

## GH0631IA2G

## Red Laser Diode

### Red Laser Diode

#### ■ Features

- (1) Wavelength : 638 nm(Typ.)
- (2) Optical power output :  
CW 185mW
- (3) Oscillation transverse mode : Single mode
- (4) Φ5.6mm CAN package

#### ■ Applications

- (1) Display
- (2) Barcode scanner
- (3) Laser sensor
- (4) other application

#### ■ Absolute Maximum Ratings

(Tc=25°C (※<sup>1</sup>))

Parameter	Symbol	Value	Unit
Optical power output (Tc=25°C)	Po	185	mW
(※ <sup>1</sup> ) (Tc=65°C)	Po	120	mW
Reverse voltage	Vr1	2	V
Operating temperature (※ <sup>1</sup> )	Top(c)	-20 ~ +65	°C
Storage temperature	Tstg	-40 ~ +105	°C
Soldering temperature (※ <sup>2</sup> )	Tsld	350	°C

※<sup>1</sup> Tc : Case temperature

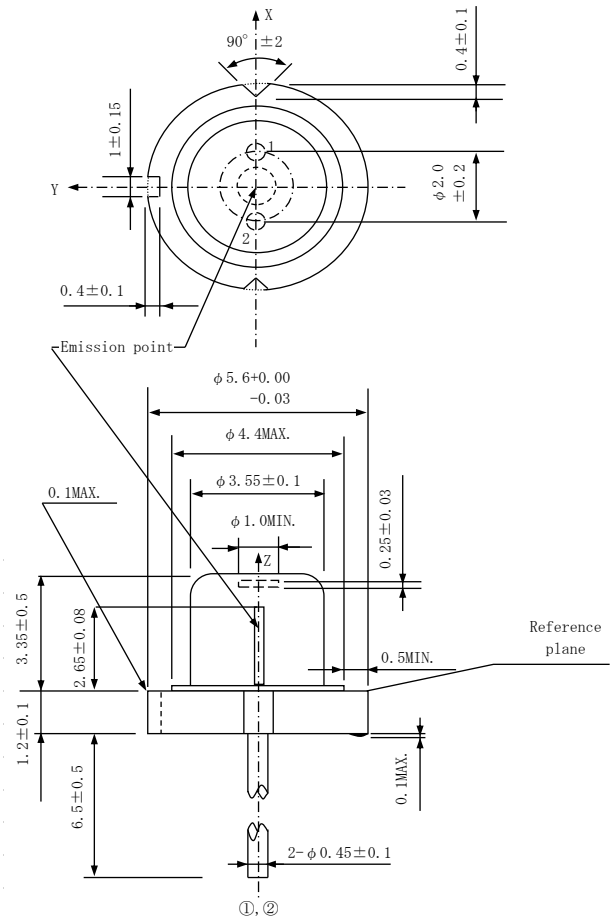
※<sup>2</sup> Soldering temperature means soldering iron tip temperature.

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

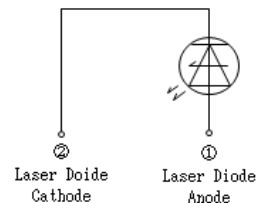
(Immersion time: ≤ 3s)

#### ■ Outline Dimensions

(Unit: mm)



#### [ Terminal connection ]



#### (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.

• Specifications are subject to change without notice for improvement.

## GH0631IA2G

### ■ Specifications

(Tc=25°C ※<sup>1</sup> ※<sup>2</sup>)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Threshold current	I <sub>th</sub>	-	-	70	-	mA	
Operating current	I <sub>op</sub>	Po=180mW	-	215	-	mA	
Operating voltage	V <sub>op</sub>		-	2.55	-	V	
Wavelength	λ <sub>p</sub>		633	638	643	nm	
Half intensity angle	Parallel		θ //	4	8	12	°
	※ <sup>3</sup> ※ <sup>4</sup> Perpendicular		θ ⊥	8	13	18	°

※<sup>1</sup> Tc : Case temperature

※<sup>2</sup> Initial value, Continuous Wave Operation

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

※<sup>4</sup> Parallel to the junction plane (X-Z plane)  
Perpendicular to the junction plane (Y-Z plane)

(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.

•Specifications are subject to change without notice for improvement.

## GH0631IA2G

### ■ Notice

1. These technical literature sheets include materials protected under copyright of Sharp Corporation ("Sharp"). Please do not reproduce or cause anyone to reproduce them without Sharp's consent.

2. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these technical literature sheets, as well as the precautions mentioned below.

Sharp assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these technical literature sheets, and the precautions mentioned below.

#### (Precautions)

(1) Please do verify the validity of this part after assembling it in customer's products, when customer wants to make catalogue and instruction manual based on the technical literature sheet of this part.

(2) This product is designed for use in the following application areas ;

- \* OA equipment   \* Audio visual equipment   \* Home appliance
- \* Telecommunication equipment (Terminal)   \* Measuring equipment
- \* Tooling machines   \* Computers

If the use of the product in the above application areas is for equipment listed in paragraphs (3) or (4), please be sure to observe the precautions given in those respective paragraphs.

(3) Appropriate measures, such as fail-safe design and redundant design considering the safety design of the overall system and equipment, should be taken to ensure reliability and safety when this product is used for equipment which demands high reliability and safety in function and precision, such as ;

- \* Transportation control and safety equipment (aircraft, train, automobile etc.)
- \* Traffic signals   \* Gas leakage sensor breakers   \* Rescue and security equipment
- \* Other safety equipment

(4) Please do not use this product for equipment which require extremely high reliability and safety in function and precision, such as ;

- \* Space equipment   \* Telecommunication equipment (for trunk lines)
- \* Nuclear power control equipment   \* Medical equipment

(5) Please contact and consult with a Sharp sales representative if four are any questions regarding interpretation of the above four paragraphs.

3. Please contact and consult with a Sharp sales representative for any questions about this product.

#### (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.

• Specifications are subject to change without notice for improvement.