

# HL6339G

633nm Lasing Laser Diode

# HITACHI

ADE-208-1434 (Z)

Preliminary  
Rev.0  
Jun. 2001

## Description

The HL6339G is 0.63  $\mu\text{m}$  band AlGaInP laser diode with a multi-quantum well (MQW) structure. Lasing wavelength of this laser is nearly equal to the wavelength of He-Ne gas laser. They are suitable as light sources for laser levelers, laser scanners and optical equipment for measurement.

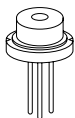
## Application

- Laser analysis systems
- Laser scanner
- Measurement

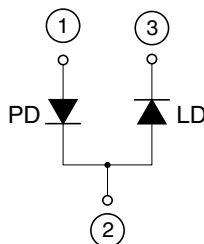
## Features

- Visible light output : 633 nm Typ (nearly equal to He-Ne gas laser)
- Optical output power : 5 mW CW
- Operating current : 55 mA Typ
- TM mode oscillation

Package Type  
• HL6339G: G2



Internal Circuit



## Absolute Maximum Ratings

( $T_c = 25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Optical output power	$P_o$	5	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	$T_{opr}$	0 to +40	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

## Optical and Electrical Characteristics

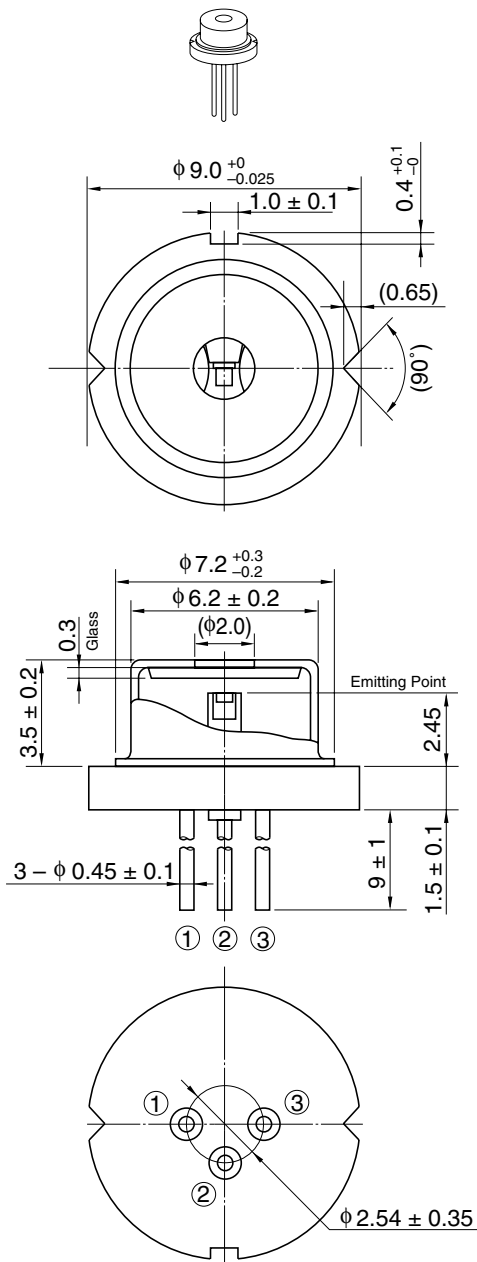
( $T_c = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Optical output power	$P_o$	5	—	—	mW	Kink free
Threshold current	$I_{th}$	—	45	60	mA	
Operating current	$I_{OP}$	—	55	70	mA	$P_o = 5 \text{ mW}$
Operating voltage	$V_{OP}$	—	2.3	2.7	V	$P_o = 5 \text{ mW}$
Slope efficiency	$\eta_s$	0.40	0.65	0.90	mW/mA	$3 \text{ (mW)} / (I_{(4mW)} - I_{(1mW)})$
Lasing wavelength	$\lambda_p$	—	633	635	nm	$P_o = 5 \text{ mW}$
Beam divergence parallel to the junction	$\theta_{//}$	—	8	—	deg.	$P_o = 5 \text{ mW}$
Beam divergence perpendicular to the junction	$\theta_{\perp}$	—	30	—	deg.	$P_o = 5 \text{ mW}$
Monitor current	$I_s$	—	0.05	—	mA	$P_o = 5 \text{ mW}, V_{R(PD)} = 5 \text{ V}$

Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	LD/G2
JEDEC	—
EIAJ	—
Mass (reference value)	1.1 g

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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.

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