

HL6545MG

Visible High Power Laser Diode for Recordable-DVD

ODE-208-038D (Z)

Rev.4

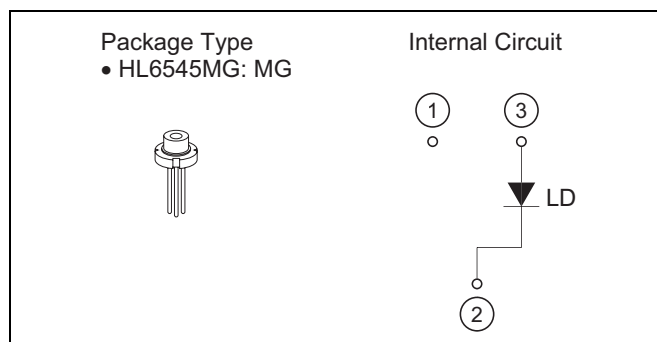
Sept. 04, 2006

Description

The HL6545MG is a 0.65 μm 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, such as H/H type Recordable-DVD, and various other types of optical equipment.

Features

- Operating temperature: 75°C Max
(300 mW(pulse), pw = 30 ns, duty = 35 %)
- Visible light output : $\lambda_p = 660 \text{ nm}$ Typ
- Low operating current :
I_{op}(1) = 175 mA Typ (P_o = 120 mW)
I_{op}(2) = 350 mA Typ
(P_o = 300 mW(pulse), pw = 30 ns, duty = 35 %)



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	Unit
Optical output power	P _O	130	mW
Pulse optical output power	P _O (pulse)	300 *	mW
LD reverse voltage	V _R (LD)	2	V
CW Operating temperature	T _{opr} (CW)	-10 to +75	°C
Pulse Operating temperature	T _{opr} (pulse)	-10 to +75	°C
Storage temperature	T _{stg}	-40 to +85	°C

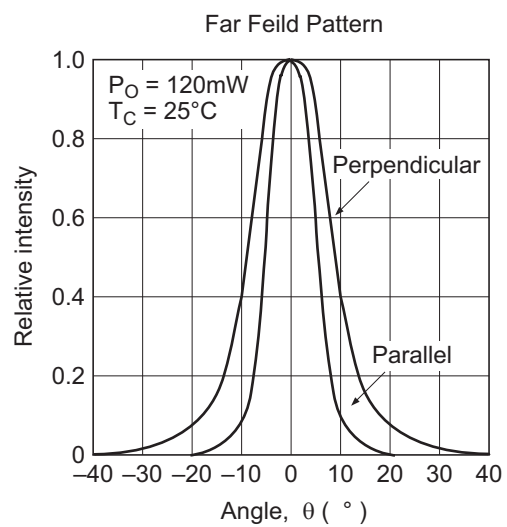
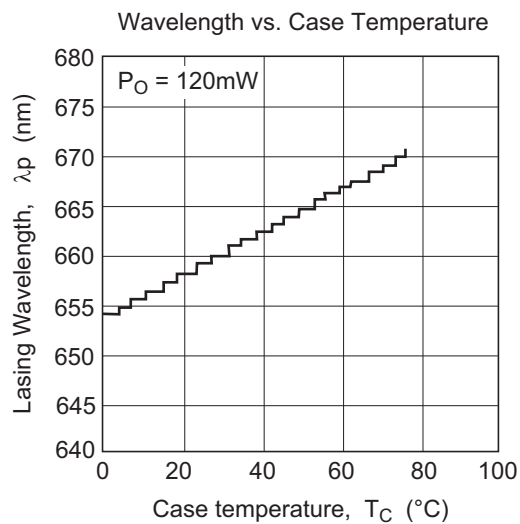
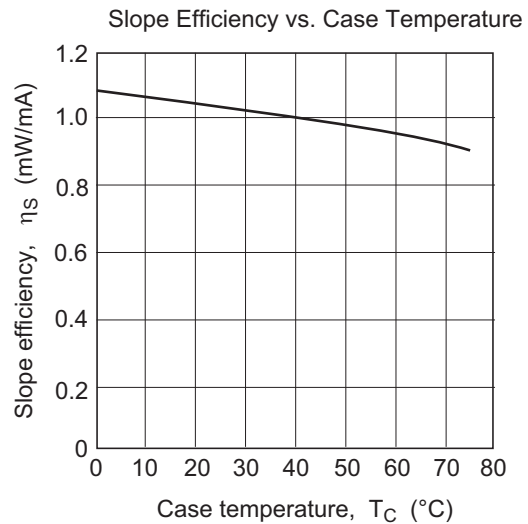
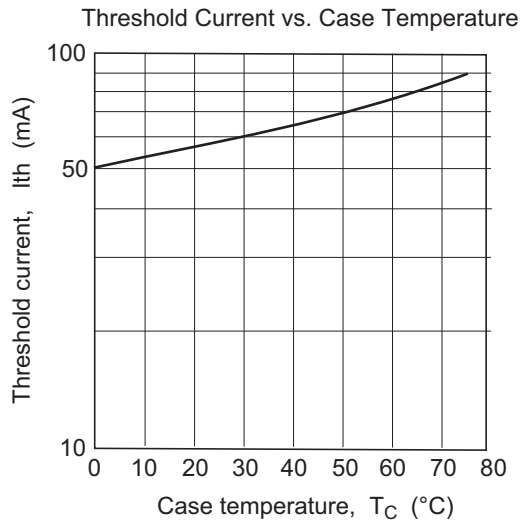
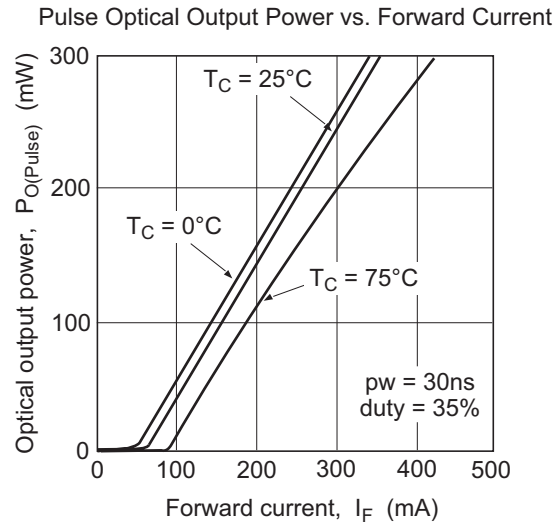
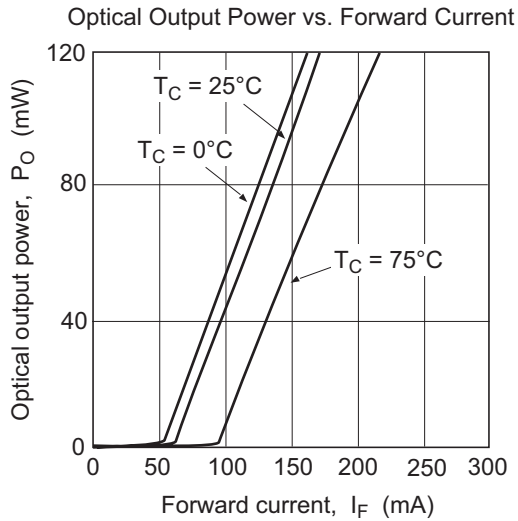
Note: Pulse condition : Pulse width = 30 ns , duty = 35 %

Optical and Electrical Characteristics

(T_C = 25°C)

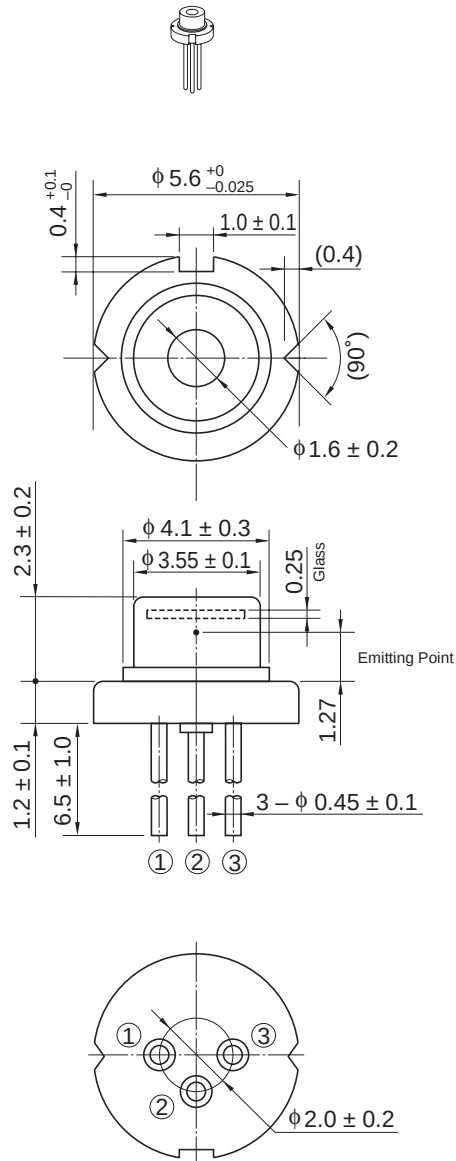
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I _{th}	—	60	75	mA	—
Operating current(1)	I _{OP} (1)	—	175	210	mA	P _O = 120 mW
Operating current(2)	I _{OP} (2)	—	350	—	mA	P _O = 300 mW(pulse) pw = 30 ns, duty = 35 %
Operating voltage	V _{OP}	—	2.5	3.0	V	P _O = 120 mW
Lasing wavelength	λ_p	652	660	664	nm	P _O = 120 mW
Beam divergence parallel to the junction(1)	$\theta_{//}(1)$	7.5	10.0	12.0	deg.	P _O = 120 mW
Beam divergence perpendicular to the junction	$\theta_{\perp}$	15	17	19	deg.	P _O = 120 mW
Beam divergence parallel to the junction(2)	$\theta_{//}(2)$	7.5	—	—	deg.	P _O = 5 mW
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.
2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.
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



Device Business Unit Opnext Japan, Inc.

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

For the detail of Opnext, Inc., see the following homepage:

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