

HL6333MG/34MG

Low Operating Current Visible Laser Diode

ODE2017-00 (M)

Rev.0

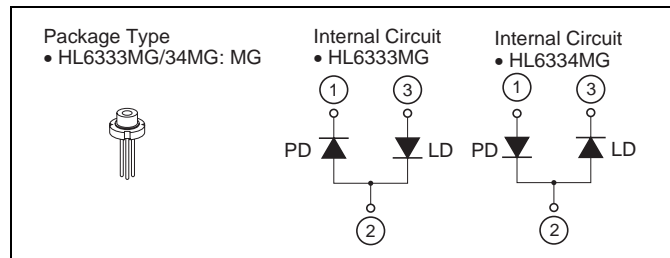
Aug. 01, 2008

Description

The HL6333MG/34MG are 0.63 μm 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: $+50^\circ\text{C}$
- TM mode oscillation



Absolute Maximum Ratings

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

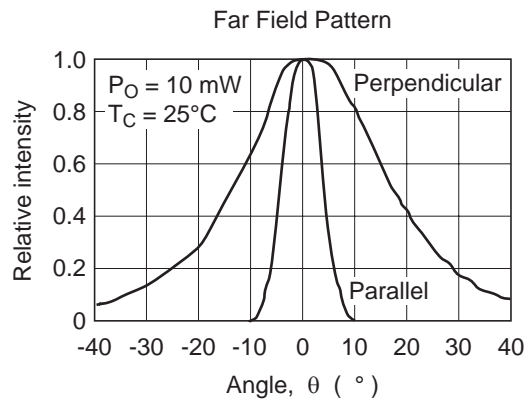
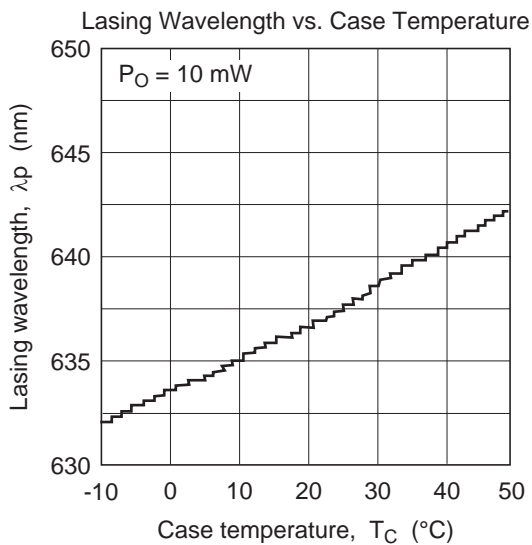
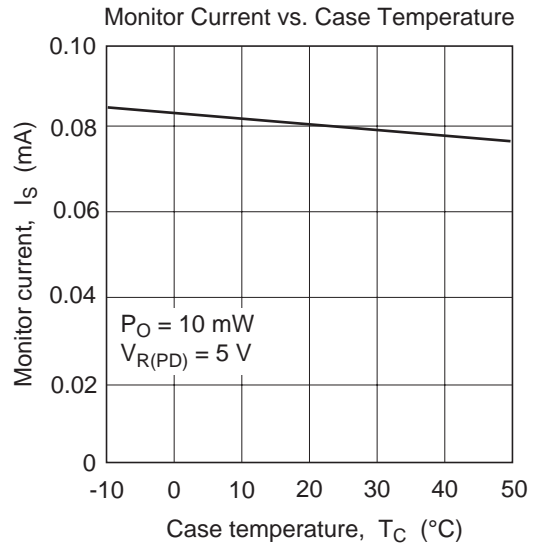
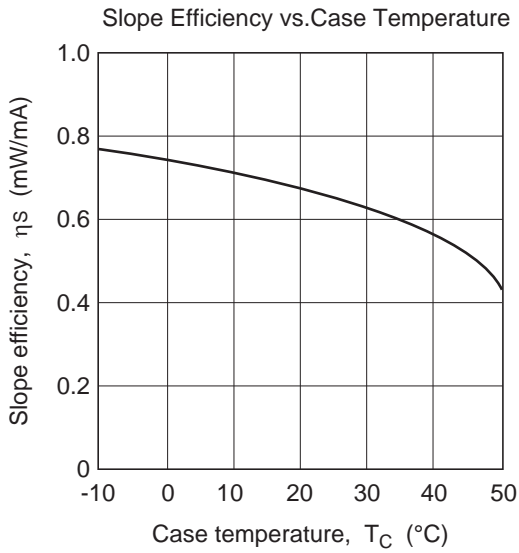
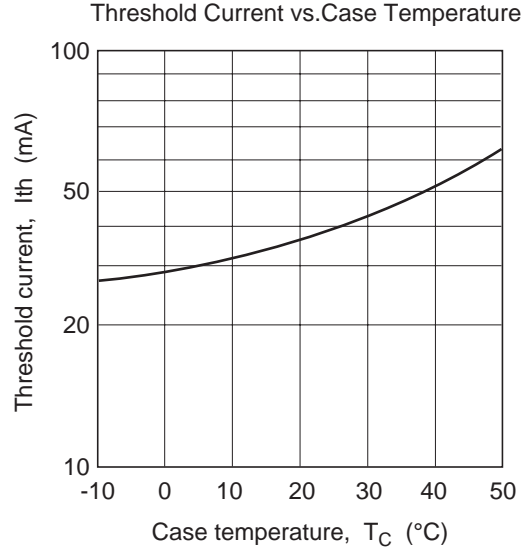
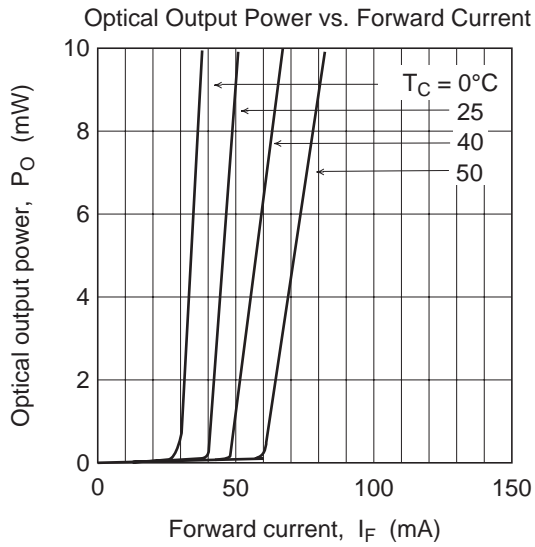
Item	Symbol	Ratings	Unit
Optical output power	P_O	10	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Optical and Electrical Characteristics

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

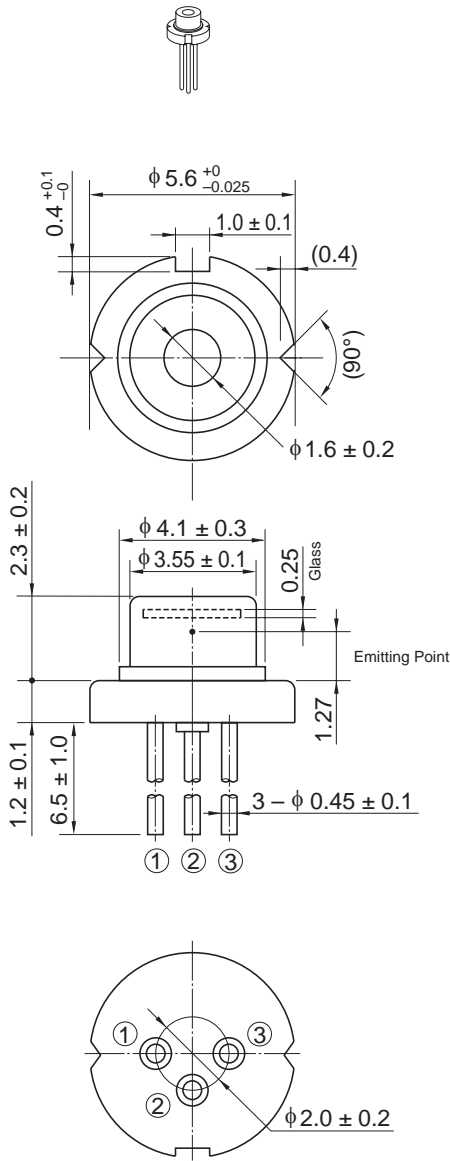
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I_{th}	—	40	60	mA	—
Operating current	I_{op}	—	55	75	mA	$P_O = 10 \text{ mW}$
Operating voltage	V_{OP}	—	2.2	2.4	V	$P_O = 10 \text{ mW}$
Slope efficiency	η_s	0.40	0.65	0.90	mW/mA	$6 \text{ (mW)} / (I_{(8mW)} - I_{(2mW)})$
Beam divergence parallel to the junction	$\theta_{//}$	6	8	11	$^\circ$	$P_O = 10 \text{ mW}$
Beam divergence perpendicular to the junction	θ_{\perp}	25	31	36	$^\circ$	$P_O = 10 \text{ mW}$
Lasing wavelength	λ_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

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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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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.

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