

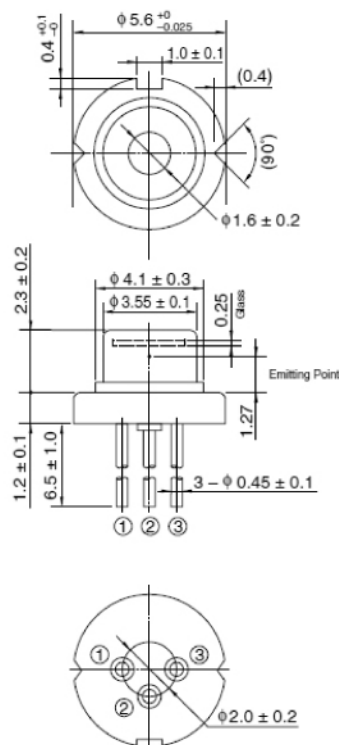
## Data Sheet

# HL6750MG

685nm / 55mW    AlGaInP Laser Diode

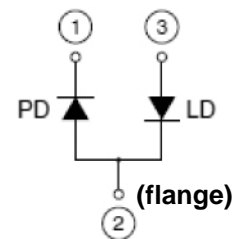
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### Outline



(Unit:mm)

### Internal Circuit



### Features

- Operation temperature:  $-10 \sim +70^\circ\text{C}$
- Optical output power: 50mW(CW)
- Visible lasing: 685nm Typ.( $P_o=50\text{mW}$ )
- Low operating voltage: 3.0V Max.
- Package:  $\phi 5.6\text{mm}$
- Single transverse mode
- TE mode oscillation

### Application

- Measurement
- Laser module
- Sensing

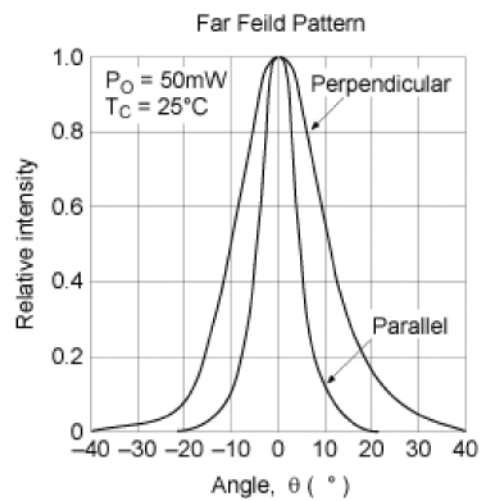
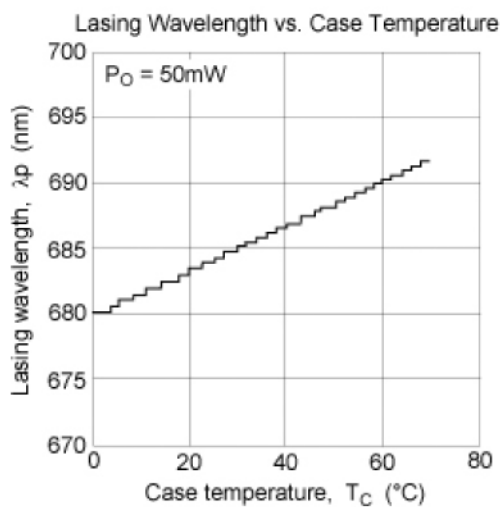
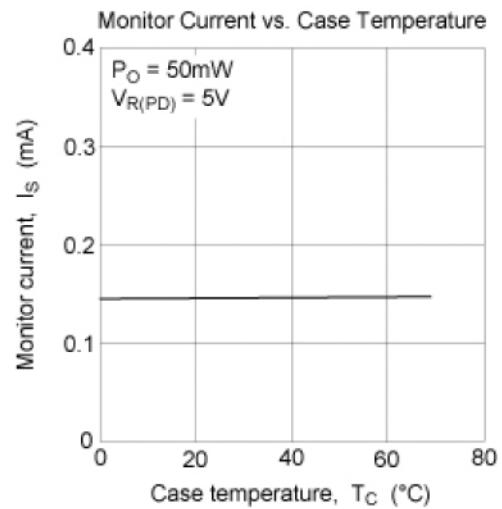
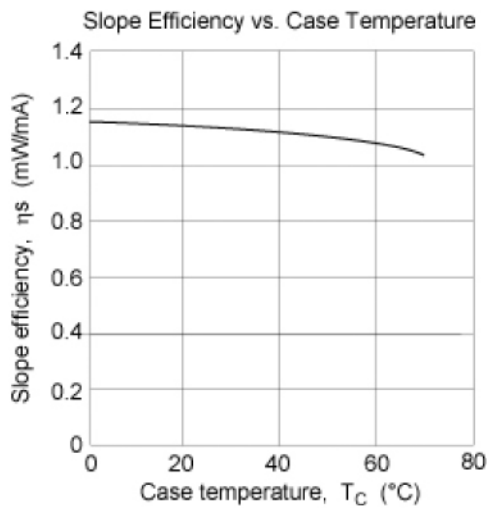
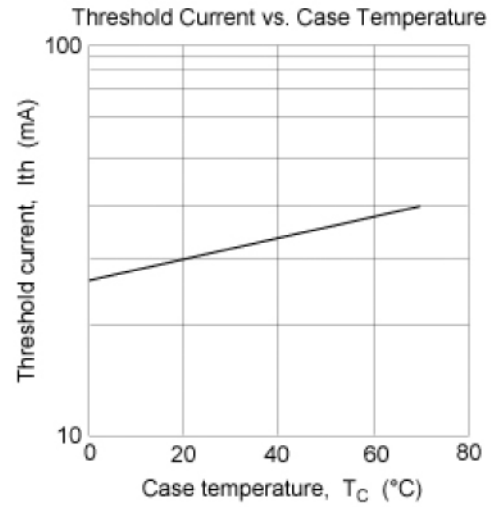
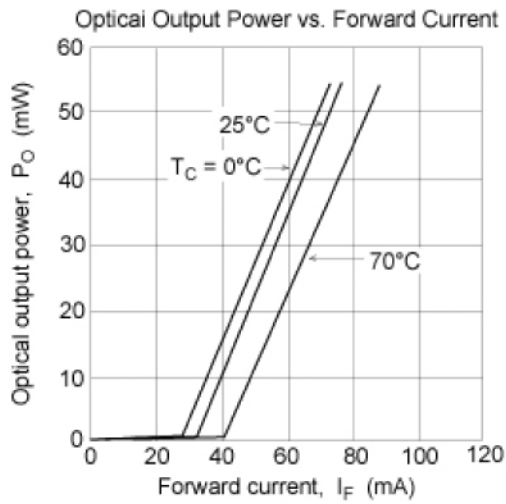
### Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	55	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 ~ +70	°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>	-	30	60	mA	-
Operating voltage	V <sub>op</sub>	-	2.3	3.0	V	Po=50mW
Slope efficiency	η <sub>s</sub>	0.8	1.1	1.4	mW/mA	30(mW)/(I <sub>(40mW)</sub> -I <sub>(10mW)</sub> )
Beam divergence Parallel to the junction	θ <sub>//</sub>	7	-	12	°	Po=50mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	18	-	25	°	Po=50mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	675	685	695	nm	Po=50mW
Monitor Current	I <sub>s</sub>	0.08	0.12	0.35	mA	Po=50mW, V <sub>R(PD)</sub> =5V

## Typical Characteristic Curves



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