

# Data Sheet

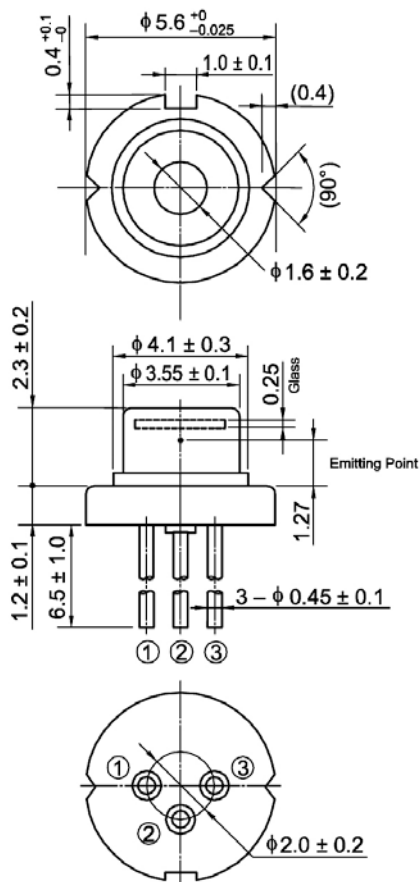
## HL6501MG

658nm / 35mW

AlGaInP Laser Diode

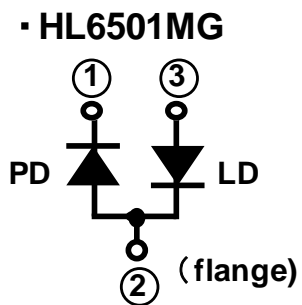
USHIO

### Outline



(Unit: mm)

### Internal Circuit



### Features

- Visible light output: 658nm Typ.
- Optical output power: 30mW (CW)
- Operating temperature: +60°C
- Built-in monitor diode
- Single transverse mode
- TE mode oscillation

### Application

- Laser leveler
- Laser scanner
- Light source of optical equipments

## Absolute Maximum Ratings (Tc=25°C)

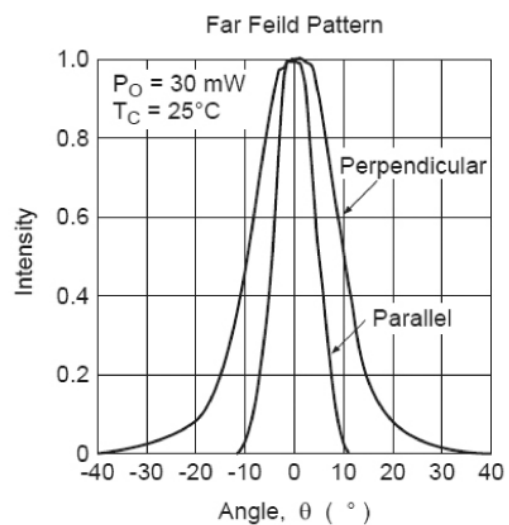
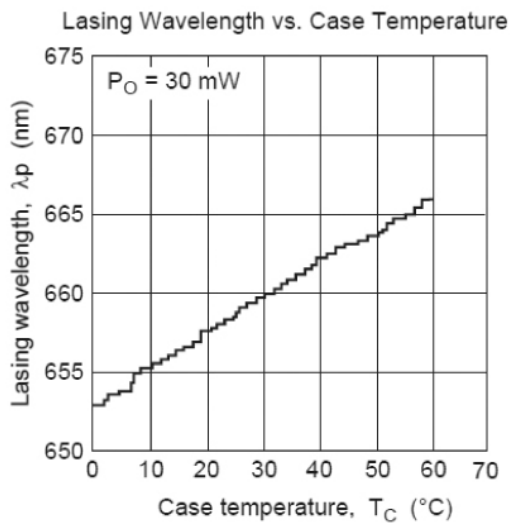
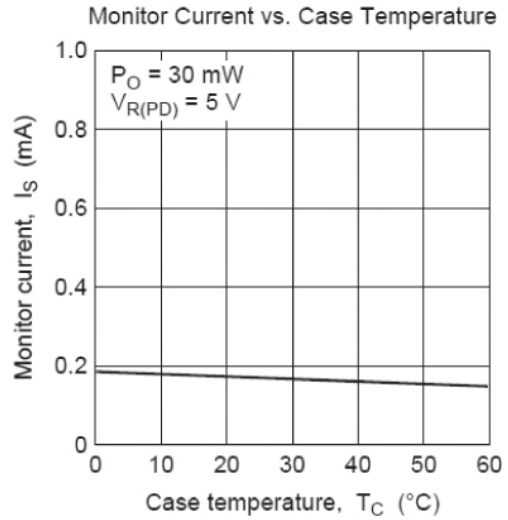
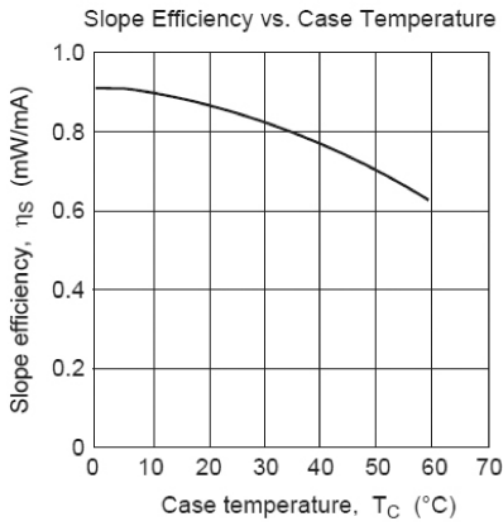
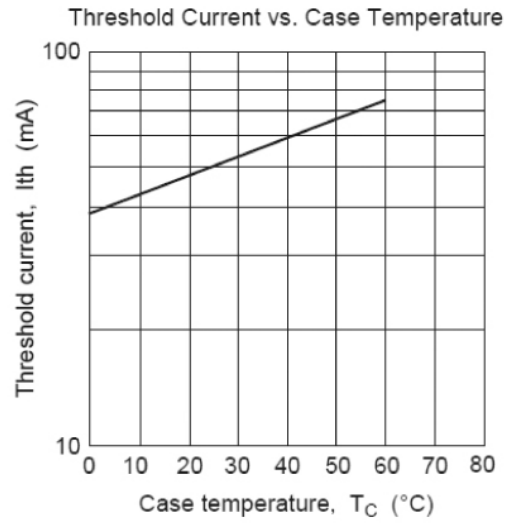
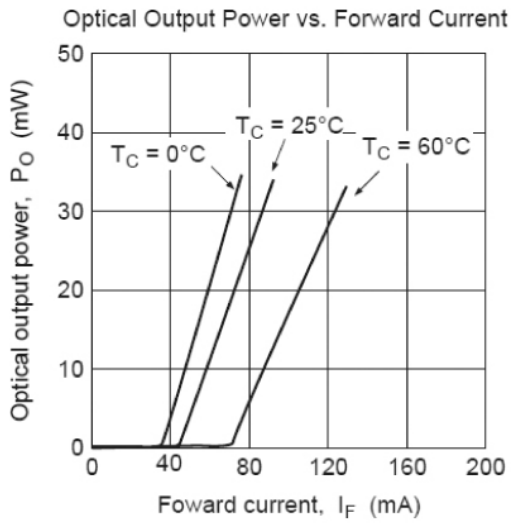
Item	Symbol	Ratings	Unit
Optical output power	Po	35	mW
Pulse optical output power	Po <sub>(pulse)</sub>	50	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Note: Pulse condition: Pulse width = 30nsec, duty = 35%

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	30	45	70	mA	-
Operating current	I <sub>op</sub>	70	85	120	mA	Po=30mW
Operating voltage	V <sub>op</sub>	2.1	2.6	3.0	V	Po=30mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	7	8.5	10.5	°	Po=30mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	18	22	26	°	Po=30mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	645	658	665	nm	Po=30mW
Monitor Current	I <sub>s</sub>	0.05	0.3	1.5	mA	Po=30mW, V <sub>R(PD)</sub> =5V

## Typical Characteristic Curves



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