

HL6323MG

AlGaInP Laser Diodes

ODE2013-00 (M)

Rev.0

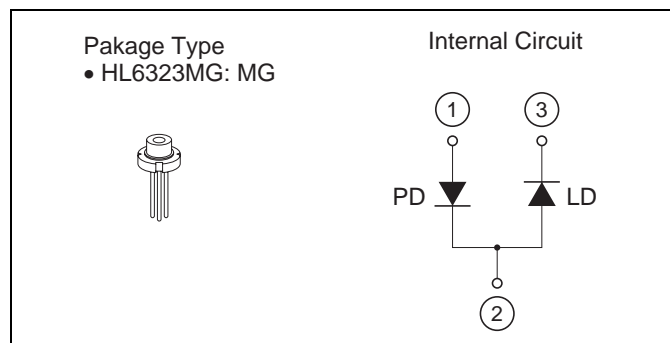
Aug. 01, 2008

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.

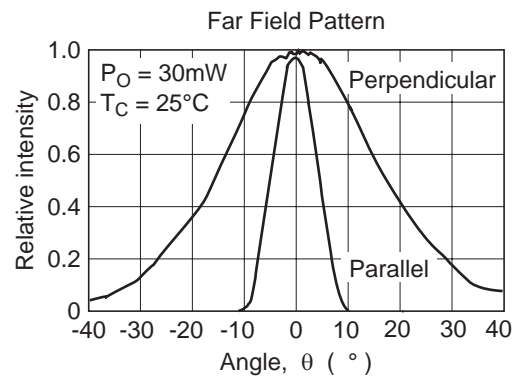
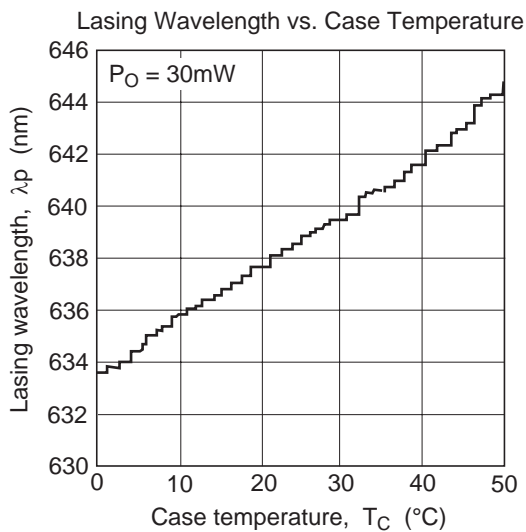
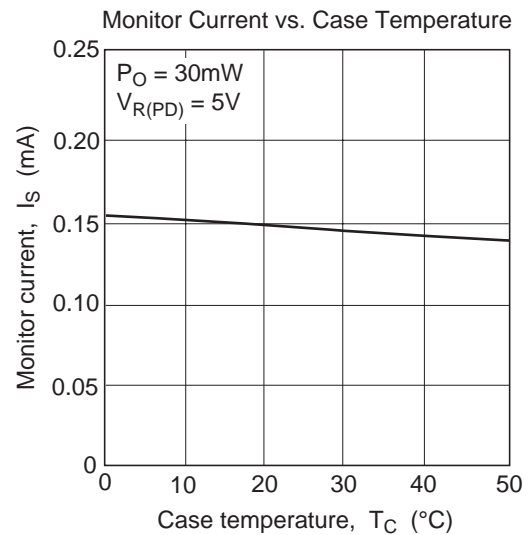
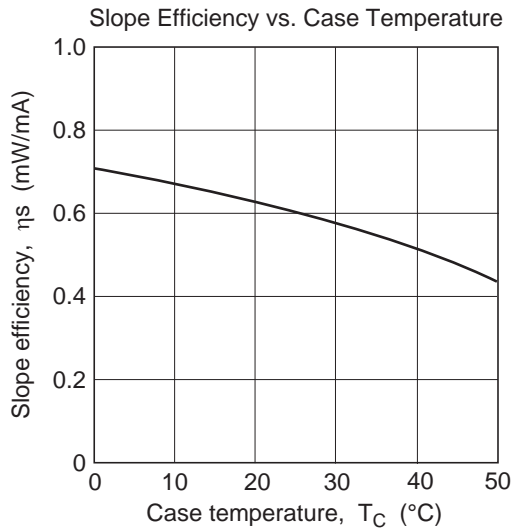
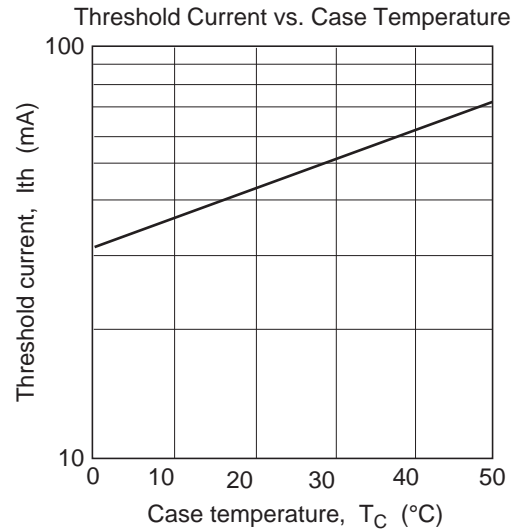
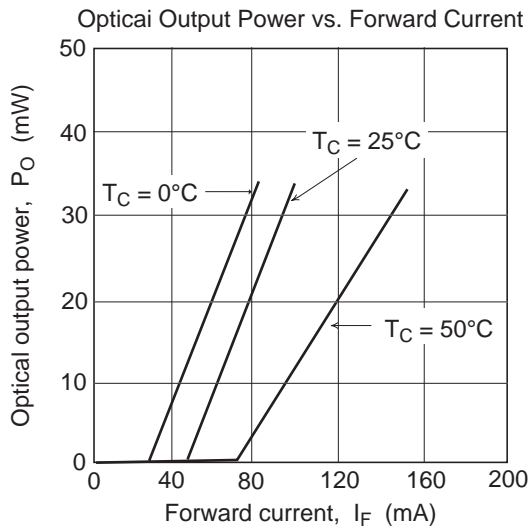
2. Pulse condition : Pulse width $p_w = 100$ ns , duty = 20%

Optical and Electrical Characteristics

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

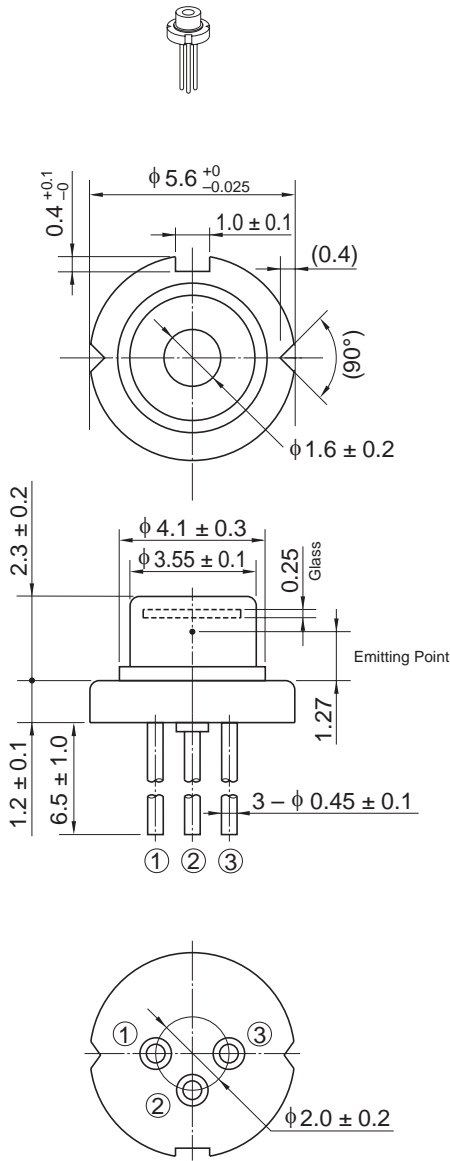
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I_{th}	30	45	65	mA	—
Slope efficiency	η_s	0.4	0.6	0.9	mW/mA	$18(\text{mW}) / (I_{(24\text{mW})} - I_{(6\text{mW})})$
Operating current	I_{OP}	—	95	130	mA	$P_O = 30$ mW
Operating voltage	V_{OP}	—	2.3	2.8	V	$P_O = 30$ mW
Beam divergence parallel 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.
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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.

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