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# HL6323MG

AlGaInP Laser Diode



ODE-208-1410A (Z)

Rev.1  
Jan. 2003

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## Description

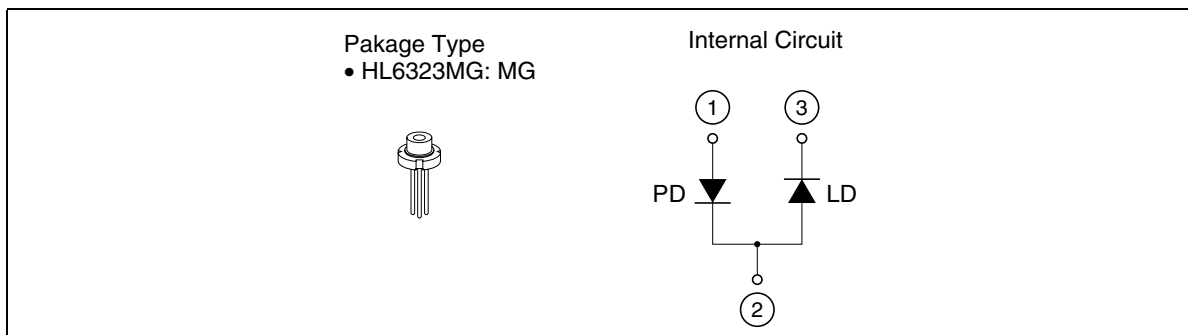
The HL6323MG is a 0.63  $\mu\text{m}$  band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a longer distance operating range for laser markers and a higher speed for positioning control sensors. The HL6323MG is packaged in the small can ( $\phi 5.6$  mm), enabling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

## Application

- Laser markers
- Measurement equipment

## 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



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## HL6323MG

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### Absolute Maximum Ratings

( $T_c = 25^\circ\text{C} \pm 3^\circ\text{C}$ )

Item	Symbol	Value	Unit
Optical output power	$P_o$	35 * <sup>1</sup>	mW
Optical output power (Pulse)	$P_o$	50 * <sup>2</sup>	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	$T_{opr}$	-10 to +50	°C
Storage temperature	$T_{stg}$	-40 to +85	°C

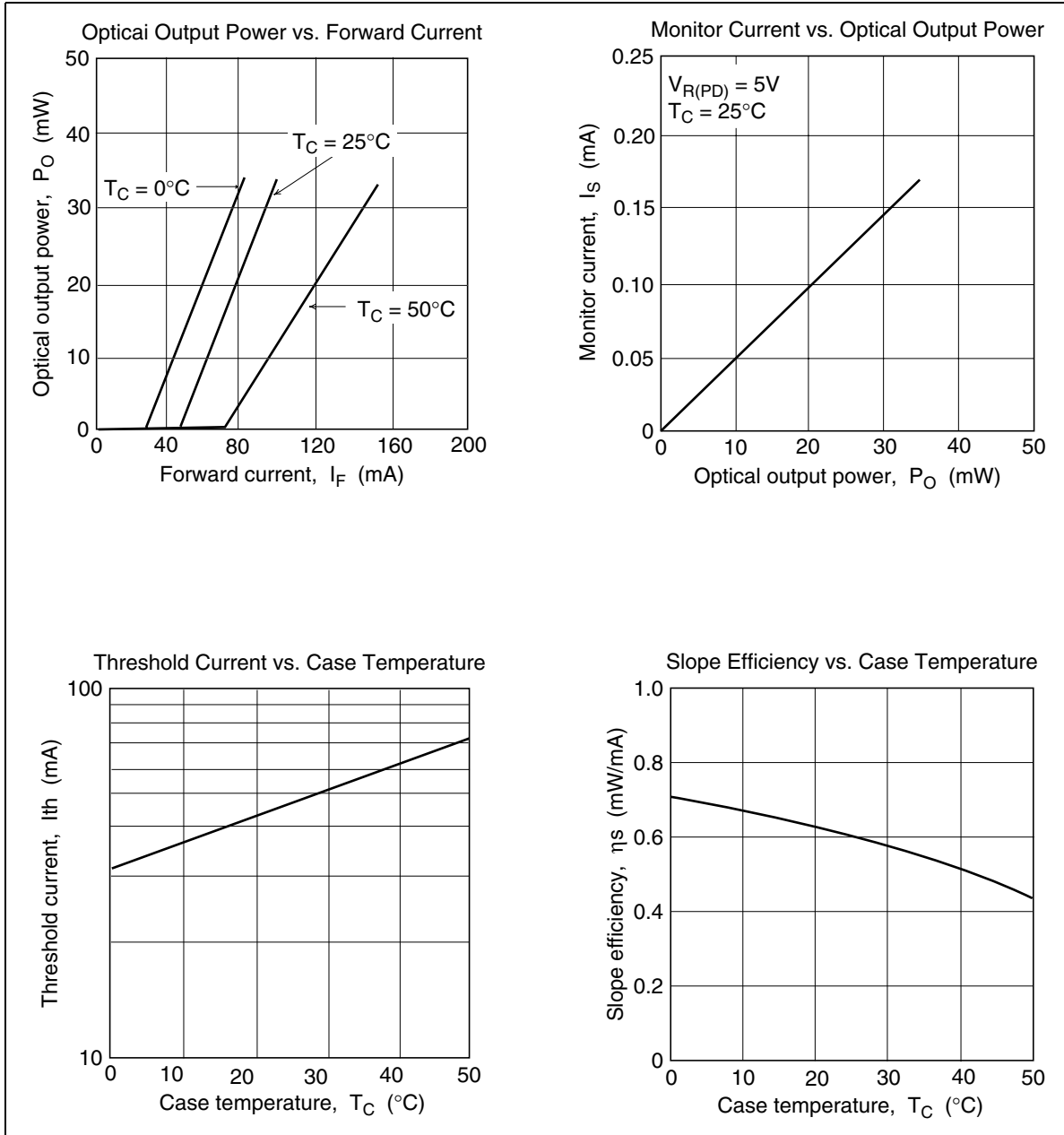
Notes: 1. This value is not the same as the specification for long term reliability, such as lifetime.  
2. Pulse condition : Pulse width  $p_w = 100$  ns , duty = 20%

### Optical and Electrical Characteristics

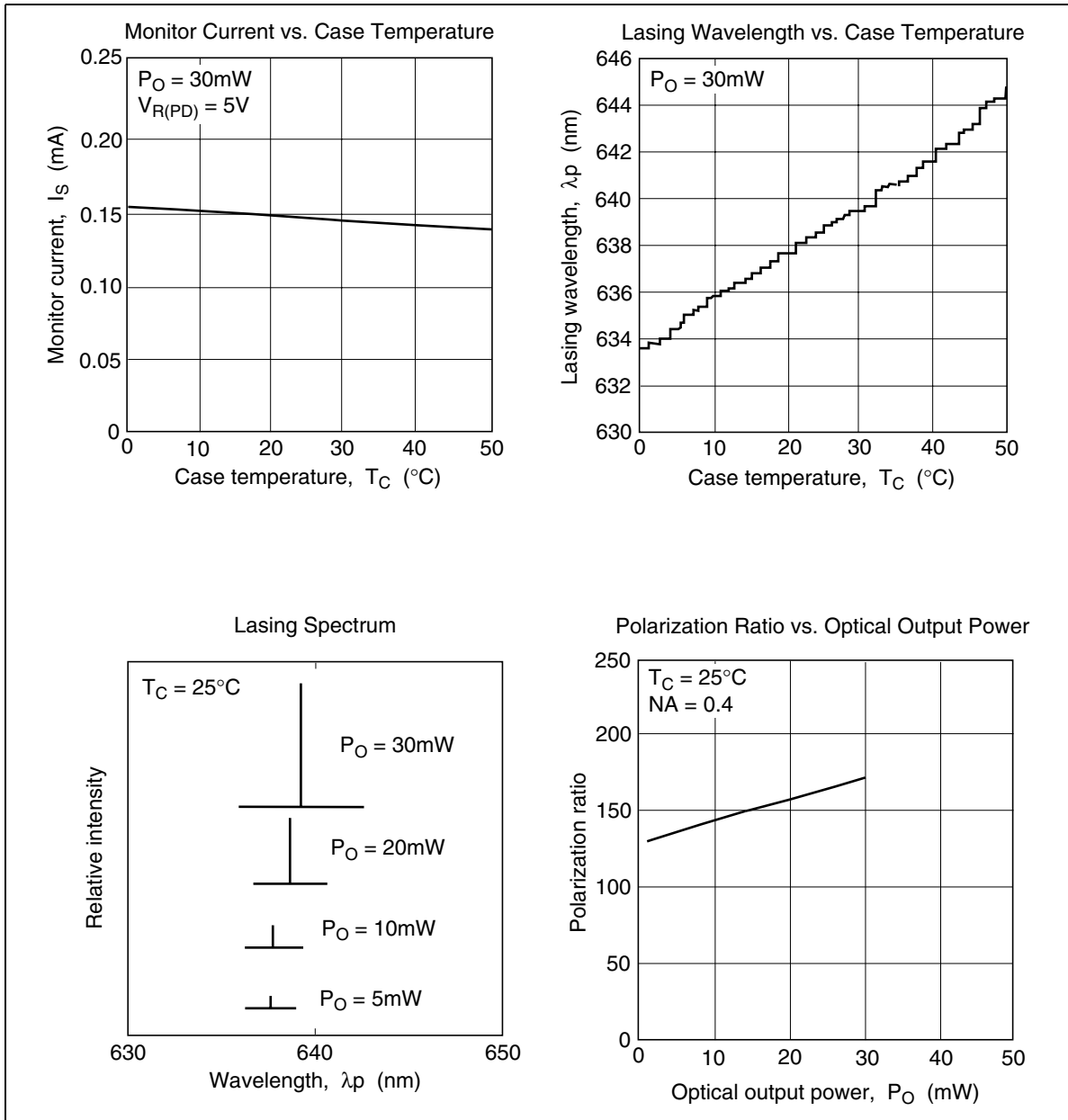
( $T_c = 25^\circ\text{C} \pm 3^\circ\text{C}$ )

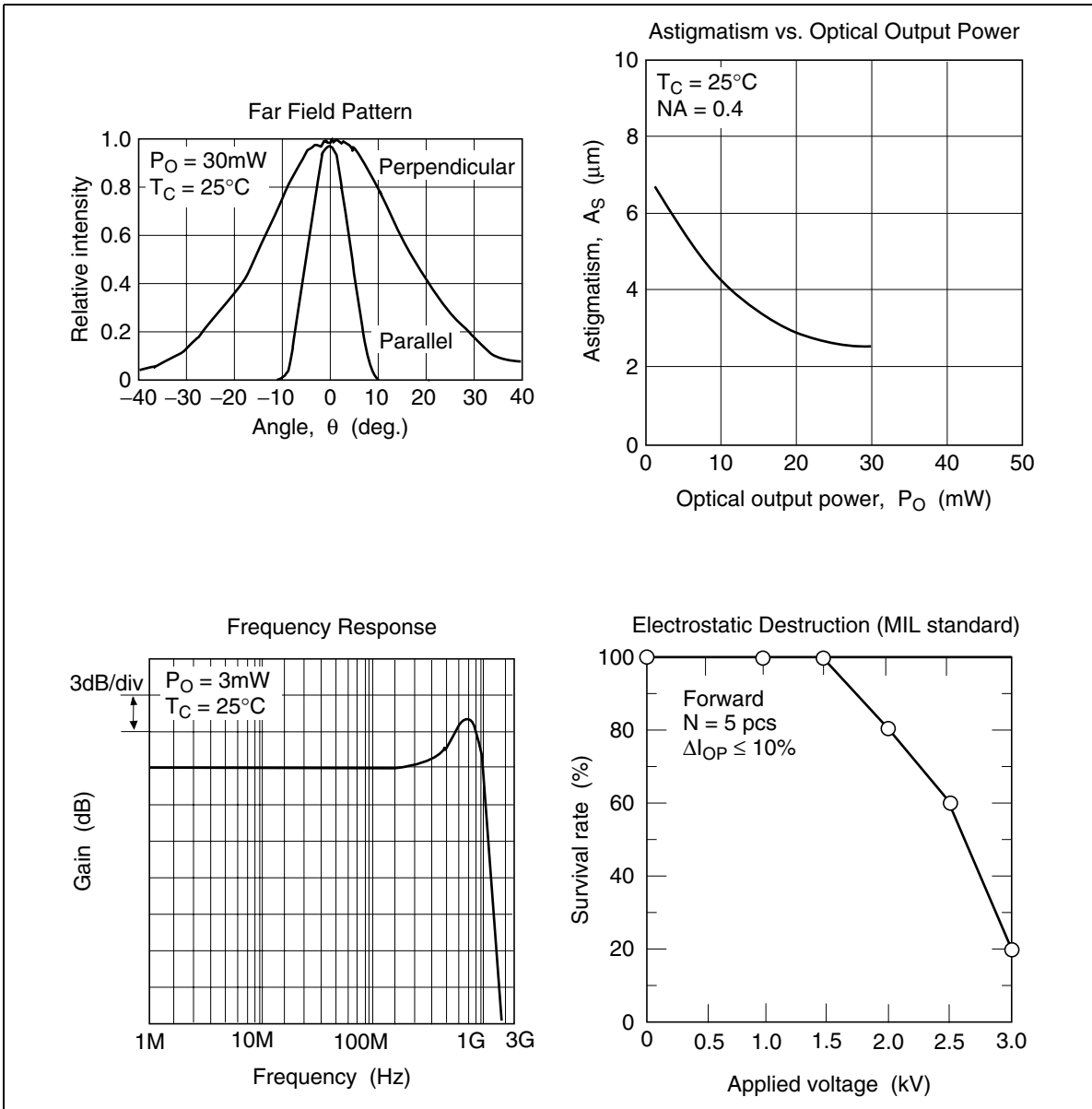
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	$I_{th}$	30	45	65	mA	—
Slope efficiency	$\eta_s$	0.4	0.6	0.9	mW/mA	$18(\text{mW}) / (I_{(24\text{mW})} - I_{(6\text{mW})})$
Operating current	$I_{OP}$	—	95	130	mA	$P_o = 30$ mW
Operating voltage	$V_{OP}$	—	2.3	2.8	V	$P_o = 30$ mW
Beam divergence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

Typical Characteristic Curves



# HL6323MG

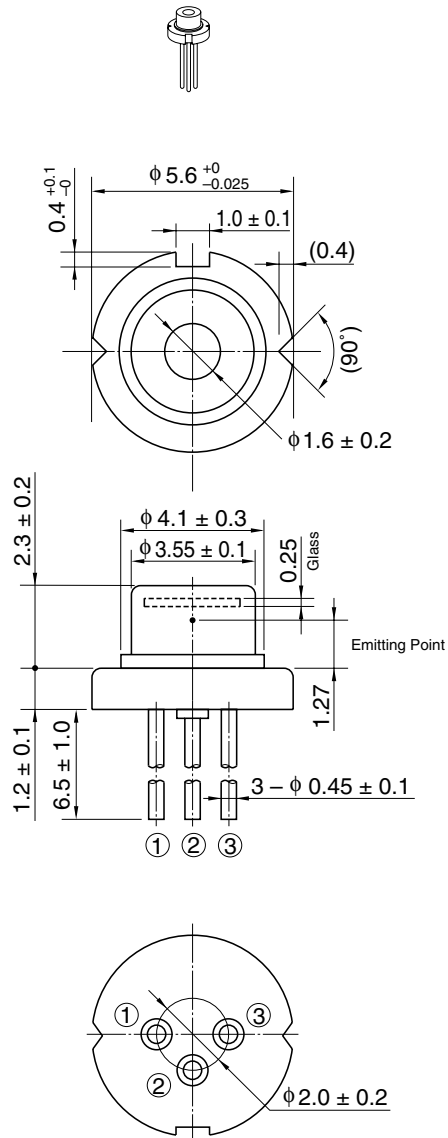




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## Package Dimensions

As of July, 2002  
Unit: mm



OPJ Code	LD/MG
JEDEC	—
JEITA	—
Mass (reference value)	0.3 g

## Cautions

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## Sales Offices



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