

HL40023MG - 405nm band / 500mW -

GaN Violet High Power Laser Diode

Preliminary
Rev.2
24. Nov. 2010

Applications

- Direct Imaging for PCB
- Industry

Features

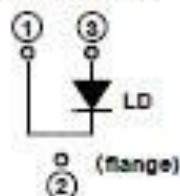
- Optical output power: $P_o=400\text{mW(CW)}$
- Violet lasing $\lambda_p=398\sim 410\text{nm}$
- Low operating current: $I_{op}=390\text{mA Typ.}$
- Low operating voltage: $V_{op}=5.5\text{V Max.}$
- Small package: $\phi 5.6\text{mm}$
- Multi transverse mode oscillation

Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

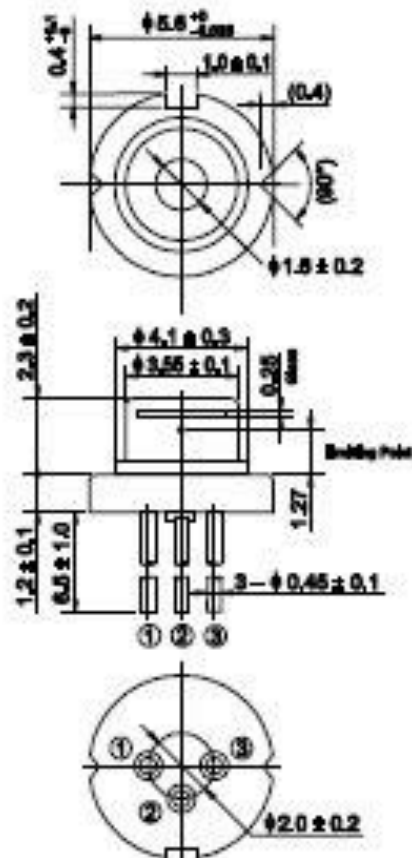
Item	Symbol	Rated	Unit
Optical output power	P_o	500	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature	T_{opr}	0 ~ +30	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +85	$^\circ\text{C}$

Internal circuit

-HL40023MG



Outline



Civillaser

Optical and Electrical Characteristics($T_c=25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold current	I_{th}	-	-	160	mA	-
Operating current	I_{op}	-	390	420	mA	$P_o=400\text{mW}$
Operating voltage	V_{op}	-	-	5.5	V	$P_o=400\text{mW}$
Lasing Wavelength	λ_p	398	-	410	nm	$P_o=400\text{mW}$
Beam divergence Parallel to the junction	$\theta_{//}$	5	-	25	$^\circ$	$P_o=400\text{mW}$, Full angle $1/e^2$
Beam divergence Perpendicular to the junction	θ_{\perp}	30	-	60	$^\circ$	$P_o=400\text{mW}$, Full angle $1/e^2$