



SHD38200MG

- UVA Laser Diode
- 380 nm, 200 mW
- Multi transverse mode
- TO56 package, Flat Window



Description

SHD38200MG is a direct emitting, **InAlGaN** multiple quantum well **UVA** multi transverse mode laser diode in 5.6 mm TO-Can **without photodiode**, typically lasing at 380 nm, with optical output power of 200mW. **SHD38200MG** is an efficient radiation source for many applications like **3D printers, or biomedical application**.

Maximum Rating*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Optical Output Power*1	$P_O(CW)$		210	mW
LD Reverse Voltage	V_{RLD}		2	V
Operating Temperature*1	T_{OPR}	20	30	°C
Storage Temperature	T_{STG}	- 40	85	°C
Soldering Temperature (max. 3s)	T_{SOL}		260	°C

* operating outside these conditions may damage the device

*1 operating at maximum ratings may influence the life time



Electro-Optical Characteristics (T_{CASE} = 25°C)

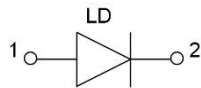
Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	375	380	385	nm
Optical Output Power	P_O		200		mW
Operating Voltage	V_F		4.4		V
Threshold Current	I_{th}		200		mA
Operating Current	I_F		325		mA
Slope Efficiency	CW	0.5	0.8		W/A
Beam Divergence (1/e ²)	parallel	$\theta_{ }$		15	deg.
	perpendicular	θ_{\perp}		36	deg.
Misalignment	parallel	$\Delta \theta_{ }$	- 5	5	deg.
	perpendicular	$\Delta \theta_{\perp}$	- 5	5	deg.



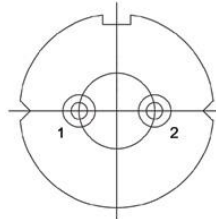
Electrical Connection

Pin Configuration

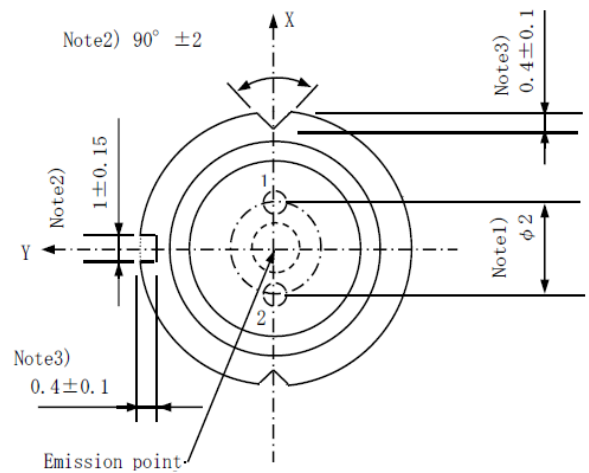
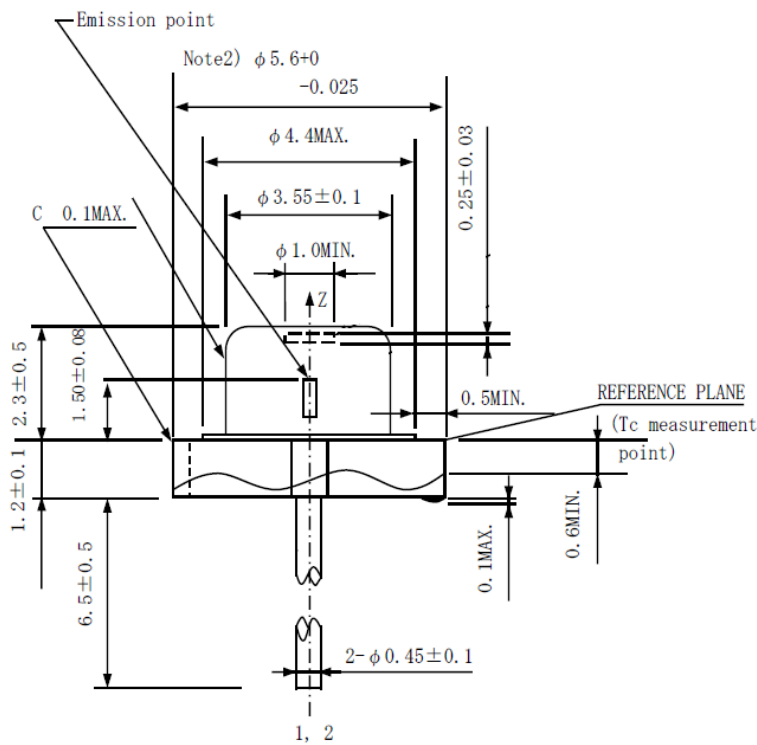
Pin #	Function
Pin 1	LD anode
Pin 2	LD cathode



Bottom View



Outline Dimensions



All dimensions in mm



Precautions

Safety

Caution: Laser light emitted from any laser diode may be **harmful to the human eye**. Avoid looking directly into the laser diode's aperture when the diode is in operation.

Note: The use of optical lenses with this laser diode will increase eye hazard

ESD caution

Always do handle laser diodes with extreme care to **prevent electrostatic discharge**, the primary cause of unexpected diode failure. To prevent ESD related failures, it is strongly advised to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating Considerations

It is strongly advised to only operate this laser diode with a current source. The current of a laser diode is an exponential function of the voltage across it. **Usage of current regulated drive circuits is mandatory.** Laser diodes may be damaged by excessive drive currents or switching transients

It is advised, to operate the laser diode at the lowest temperature possible, and to never exceed maximum specifications as outlined in the datasheet. Device degradation will accelerate with increased temperature. **Proper heat sinking will greatly enhance stability and life time of the laser diode**

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