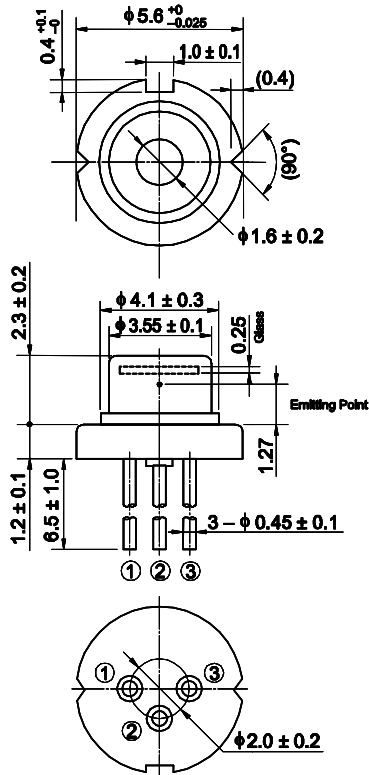


# HL40041MG

GaN Laser Diode

404nm/150mW

## Outline



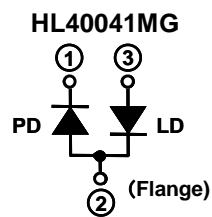
## Features:

- 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

## Applications:

- Bio & Medical
- Measurement

## Internal Circuit



\* Monitor PD for initial checking purpose only

Absolute Maximum Ratings (T<sub>c</sub>=25°C)

| Item                  | Symbol             | Ratings   | Unit |
|-----------------------|--------------------|-----------|------|
| Optical output power  | P <sub>o</sub>     | 150       | mW   |
| LD Reverse Voltage    | V <sub>R(LD)</sub> | 2         | V    |
| PD Reverse Voltage *  | V <sub>R(PD)</sub> | 20        | V    |
| Operating Temperature | T <sub>opr</sub>   | -10 ~ +50 | °C   |
| Storage Temperature   | T <sub>stg</sub>   | -40 ~ +85 | °C   |

\* Monitor PD for initial checking purpose only

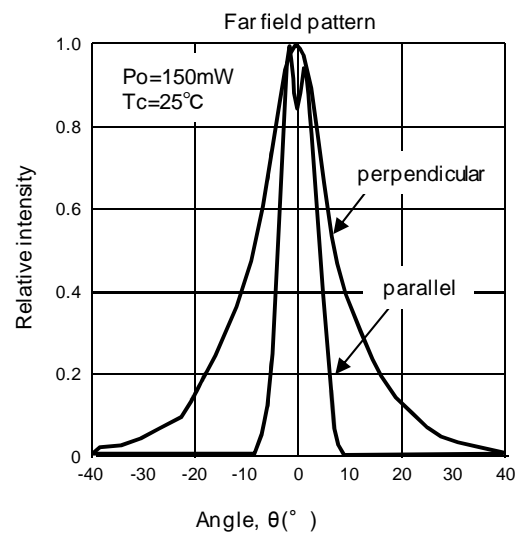
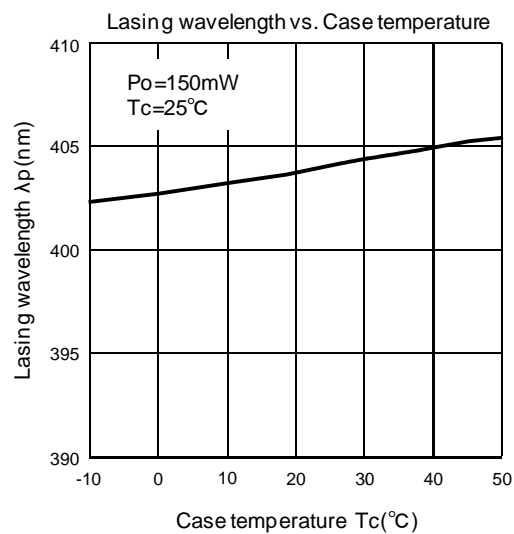
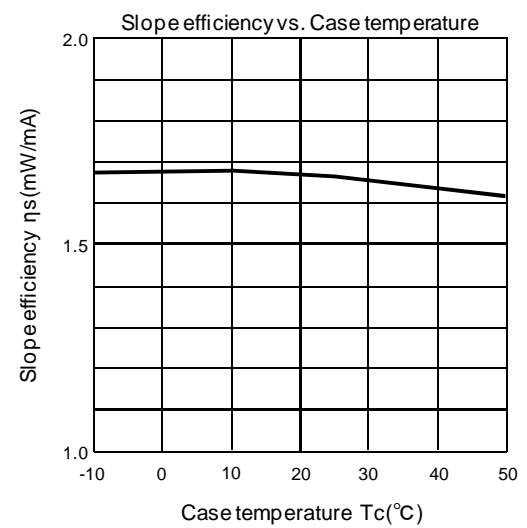
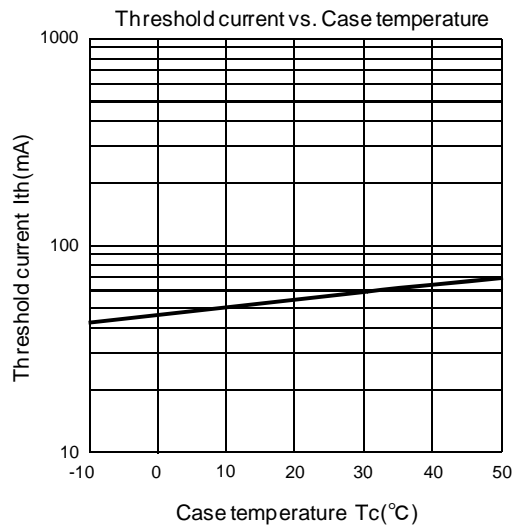
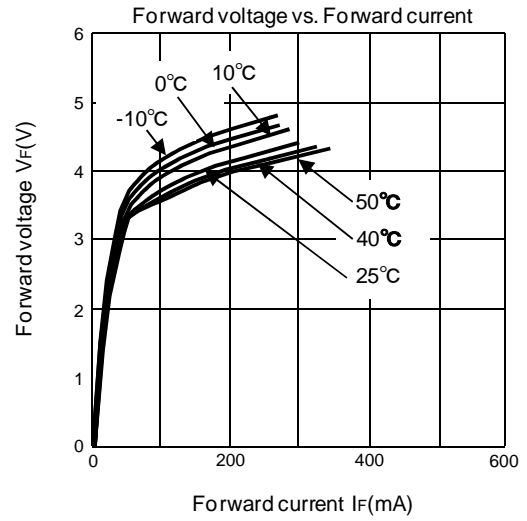
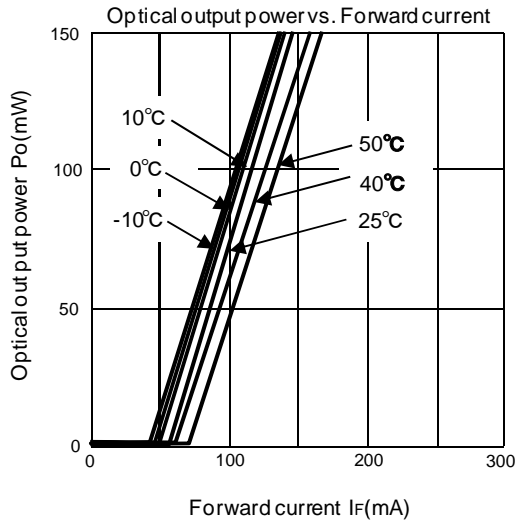
Optical and Electrical Characteristics (T<sub>c</sub>=25°C)

| Parameter  | Symbol          | Min  | Typ  | Max  | Unit | Test Condition  |
|--|-----------------|------|------|------|------|---|
| Threshold current                                | I <sub>th</sub> | -    | 60   | 120  | mA   | -   |
| Operating current                                | I <sub>op</sub> | -    | 150  | 250  | mA   | P <sub>o</sub> =150mW                                 |
| Operating voltage                                | V <sub>op</sub> | -    | -    | 5.0  | V    | P <sub>o</sub> =150mW                                 |
| Beam divergence<br>Parallel to the junction      | θ <sub>//</sub> | 5    | 13   | 25   | °    | P <sub>o</sub> =150mW,<br>Full angle 1/e <sup>2</sup> |
| Beam divergence<br>Perpendicular to the junction | θ <sub>⊥</sub>  | 30   | 45   | 60   | °    | P <sub>o</sub> =150mW<br>Full angle 1/e <sup>2</sup>  |
| Lasing Wavelength                                | λ <sub>p</sub>  | 398  | 404  | 410  | nm   | P <sub>o</sub> =150mW                                 |
| Monitor Current *                                | I <sub>s</sub>  | 0.05 | 0.15 | 0.50 | mA   | P <sub>o</sub> =150mW,<br>V <sub>R(PD)</sub> =5V      |

Monitor PD for initial checking purpose only

# Data Sheet

## 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.

## Contact Information

[www.oclaro.com](http://www.oclaro.com)

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