

# HL8335MG

## GaAlAs Laser Diode

ODE2054-00 (M)

Rev.0

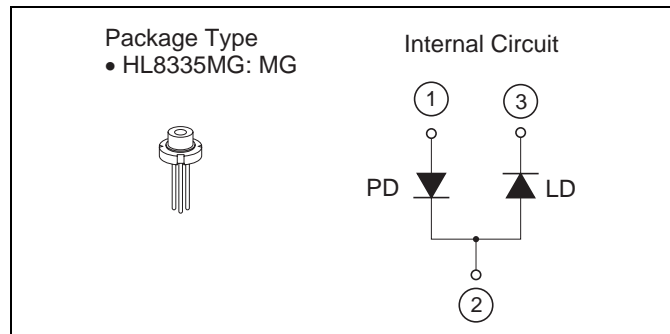
Aug. 01, 2008

### Description

The HL8335MG is a high-power 0.8  $\mu\text{m}$  band GaAlAs laser diode with a TQW (triple quantum well) structure. It is suitable as a light source for various types of optical equipment.

### Features

- Infrared light output:  $\lambda_p = 840$  to  $860$  nm
- High Power:  
standard continuous operation at 40mW (CW),  
pulsed operation at 50mW
- Built-in monitor photodiode
- Single longitudinal mode



### Absolute Maximum Ratings

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

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

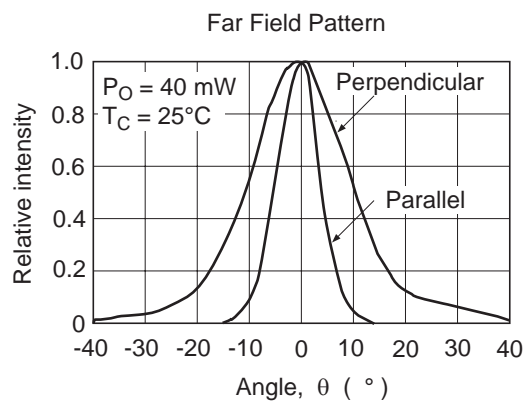
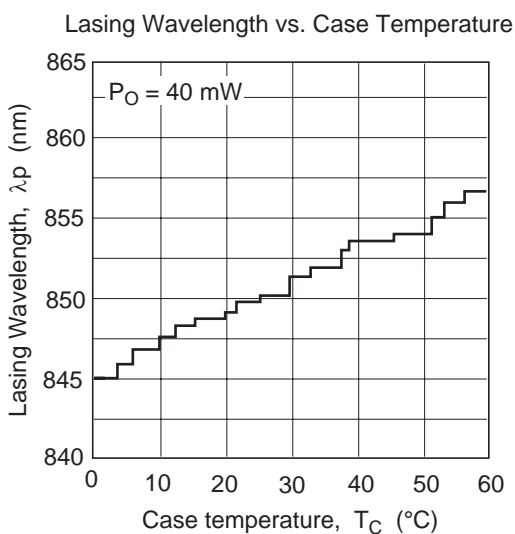
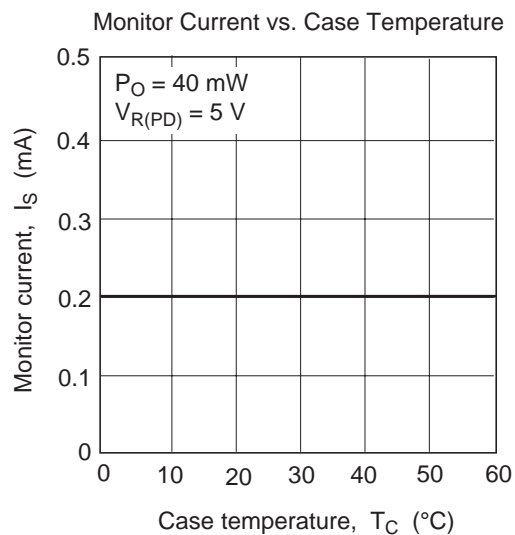
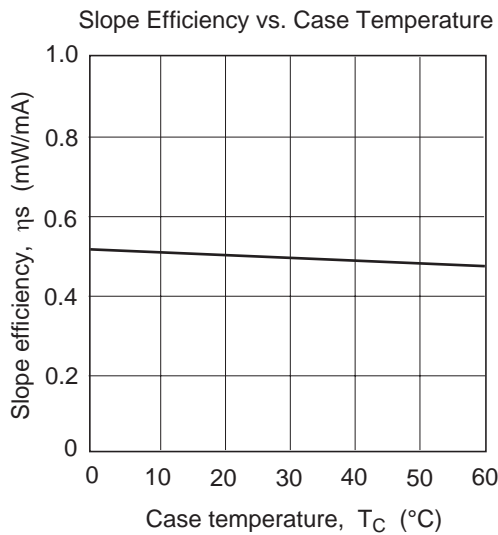
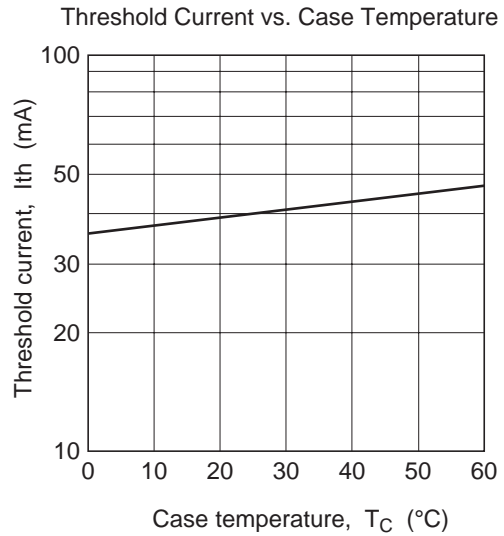
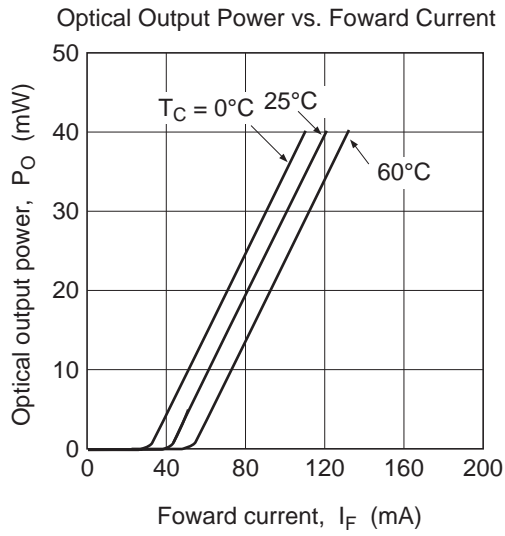
Note: Pulse condition : Pulse width  $\leq 1 \mu\text{s}$  , duty  $\leq 50\%$

### Optical and Electrical Characteristics

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

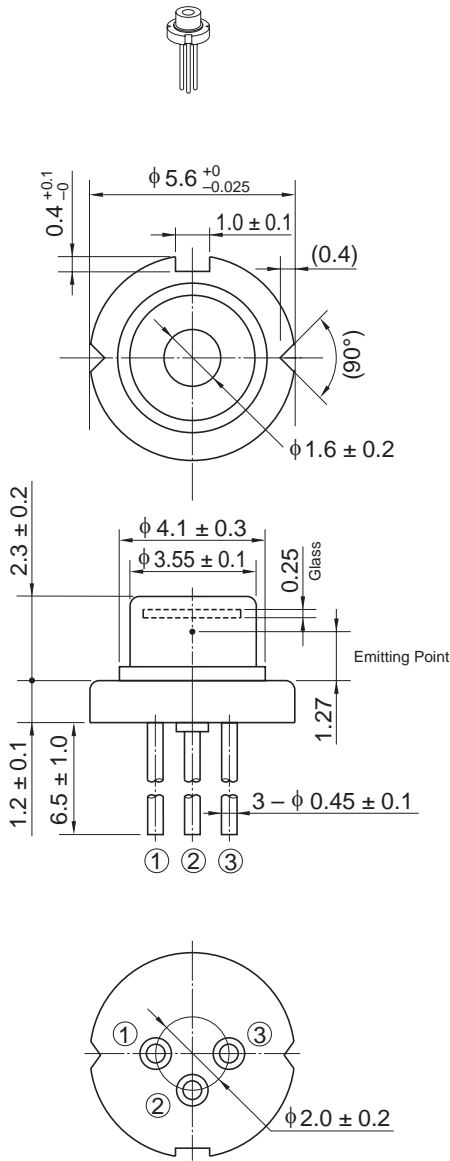
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	$I_{th}$	—	40	70	mA	—
Slope efficiency	$\eta_s$	0.4	0.5	0.9	mW/mA	$24(\text{mW}) / (I_{(32\text{mW})} - I_{(8\text{mW})})$
Operating current	$I_{OP}$	—	120	160	mA	$P_O = 40$ mW
Beam divergence parallel to the junction	$\theta_{//}$	7	10	14	$^\circ$	$P_O = 40$ mW, FWHM
Beam divergence perpendicular to the junction	$\theta_{\perp}$	18	22	32	$^\circ$	$P_O = 40$ mW, FWHM
Lasing wavelength	$\lambda_p$	840	850	860	nm	$P_O = 40$ mW
Monitor current	$I_s$	0.08	0.2	0.40	mA	$P_O = 40$ mW, $V_{R(\text{PD})} = 5$ 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.
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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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