

980nm Laser Diode

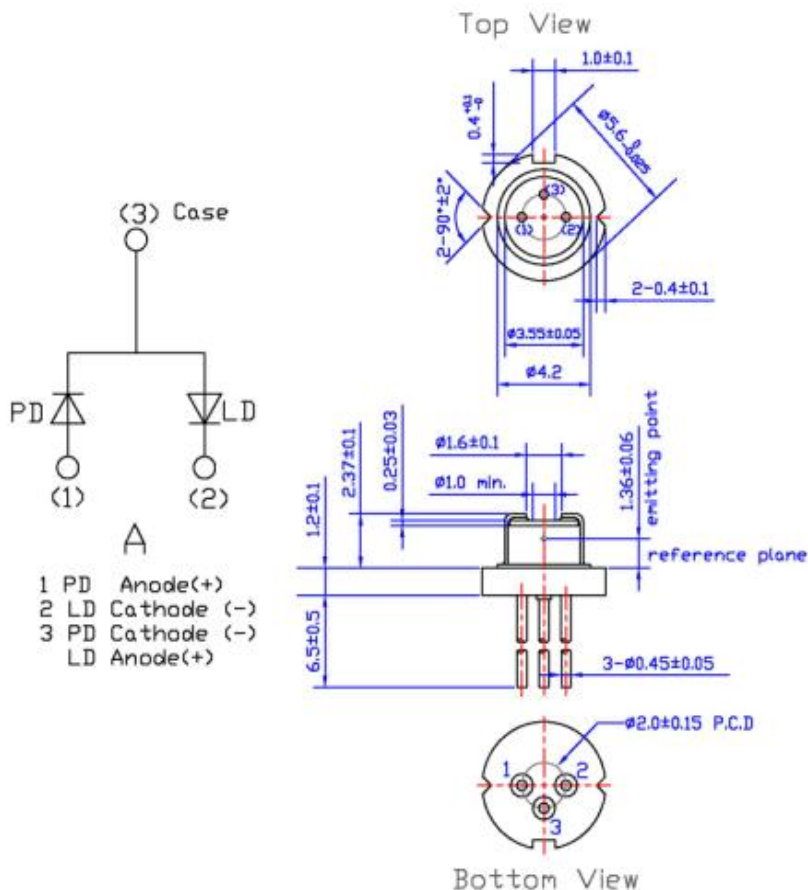
980nm Laser Diode

NE W982561A-preliminary

Specifications

- (1) Device: Laser Diode
 (2) Structure: TO-18(φ 5.6mm), With Pb free glass cap, with PD

External dimensions(Unit : mm)



Absolute Maximum Ratings(Tc=25°C)

| Parameter | Symbol | Rating | Unit |
|-----------------------|--------|---------|------|
| Optical Output | Po | 25 | mW |
| Reverse Voltage | Laser | Vr | 2 V |
| | PIN PD | Vr(PIN) | 30 V |
| Operating Temperature | Top | -10~+60 | °C |
| Storage Temperature | Tstg | -15~+85 | °C |

Ver.1 2009/12

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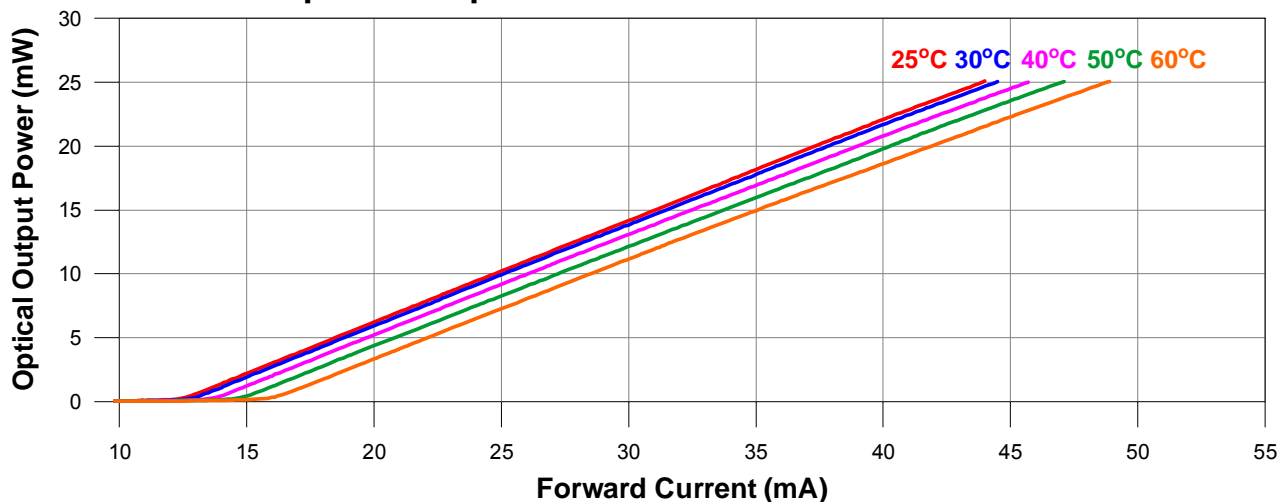
Electrical and Optical Characteristics(Tc=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit | |
|---------------------------|--------------------------------|--------------------------------------|----------------------|------|------|-------|------|
| Threshold Current | I _{th} | - | - | 12 | 20 | mA | |
| Operating Current | I _{op} | P _o =25mW | - | 44 | 70 | mA | |
| Operating Voltage | V _{op} | - | 1 | 1.5 | 2.1 | Volt | |
| Slope Efficiency | η | 20mW-10mW | 0.5 | 0.8 | - | mW/mA | |
| | | I _{20mW} -I _{10mW} | | | | | |
| Monitor Current | I _m | P _o =25mW | - | 0.1 | 0.2 | mA | |
| Beam Divergence (FWHM) | Parallel | $\theta //$ | P _o =25mW | 8 | 13 | 18 | deg. |
| | Perpendicular | $\theta \perp$ | P _o =25mW | 25 | 30 | 35 | deg. |
| Lasing Wavelength | λ | P _o =25mW | 970 | 980 | 990 | nm | |
| Emission point accuracy | $\Delta X, \Delta Y, \Delta Z$ | P _o =25mW | -60 | - | 60 | um | |

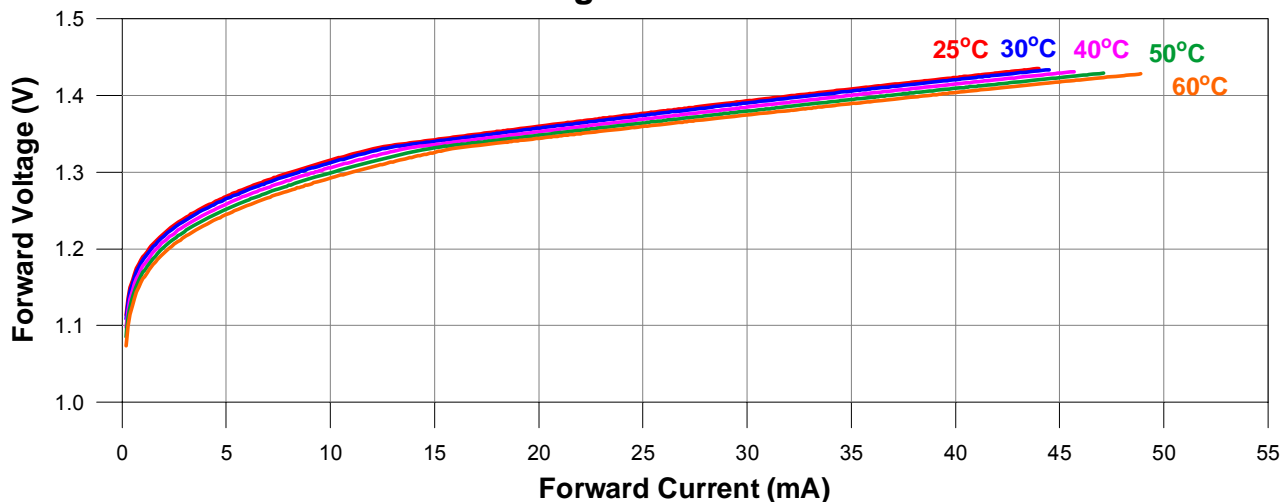
© $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

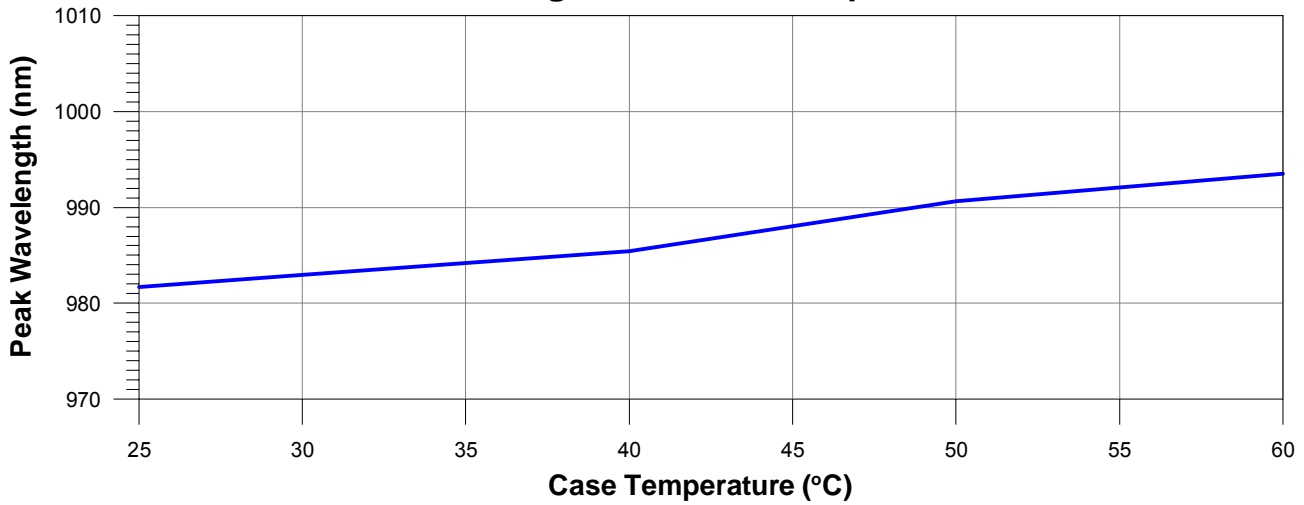
Optical Output Power v.s. Forward Current



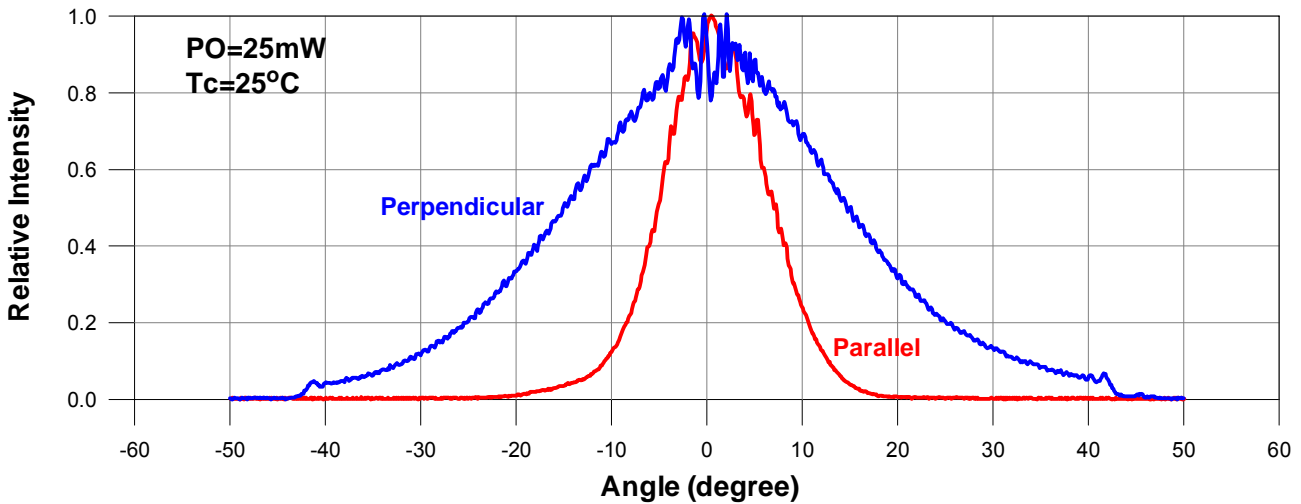
Forward Voltage v.s. Forward Current



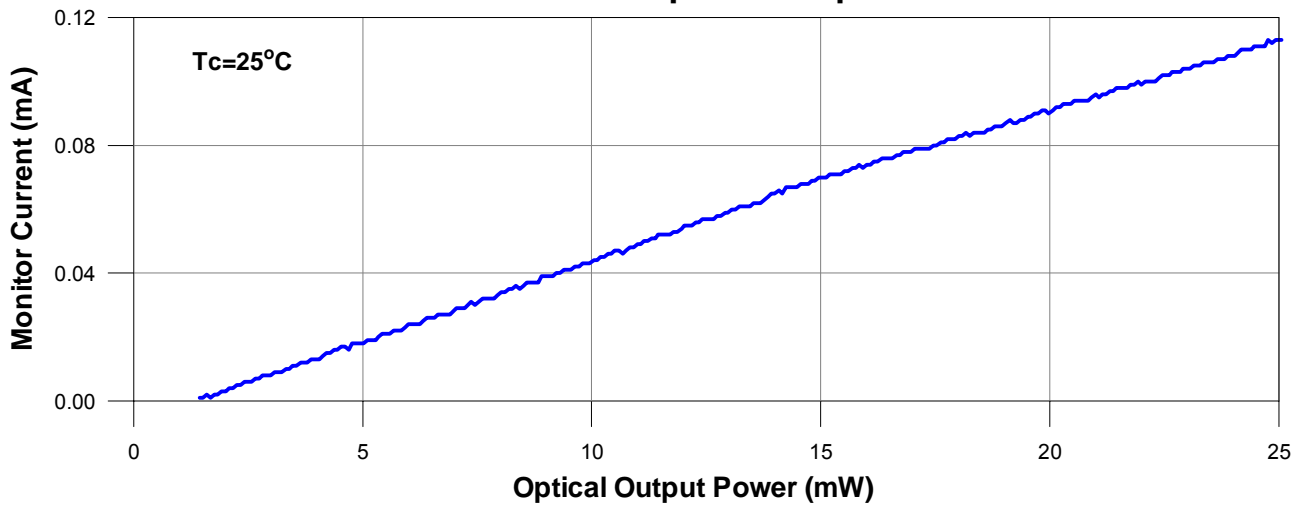
Peak Wavelength v.s. Case Temperature



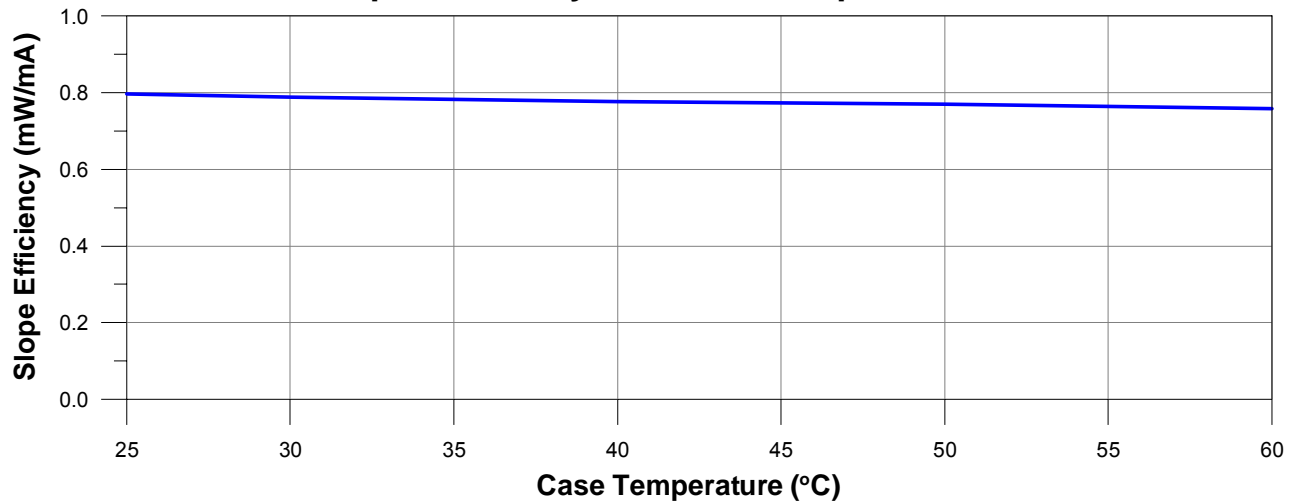
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

