
HL6321G/22G

AlGaInP Laser Diodes



ODE-208-598D (Z)

Rev.4
Jan. 2003

Description

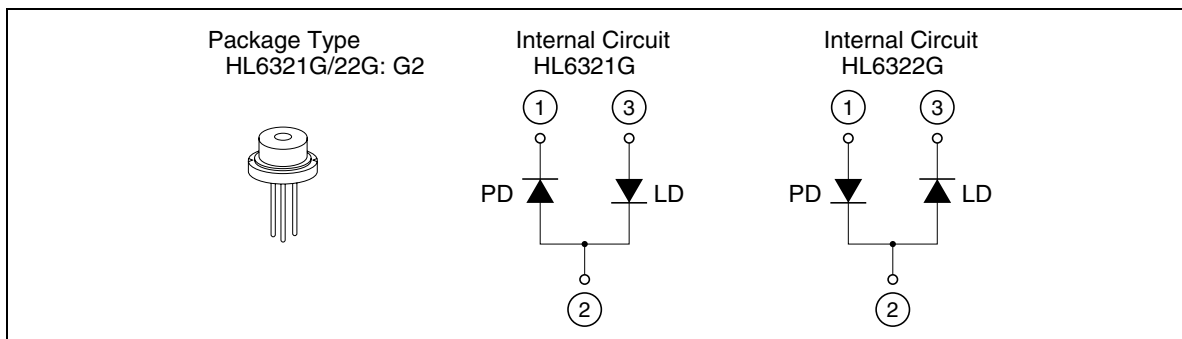
The HL6321G/22G are 0.63 μm band AlGaInP laser diodes with a multi-quantum well (MQW) structure. They are suitable as light sources for laser levelers and optical equipment for measurement.

Application

- Laser levelers
- Measurement

Features

- Visible light output: 635 nm Typ (nearly equal to He-Ne gas laser)
- Single longitudinal mode
- Optical output power: 15 mW CW
- Low operating current: 100 mA Max
- Low operating voltage: 2.7 V Max
- TM mode oscillation



HL6321G/22G

Absolute Maximum Ratings

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

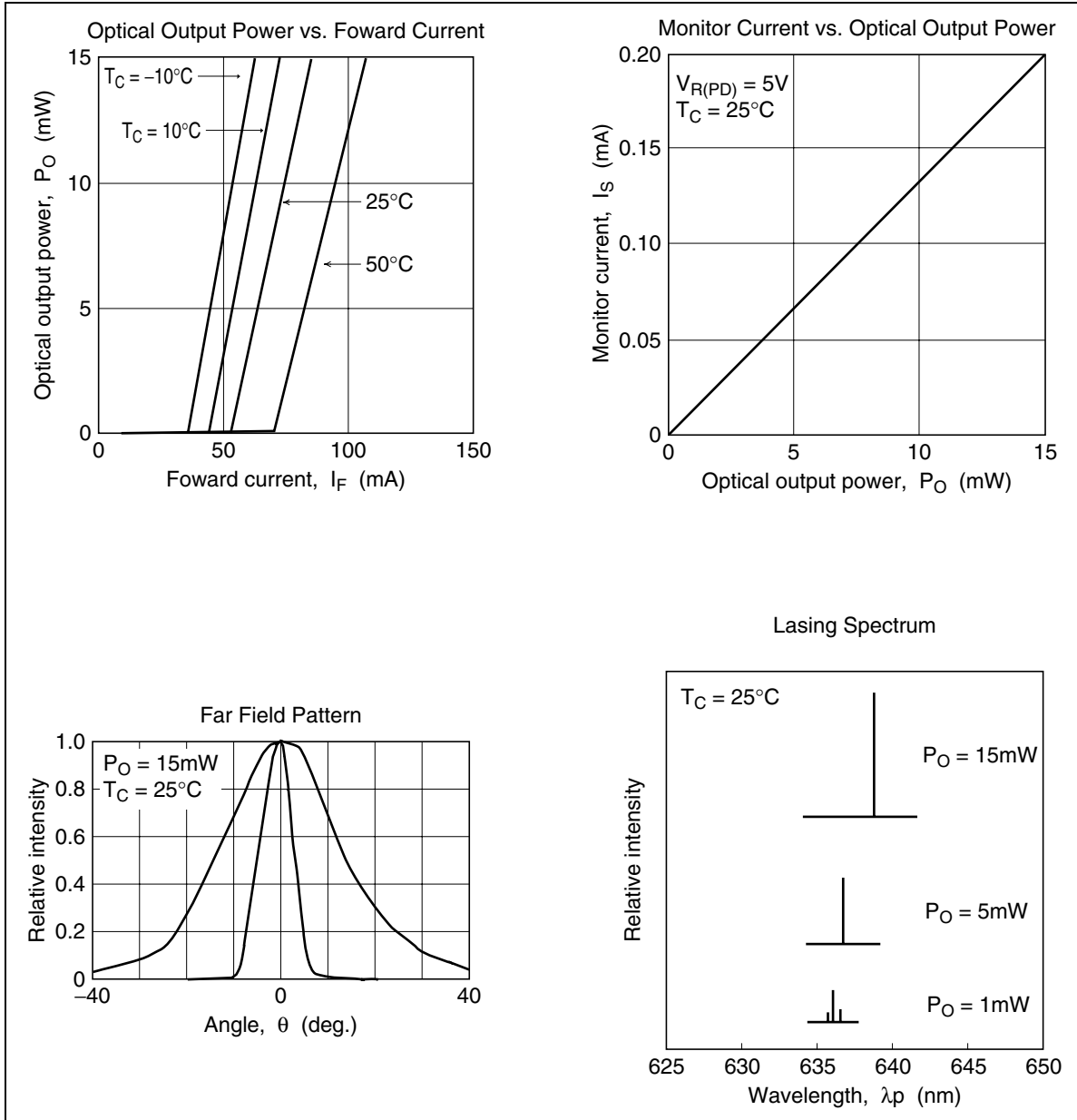
Item	Symbol	Rated Value	Unit
Optical output power	P_o	15	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Optical and Electrical Characteristics

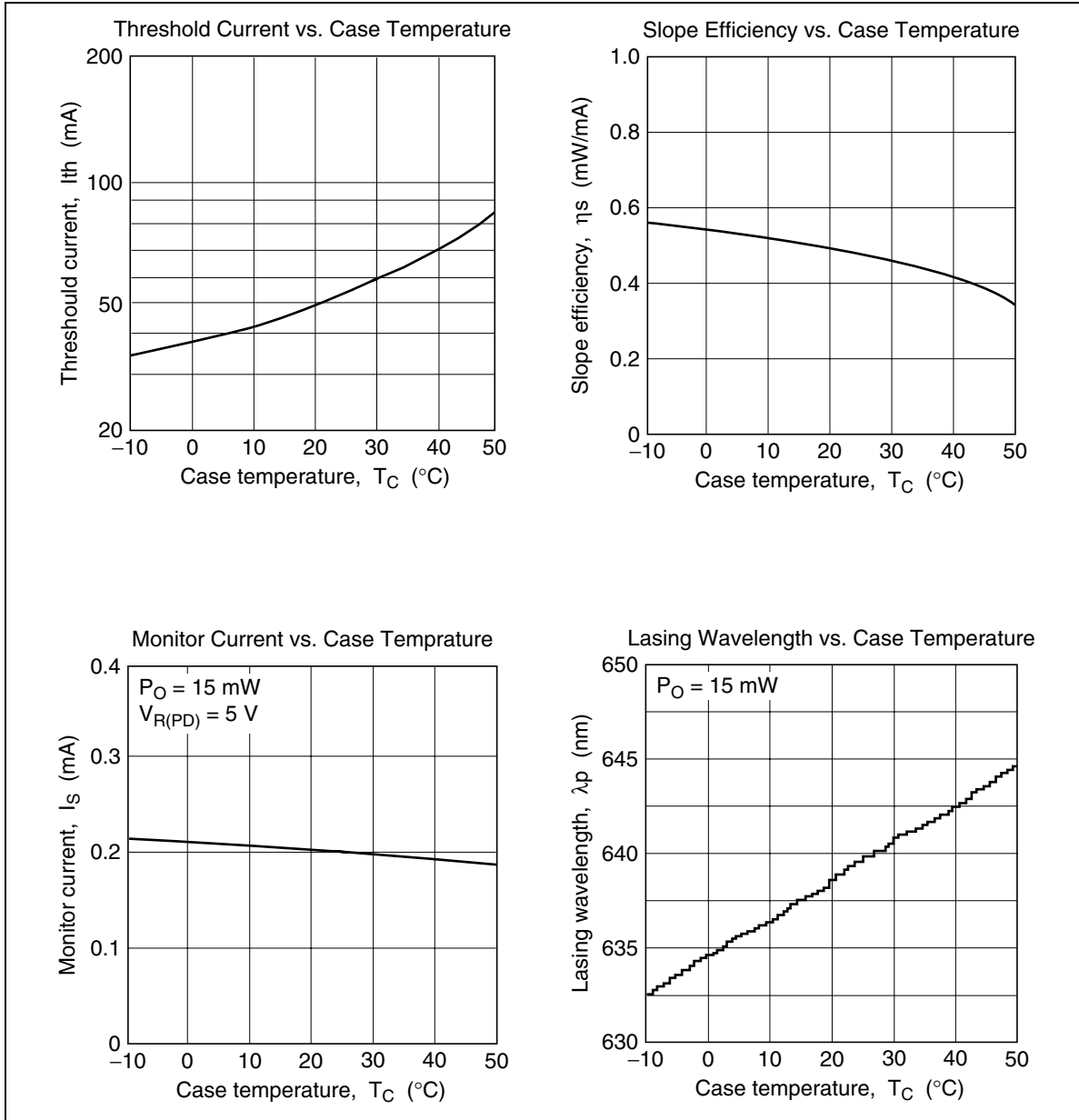
($T_c = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_o	15	—	—	mW	—
Threshold current	I_{th}	20	55	70	mA	—
Operating current	I_{OP}	—	85	100	mA	$P_o = 15 \text{ mW}$
Operating voltage	V_{OP}	—	—	2.7	V	$P_o = 15 \text{ mW}$
Slope efficiency	η_s	0.3	—	0.7	mW/mA	$9 \text{ (mW)} / (I_{(12\text{mW})} - I_{(3\text{mW})})$
Beam divergence parallel to the junction	$\theta_{//}$	6	8	11	deg.	$P_o = 15 \text{ mW}$
Beam divergence perpendicular to the junction	θ_{\perp}	25	30	36	deg.	$P_o = 15 \text{ mW}$
Lasing wavelength	λ_p	630	635	640	nm	$P_o = 15 \text{ mW}$
Monitor current	I_s	0.1	0.2	0.4	mA	$P_o = 15 \text{ mW}, V_{R(PD)} = 5 \text{ V}$

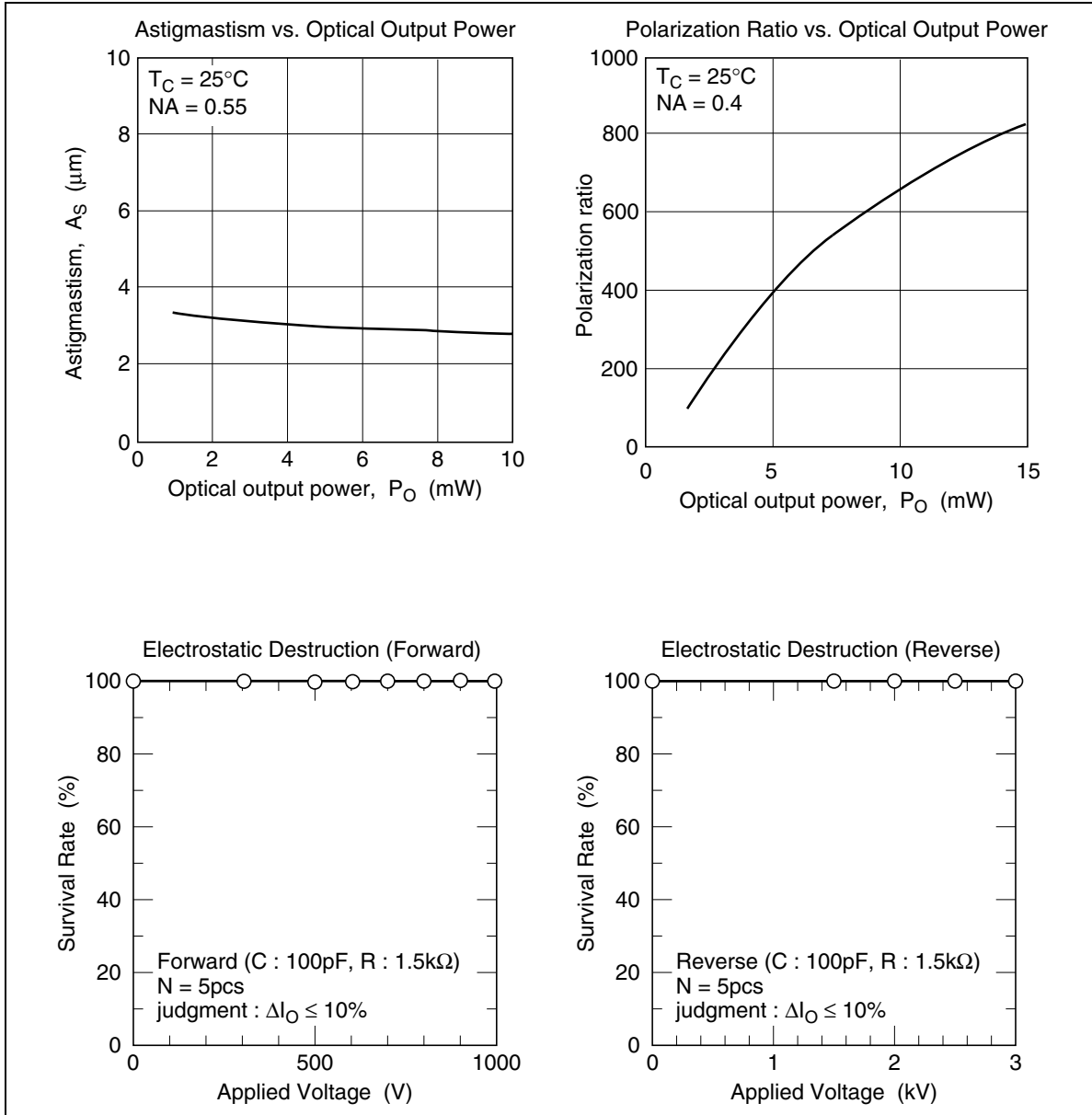
Typical Characteristic Curves



Typical Characteristic Curves (cont)



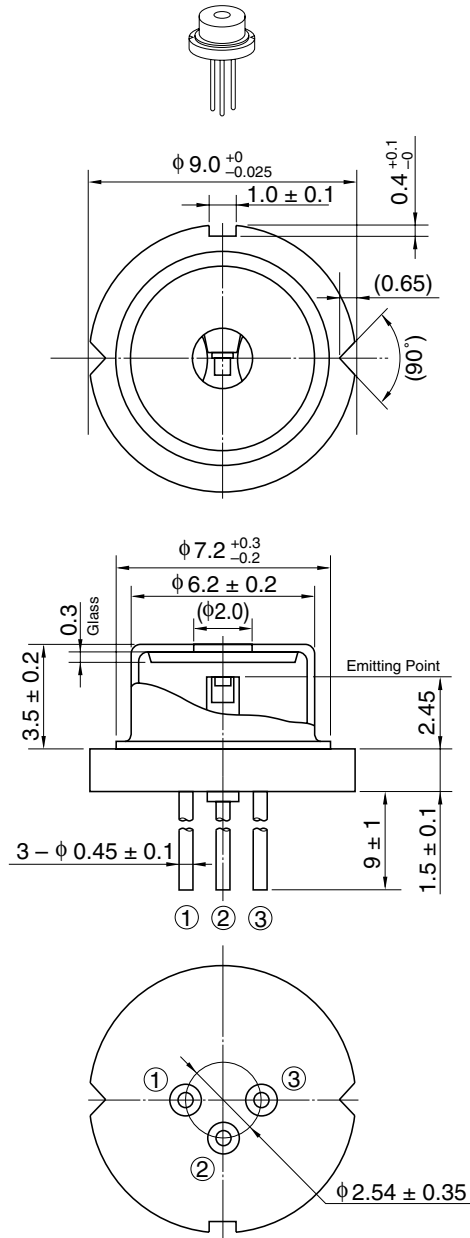
Typical Characteristic Curves (cont)



HL6321G/22G

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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