

HL6512MG

Visible High Power Laser Diode

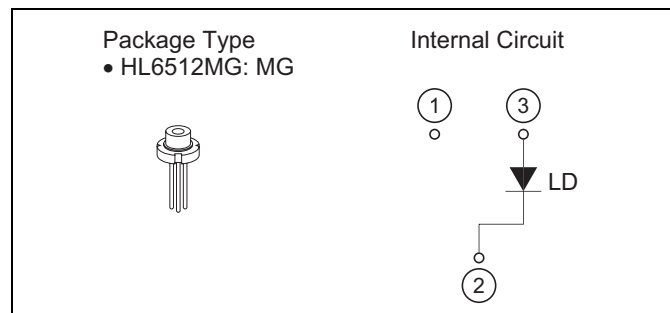
ODE-208-042A (Z)
Rev.1
Oct. 20, 2006

Description

The HL6512MG is a 0.65 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. Its beam divergence (parallel to the junction) has a small variation to the optical output power. It is suitable as light sources for laser scanners and optical equipment for measurement.

Features

- High output power and Wide operating temperature: 70 mW (pulse), PW = 100ns, duty = 50%, (Topr = 70°C)
- Small package : ϕ 5.6 mm
- Visible light output : λ_p = 658 nm Typ
- The beam divergence (parallel to the junction) has a small variation to the output power.
- Single longitudinal mode



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	Unit
Optical output power	P _O	50	mW
Pulse optical output power	P _{O(pulse)}	70 * ¹	mW
Laser diode reverse voltage	V _{R(LD)}	2	V
Operating temperature	Topr	-10 to +70 * ²	°C
Storage temperature	Tstg	-40 to +85	°C

Notes: 1. Pulse condition : Pulse width = 100 ns, duty = 50%

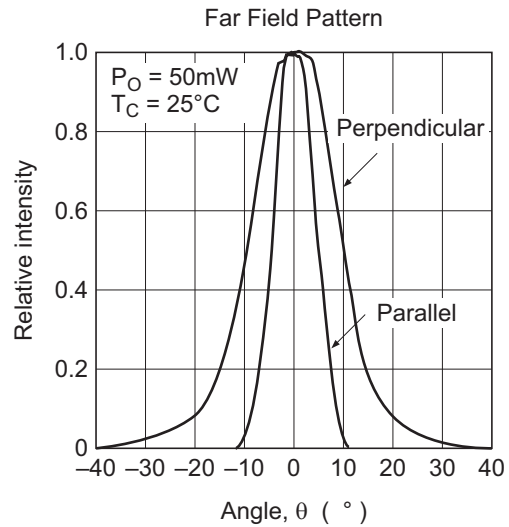
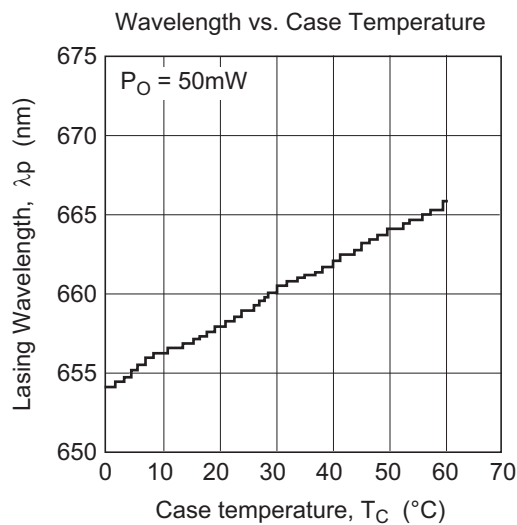
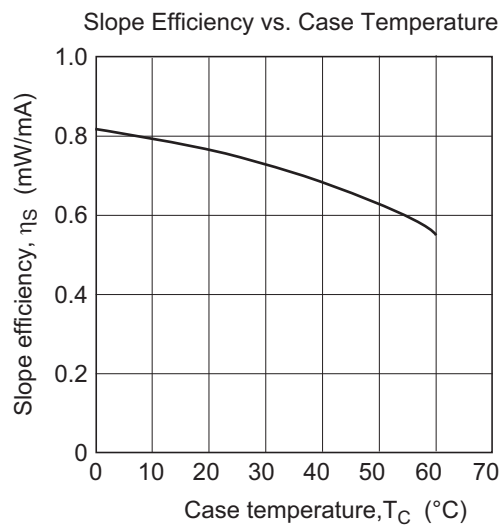
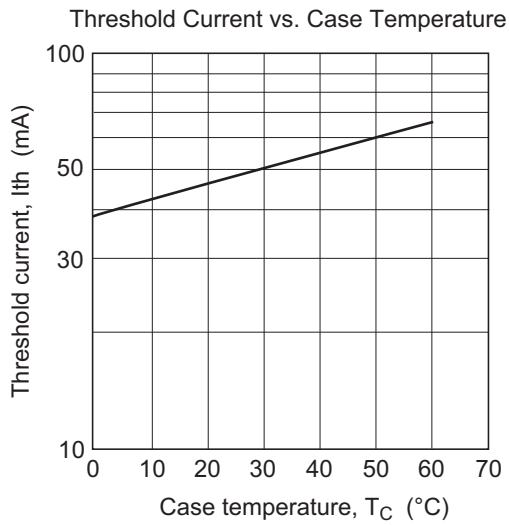
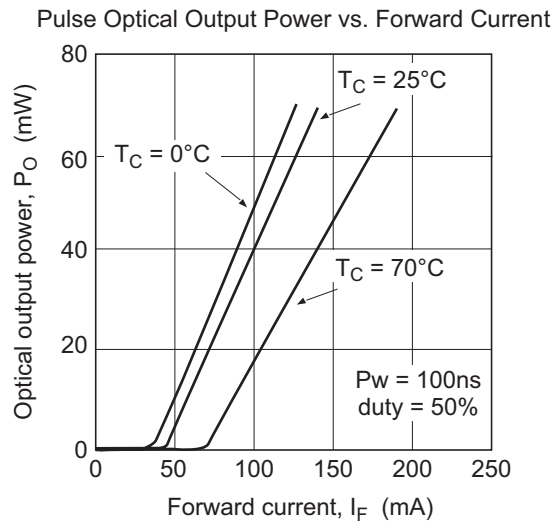
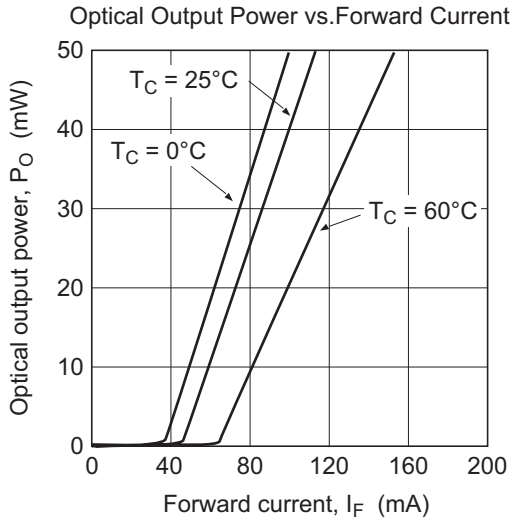
2. The value of -10 to +70°C is effective under pulse operation. The value under CW operation is -10 to +60°C.

Optical and Electrical Characteristics

(T_C = 25°C)

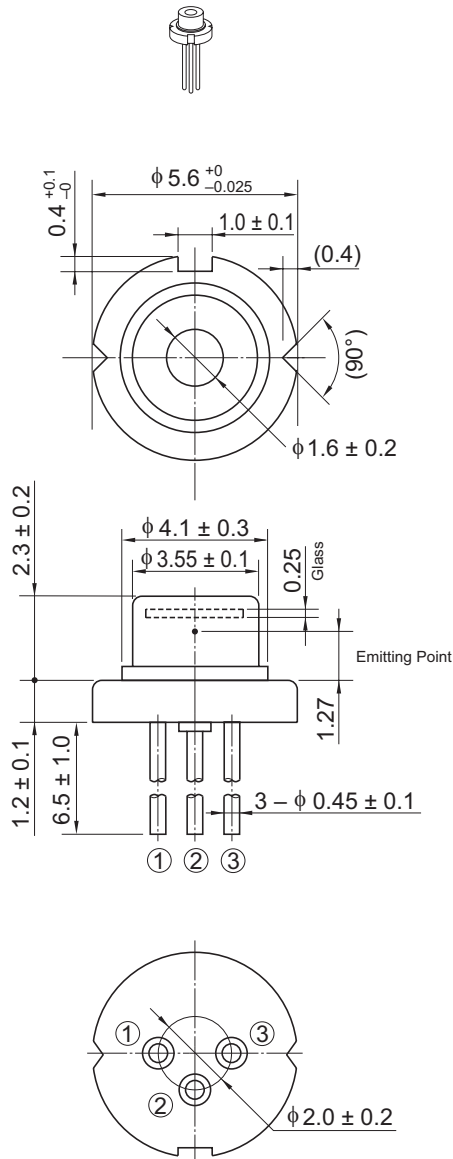
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I _{th}	30	45	60	mA	—
Operating current	I _{op}	—	115	135	mA	P _O = 50 mW
Operating voltage	V _{OP}	2.1	2.6	3.0	V	P _O = 50 mW
Beam divergence parallel to the junction	$\theta_{//}$	7	8.5	11	°	P _O = 50 mW
Beam divergence perpendicular to the junction	θ_{\perp}	18	21	26	°	P _O = 50 mW
Astigmatism	A _S	—	5	—	μm	P _O = 5 mW, NA = 0.55
Lasing wavelength	λ_p	655	658	662	nm	P _O = 50 mW

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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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



Device Business Unit Opnext Japan, Inc.

Takagi Bldg., 3F, 1-3-9, Iwamoto-cho, Chiyoda-ku, Tokyo 101-0032 Japan
Tel: (03) 3865-5591

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