HL6314MG/24MG

AlGaInP Laser Diodes

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ODE-208-262E (Z)

Rev.5
Jan. 2003

Description

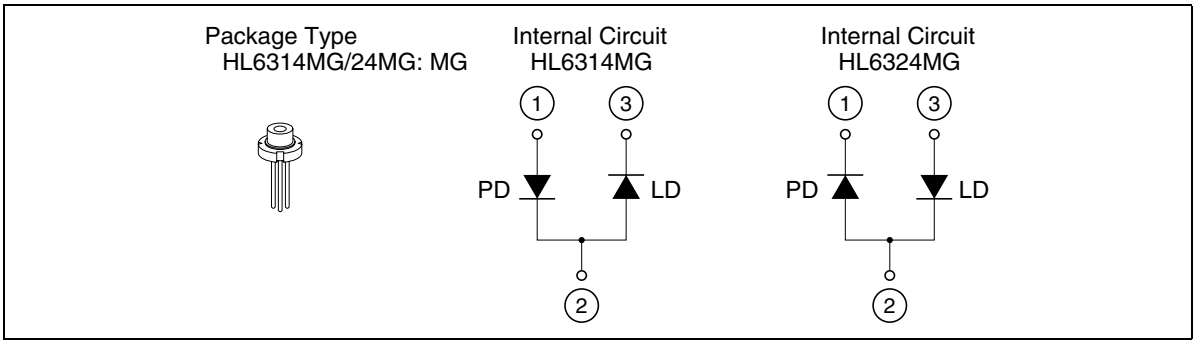
The HL6314MG/24MG are 0.63 μm band AlGaInP laser diodes with a multi-quantum well (MQW) structure. They are suitable as light sources for laser pointers and optical equipment for amusement.

Application

- Laser pointer

Features

- Visible light output: 635 nm Typ
- Single longitudinal mode
- Optical output power: 3 mW CW
- Low operating current: 30 mA Typ
- Low operating voltage: 2.7 V Max
- TM mode oscillation



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Rated Value	Unit
Optical output power	P_O	3	mW
Pulse optical output power	$P_{O(pulse)}$	5 *	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	Topr	–10 to +50	°C
Storage temperature	Tstg	–40 to +85	°C

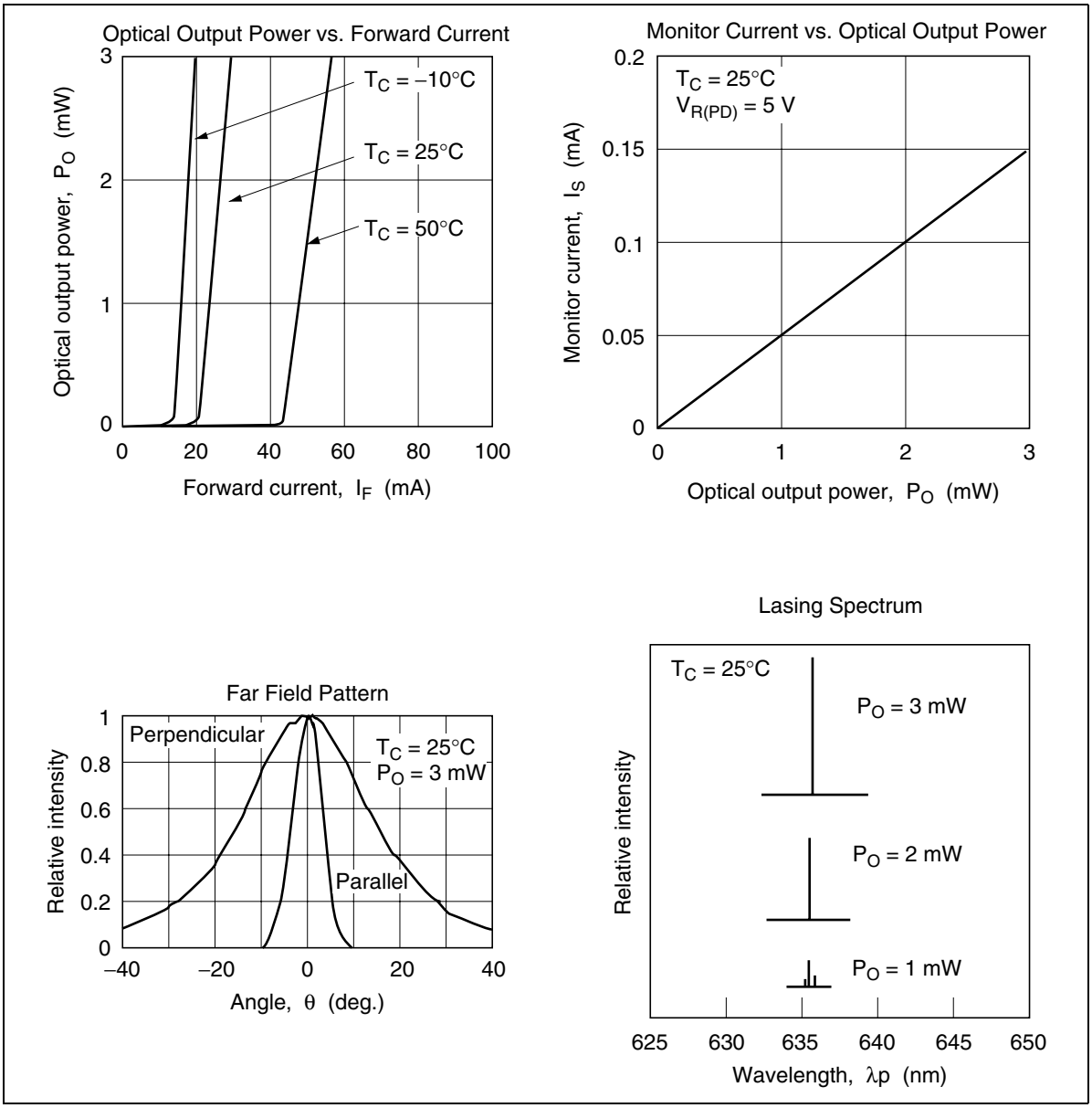
Note: Pulse condition : Pulse width ≤ 1 μs , duty ≤ 50%

Optical and Electrical Characteristics

(T_C = 25°C)

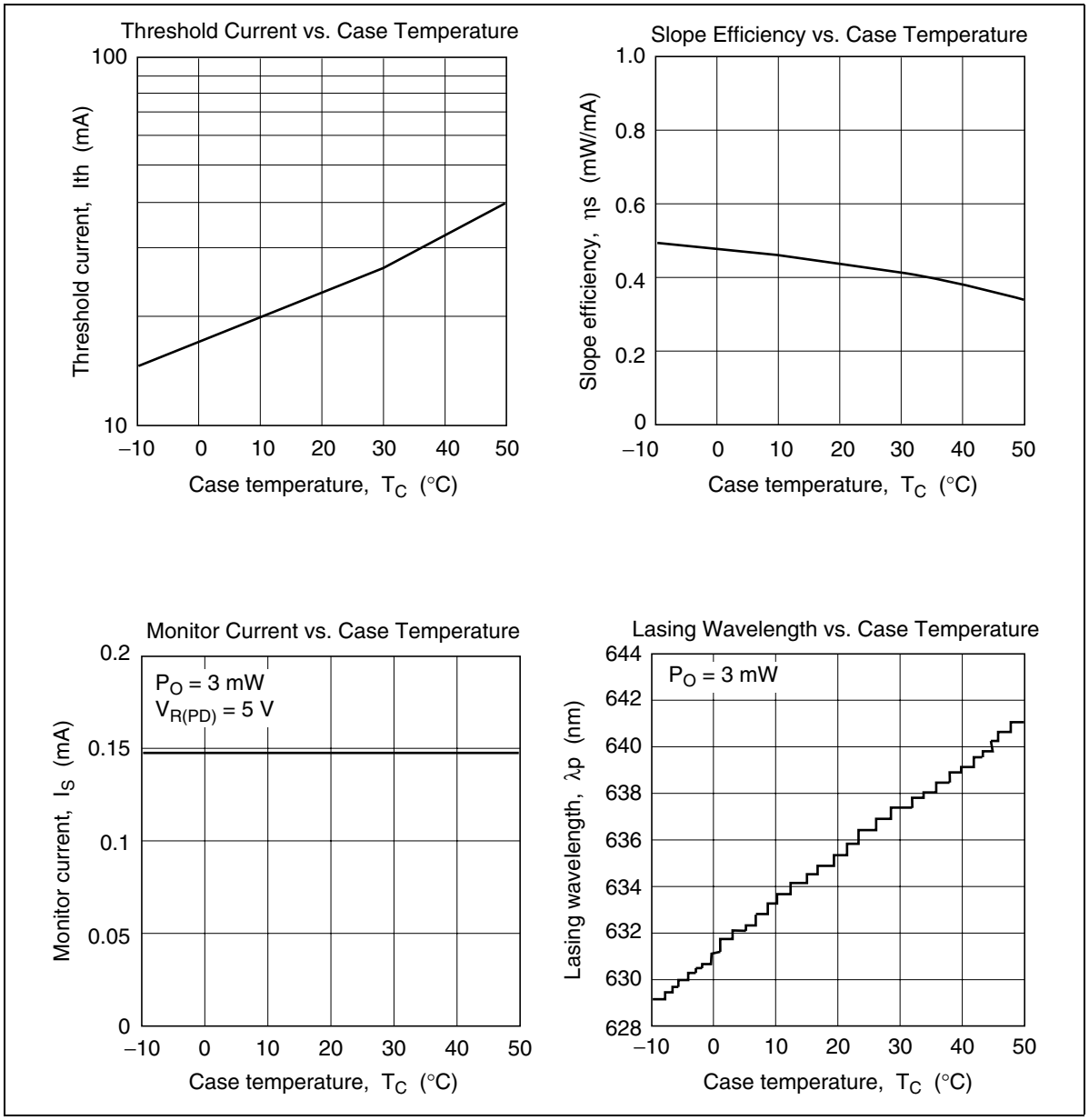
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_O	3	—	—	mW	—
Threshold current	Ith	—	25	35	mA	—
Operating current	I_{OP}	—	30	42	mA	P_O = 3 mW
Operating voltage	V_{OP}	—	—	2.7	V	P_O = 3 mW
Beam divergence parallel to the junction	θ//	6	8	10	deg.	P_O = 3 mW
Beam divergence parpendicular to the junction	θ⊥	23	30	39	deg.	P_O = 3 mW
Astigmatism	A_S	—	8	—	μm	P_O = 3 mW, NA = 0.55
Lasing wavelength	λp	630	635	640	nm	P_O = 3 mW
Monitor current	I_S	0.08	0.15	0.40	mA	P_O = 3 mW, $V_{R(PD)}$ = 5 V

Typical Characteristic Curves

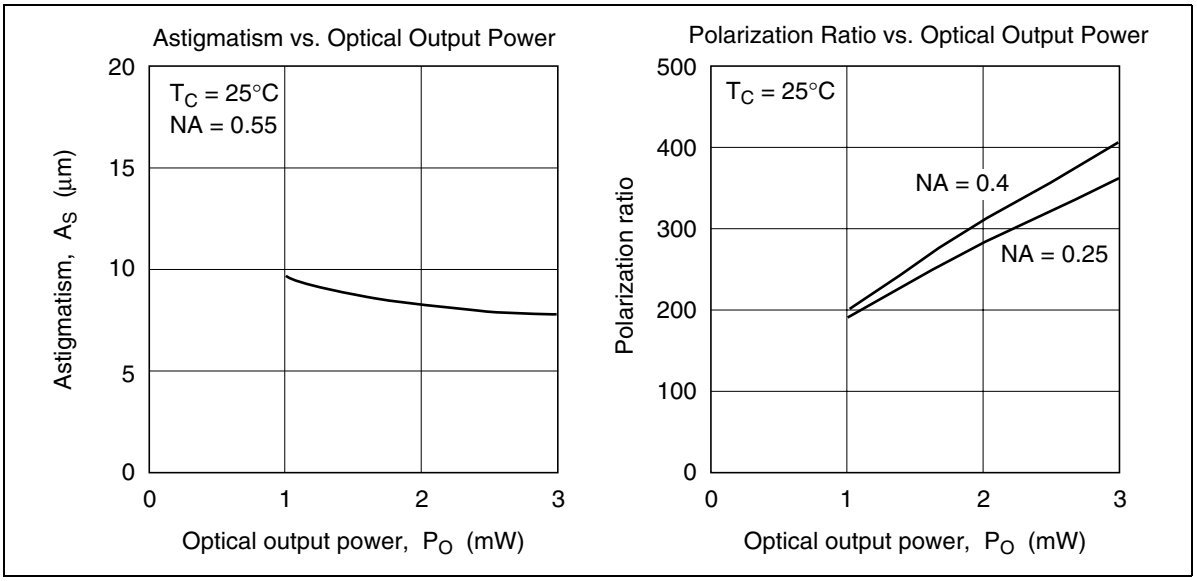


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Typical Characteristic Curves (cont)



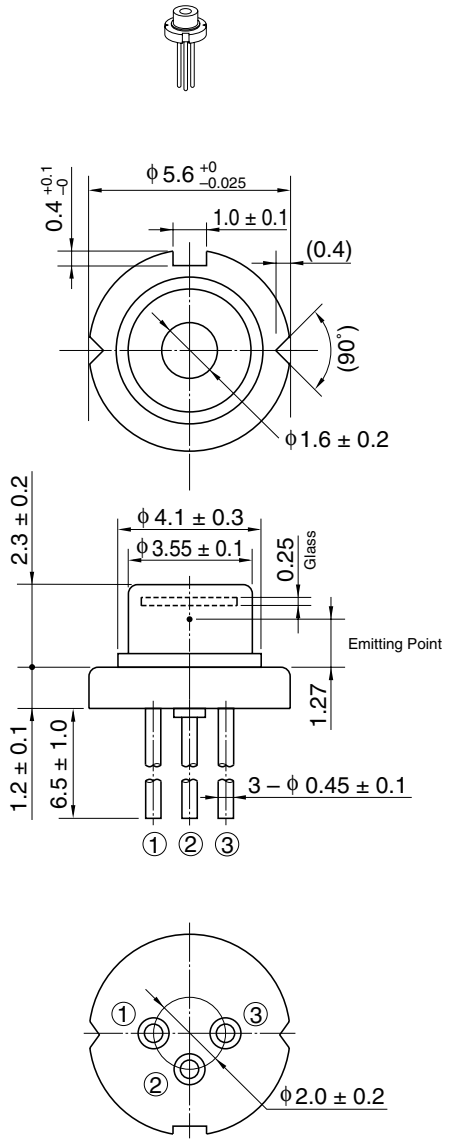
Typical Characteristic Curves (cont)



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Package Dimensions

As of July, 2002
Unit: mm



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

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