

# SPECIFICATIONS

## Laser Diode

### GH0641FA2G



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  - Traffic signals • Gas leakage sensor breakers • Rescue and security equipment
  - Other safety equipment
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  - Nuclear power control equipment • Medical equipment
- (5) Please contact and consult with a Sharp sales representative if there are any question regarding interpretation of the above four paragraphs.

3. Disclaimer

The warranty period for Sharp product is one (1) year (or six (6) months in case of generalized product) after shipment. During the period, if there are any products problem, Sharp will repair (if applicable), replace or refund. Except the above, both parties will discuss to cope with the problems.

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- (1) storage keep trouble during the inventory in the marketing channel.
- (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.)
- (7) external factors (abnormal voltage, abnormal electromagnetic wave, fire, etc.)
- (8) special environment (factory, coastal areas, hotspring area, etc.)
- (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.

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

## Red Laser Diode

### ■ Features

- (1) Wavelength : 642nm(TYP.)
- (2) Optical power output : CW 150mW
- (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 ※1)

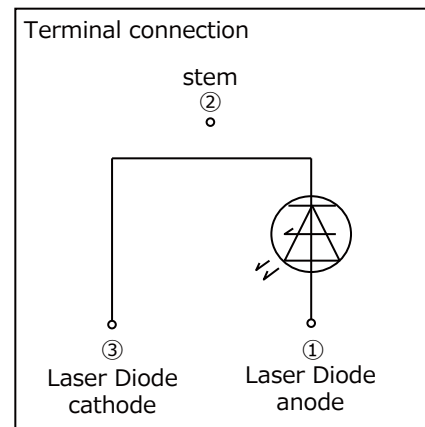
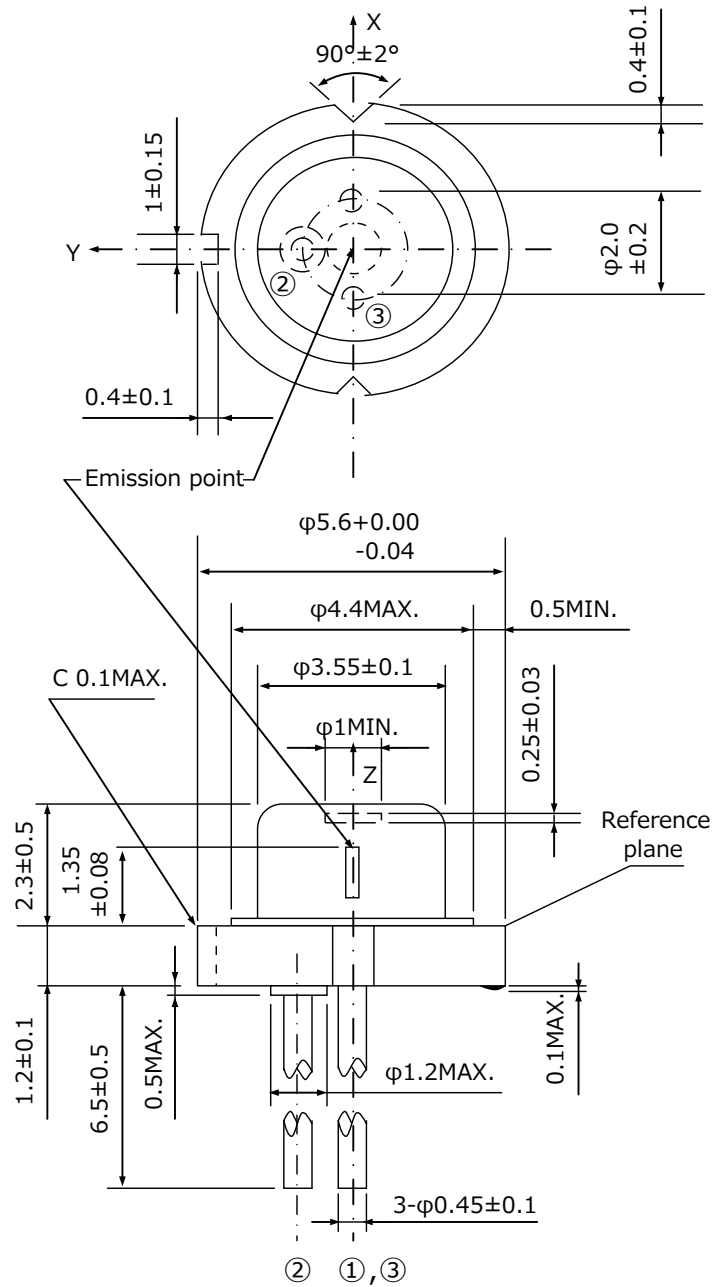
Parameter	Symbol	Ratings	Unit	
Optical power output (※1)	(Tc=25°C)	Po	155	mW
	(Tc=40°C)	Po	130	mW
Reverse voltage	Vrl	2	V	
Operating temperature (※1)	Top(c)	-10~+60	°C	
Storage temperature	Tstg	-40~+85	°C	
Soldering Temperature (※2)	Tsld	350	°C	

※1 Tc : Case temperature

※2 Soldering temperature means soldering iron trip temperature.  
Soldering position is 1.6mm apart from bottom edge of the case.  
(Immersion time : ≤ 3S)

### ■ Outline Dimensions

(unit:mm)



## ■ Specifications

(Tc = 25°C ※1 ※2)

Parameter		Symbol	Contitions	Min.	Typ.	Max.	Unit
Threshold current		I <sub>th</sub>	-	-	60	-	mA
Operating current		I <sub>op</sub>	Po = 150 mW	-	190	-	mA
Operating current		V <sub>op</sub>		-	2.6	3.0	V
Wavelength		λ <sub>p</sub>		637	642	647	nm
Half intensity angle ※3 ※4	Parallel	θ <sub>∥</sub>		4	8	12	°
	Perpendicular	θ <sub>⊥</sub>		10	15	20	°

※1 Tc : Case temperature

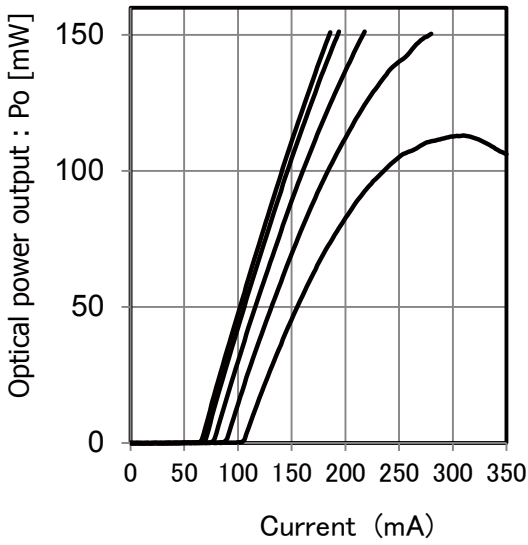
※2 Initial value, Continuous Wave Operation

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

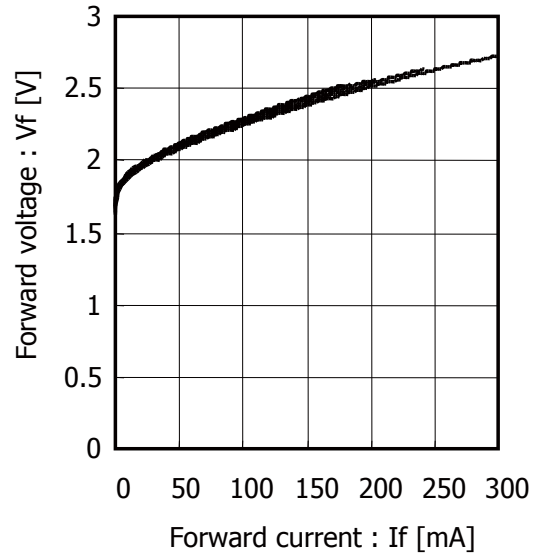
※4 Parallel to the junction plane (Y-Z plane)

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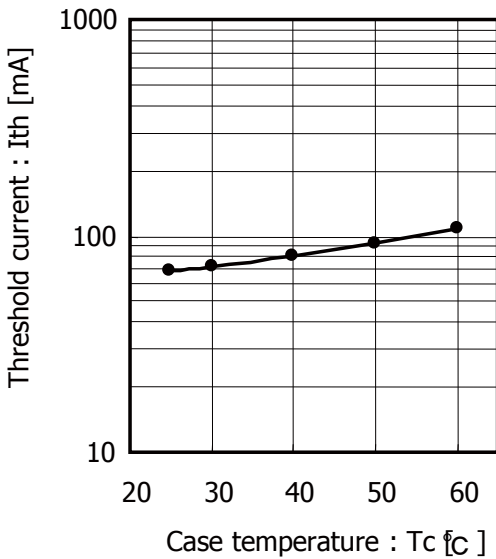
■ Optical power output – Forward current  
 $T_c=25/30/40/50/60^\circ\text{C}$



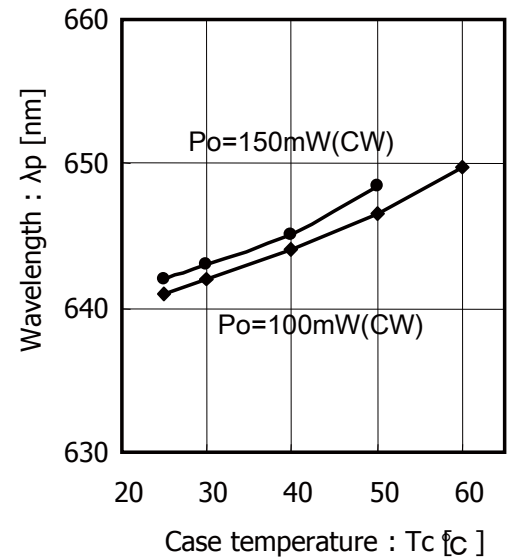
■ Forward voltage – Forward current  
 $T_c=25/30/40/50/60^\circ\text{C}$



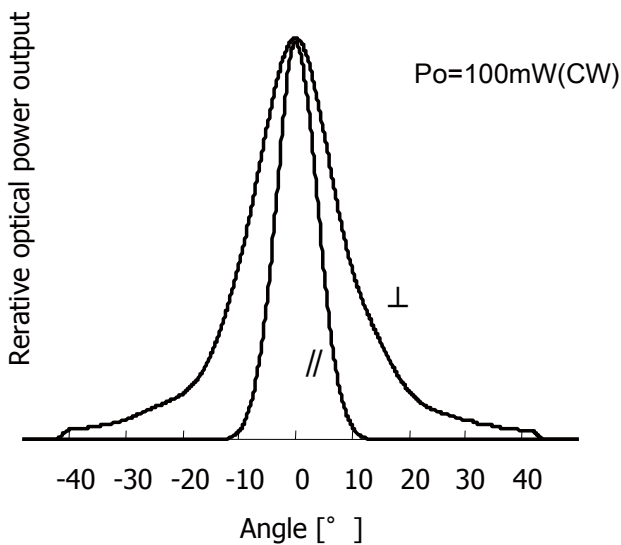
■ Case temperature dependence of threshold current



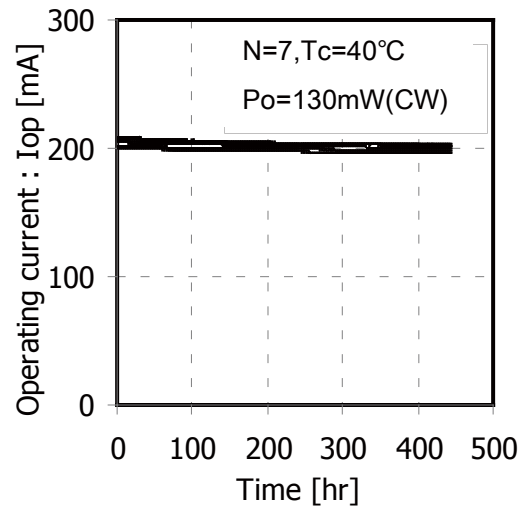
■ Case temperature dependence of wavelength



■ Far field pattern



■ Hi temperature operating



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