

Under development	●
New product	

GH0637AA2G

Red Laser Diode

Red Laser Diode

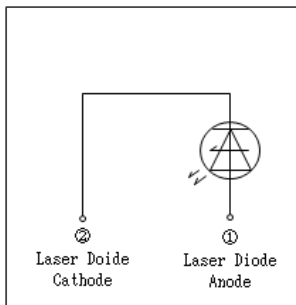
■ Features

- (1) Wavelength : 638 nm(Typ.)
- (2) Optical power output :
 - Max Current : 1A
 - CW 700mW
- (3) $\Phi 5.6$ mm CAN package
- (4) Emitting point :
 - Single Emitter
 - Size $2\mu\text{m} \times 20\mu\text{m}$

■ Applications

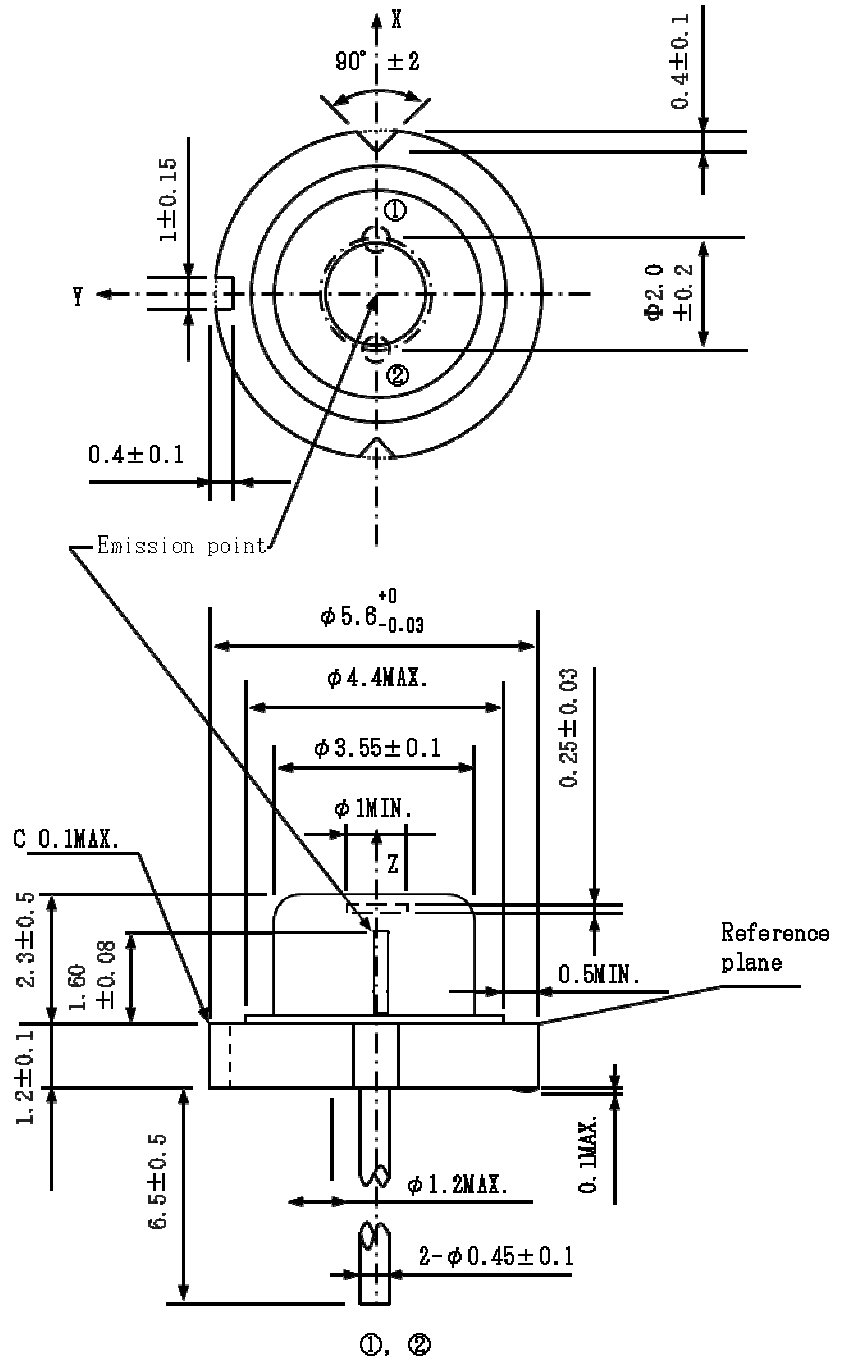
- (1) Display
- (2) Projector
- (3) other application

[Terminal connection]



■ Outline Dimensions

(Unit: mm)



(Notice)

- In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.
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■ Absolute Maximum Ratings

(Tc=25°C ※¹)

Parameter	Symbol	Ratings	Unit
Optical power output 1 (Tc※ ¹ -10 to +30)	Po	700	mW
Optical power output 2 (Tc※ ¹ +30 to +40)	Po	500	mW
Max Current (Tc※ ¹ -10 to +40)	I max	1	A
Reverse voltage	Vrl	2	V
Operating temperature (※ ¹)	Tc	-10 ~ +40	°C
Storage temperature	Tstg	-40 ~ +85	°C
Soldering Temperature (※ ²)	Tsld	350	°C

※¹ Tc : Case temperature

※² Soldering temperature means soldering iron tip temperature.

Soldering position is 1.6mm apart from bottom edge of the case.

(Immersion time: ≤ 3s)

■ Specifications

(Tc=25°C ※¹※²)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Threshold current	Ith	-	-	120	-	mA	
Operating current	Iop	Po=700mW	-	970	1000	mA	
Operating voltage	Vop		-	2.46	3.0	V	
Wavelength	λp		635	638	642	nm	
Half intensity angle	Parallel		θ //	1	18	28	°
	※ ³ ※ ⁴ Perpendicular		θ ⊥	25	35	45	°

※¹ Tc : Case temperature

※² Initial value, Continuous Wave Operation

※³ Angle of 50% peak intensity (Full angle at half-maximum)

※⁴ Parallel to the junction plane (X-Z plane)

Perpendicular to the junction plane (Y-Z plane)

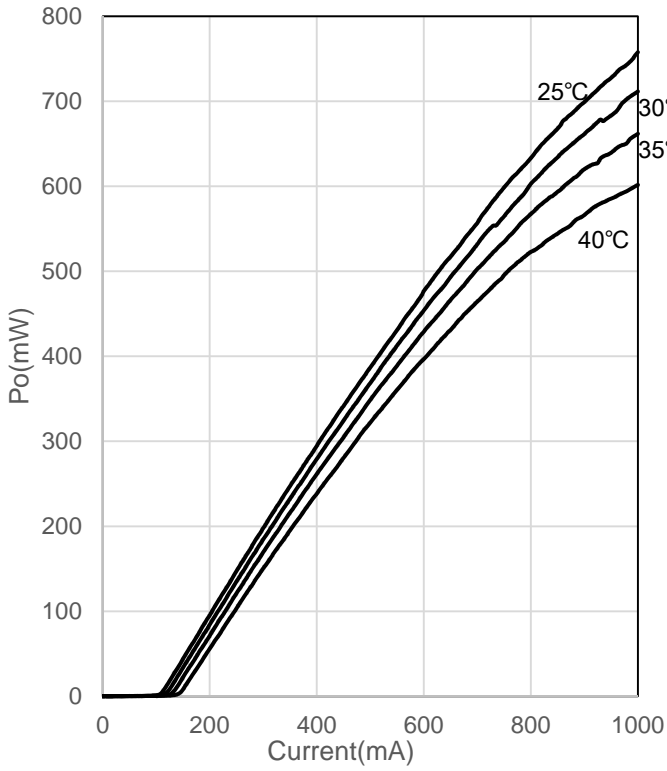
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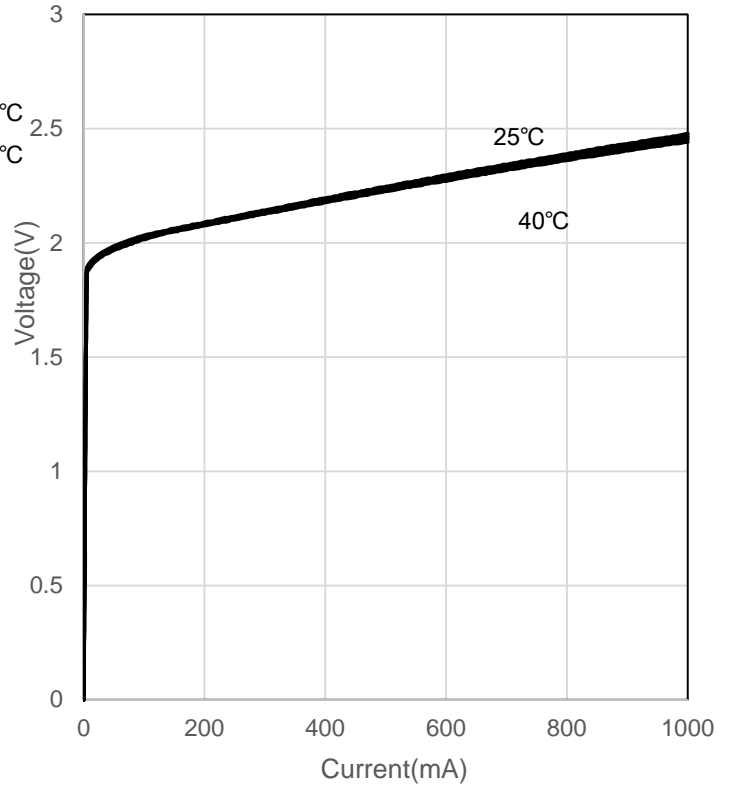
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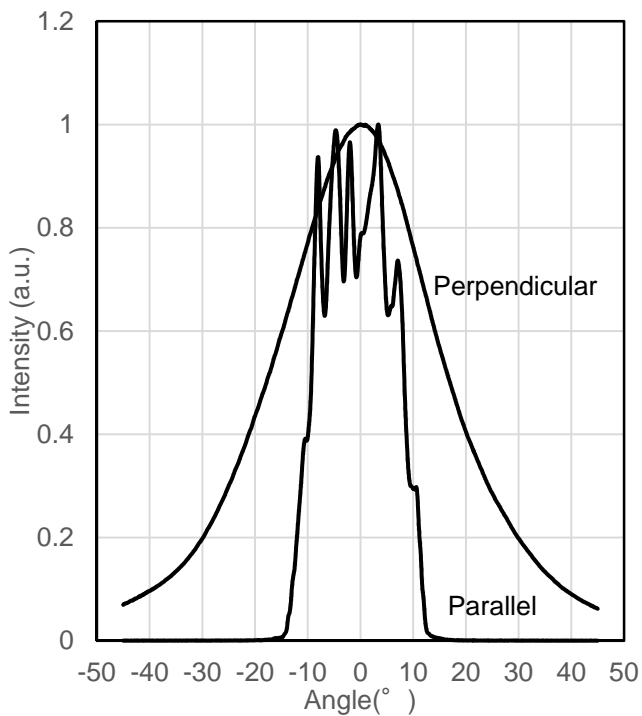
Output power vs Current
CW



Voltage vs Current



Far Field Pattern(700mW)



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 - Traffic signals • Gas leakage sensor breakers • Rescue and security equipment
 - Other safety equipment
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 - (2) intentional act, negligence or wrong/poor handling.
 - (3) equipment which Sharp products are connected to or mounted in.
 - (4) disassembling, reforming or changing Sharp products.
 - (5) installation problem.
 - (6) act of God or other disaster (natural disaster, fire, flood, etc.)
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 - (9) phenomenon which cannot be foreseen based on the practical technologies at the time of shipment.
 - (10) the factors not included in the product specification sheet.
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