HL6321G/22G

AlGaInP Laser Diodes

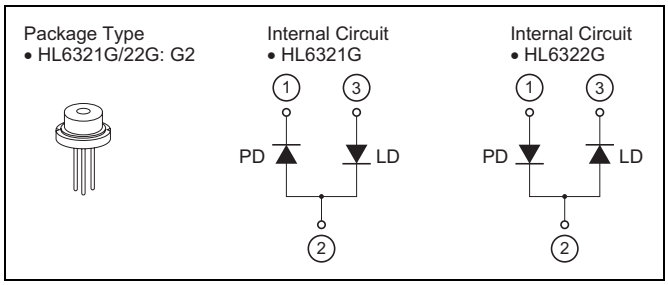
ODE-208-028A (Z)
Rev.1
Oct. 24, 2006

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.

Features

- Visible light output: 635 nm Typ
- 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



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	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	Topr	–10 to +50	°C
Storage temperature	Tstg	–40 to +85	°C

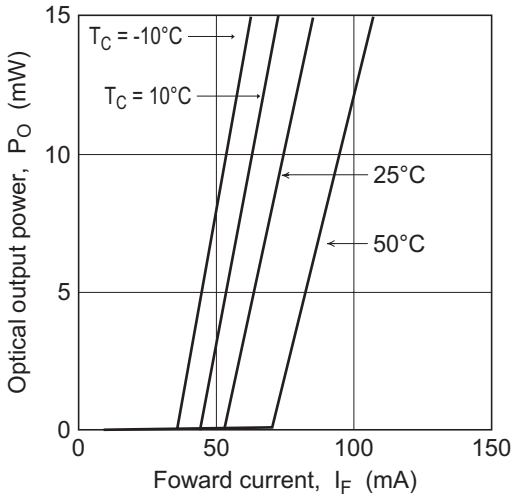
Optical and Electrical Characteristics

(T_C = 25°C)

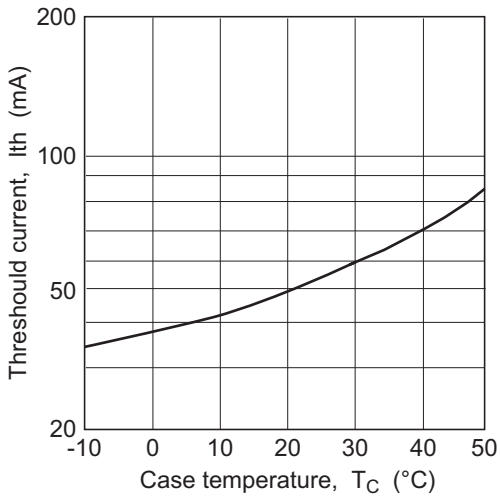
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	Ith	20	55	70	mA	—
Operating current	I_{OP}	—	85	100	mA	P_O = 15 mW
Operating voltage	V_{OP}	—	—	2.7	V	P_O = 15 mW
Slope efficiency	ηs	0.3	—	0.7	mW/mA	9 (mW) / ($I_{(12mW)}$ – $I_{(3mW)}$)
Beam divergence parallel to the junction	θ//	6	8	11	°	P_O = 15 mW
Beam divergence perpendicular to the junction	θ⊥	25	30	36	°	P_O = 15 mW
Lasing wavelength	λp	630	635	640	nm	P_O = 15 mW
Monitor current	I_S	0.1	0.2	0.4	mA	P_O = 15 mW, $V_{R(PD)}$ = 5 V

Typical Characteristic Curves

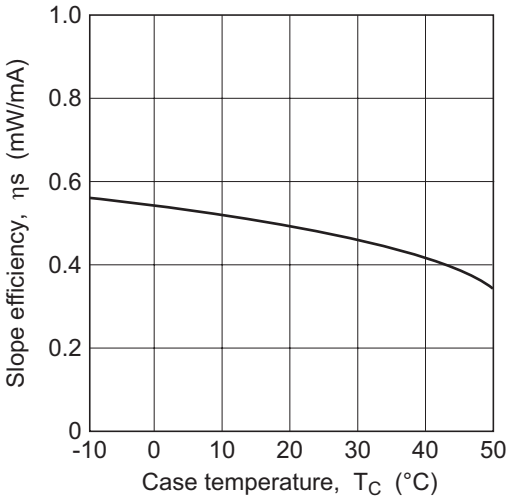
Optical Output Power vs. Foward Current



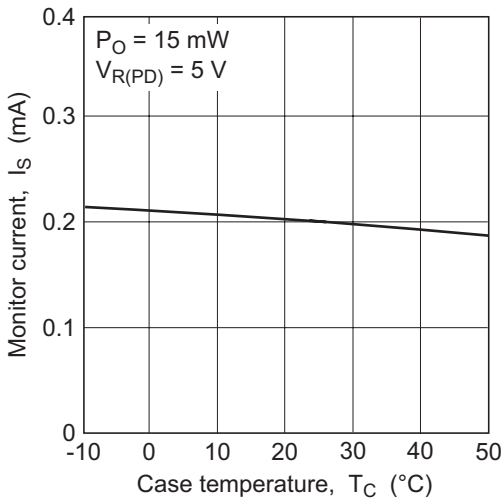
Threshold Current vs. Case Temperature



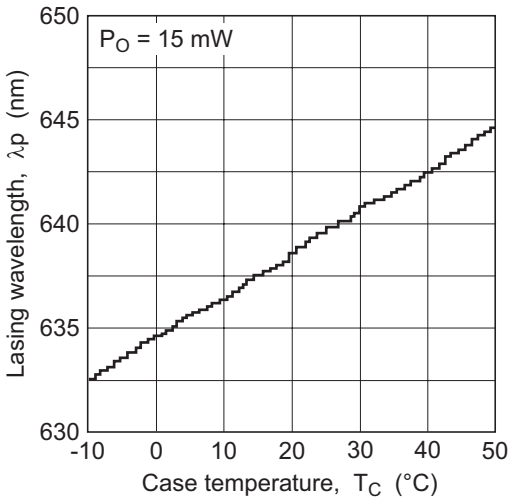
Slope Efficiency vs. Case Temperature



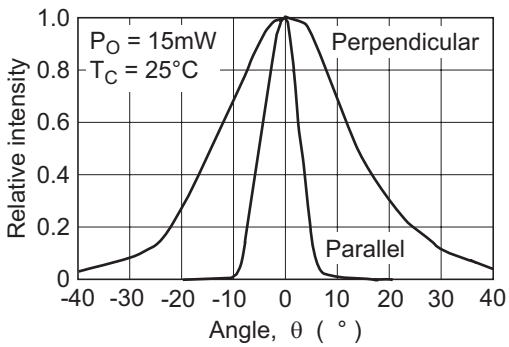
Monitor Current vs. Case Temprature



Lasing Wavelength vs. Case Temperature



Far Field Pattern



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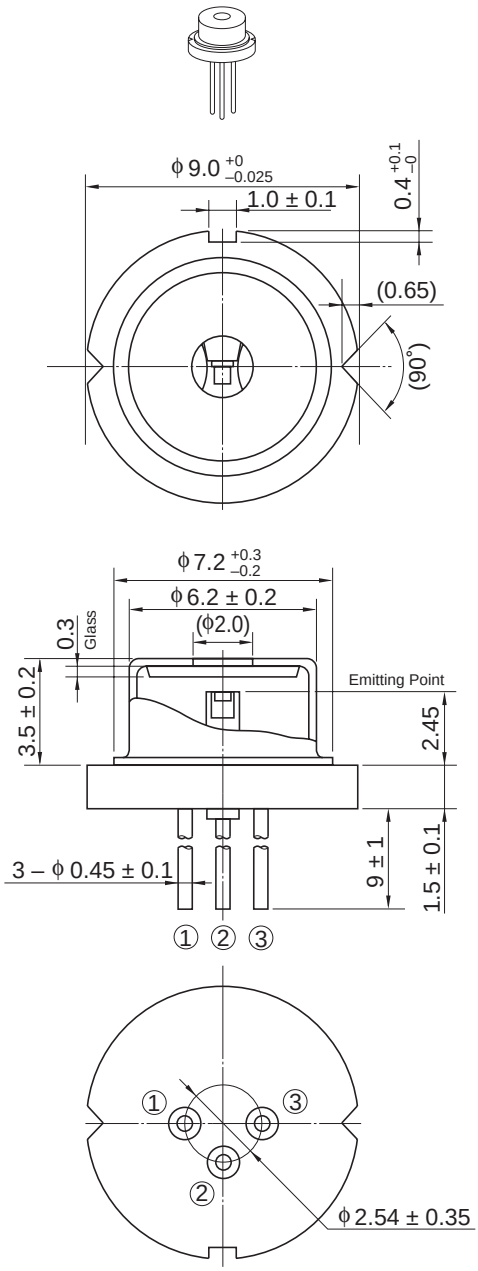
Package Dimensions

As of July, 2002

Unit: mm



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

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Sales Offices

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