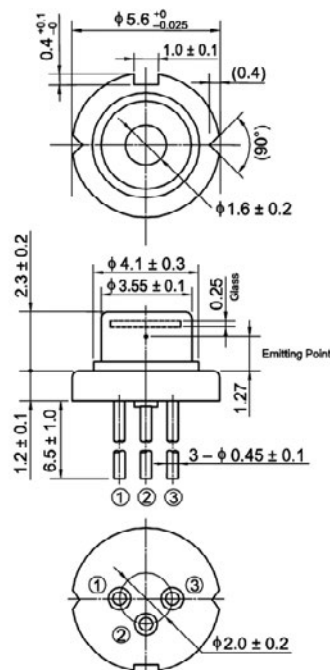


Data Sheet

HL40041MG

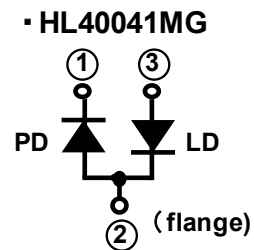
404nm/150mW Violet Laser Diode

Outline



(Unit: mm)

Internal Circuit



* Monitor PD for initial checking purpose only

Features

- Operation temperature: $-10 \sim +50^\circ\text{C}$
- Optical output power: 150mW (CW)
- Violet Lasing: 404nm Typ.
- Low operating voltage: 5.0V Max.
- Package: $\phi 5.6\text{mm}$
- Multiple transverse mode
- TE mode oscillation

Application

- Bio & Medical
- Measurement

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	150	mW
LD Reverse Voltage	VR(LD)	2	V
PD Reverse Voltage *	VR(PD)	20	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

* Monitor PD for initial checking purpose only

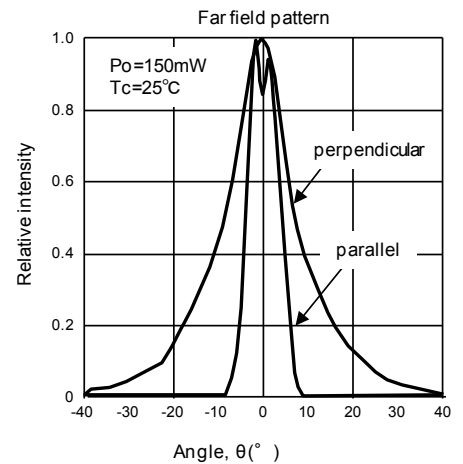
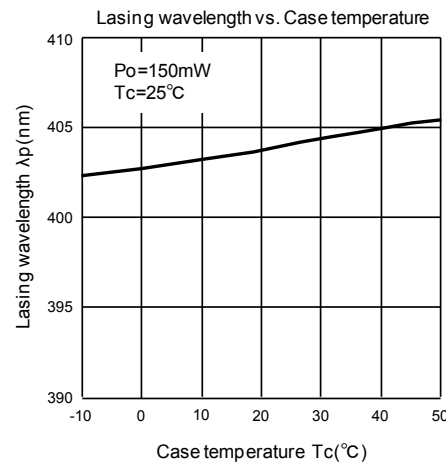
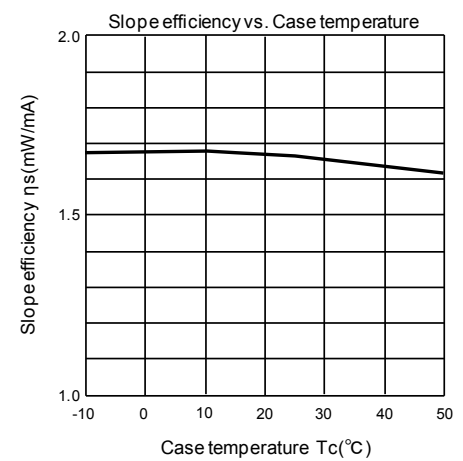
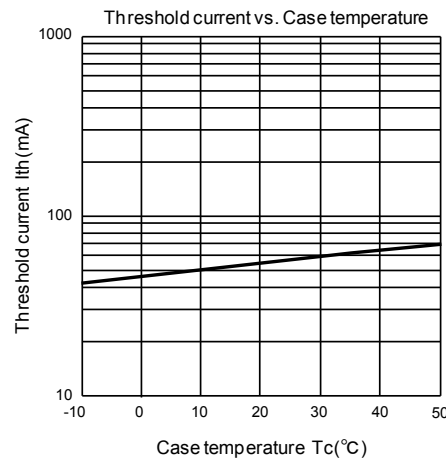
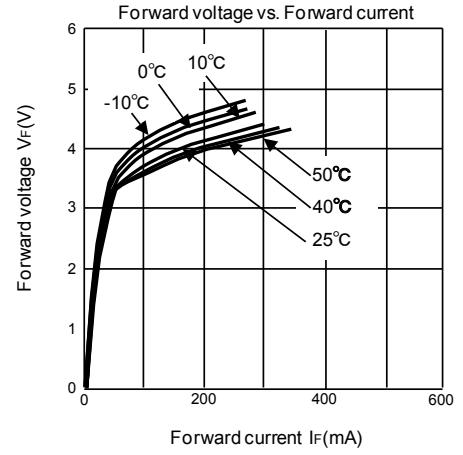
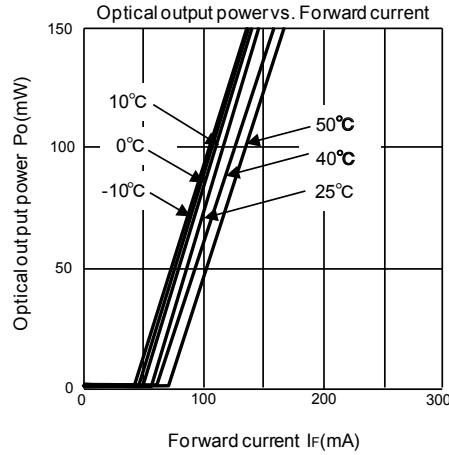
Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	60	120	mA	-
Operating current	Iop	-	150	250	mA	Po=150mW
Operating voltage	Vop	-	-	5.0	V	Po=150mW
Beam divergence Parallel to the junction	$\theta_{//}$	5	13	25	°	Po=150mW, Full angle $1/e^2$
Beam divergence Perpendicular to the junction	θ_{\perp}	30	45	60	°	Po=150mW, Full angle $1/e^2$
Lasing Wavelength	λ_p	398	404	410	nm	Po=150mW
Monitor Current *	Is	0.05	0.20	0.50	mA	Po=150mW, VR(PD)=5V

* Monitor PD for initial checking purpose only

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Typical Characteristic Curves



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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.



Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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