

HL40023MG - 404nm band / 500mW -

GaN Violet High Power Laser Diode

Rev.6
21. Feb. 2011

Applications

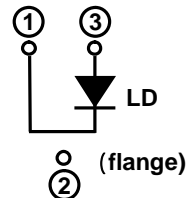
- Direct Imaging for PCB
- Industry

Features

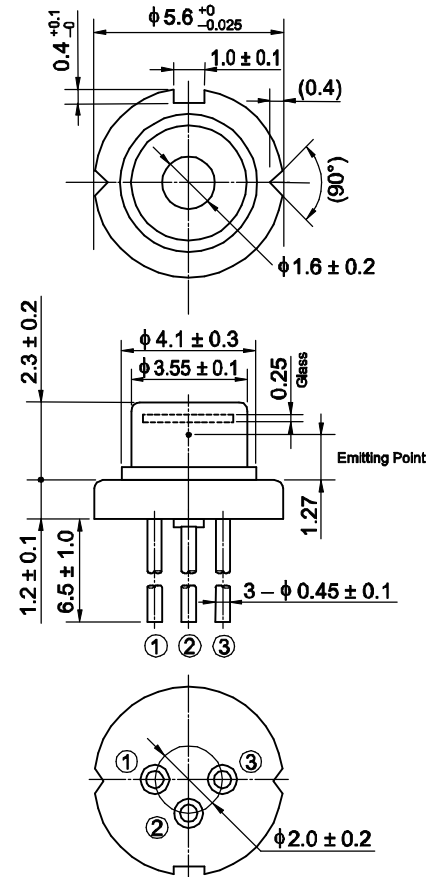
- Optical output power: $P_o=400\text{mW (CW)}$
- Violet lasing : $\lambda_p=398\sim 410\text{nm}$
- Low operating current: $I_{op}=390\text{mA Typ.}$
- Low operating voltage: $V_{op}=5.5\text{V Max.}$
- Small package: 5.6mm
- Multi transverse mode oscillation

Internal circuit

HL40023MG



Outline

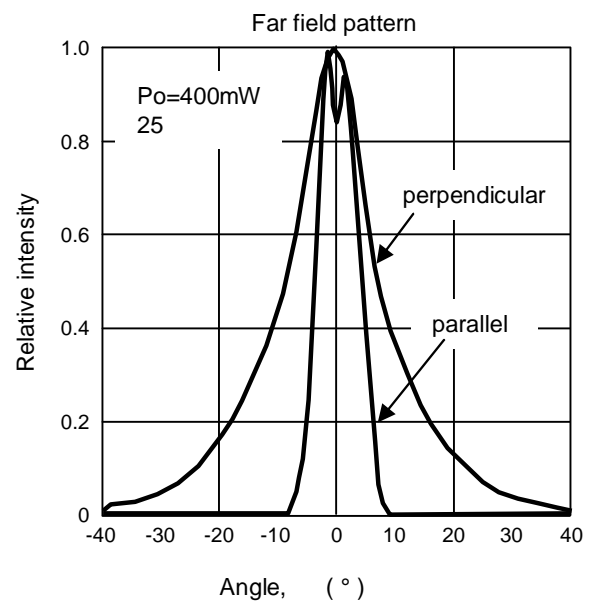
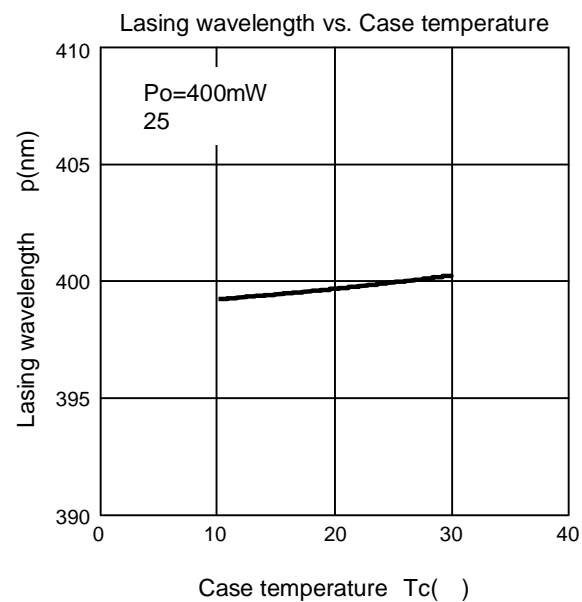
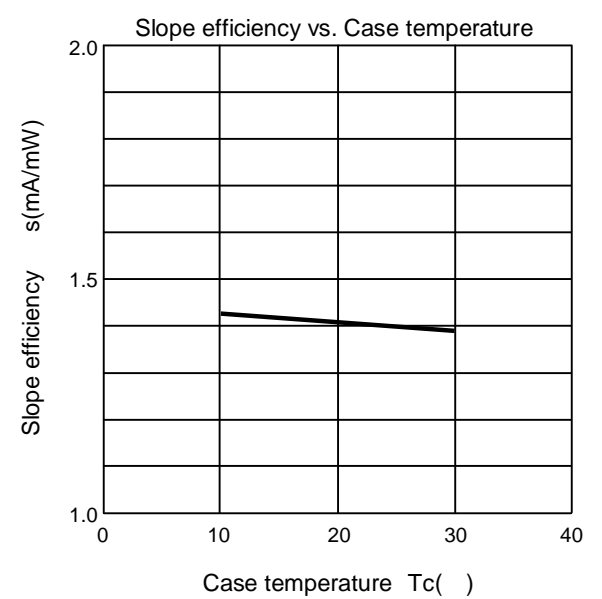
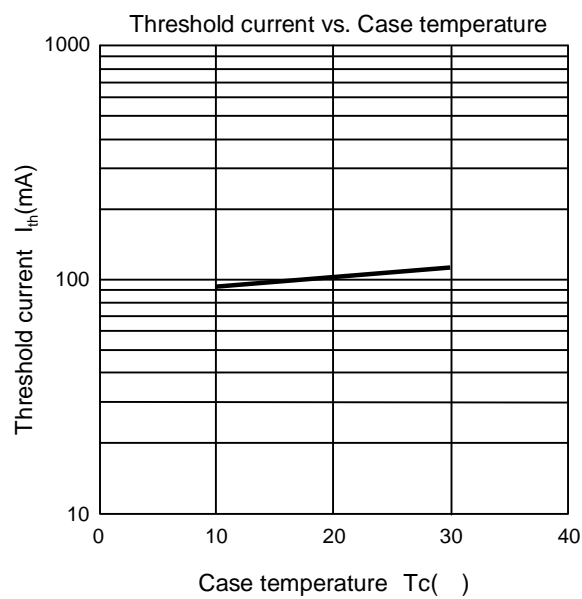
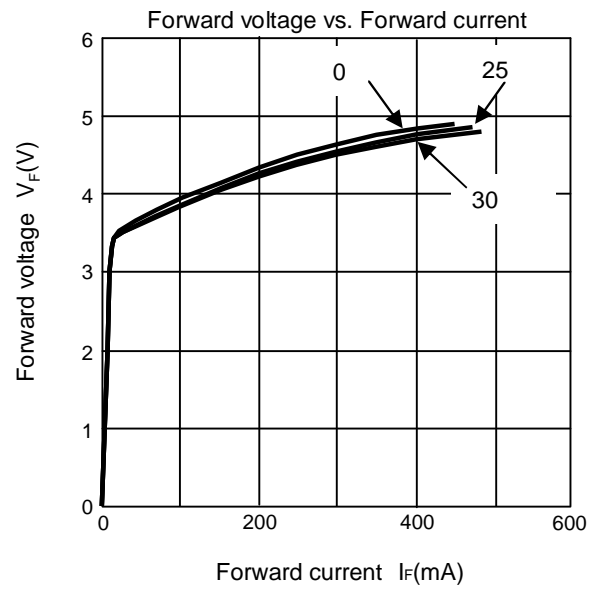
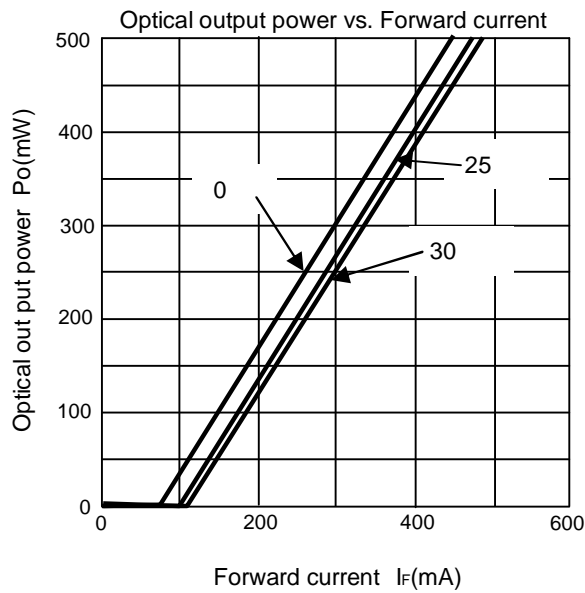


Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

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

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	404	410	nm	$P_o=400\text{mW}$
Beam divergence Parallel to the junction	$\theta_{//}$	5	13	25	$^\circ$	$P_o=400\text{mW}$, Full angle $1/e^2$
Beam divergence Perpendicular to the junction	θ_{\perp}	30	45	60	$^\circ$	$P_o=400\text{mW}$, Full angle $1/e^2$



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