

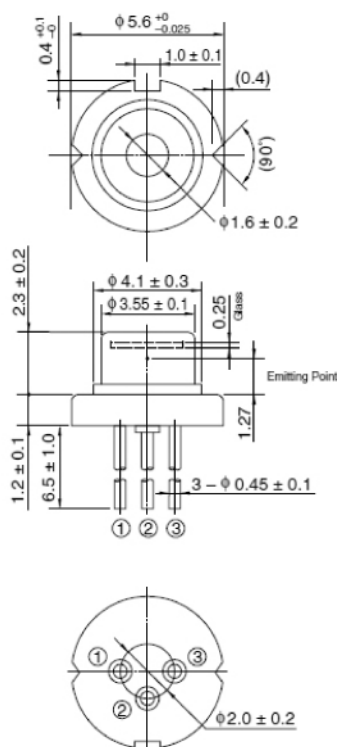
## Data Sheet

# HL8342MG/43MG

852nm / 50mW GaAlAs Laser Diode

USHIO

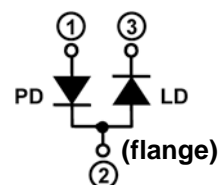
### Outline



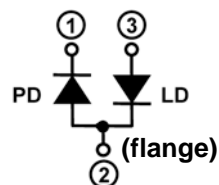
(Unit:mm)

### Internal Circuit

#### -HL8342MG



#### -HL8343MG



### Features

- Operation temperature: -10~+60°C
- Optical output power: 50mW(CW)
- Infrared lasing: 852nm Typ.
- Low operating voltage: 2.4V Max.
- Package:  $\phi$ 5.6mm
- Single transverse mode
- TE mode oscillation

### Application

- Sensor application
- Night vision
- Machine vision
- Light source of optical equipments

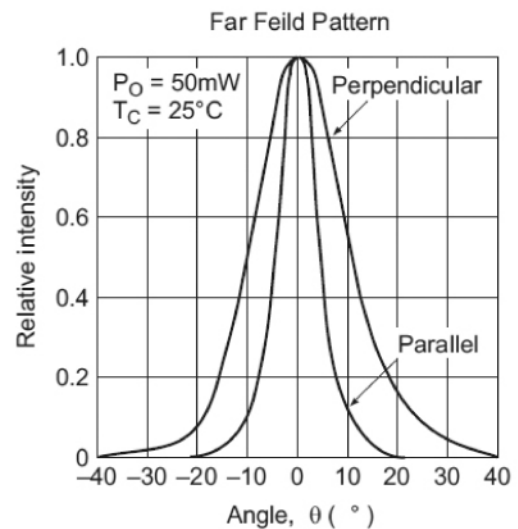
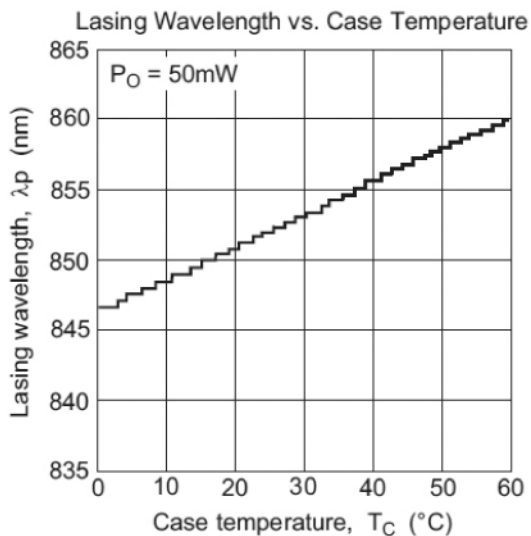
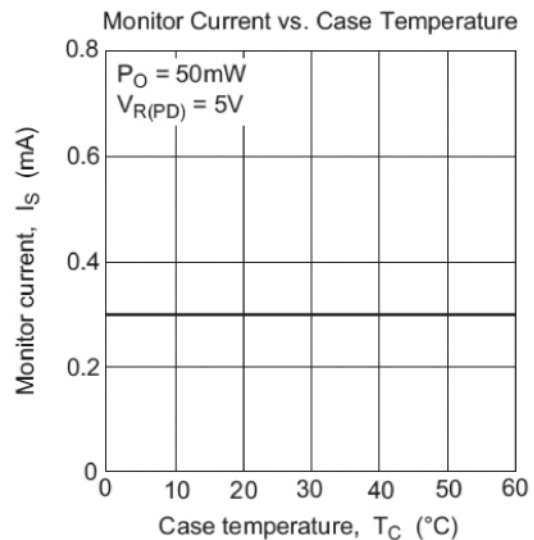
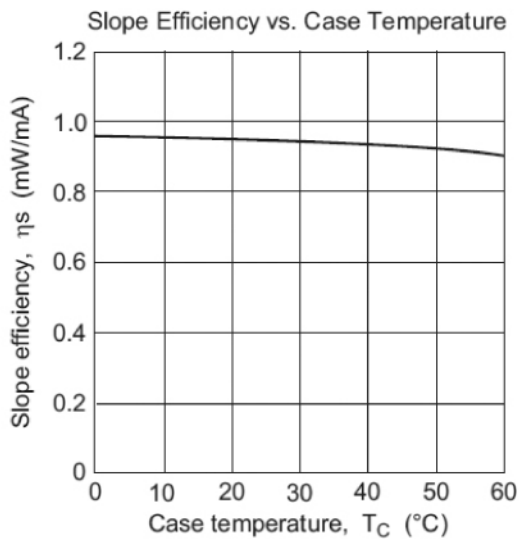
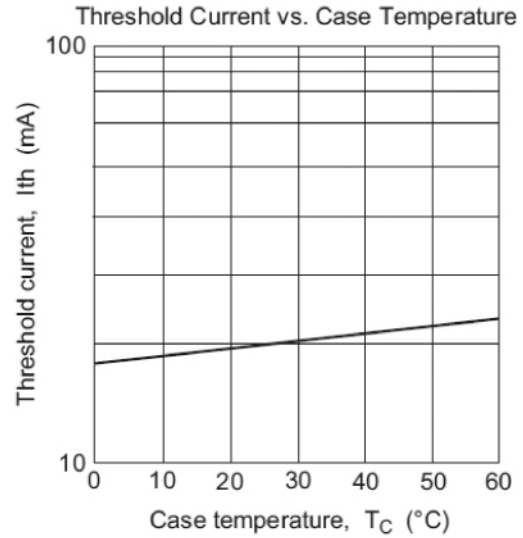
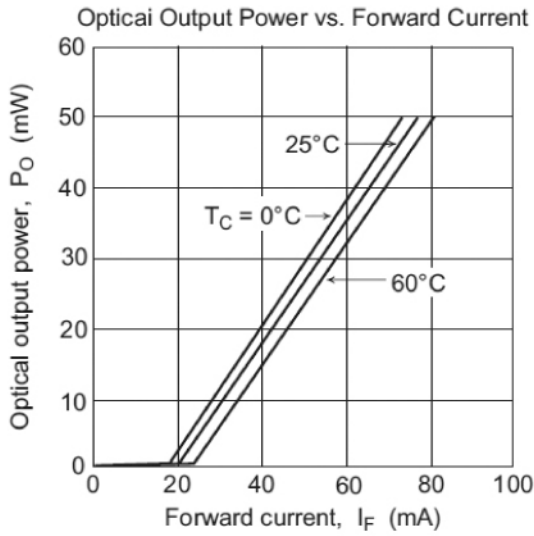
### Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power	Po	50	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	Topr	-10 ~ +60	°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 <sub>th</sub>	-	20	40	mA	-
Operating current	I <sub>op</sub>	-	75	100	mA	Po=50mW
Operating voltage	V <sub>op</sub>	-	1.9	2.4	V	Po=50mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	6	9	12	°	Po=50mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	18	22	26	°	Po=50mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	848	852	856	nm	Po=50mW
Monitor Current	I <sub>s</sub>	0.10	0.25	0.50	mA	Po=50mW, V <sub>R(PD)</sub> =5V

## Typical Characteristic Curves



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