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# HL6738MG

## Visible High Power Laser Diode



ODE-208-601E (Z)

Rev.5  
Mar. 2005

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### Description

The HL6738MG is a 0.68  $\mu\text{m}$  band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a light source for large capacity optical disc memories and various other types of optical equipment.

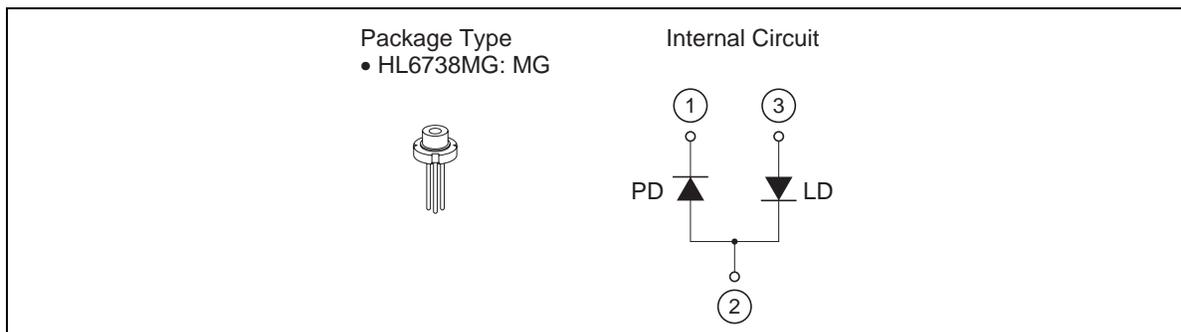
Hermetic sealing of the small package ( $\phi$  5.6 mm) assures high reliability.

### Application

- Optical disc memories
- Optical equipment

### Features

- High output power : 35 mW (CW)
- Visible light output :  $\lambda_p = 680$  to 695 nm
- Small package :  $\phi$  5.6 mm
- Low astigmatism : 6  $\mu\text{m}$  Typ ( $P_0 = 5$  mW)
- Single longitudinal mode



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### Absolute Maximum Ratings

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

Item	Symbol	Value	Unit
Optical output power	$P_O$	35	mW
Pulse optical output power	$P_{O(\text{pulse})}$	50 *	mW
Laser diode reverse voltage	$V_{R(\text{LD})}$	2	V
Photo diode reverse voltage	$V_{R(\text{PD})}$	30	V
Operating temperature	$T_{opr}$	-10 to +70	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

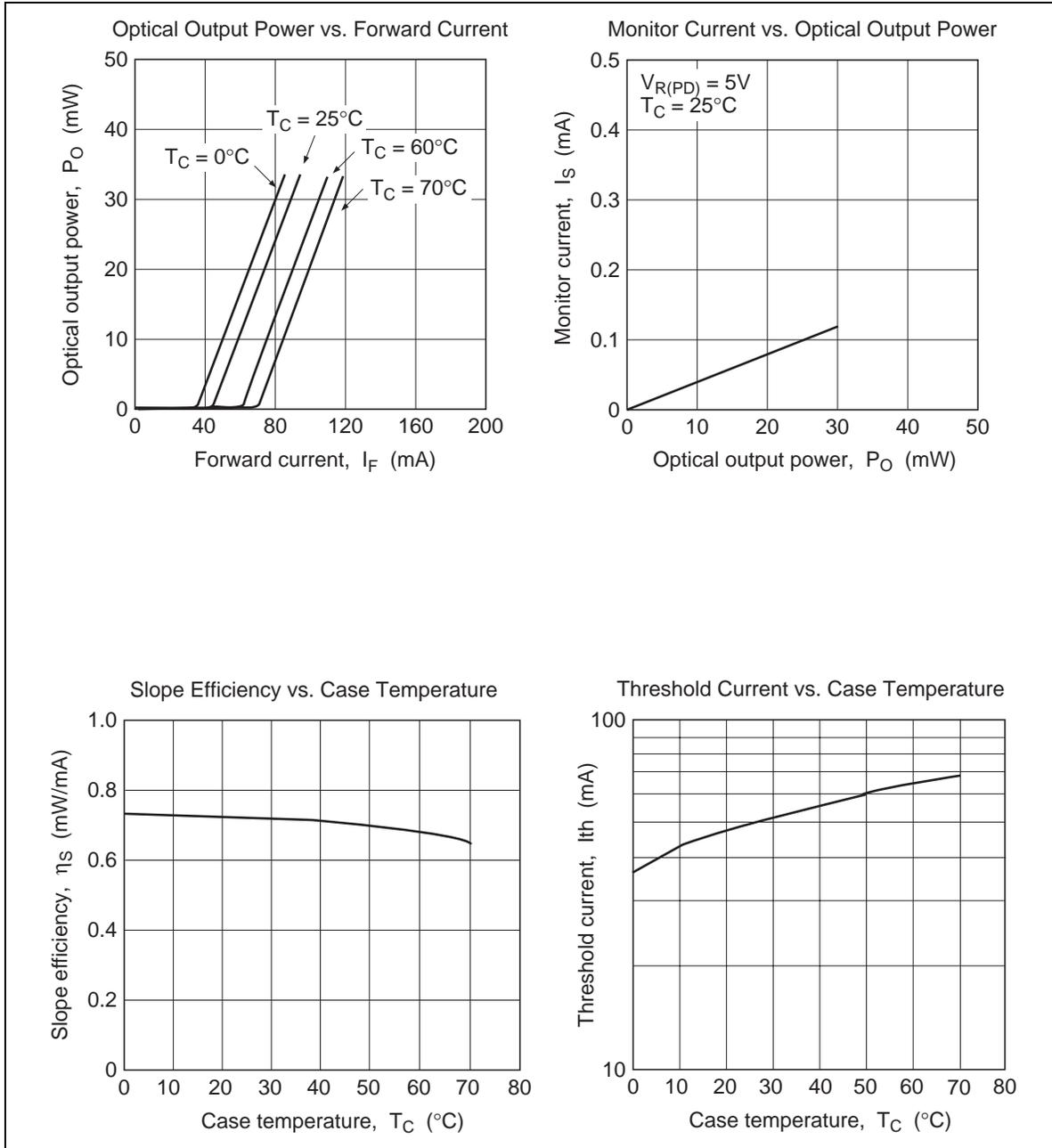
Note: Pulse condition : Pulse width = 100 ns, duty = 50%

### Optical and Electrical Characteristics

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

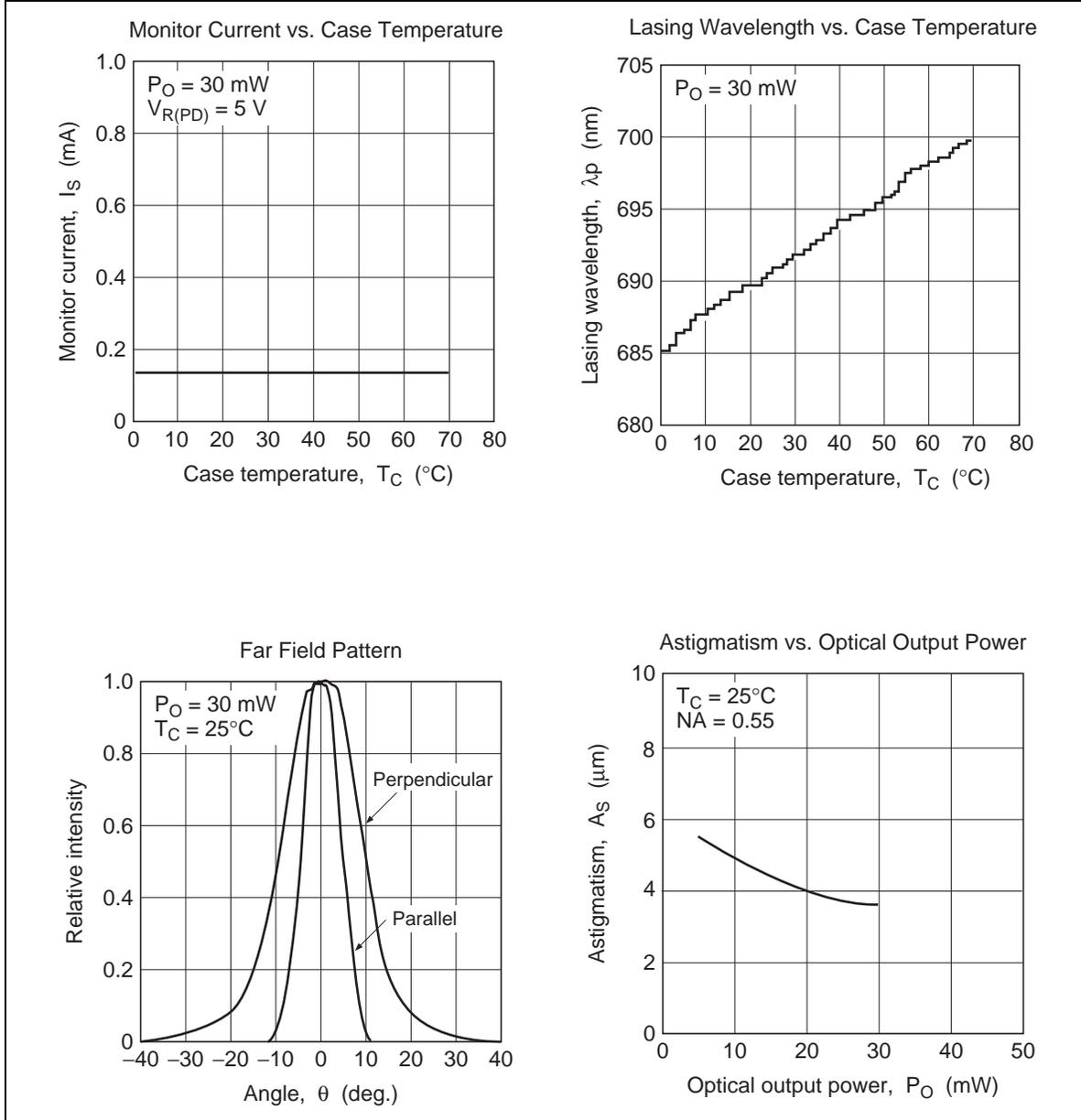
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	$I_{th}$	30	45	70	mA	—
Operating voltage	$V_{OP}$	2.1	2.5	2.8	V	$P_O = 30 \text{ mW}$
Slope efficiency	$\eta_s$	0.5	0.7	0.9	mW/mA	$18(\text{mW}) / (I_{(24\text{mW})} - I_{(6\text{mW})})$
Beam divergence parallel to the junction	$\theta_{//}$	7	8.5	10.5	deg.	$P_O = 30 \text{ mW}$
Beam divergence perpendicular to the junction	$\theta_{\perp}$	17	19	23	deg.	$P_O = 30 \text{ mW}$
Asigmatism	$A_s$	—	6	—	$\mu\text{m}$	$P_O = 5 \text{ mW}, NA = 0.55$
Lasing wavelength	$\lambda_p$	680	690	695	nm	$P_O = 30 \text{ mW}$
Monitor current	$I_s$	0.02	0.1	0.45	mA	$P_O = 30 \text{ mW}, V_{R(\text{PD})} = 5 \text{ V}$

Typical Characteristic Curves



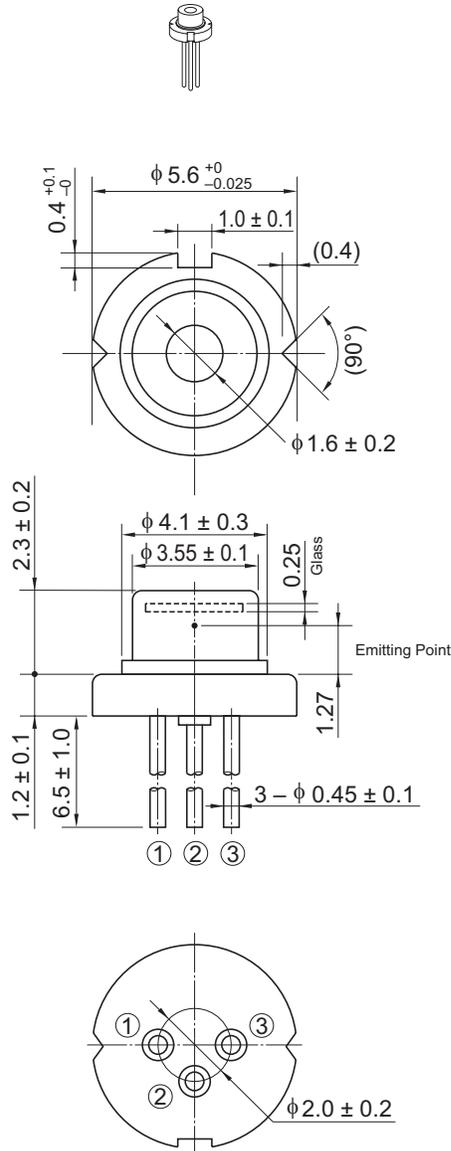
# HL6738MG

## Typical Characteristic Curves (cont)



Package Dimensions

As of July, 2002  
Unit: mm



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

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## HL6738MG

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### Sales Offices



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