HL6327MG/28MG

AlGaInP Laser Diodes

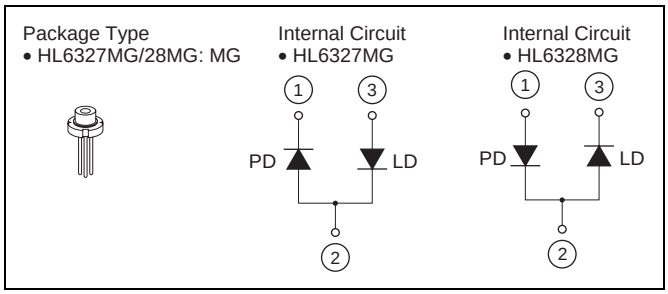
ODE-208-031 (Z)
Rev.0
Jul. 01, 2005

Description

The HL6327MG/28MG are 0.63 μm band AlGaInP 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 : 635 nm Typ
- Single longitudinal mode
- Optical output power : 5 mW CW
- Low operating current : 40 mA Typ
- Low operating voltage : 2.4 V Max
- Operating temperature : +50°C
- TM mode oscillation



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	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	Topr	–10 to +50	°C
Storage temperature	Tstg	–40 to +85	°C

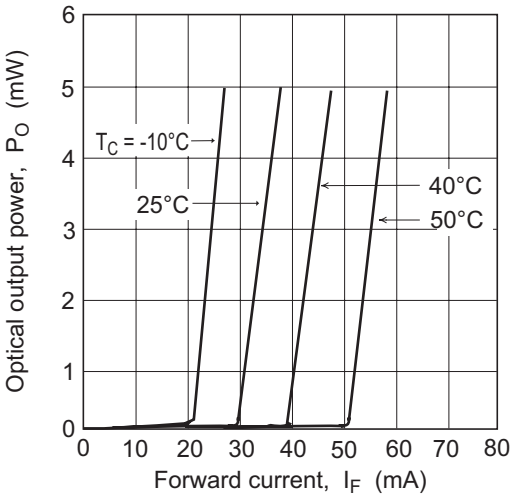
Optical and Electrical Characteristics

(T_C = 25°C)

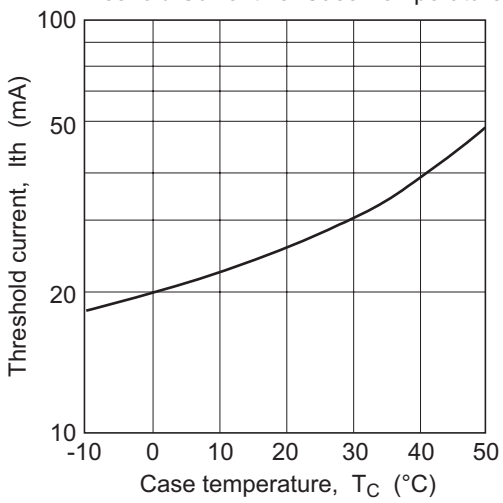
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	—	30	50	mA	—
Operating current	I_{OP}	—	40	60	mA	P_O = 5 mW
Operating voltage	V_{OP}	—	2.2	2.4	V	P_O = 5 mW
Slope efficiency	ηs	0.3	0.5	0.8	mW/mA	3 (mW) / ($I_{(4mW)}$ – $I_{(1mW)}$)
Beam divergence parallel to the junction	θ//	6	8	11	°	P_O = 5 mW
Beam divergence perpendicular to the junction	θ⊥	25	31	37	°	P_O = 5 mW
Lasing wavelength	λp	630	635	640	nm	P_O = 5 mW
Monitor current	I_S	0.02	0.07	0.12	mA	P_O = 5 mW, $V_{R(PD)}$ = 5 V

Typical Characteristic Curves

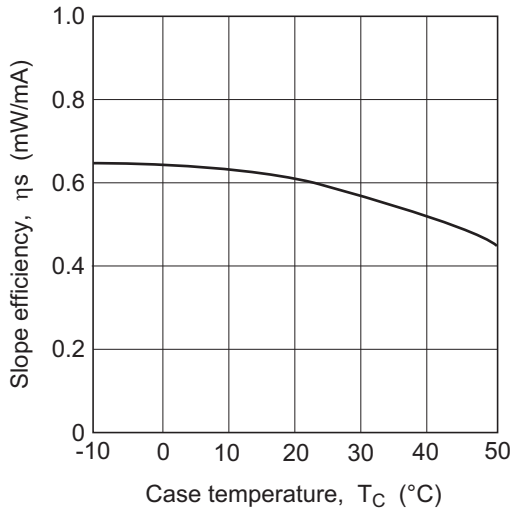
Optical Output Power vs. Forward Current



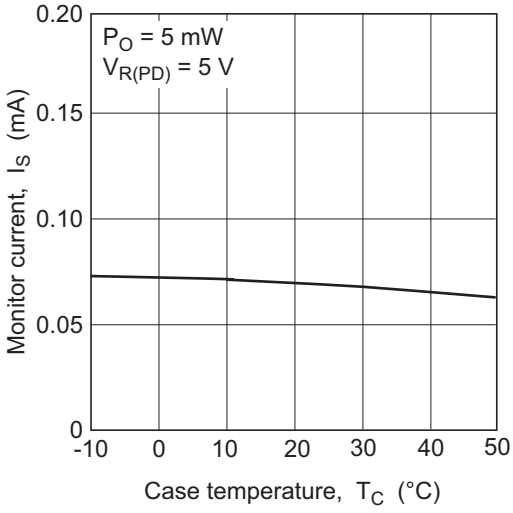
Threshold Current vs. Case Temperature



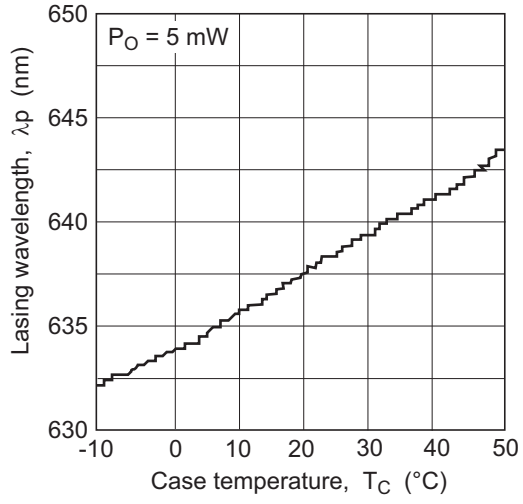
Slope Efficiency vs. Case Temperature



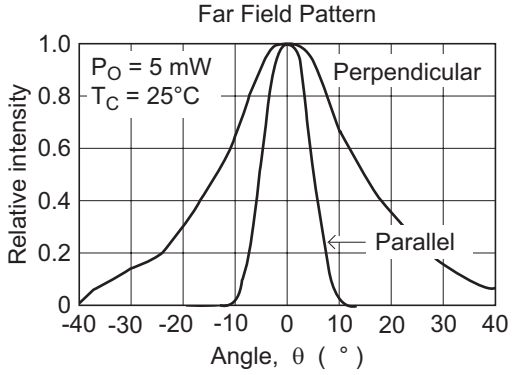
Monitor Current vs. Case Temperature



Lasing Wavelength vs. Case Temperature



Far Field Pattern



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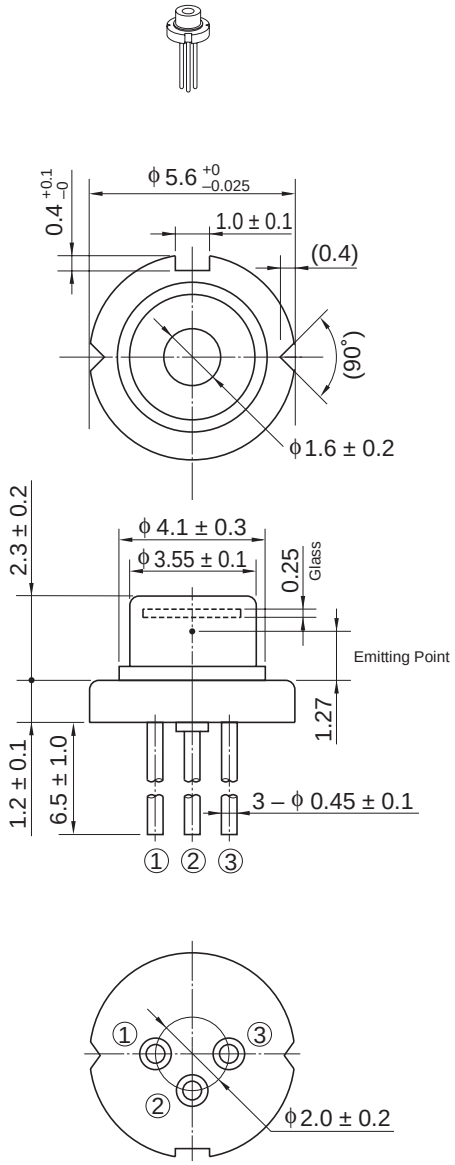
Package Dimensions

As of July, 2002

Unit: mm



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

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Sales Offices

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