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# HL6316G

AlGaInP Laser Diodes



ODE-208-218E (Z)

Rev.5  
Jan. 2003

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## Description

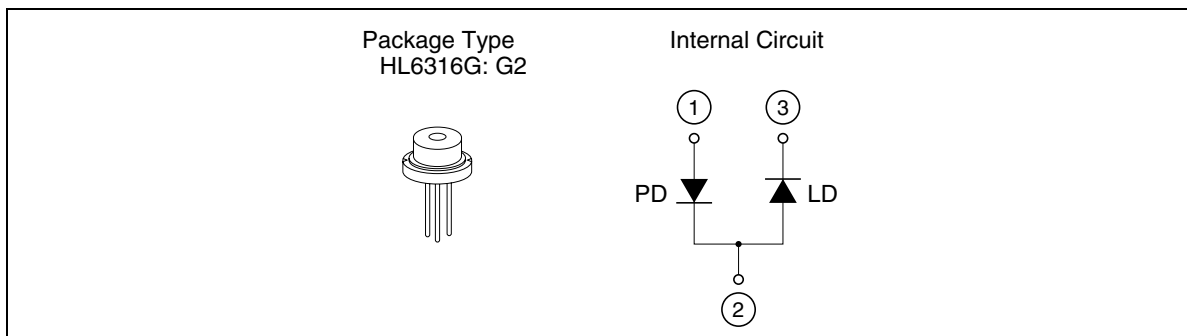
The HL6316G is 0.63  $\mu\text{m}$  band AlGaInP laser diodes with a multi-quantum well (MQW) structure. It is suitable as light sources for laser pointers and optical equipment.

## Application

- Laser pointer

## Features

- Visible light output: 635 nm Typ (nearly equal to He-Ne gas laser)
- 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



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## HL6316G

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### Absolute Maximum Ratings

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

Item	Symbol	Rated Value	Unit
Optical output power	$P_o$	3	mW
Pulse optical output power	$P_{O(\text{pulse})}$	5 *	mW
LD reverse voltage	$V_{R(\text{LD})}$	2	V
PD reverse voltage	$V_{R(\text{PD})}$	30	V
Operating temperature	$T_{\text{opr}}$	-10 to +50	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-40 to +85	$^\circ\text{C}$

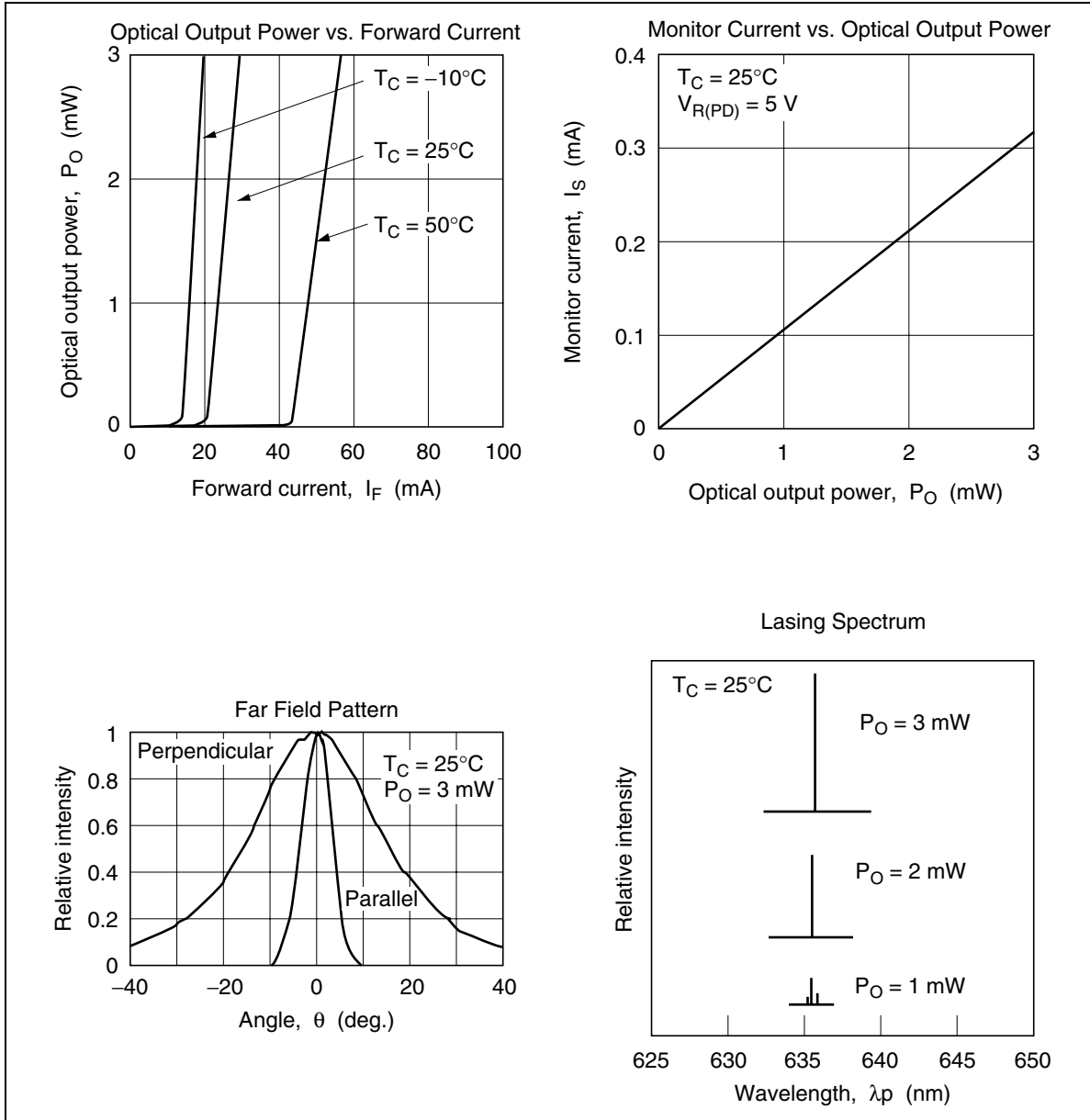
Note: Pulse condition : Pulse width  $\leq 1 \mu\text{s}$  , duty  $\leq 50\%$

### Optical and Electrical Characteristics

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

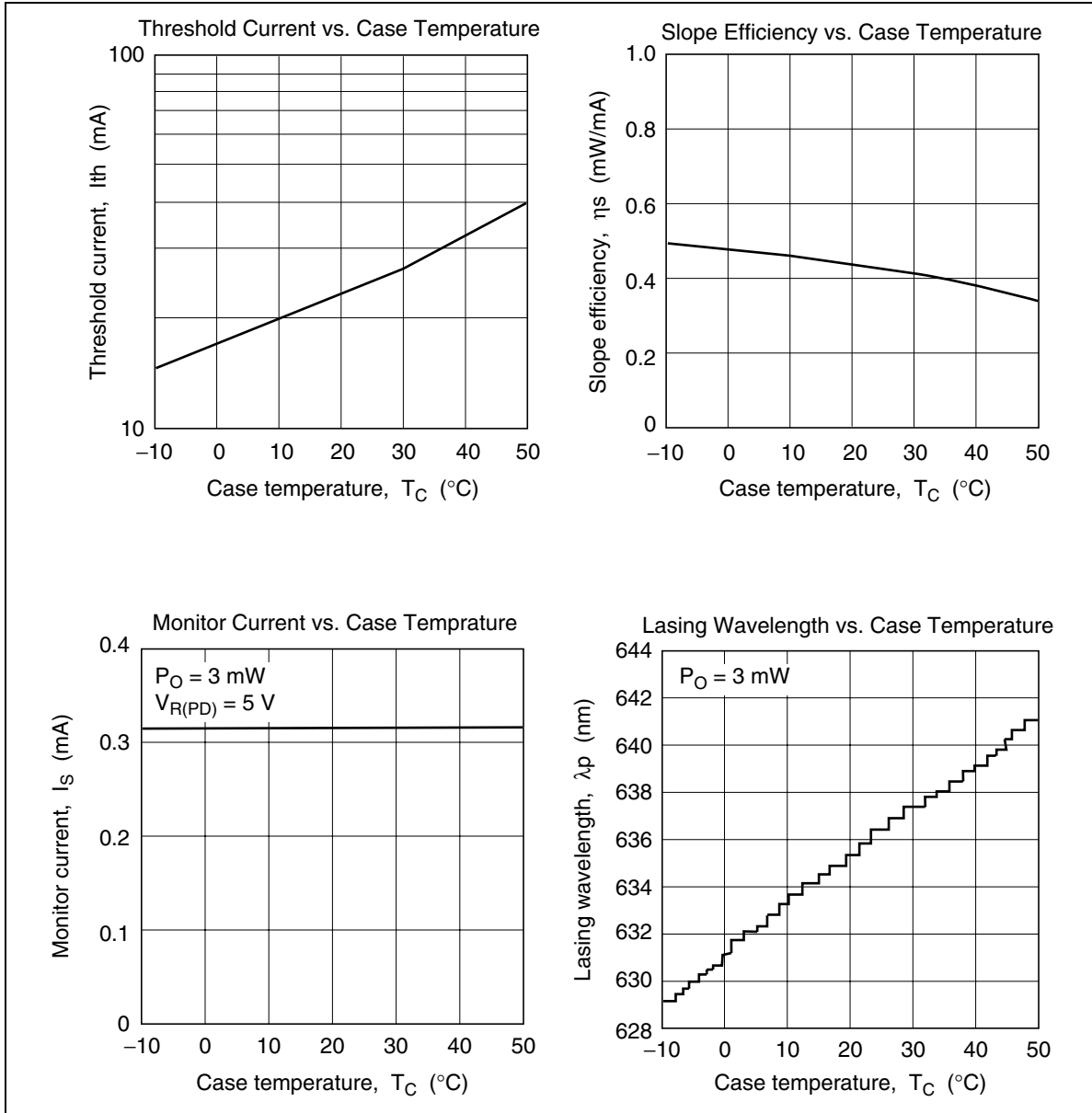
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	$P_o$	3	—	—	mW	—
Threshold current	$I_{\text{th}}$	—	25	35	mA	—
Operating current	$I_{\text{OP}}$	—	30	42	mA	$P_o = 3 \text{ mW}$
Operating voltage	$V_{\text{OP}}$	—	—	2.7	V	$P_o = 3 \text{ mW}$
Beam divergence parallel to the junction	$\theta_{//}$	6	8	10	deg.	$P_o = 3 \text{ mW}$
Beam divergence parpendicular to the junction	$\theta_{\perp}$	23	30	39	deg.	$P_o = 3 \text{ mW}$
Lasing wavelength	$\lambda_p$	630	635	640	nm	$P_o = 3 \text{ mW}$
Monitor current	$I_s$	0.1	0.3	0.6	mA	$P_o = 3 \text{ mW}$ , $V_{R(\text{PD})} = 5 \text{ V}$

Typical Characteristic Curves

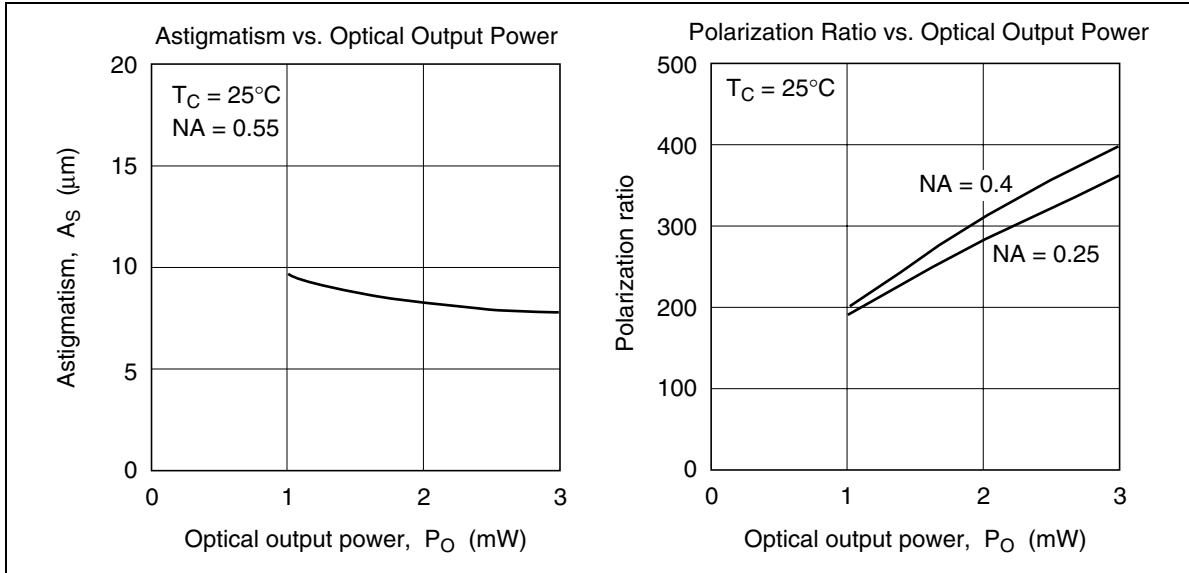


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## Typical Characteristic Curves (cont)



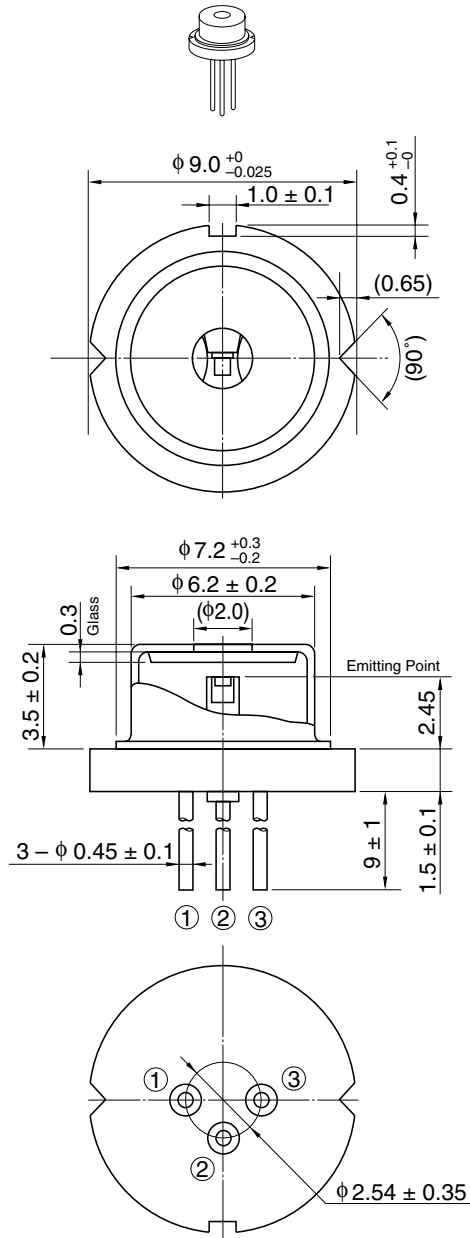
Typical Characteristic Curves (cont)



# HL6316G

## Package Dimensions

As of July, 2002  
Unit: mm



OPJ Code	LD/G2
JEDEC	—
JEITA	—
Mass (reference value)	1.1 g

## Cautions

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## Sales Offices



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