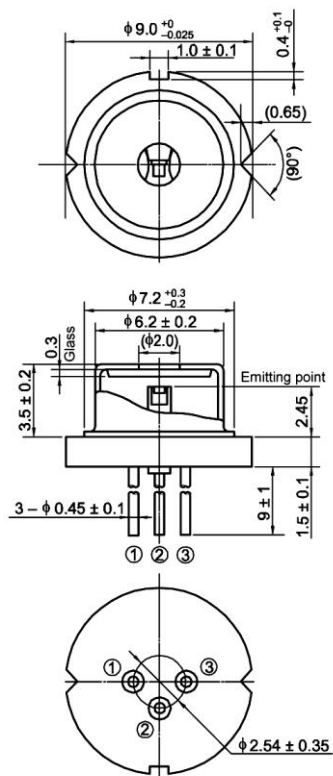


## HL6319G/20G

638nm / 10mW AlGaInP Laser Diode

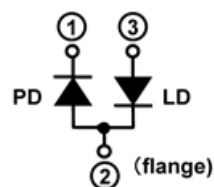
### Outline



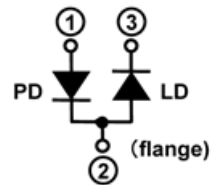
(unit: mm)

### Internal Circuit

#### HL6319G



#### HL6320G



### Features

- Optical output power: 10mW(CW)
- Visible light output: 638nm Typ.
- Low operating current: 95mA Max.
- Low operating voltage: 2.7V Max.
- Single transverse mode
- TM mode oscillation

### Application

- Laser lever
- Laser module
- Optical equipment for measurement

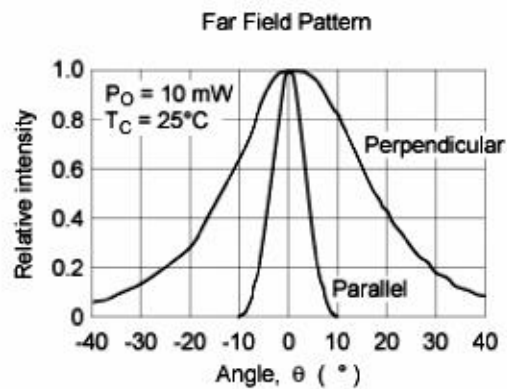
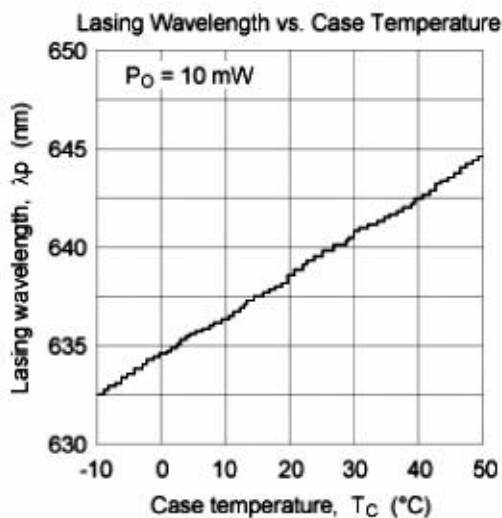
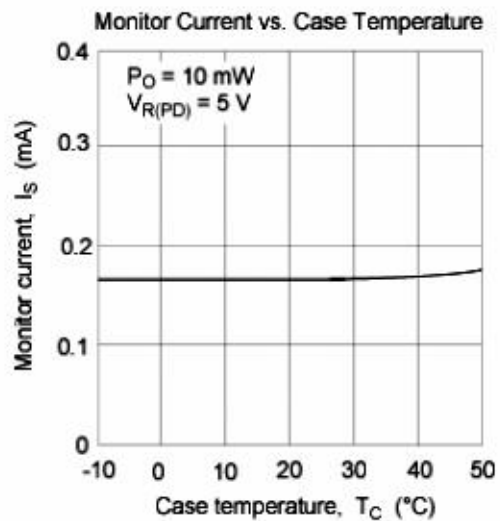
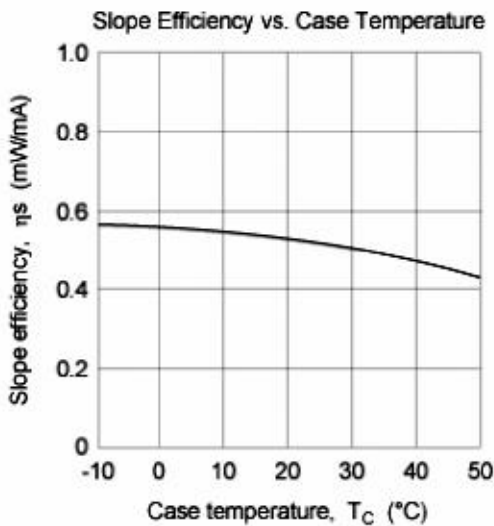
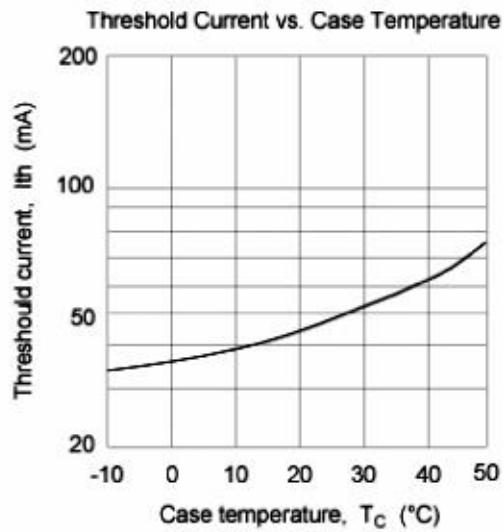
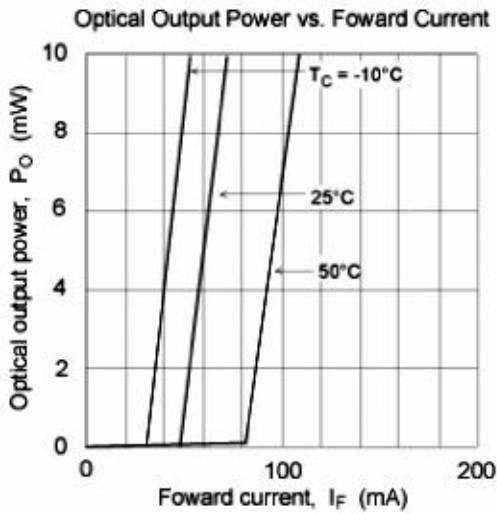
**Absolute Maximum Ratings (Tc=25°C)**

Item	Symbol	Ratings	Unit
Optical output power	Po	10	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

**Optical and Electrical Characteristics (Tc=25°C)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	20	50	75	mA	-
Operating current	I <sub>op</sub>	-	70	95	mA	Po=10mW
Operating voltage	V <sub>op</sub>	-	-	2.7	V	Po=10mW
Slope efficiency	η <sub>s</sub>	0.3	0.5	0.7	mW/mA	6(mW)/(I <sub>(8mW)</sub> - I <sub>(2mW)</sub> )
Monitor current	I <sub>s</sub>	0.05	0.17	0.30	mA	Po=10mW, V <sub>R(PD)</sub> =5V
Lasing Wavelength	λ <sub>p</sub>	625	638	640	nm	Po=10mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	5	8	11	°	Po=10mW FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	25	31	37	°	Po=10mW FWHM
Astigmatism	As	-	5	-	μm	Po=10mW, NA=0.55

Typical Characteristic Curves



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