

# HL6333MG/34MG

## Low Operating Current Visible Laser Diode

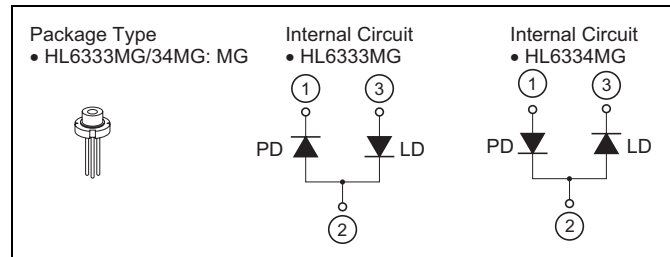
ODE-208-033A (Z)  
Rev.1  
Oct. 21, 2005

### Description

The HL6333MG/34MG are 0.63  $\mu\text{m}$  band AlGaInP 10mW laser diodes with a multi-quantum well (MQW) structure. They are suitable as light sources for laser levelers, laser scanners and optical equipment for measurement.

### Features

- Visible light output:  $\lambda_p = 635 \text{ nm Typ}$
- Single longitudinal mode
- Optical output power: 10 mW CW
- Low operating current : 55 mA Typ
- Low Operating voltage: 2.4 V Max
- Operating temperature : +50°C
- TM mode oscillation



### Absolute Maximum Ratings

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

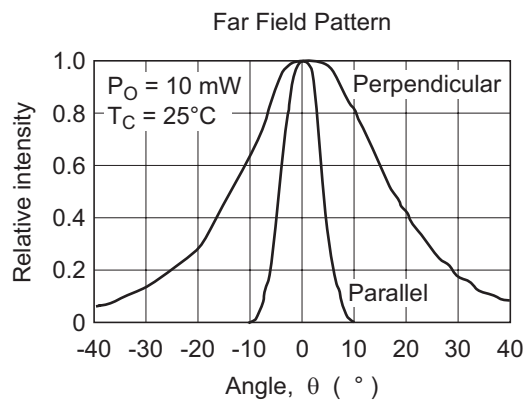
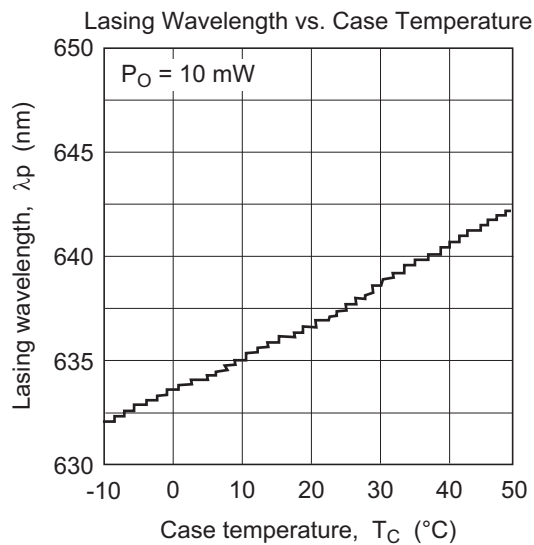
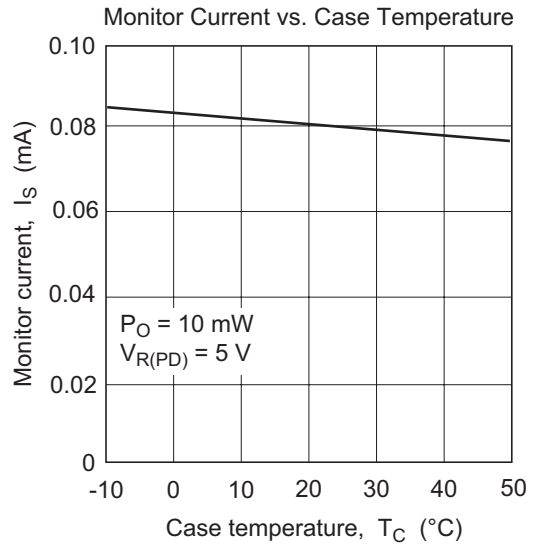
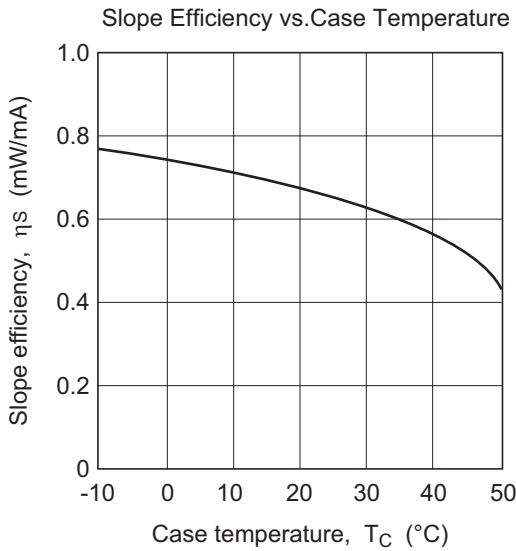
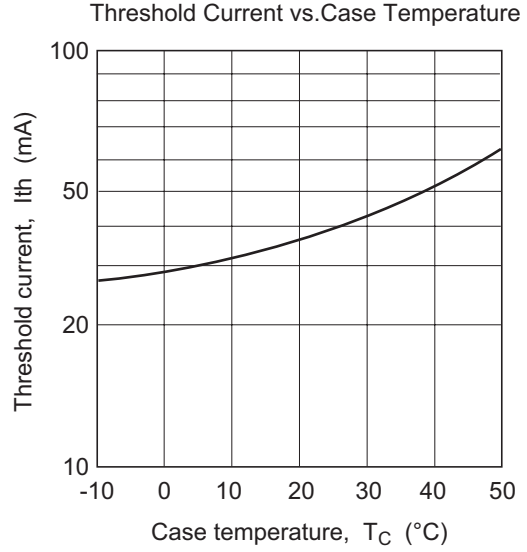
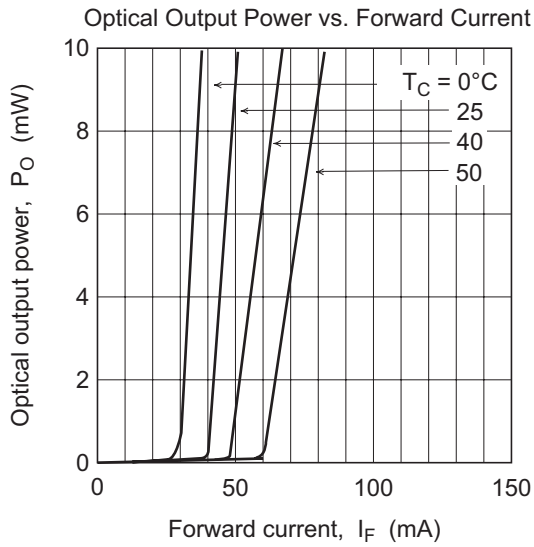
Item	Symbol	Ratings	Unit
Optical output power	$P_O$	10	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	$T_{opr}$	-10 to +50	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

### Optical and Electrical Characteristics

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

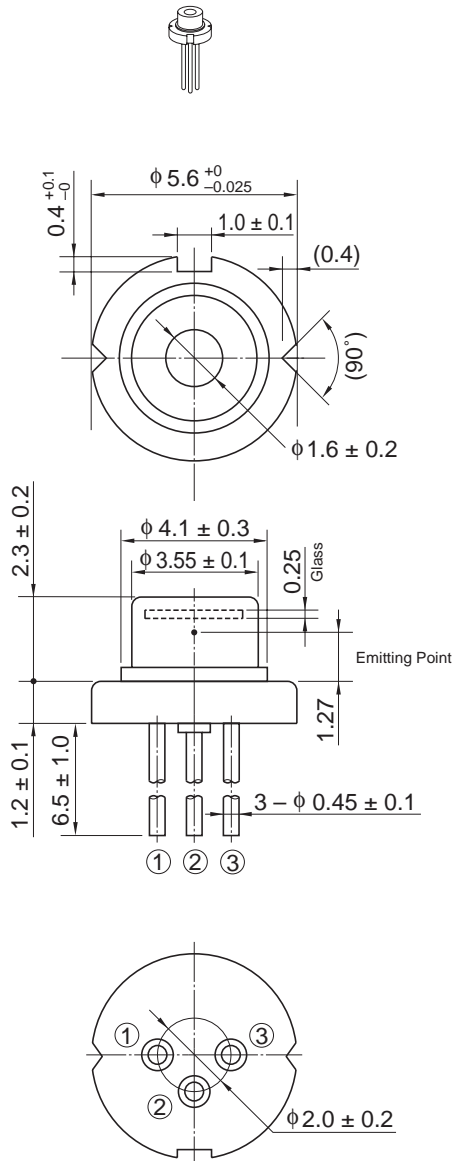
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	$I_{th}$	—	40	60	mA	—
Operating current	$I_{op}$	—	55	75	mA	$P_O = 10 \text{ mW}$
Operating voltage	$V_{OP}$	—	2.2	2.4	V	$P_O = 10 \text{ mW}$
Slope efficiency	$\eta_s$	0.40	0.65	0.90	mW/mA	$6 \text{ (mW)} / (I_{(8mW)} - I_{(2mW)})$
Beam divergence parallel to the junction	$\theta_{//}$	6	8	11	$^\circ$	$P_O = 10 \text{ mW}$
Beam divergence perpendicular to the junction	$\theta_{\perp}$	25	31	36	$^\circ$	$P_O = 10 \text{ mW}$
Lasing wavelength	$\lambda_p$	630	635	640	nm	$P_O = 10 \text{ mW}$
Monitor current	$I_s$	0.04	0.08	0.16	mA	$P_O = 10 \text{ mW}, V_{R(PD)} = 5 \text{ V}$

### 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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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.  
When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
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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