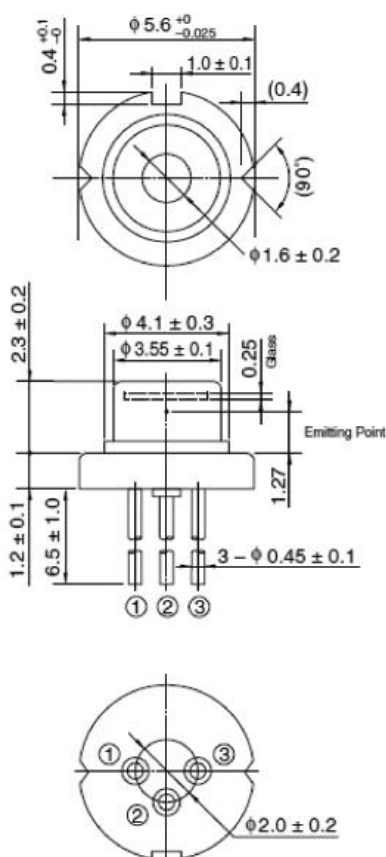


HL83013MG

830nm / 50mW GaAlAs Laser Diode

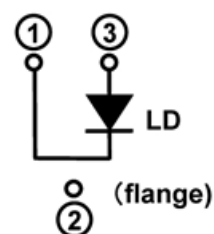
Outline



(Unit:mm)

Internal Circuit

HL83013MG



Features

- Operation temperature: $-10 \sim +60^\circ\text{C}$
- Optical output power: 50mW(CW)
- Infrared lasing: 830nm Typ.
- Low operating voltage: 2.4V Max.
- Package: $\phi 5.6\text{mm}$
- Single transverse mode
- TE mode oscillation

Application

- Sensor application
- Night vision
- Machine vision
- Light source of optical equipments

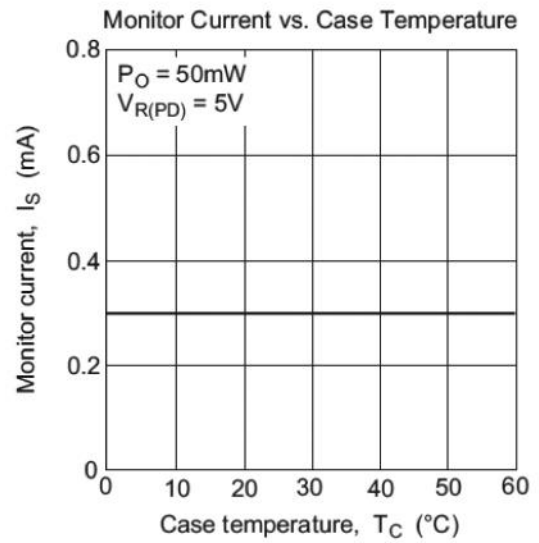
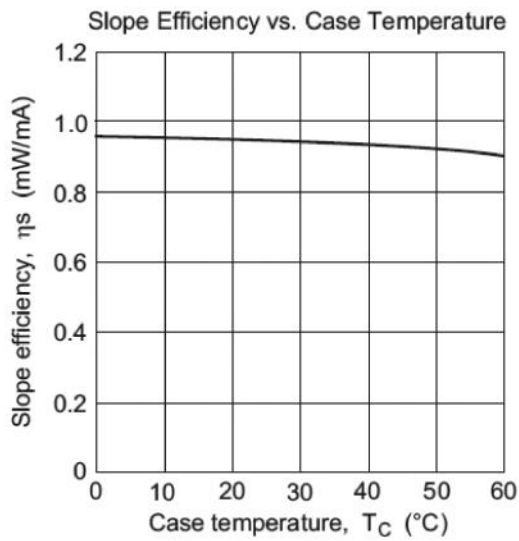
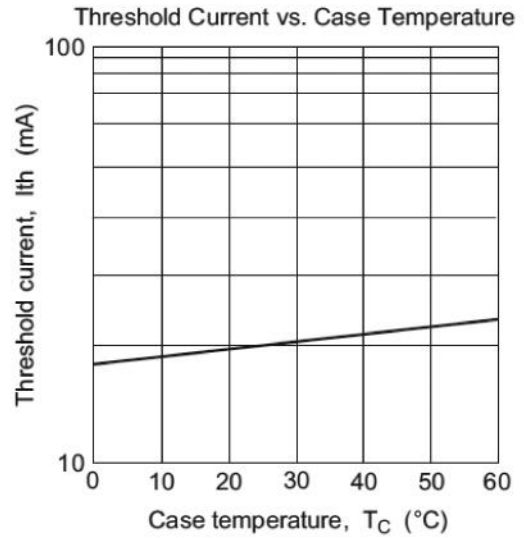
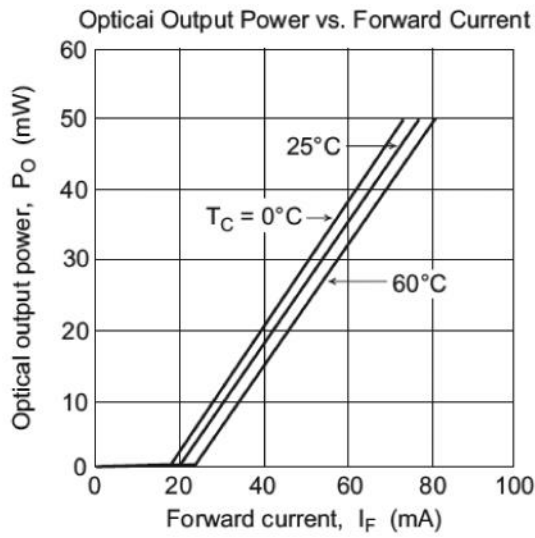
Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	50	mW
LD Reverse Voltage	V _{R(LD)}	2	V
Operating Temperature	Topr	-10 ~ +60	°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 _{th}	-	20	40	mA	-
Operating current	I _{op}	-	75	100	mA	Po=50mW
Operating voltage	V _{op}	-	1.9	2.4	V	Po=50mW
Beam divergence Parallel to the junction	θ _{//}	6	9	12	°	Po=50mW, FWHM
Beam divergence Perpendicular to the junction	θ _⊥	18	22	26	°	Po=50mW, FWHM
Lasing Wavelength	λ _p	820	830	840	nm	Po=50mW

Typical Characteristic Curves



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