
HL6327MG/28MG

Low Operating Current Visible Laser Diode



ODE-208-782C (Z)

Rev.3
Jan. 2003

Description

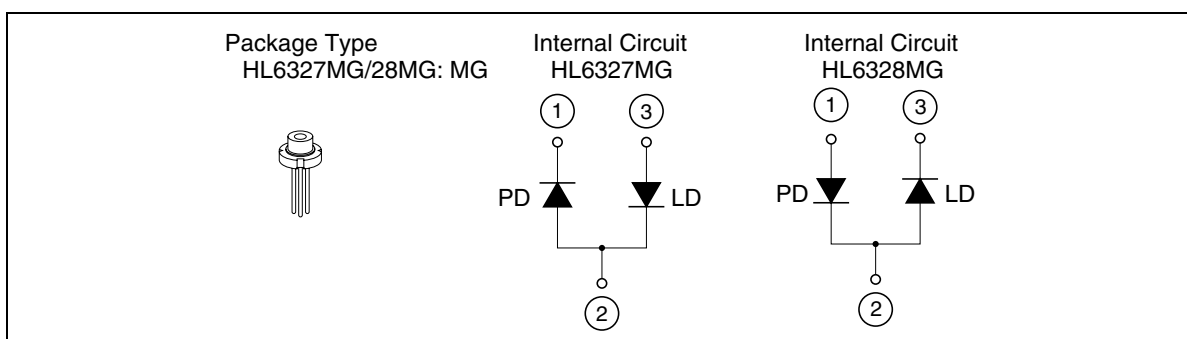
The HL6327MG/28MG are 0.63 μm band AlGaInP laser diodes with a multi-quantum well (MQW) structure. They are suitable as light sources for laser levelers, laser scanners and optical equipment for measurement.

Application

- Laser leveler
- Laser scanner
- Measurement

Features

- Visible light output : 635 nm Typ (nearly equal to He-Ne gas laser)
- 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



HL6327MG/28MG

Absolute Maximum Ratings

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

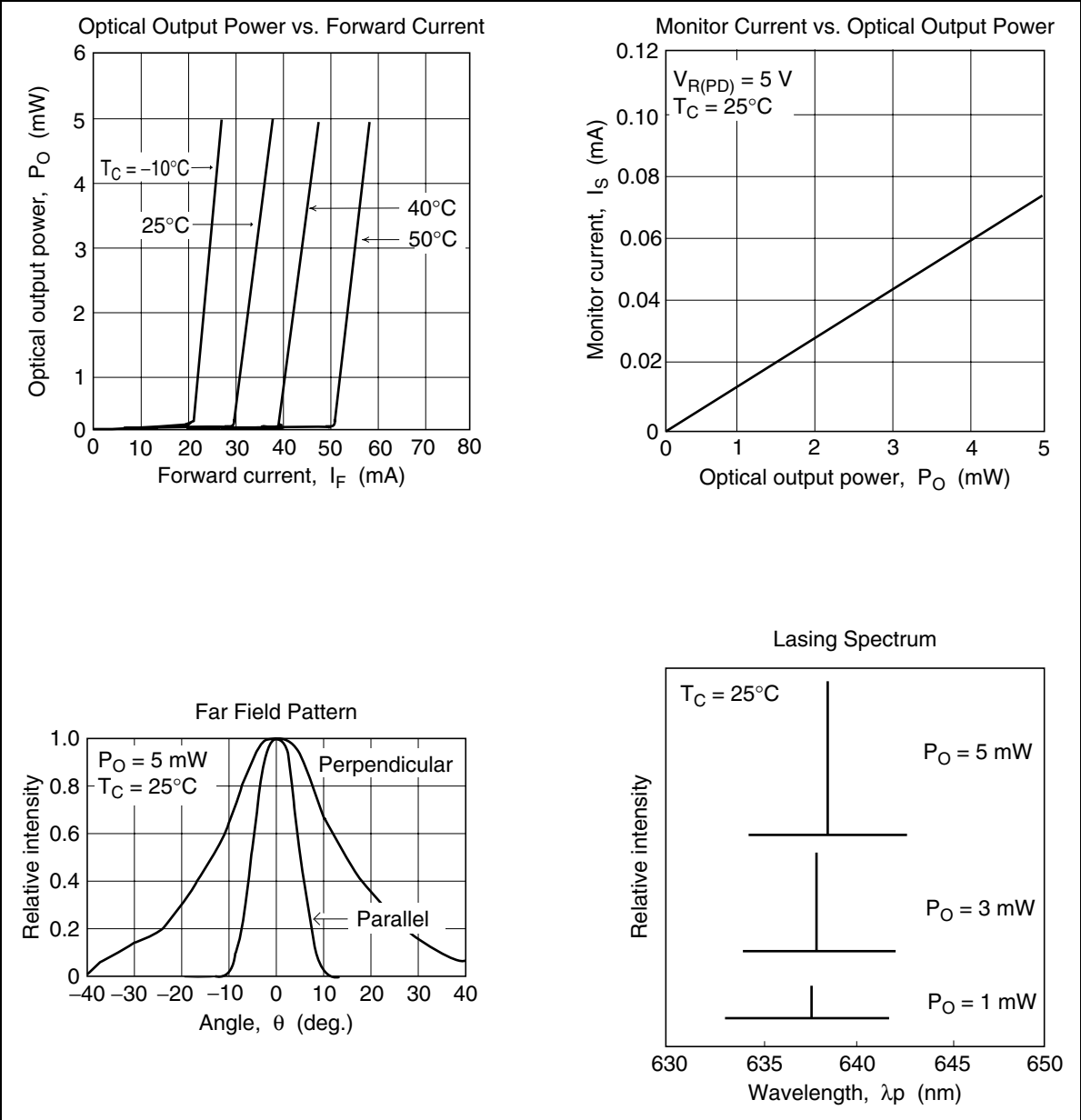
Item	Symbol	Value	Unit
Optical output power	P_o	5	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Optical and Electrical Characteristics

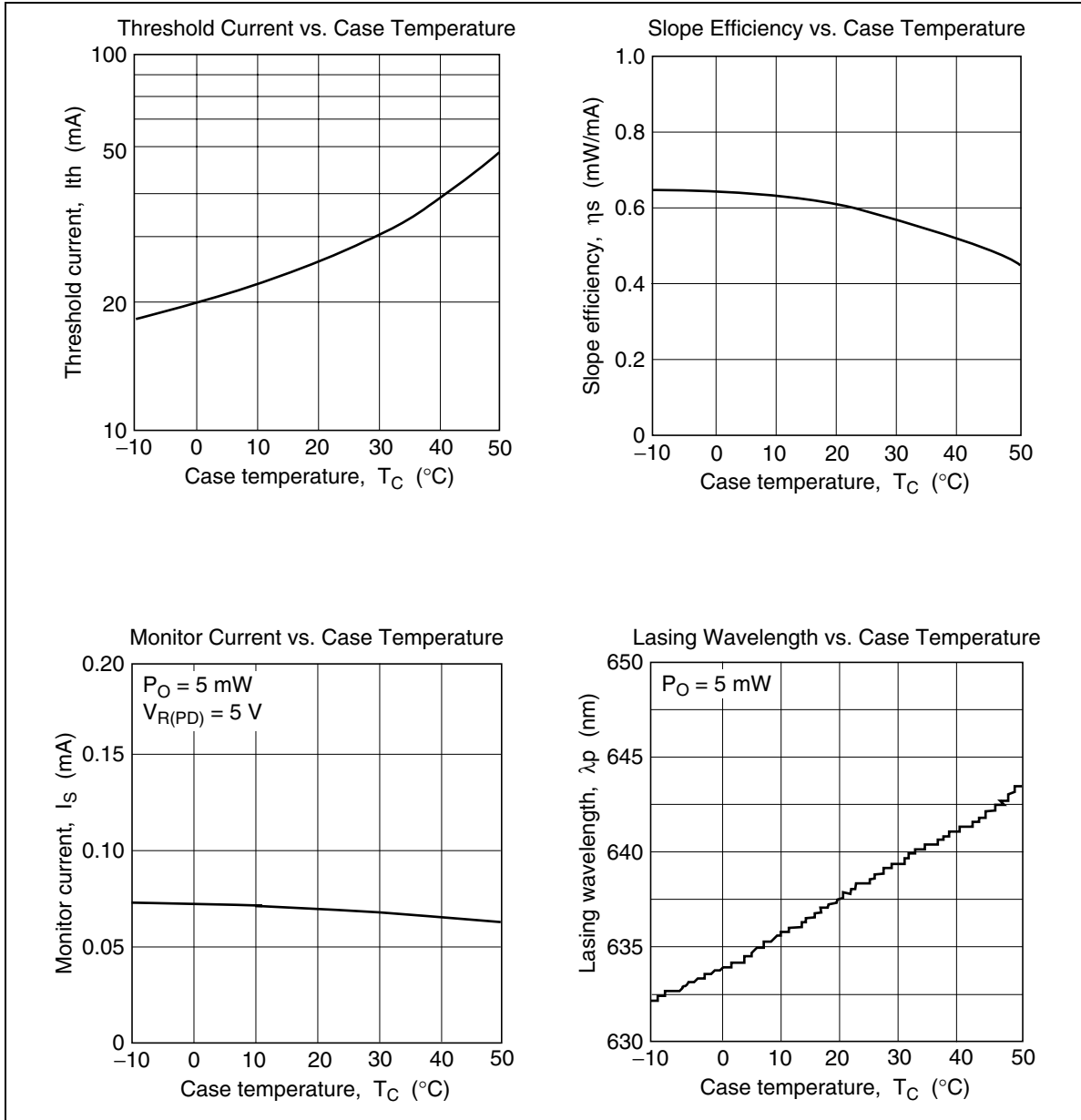
($T_c = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Optical output power	P_o	5	—	—	mW	—
Threshold current	I_{th}	—	30	50	mA	—
Operating current	I_{op}	—	40	60	mA	$P_o = 5 \text{ mW}$
Operating voltage	V_{op}	—	2.2	2.4	V	$P_o = 5 \text{ mW}$
Slope efficiency	η_s	0.3	0.5	0.8	mW/mA	$3 \text{ (mW)} / (I_{(4mW)} - I_{(1mW)})$
Beam divergence parallel to the junction	$\theta_{//}$	6	8	11	deg.	$P_o = 5 \text{ mW}$
Beam divergence perpendicular to the junction	θ_{\perp}	25	31	37	deg.	$P_o = 5 \text{ mW}$
Lasing wavelength	λ_p	630	635	640	nm	$P_o = 5 \text{ mW}$
Monitor current	I_s	0.02	0.07	0.12	mA	$P_o = 5 \text{ mW}, V_{R(PD)} = 5 \text{ V}$

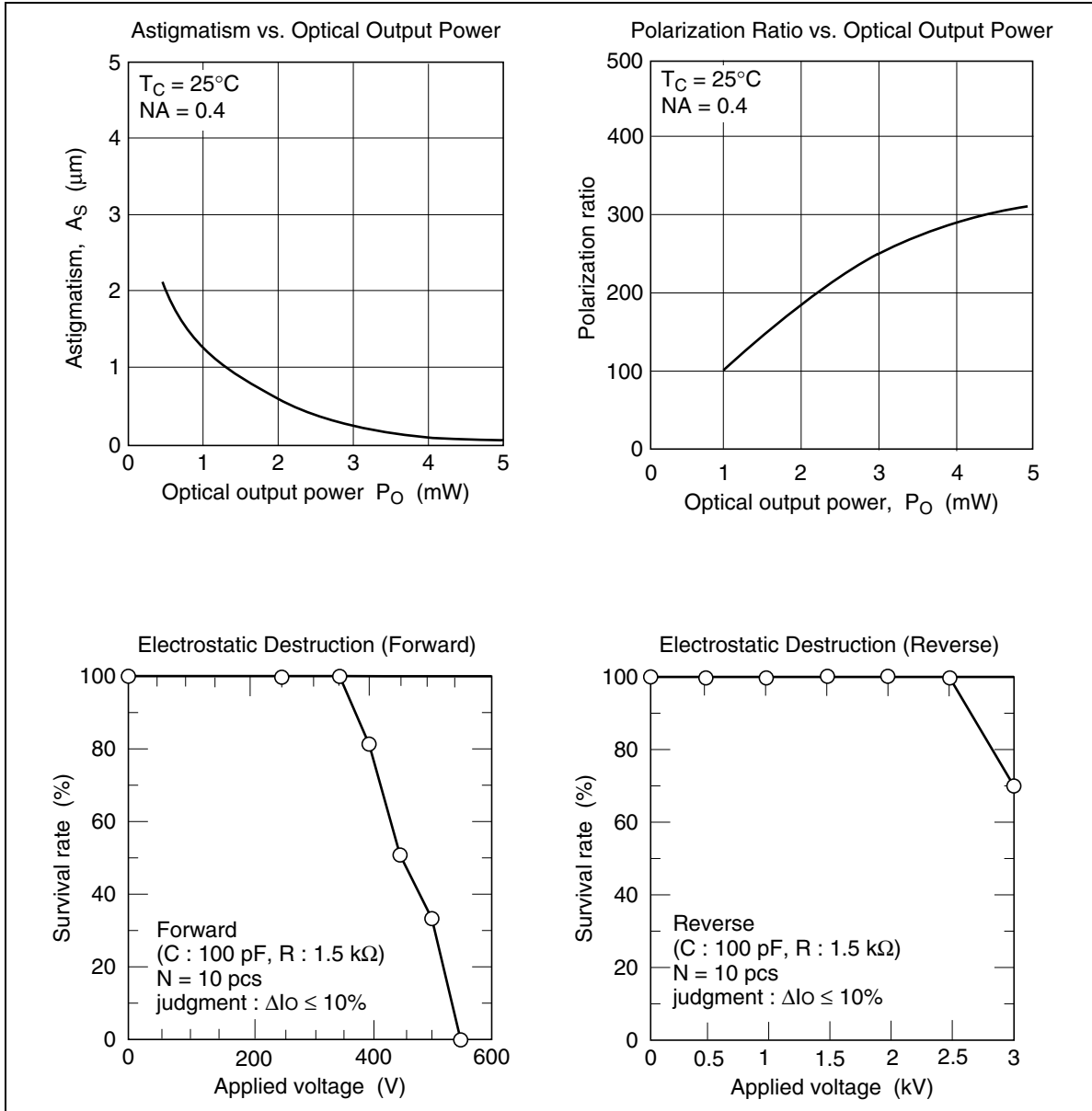
Typical Characteristic Curves



Typical Characteristic Curves (cont)



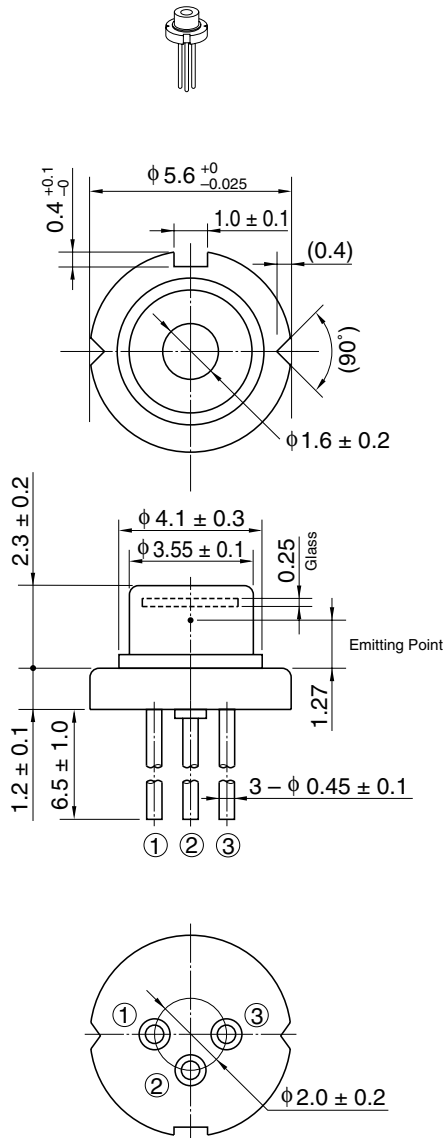
Typical Characteristic Curves (cont)



HL6327MG/28MG

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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Sales Offices



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