

HL6750MG

Visible High Power Laser Diode

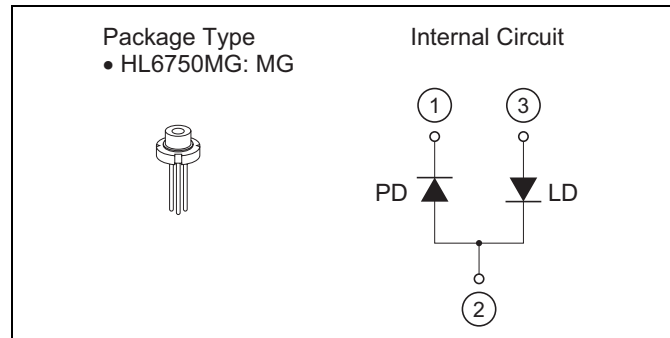
ODE-208-021A (Z)
Rev.1
Dec. 21, 2006

Description

The HL6750MG is a 0.68 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a light source for various other types of optical equipment.

Features

- High output power : 50 mW (CW)
- Small package : ϕ 5.6 mm
- Visible light output : $\lambda_p = 685$ nm Typ
- Single longitudinal mode
- Low operating current : 75 mA typ
- Low operating voltage : 2.3 V typ



Absolute Maximum Ratings

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

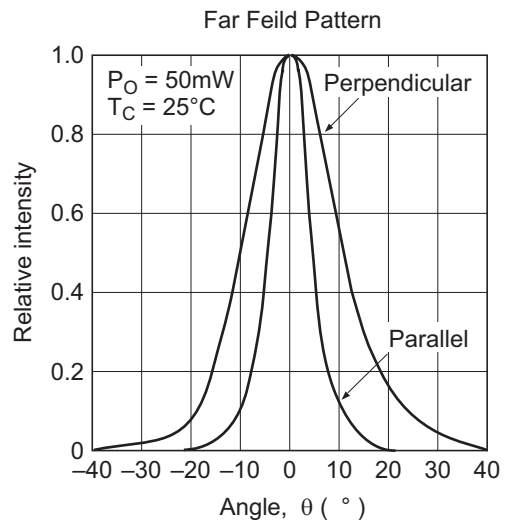
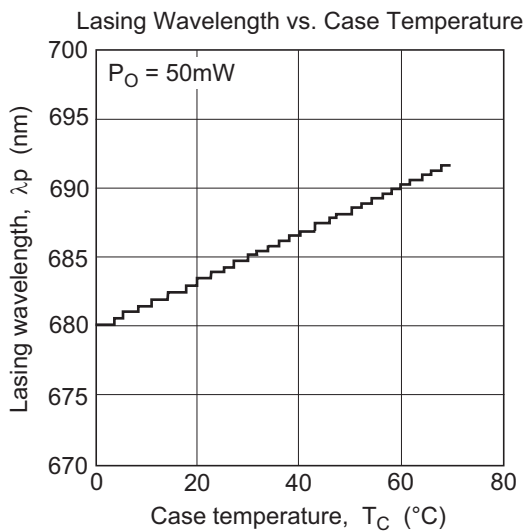
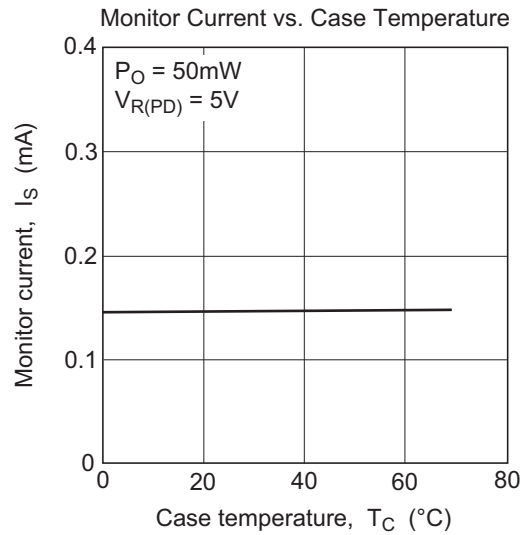
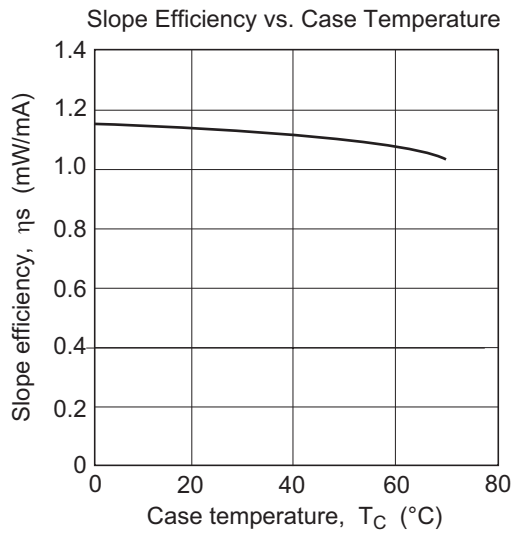
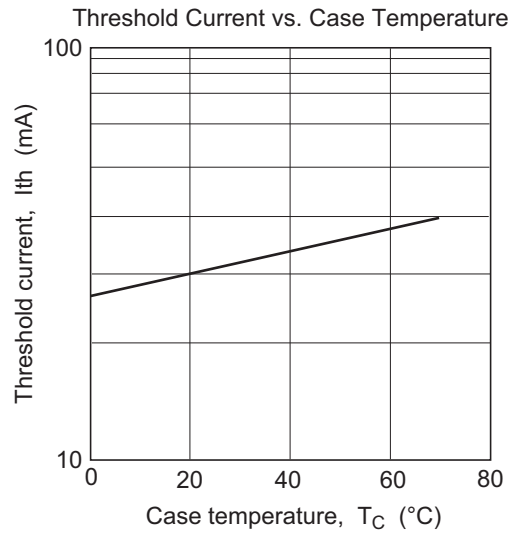
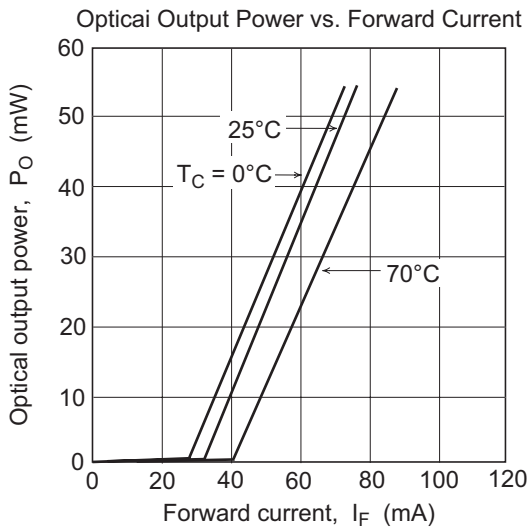
Item	Symbol	Ratings	Unit
Optical output power	P_O	55	mW
Laser diode reverse voltage	$V_{R(LD)}$	2	V
Photo diode reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	T_{opr}	-10 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Optical and Electrical Characteristics

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

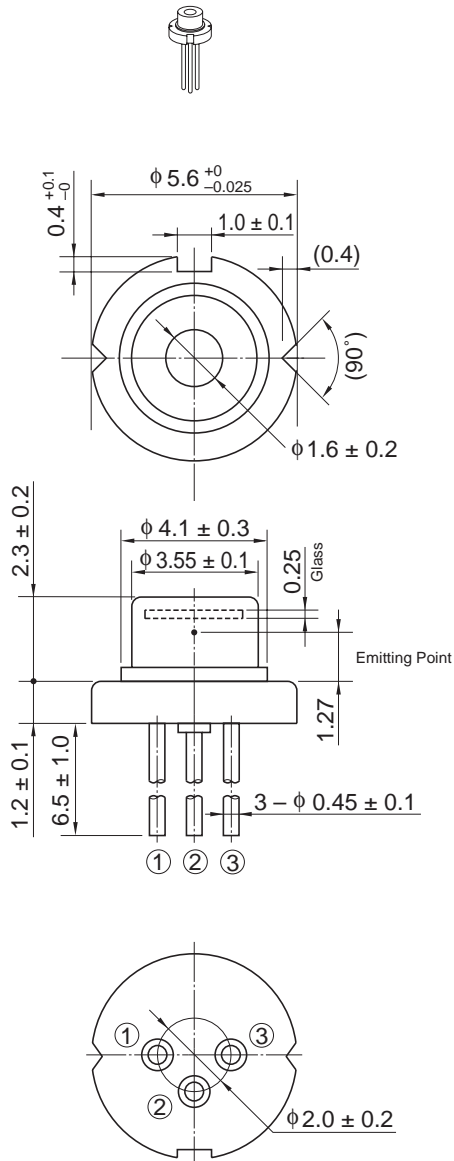
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I_{th}	—	30	60	mA	—
Operating voltage	V_{OP}	—	2.3	3.0	V	$P_O = 50$ mW
Slope efficiency	η_s	0.8	1.1	1.4	mW/mA	$30(\text{mW}) / (I_{(40\text{mW})} - I_{(10\text{mW})})$
Operating current	I_{OP}	—	75	120	mA	$P_O = 50$ mW
Beam divergence parallel to the junction	$\theta_{//}$	7	9	12	$^\circ$	$P_O = 50$ mW
Beam divergence perpendicular to the junction	θ_{\perp}	18	21	25	$^\circ$	$P_O = 50$ mW
Lasing wavelength	λ_p	675	685	695	nm	$P_O = 50$ mW
Monitor current	I_s	0.08	0.15	0.35	mA	$P_O = 50$ mW, $V_{R(PD)} = 5$ V
Astigmatism	A_s	—	1	—	μm	$P_O = 5$ mW, $NA = 0.55$

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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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.

Sales Offices



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