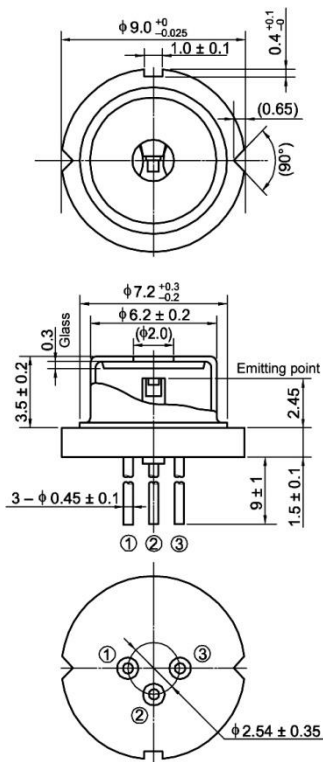


HL6312G

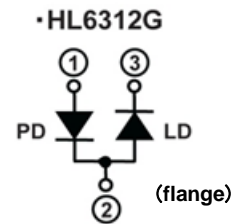
638nm / 5mW AlGaInP Laser Diode

Outline



(unit: mm)

Internal Circuit



Features

- Visible light output: 638nm Typ.
- Optical output power: 5mW (CW)
- Low operating voltage: 2.7V Max.
- Built-in photodiode for monitoring laser output
- TM mode oscillation
- Single transverse mode

Application

- Laser leveler
- Bar code reader
- Distance meter
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

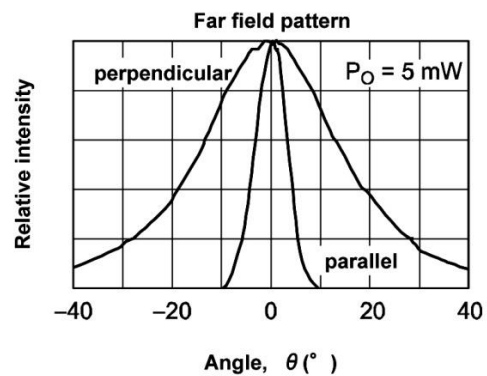
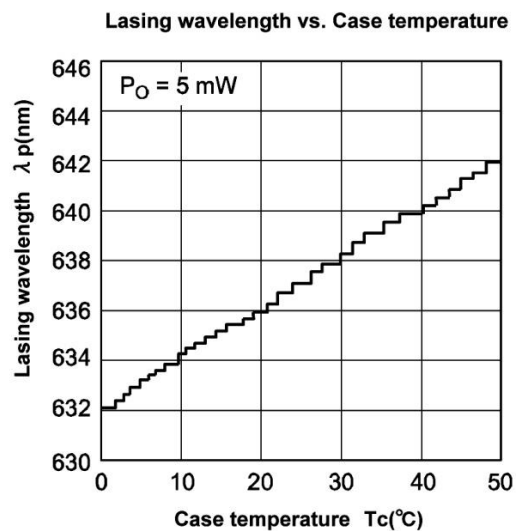
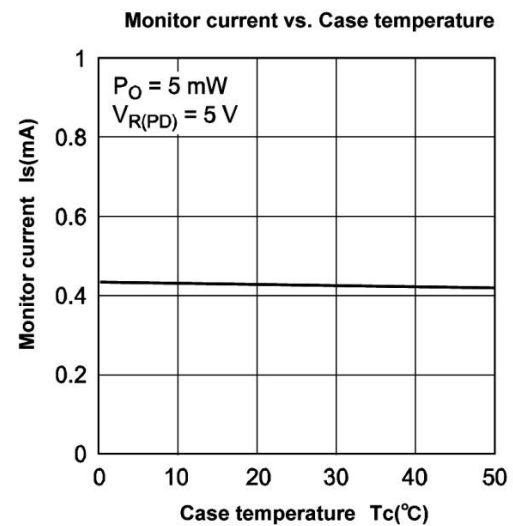
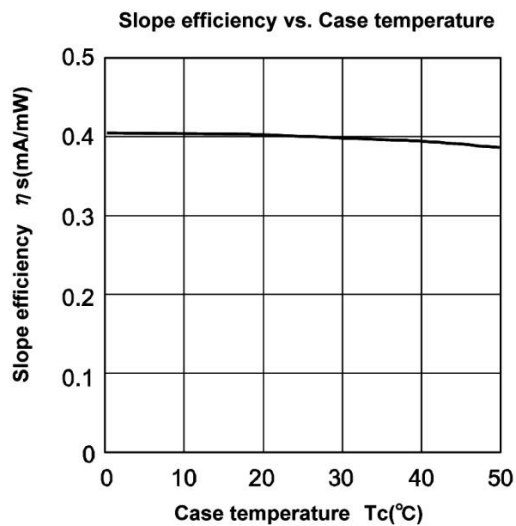
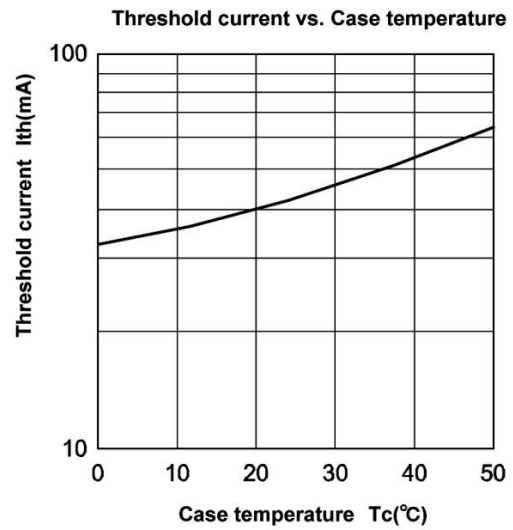
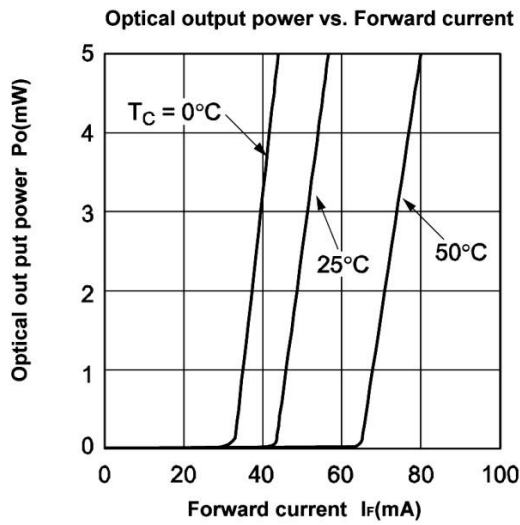
Item	Symbol	Ratings	Unit
Optical output power	Po	5	mW
Pulse optical output power	Po (pulse)	6*	mW
LD Reverse Voltage	V _{R(LD)}	2	V
PD Reverse Voltage	V _{R(PD)}	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

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

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I _{th}	20	45	70	mA	-
Operating current	I _{op}	-	55	85	mA	Po=5mW
Operating voltage	V _{op}	-	-	2.7	V	Po=5mW
Beam divergence Parallel to the junction	θ _{//}	5	8	11	°	Po=5mW FWHM
Beam divergence Perpendicular to the junction	θ _⊥	25	31	37	°	Po=5mW FWHM
Astigmatism	As	-	8	-	μm	Po=5mW, NA=0.55
Lasing Wavelength	λ _p	625	638	640	nm	Po=5mW
Monitor current	I _s	0.2	0.4	0.8	mA	Po=5mW, V _{R(PD)} =5V

Typical Characteristic Curves



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2. This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. 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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