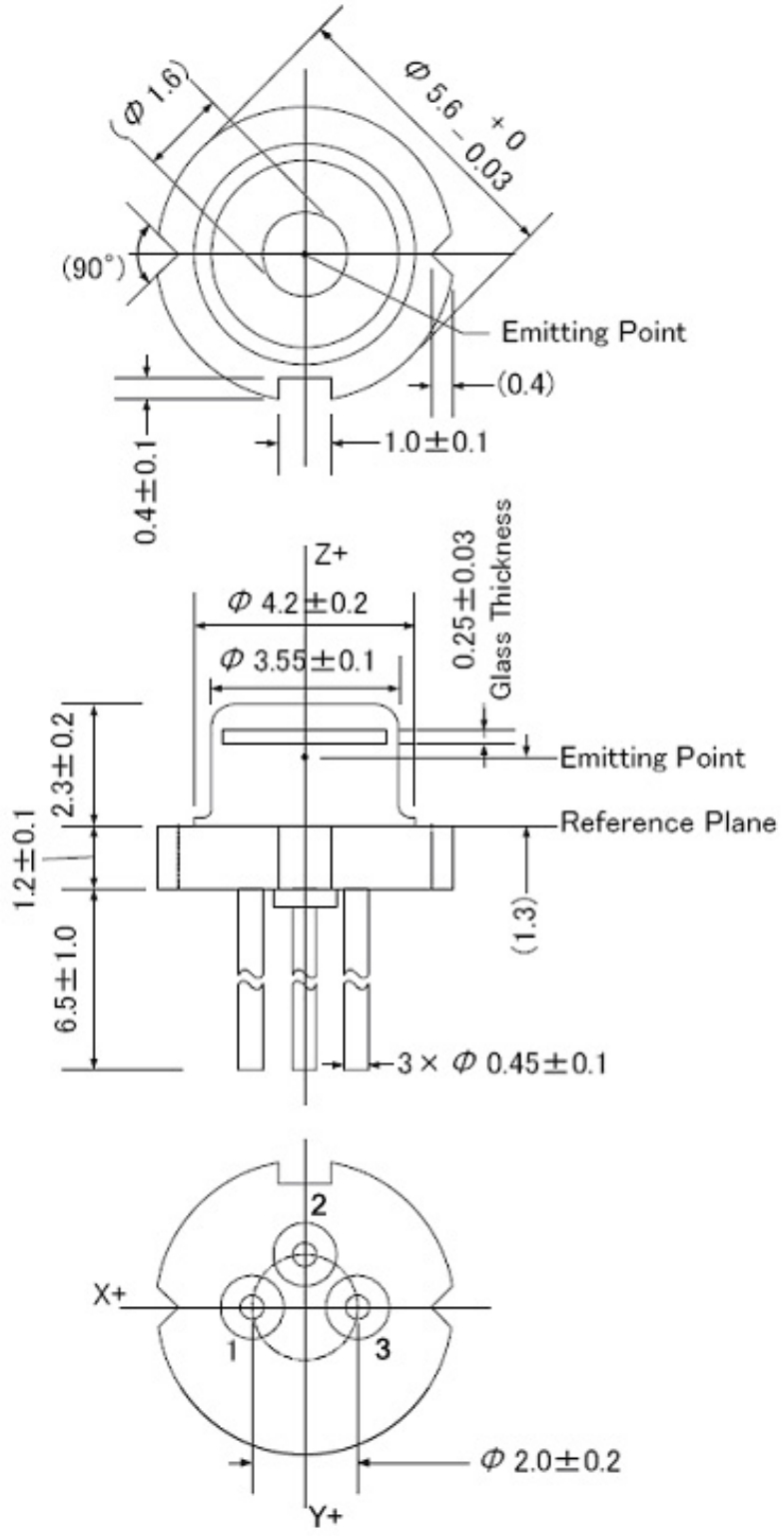
Item		Symbol	Min.	Typ.	Max.	Unit
Optical Specifications						
CW Output Power		P_O	-	-	100	mW
Peak Wavelength *		λ_P	400	405	410	nm
FWHM Beam Divergence		$\theta_\parallel$	7.0	9.0	12.0	deg
		$\theta_\perp$	15.0	19.5	23.0	deg
Emission Point Accuracy	Angle	$\Delta\theta_\parallel$	-2.0	-	2.0	deg
		$\Delta\theta_\perp$	-2.5	-	2.5	deg
Electrical Specifications						
Threshold Current		I_{th}	-	35	50	mA
Operating Current		I_{op}	-	100	130	mA
Slope Efficiency		η	1.2	1.4	1.9	W/A
Operating Voltage		V_{op}	-	4.6	5.5	V

* Measuring specifications.
Not guaranteed for accuracy.

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

Package Dimensions

5.6 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 classified in Class 4 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 this LDs are incorporated and/or integrated.

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. 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 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.