

## AlGaInP Visible Laser Diode

ADL-63G02TP

XX-XX-XXXX-XXX Rev.00

638nm 50mW

### Features

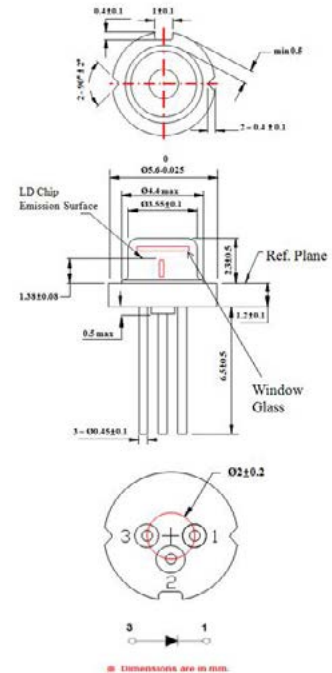
- Small size
- Single transverse mode
- High performance in temperature characteristic

### Applications

- Laser projector
- Barcode scanner

### Absolute Maximum Ratings

| Parameter             | Symbol   | Condition | Rating | Unit |
|-----------------------|----------|-----------|--------|------|
| Light Output Power    | $P_O$    | CW        | 50     | mW   |
| Reverse Voltage(LD)   | $V_{RL}$ | -         | 2      | V    |
| Operation Temperature | TC       | -         | -10~40 | °C   |
| Storage Temperature   | TS       | -         | -40~85 | °C   |



### Electrical and Optical Characteristics(Tc=25°C)

| Parameter                      | Symbol           | Min. | Typ. | Max. | Unit  | Condition |
|--------------------------------|------------------|------|------|------|-------|-----------|
| Peak Wavelength                | $\lambda$        | -    | 638  | -    | nm    | Po=50mW   |
| Threshold Current              | $I_{th}$         | -    | 35   | -    | mA    |           |
| Operating Current              | $I_{op}$         | -    | 85   | -    | mA    | Po=50mW   |
| Operating Voltage              | $V_{op}$         | -    | 2.8  | -    | V     | Po=50mW   |
| Differential efficiency        | $\eta$           | -    | 1.0  | -    | mW/mA | Po=5~50mW |
| Parallel divergence angle      | $\theta_{//}$    | -    | 8    | -    | deg.  | Po=50mW   |
| Perpendicular divergence angle | $\theta_{\perp}$ | -    | 20   | -    | deg.  |           |

\*Sufficient heat dissipation is required for CW operation.

### Precautions

- \* Do not operate the device above maximum ratings even short period of time. Doing so may cause unexpected and permanent damage to the device.
- \* Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- \* Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- \* Observing visible or invisible laser beams with the human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- \* No laser device should be used in any application or situation where life or property is at risk in event of device failure.
- \* Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

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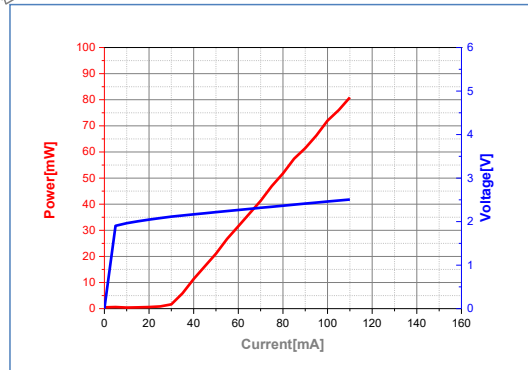
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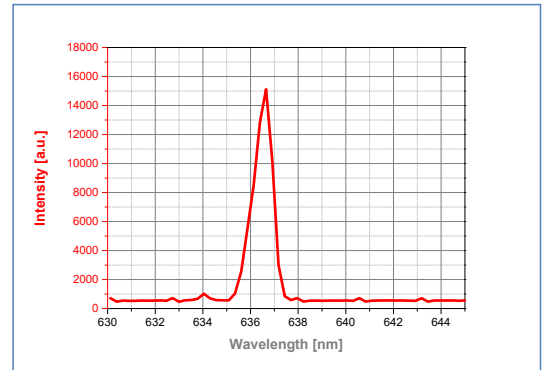
638nm 50mW

TENTATIVE

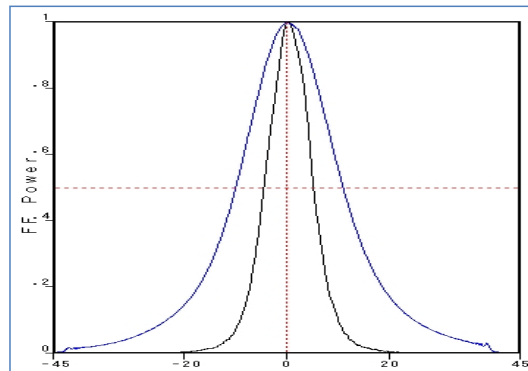
LIV Curve



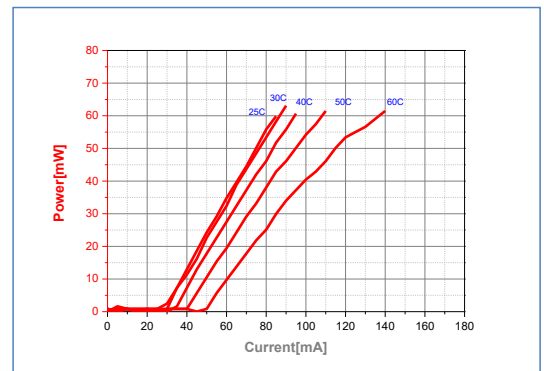
Wavelength



Far-field pattern



Temperature difference test



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