

HL6321G/22G

AlGaInP Laser Diodes

ODE2012-00 (M)

Rev.0

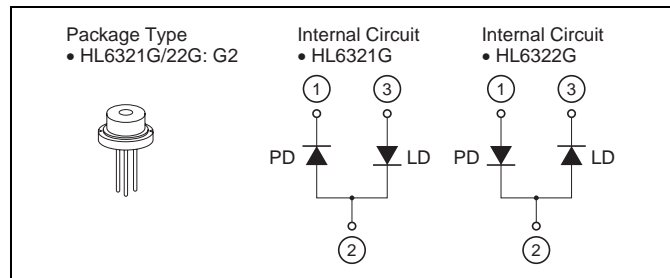
Aug. 01, 2008

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

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

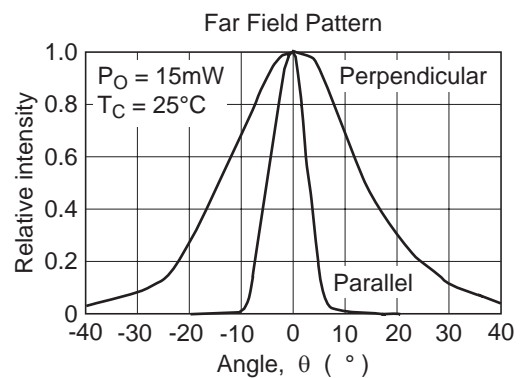
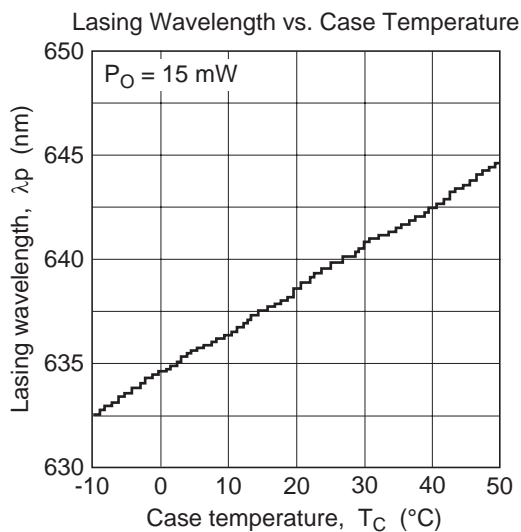
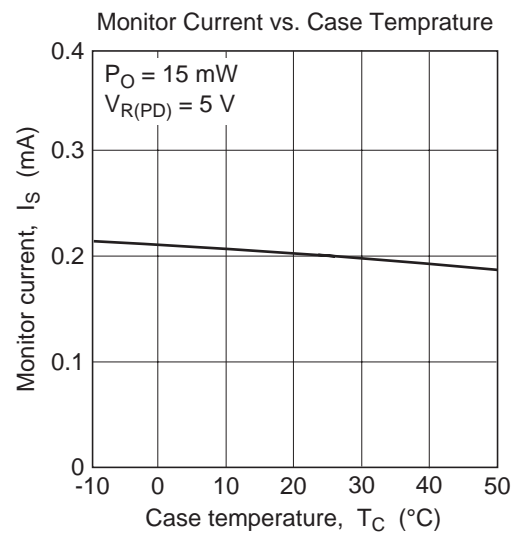
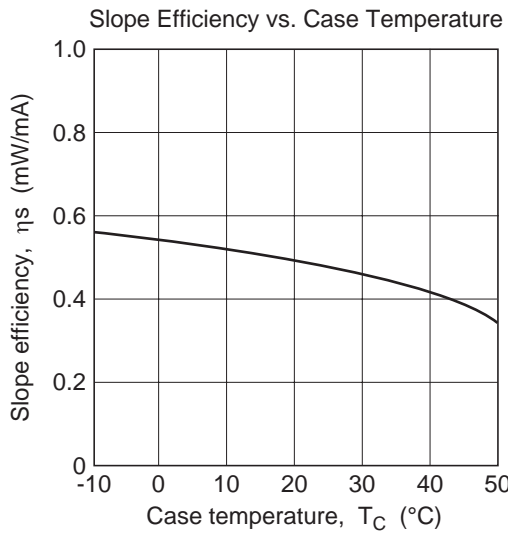
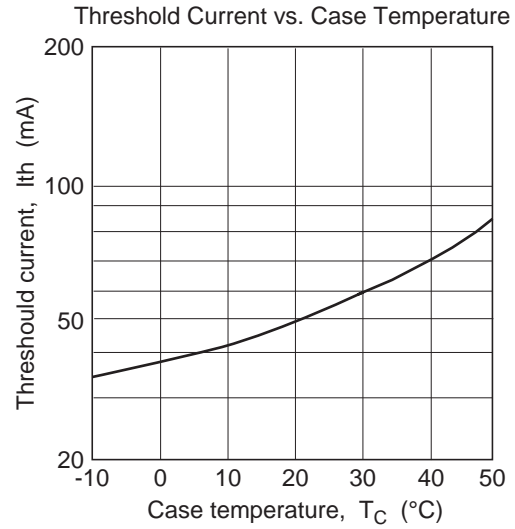
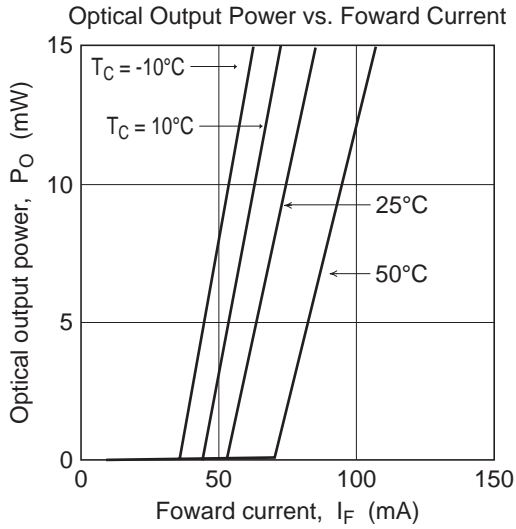
| Item | Symbol | Ratings | Unit |
|-----------------------|-------------|------------|------------------|
| Optical output power | P_O | 15 | mW |
| LD reverse voltage | $V_{R(LD)}$ | 2 | V |
| PD reverse voltage | $V_{R(PD)}$ | 30 | V |
| Operating temperature | T_{opr} | -10 to +50 | $^\circ\text{C}$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

Optical and Electrical Characteristics

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

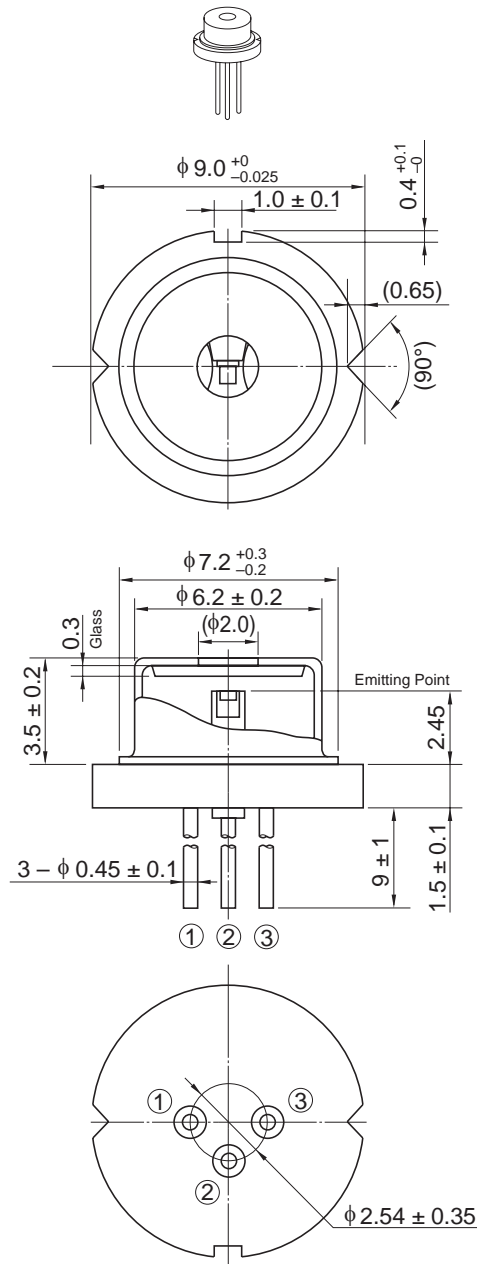
| Item | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|------------------|-----|-----|-----|----------|---|
| Threshold current | I_{th} | 20 | 55 | 70 | mA | — |
| Operating current | I_{OP} | — | 85 | 100 | mA | $P_O = 15 \text{ mW}$ |
| Operating voltage | V_{OP} | — | — | 2.7 | V | $P_O = 15 \text{ mW}$ |
| 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 | $^\circ$ | $P_O = 15 \text{ mW}$ |
| Beam divergence perpendicular to the junction | θ_{\perp} | 25 | 30 | 36 | $^\circ$ | $P_O = 15 \text{ mW}$ |
| 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



Package Dimensions

As of July, 2002
Unit: mm



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

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When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
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