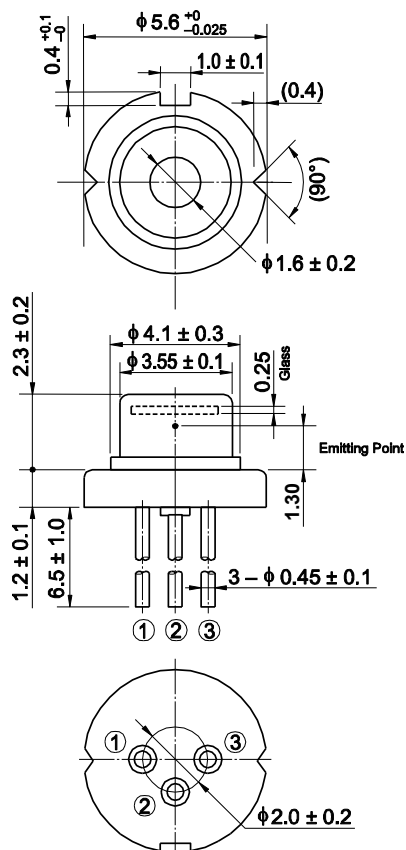


HL40161MG/163MG

405nm/175mW Violet Laser Diode

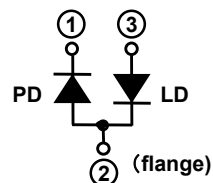
Outline



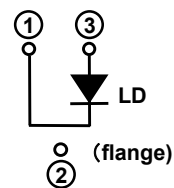
(Unit: mm)

Internal Circuit

•HL40161MG



•HL40163MG



Features

- Operation temperature: $-5 \sim +85^\circ\text{C}$
- Optical output power: 175mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating voltage: 5.0V Typ.
- Package: $\phi 5.6\text{mm}$
- Single transverse mode
- TE mode oscillation

Application

- Bio & Medical
- Measurement
- 3D Printer

HL40161MG/163MG

Data Sheet

Absolute Maximum Ratings (Tc=25°C)

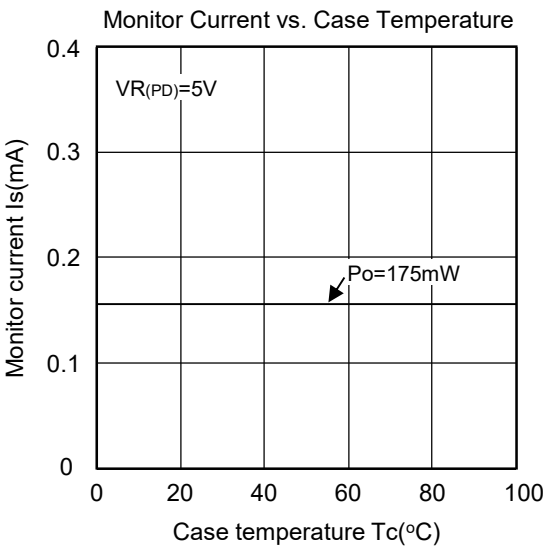
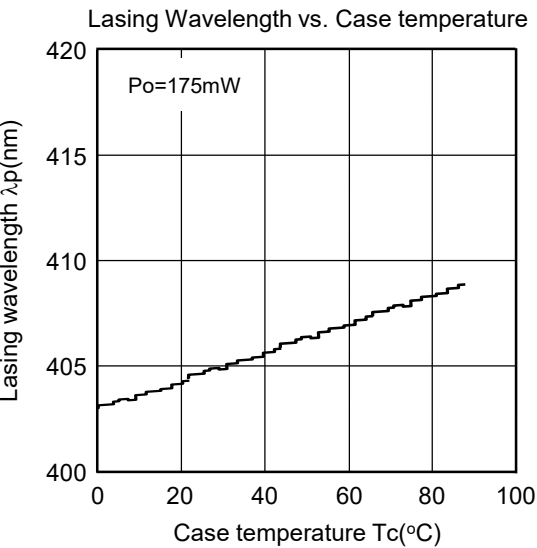
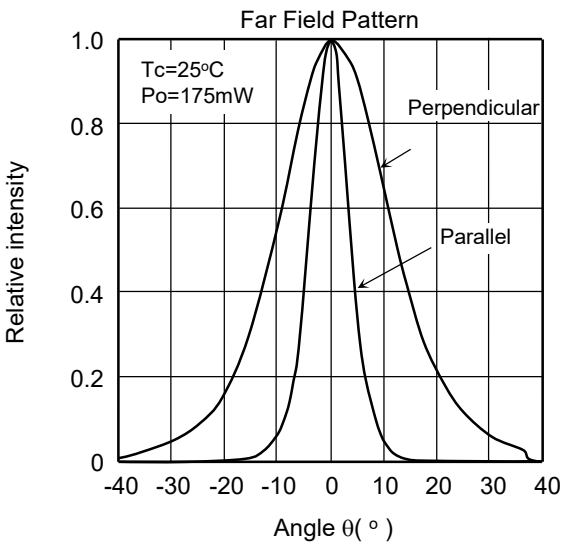
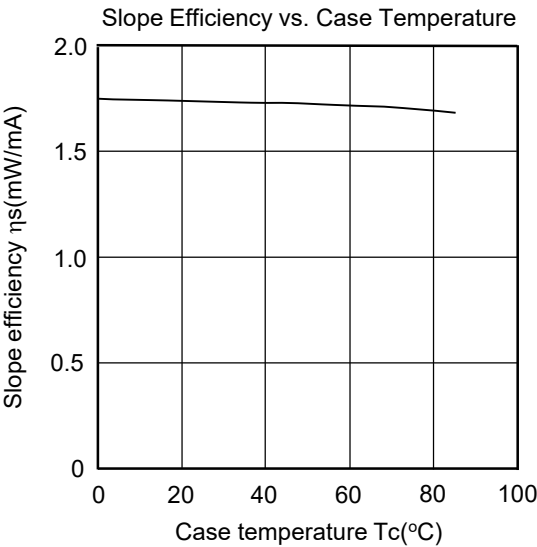
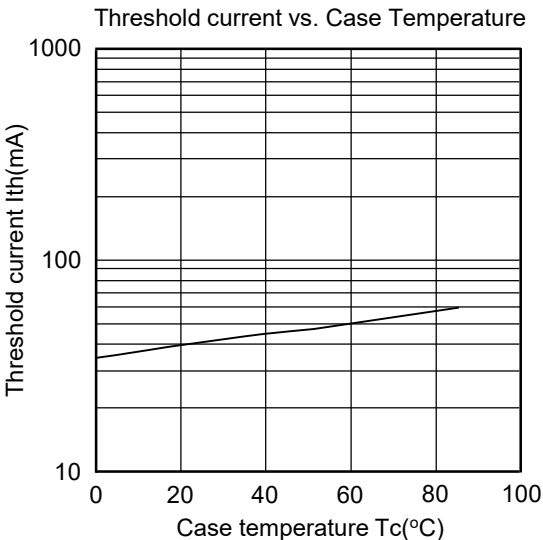
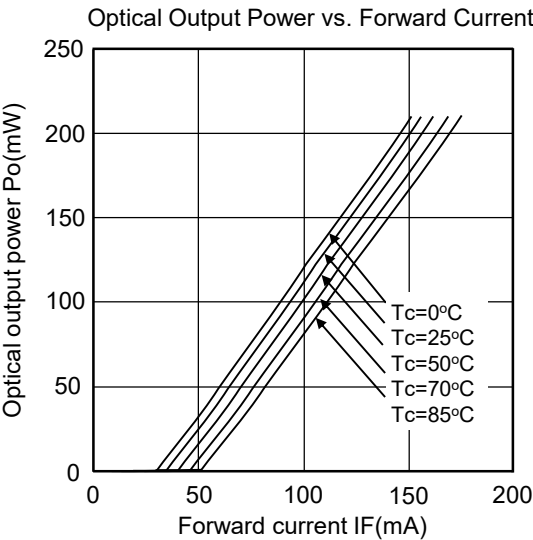
Item	Symbol	Ratings	Unit
Optical output power	Po	210	mW
LD Reverse Voltage	V _{R(LD)}	2	V
PD Reverse Voltage (*1)	V _{R(PD)}	15	V
Operating Temperature	Topr	-5 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I _{th}	-	35	55	mA	-
Operating current	I _{op}	-	150	200	mA	Po=175mW
Operating voltage	V _{op}	-	5.0	6.5	V	Po=175mW
Beam divergence Parallel to the junction	θ _{//}	6	9	12	°	Po=175mW, FWHM
Beam divergence Perpendicular to the junction	θ _⊥	15	20	25	°	Po=175mW, FWHM
Lasing Wavelength	λ _p	400	405	410	nm	Po=175mW
Monitor Current (*1)	I _s	0.05	0.15	0.50	mA	Po=175mW V _{R(PD)} =5V

*1 for only initial checking and for only RHL40161MG type

Typical Characteristic Curves



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