

HL6323MG

AlGaInP Laser Diodes

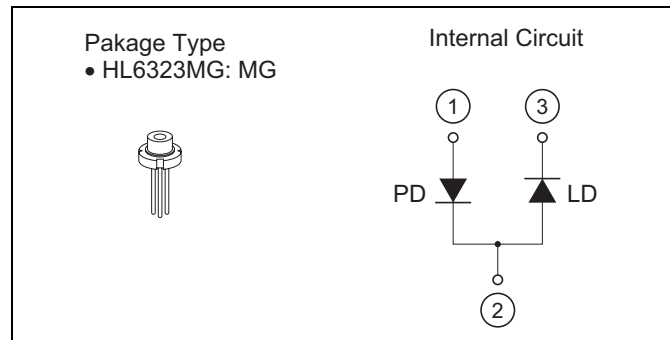
ODE-208-029 (Z)
Rev.0
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Description

The HL6323MG is a 0.63 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a longer distance operating range for laser markers and a higher speed for positioning control sensors. The HL6323MG is packaged in the small can ($\phi 5.6$ mm), enabling end products to be kept small.

Features

- High output power : 35 mW (CW)
- Visible light output : $\lambda_p = 639$ nm Typ
- Small package : $\phi 5.6$ mm
- TM mode oscillation
- Single longitudinal mode



Absolute Maximum Ratings

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

Item	Symbol	Ratings	Unit
Optical output power	P_O	35 * ¹	mW
Pulse optical output power	$P_{O(\text{pulse})}$	50 * ²	mW
LD reverse voltage	$V_{R(\text{LD})}$	2	V
PD reverse voltage	$V_{R(\text{PD})}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

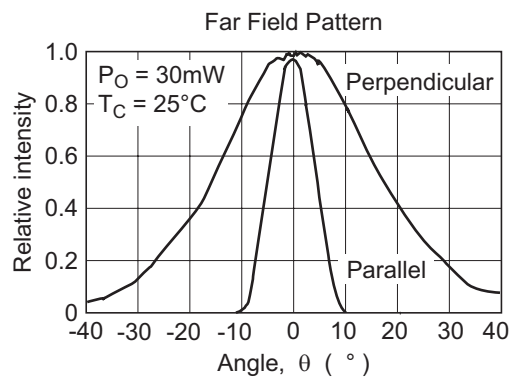
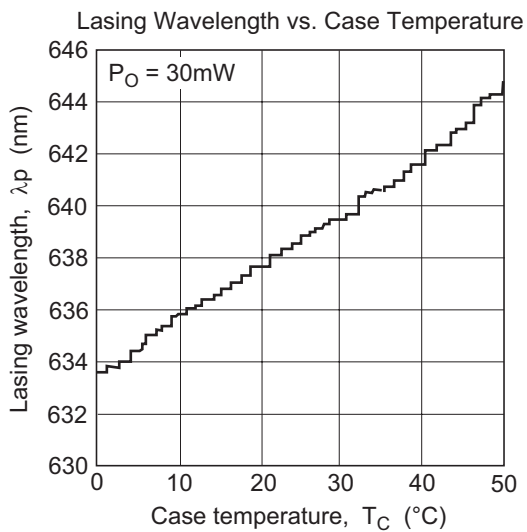
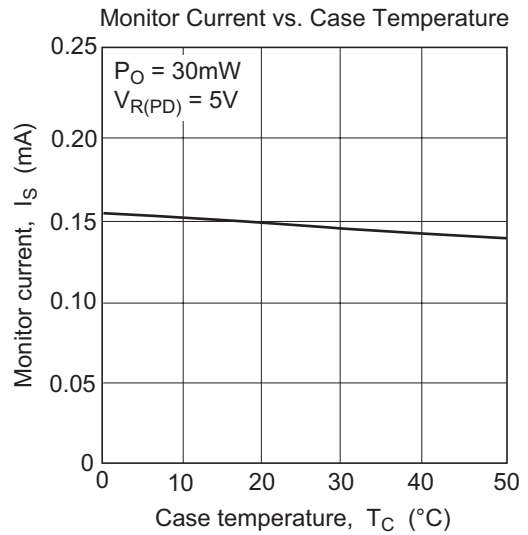
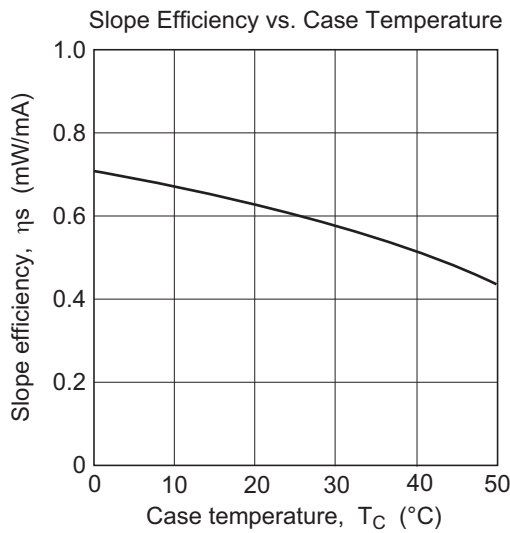
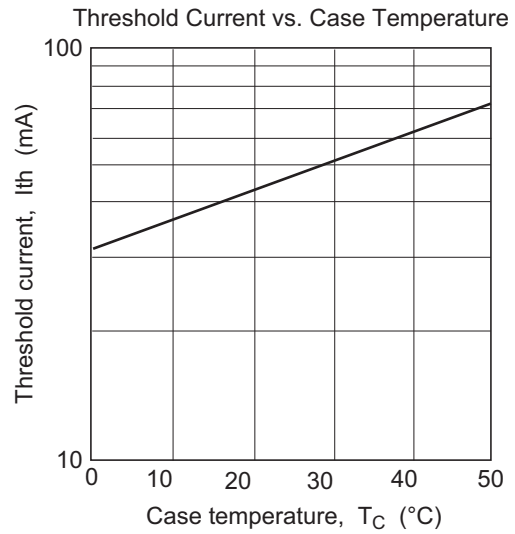
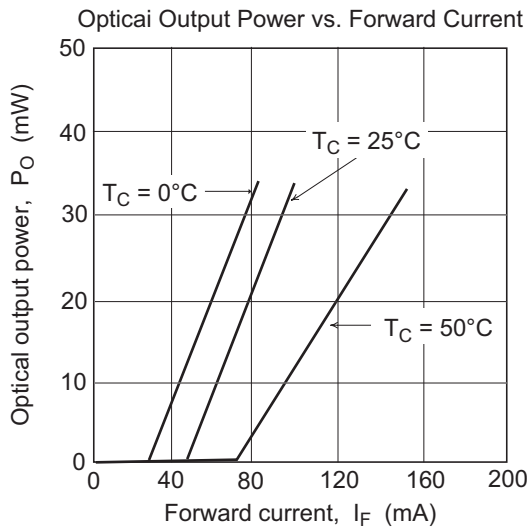
- Notes: 1. This value is not the same as the specification for long term reliability, such as lifetime.
2. Pulse condition : Pulse width $p_w = 100$ ns , duty = 20%

Optical and Electrical Characteristics

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

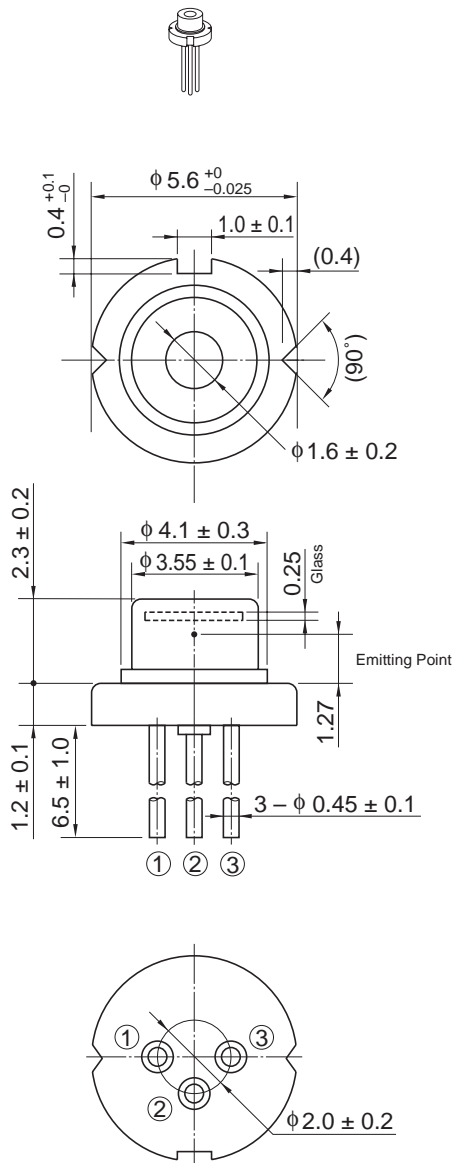
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I_{th}	30	45	65	mA	—
Slope efficiency	η_s	0.4	0.6	0.9	mW/mA	$18(\text{mW}) / (I_{(24\text{mW})} - I_{(6\text{mW})})$
Operating current	I_{OP}	—	95	130	mA	$P_O = 30$ mW
Operating voltage	V_{OP}	—	2.3	2.8	V	$P_O = 30$ mW
Beam divergence parallel to the junction	$\theta_{//}$	7	8.5	11	$^\circ$	$P_O = 30$ mW
Beam divergence perpendicular to the junction	θ_{\perp}	26	30	34	$^\circ$	$P_O = 30$ mW
Lasing wavelength	λ_p	635	639	642	nm	$P_O = 30$ mW
Monitor current	I_s	0.05	0.15	0.25	mA	$P_O = 30$ mW, $V_{R(\text{PD})} = 5$ V

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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