HL40023MG

- 404nm / 500mW -

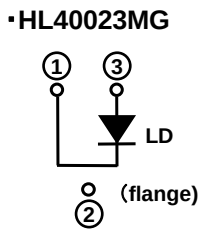
GaN Laser Diode

Rev.8
31. Aug. 2012

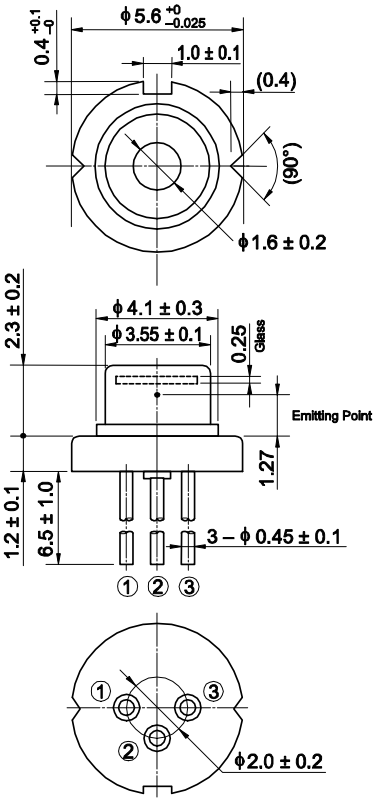
■ Applications

- Direct Imaging for PCB
- Industry

■ Internal circuit



■ Outline



■ Features

- Optical output powr: 400mW (CW)
- Violet lasing :398~410nm
- Low operating current: 390mA Typ.
- Low operating voltage: 5.5V Max.
- Small package: ϕ5.6mm
- Multiple transverse mode
- TE mode oscillation

■ Absolute Maximum Ratings (Tc=25 °C)

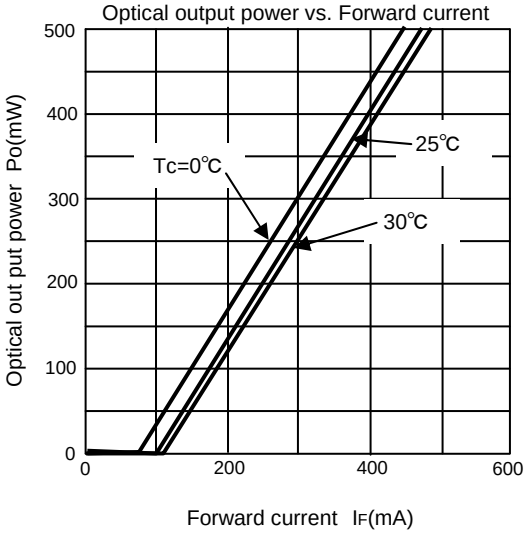
Item	Symbol	Ratings	Unit
Optical output power	P_o	500	mW
LD Reverse Voltage	$V_{R(LD)}$	5	V
Operating Temperature	Topr	0 ~ +30	˚C
Storage Temperature	Tstg	-35 ~ +85	˚C

■ Optical and Electrical Characteristics (Tc=25˚C)

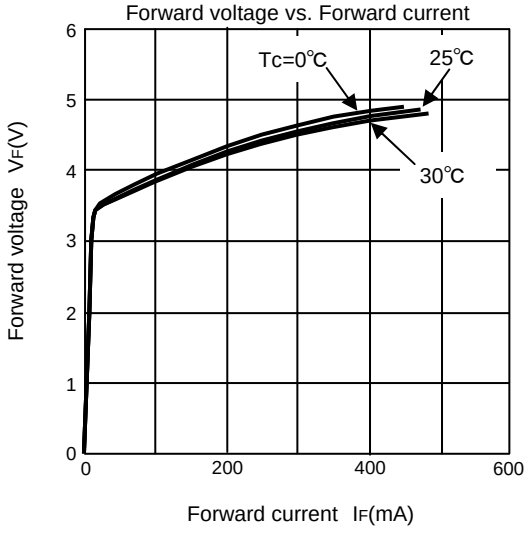
Item	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold current	Ith	-	-	160	mA	-
Operating current	Iop	-	390	420	mA	Po=400mW
Operating voltage	Vop	-	-	5.5	V	Po=400mW
Beam divergence Parallel to the junction	θ//	5	13	25	o	Po=400mW, Full angle 1/e^2
Beam divergence Perpendicular to the junction	θ⊥	30	45	60	o	Po=400mW, Full angle 1/e^2
Lasing Wavelength	λp	398	404	410	nm	Po=400mW

HL40023MG Typical Characteristic Curves

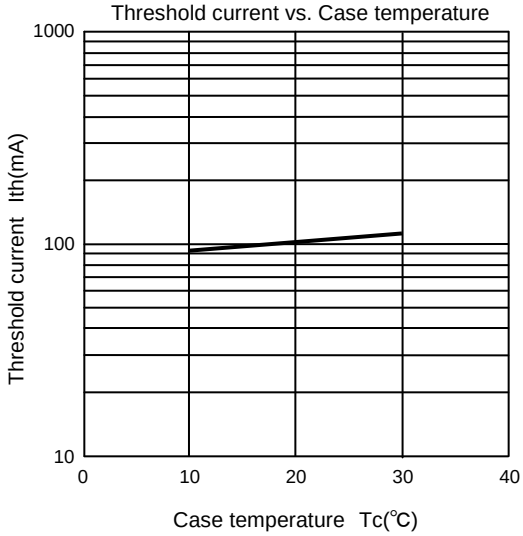
Optical output power vs. Forward current



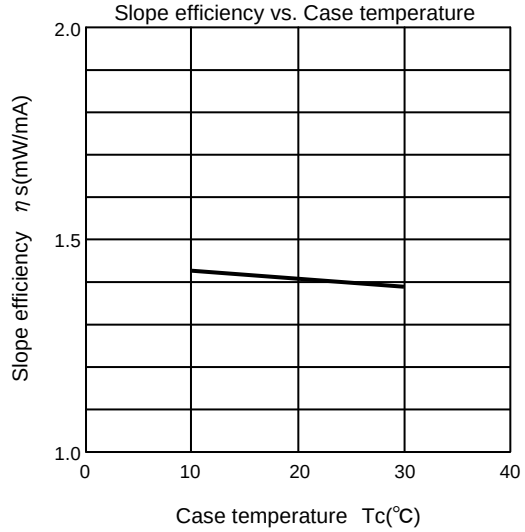
Forward voltage vs. Forward current



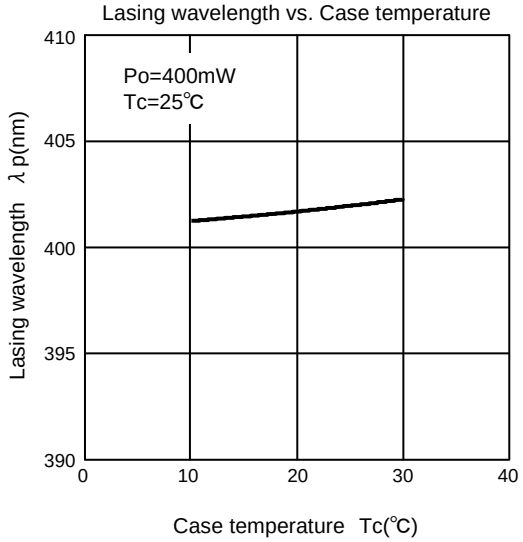
Threshold current vs. Case temperature



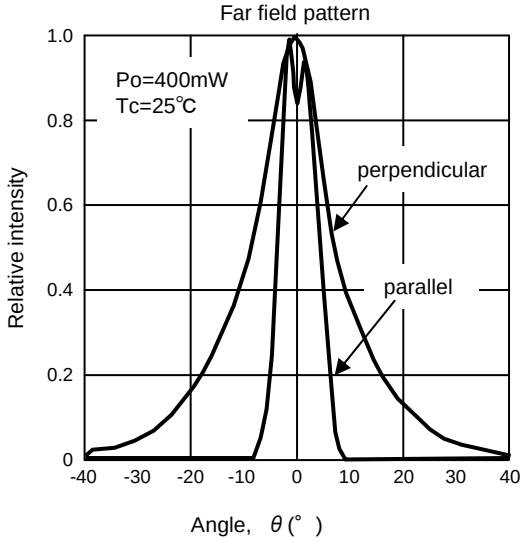
Slope efficiency vs. Case temperature



Lasing wavelength vs. Case temperature



Far field pattern



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