

# HL8341MG

## GaAlAs Laser Diode

ODE-208-068A (Z)

Rev.1

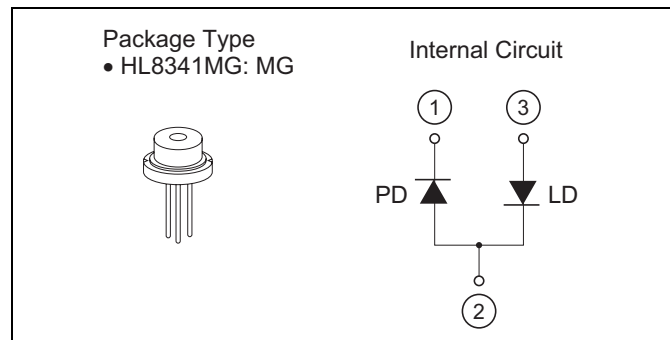
May 24, 2007

### Description

The HL8341MG is 0.85  $\mu\text{m}$  band GaAlAs laser diode with a multi-quantum well(MQW) structure. It is suitable as a light source for sensor applications and various other types of optical equipment.

### Features

- Infrared light output:  $\lambda_p = 852 \text{ nm}$  Typ
- Optical output power: 50 mW (CW)
- Low operating current: 75 mA Typ
- Low operating voltage: 1.9 V Typ
- Built-in monitor photodiode
- Single longitudinal mode



### Absolute Maximum Ratings

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

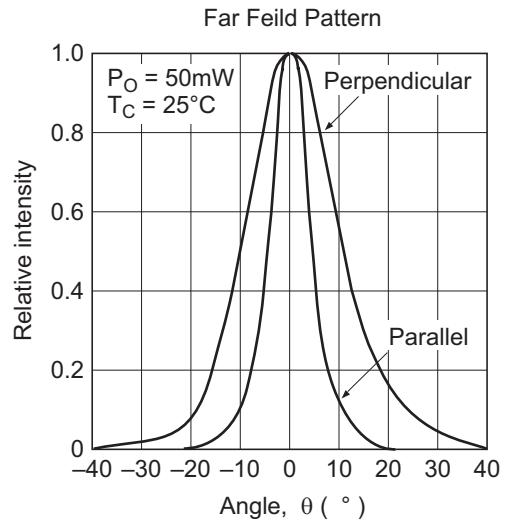
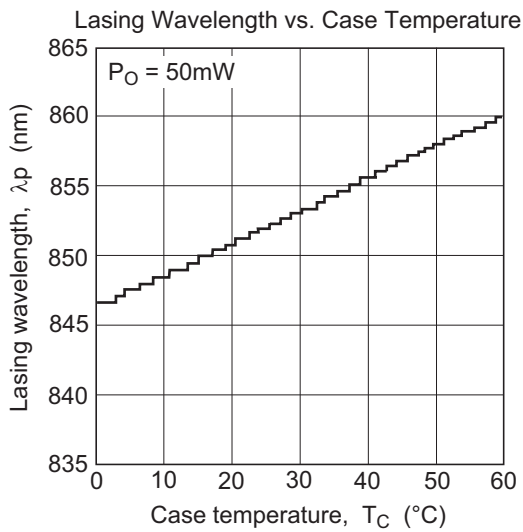
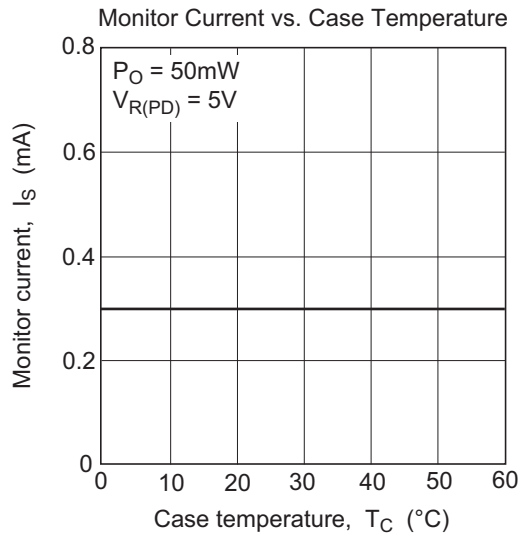
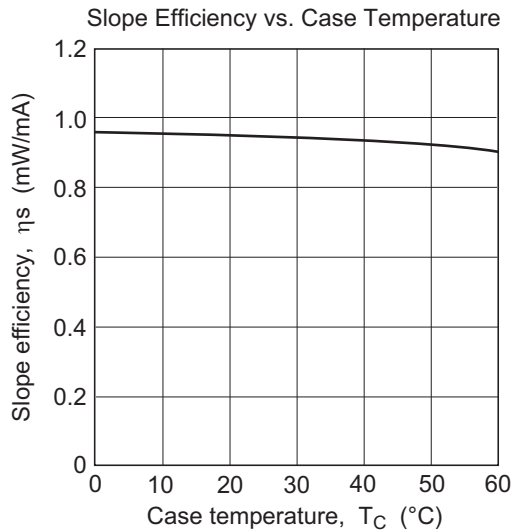
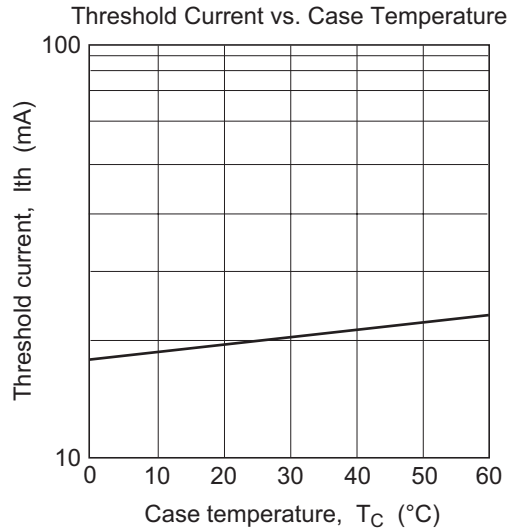
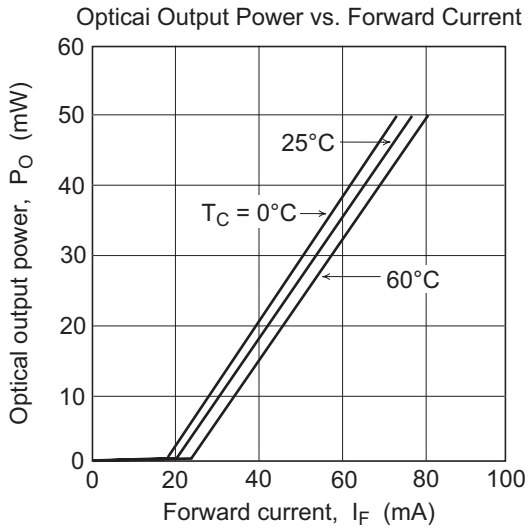
Item	Symbol	Ratings	Unit
Optical output power	$P_O$	50	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	$T_{opr}$	-10 to +60	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

### Optical and Electrical Characteristics

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

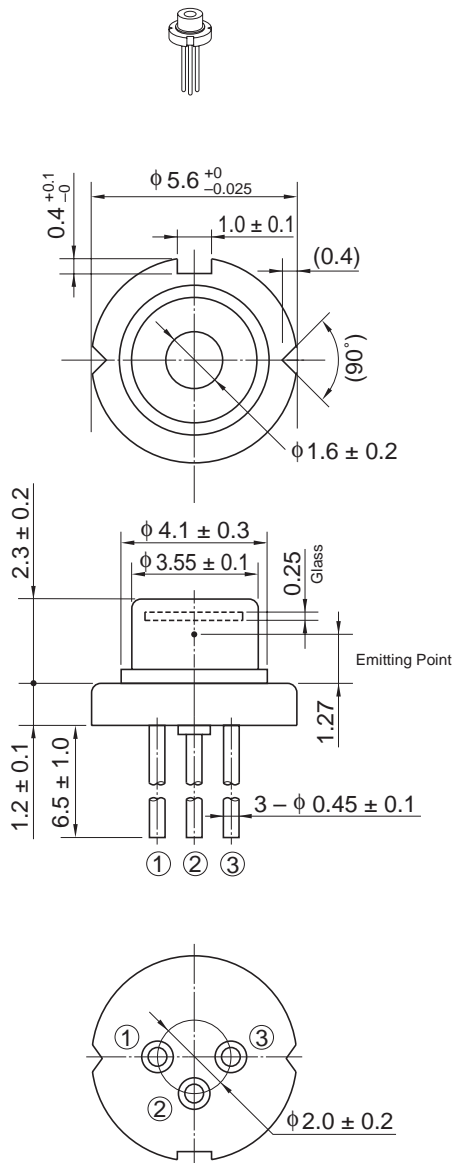
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	$I_{th}$	—	20	40	mA	—
Slope efficiency	$\eta_s$	0.7	0.9	—	mW/mA	$30 \text{ (mW)} / (I_{(40\text{mW})} - I_{(10\text{mW})})$
Operating current	$I_{OP}$	—	75	100	mA	$P_O = 50 \text{ mW}$
Operating voltage	$V_{OP}$	—	1.9	2.4	V	$P_O = 50 \text{ mW}$
Beam divergence parallel to the junction	$\theta_{//}$	6	9	12	$^\circ$	$P_O = 50 \text{ mW}$ , FWHM
Beam divergence perpendicular to the junction	$\theta_{\perp}$	18	22	26	$^\circ$	$P_O = 50 \text{ mW}$ , FWHM
Lasing wavelength	$\lambda_p$	842	852	862	nm	$P_O = 50 \text{ mW}$
Monitor current	$I_s$	—	0.25	—	mA	$P_O = 50 \text{ mW}$ , $V_{R(PD)} = 5 \text{ V}$

Typical Characteristic Curves



Package Dimensions

As of July, 2002  
Unit: mm



OPJ Code	LD/MG
JEDEC	—
JEITA	—
Mass (reference value)	0.3 g

## Cautions

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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.
2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.  
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3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

## Sales Offices



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