

# AlGaInP | Visible Laser Diode

## ADL-65075TU-1

### 650nm 7mW 70°C Reliable Operation

#### Features

- High Output Power : 7mW CW
- Small Package :  $\Phi 5.6\text{mm}$
- TE mode
- Single Transverse/Longitudinal Mode

#### Applications

- Construction Tools
- High Definition Laser Displays
- Medical Applications

#### Absolute maximum ratings

| Parameter            | Symbol   | Condition | Rating  | Unit |
|----------------------|----------|-----------|---------|------|
| Light output power   | $P_O$    | CW        | 10      | mW   |
| Reverse voltage (LD) | $V_{RL}$ | -         | 2       | V    |
| Reverse voltage (PD) | $V_{RD}$ | -         | 30      | V    |
| Forward current (PD) | $I_{FD}$ | -         | 10      | mA   |
| Case temperature     | $T_C$    | -         | -20~+70 | °C   |
| Storage temperature  | $T_S$    | -         | -40~+85 | °C   |

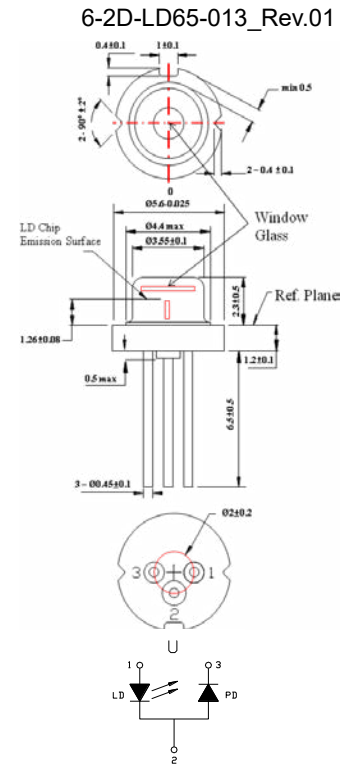
#### Electrical and optical characteristics ( $T_c=25^\circ\text{C}$ )

| Parameter                         | Symbol                     | Min. | Typ. | Max. | Unit  | Conditions                         |
|-----------------------------------|----------------------------|------|------|------|-------|------------------------------------|
| Peak wavelength                   | $\lambda$                  | 645  | 655  | 660  | nm    | $P_o=7\text{ mW}$                  |
| Threshold current                 | $I_{th}$                   | -    | 18   | 25   | mA    |                                    |
| Operating current                 | $I_{op}$                   | -    | 26   | 30   | mA    | $P_o=7\text{ mW}$                  |
| Operating voltage                 | $V_{op}$                   | -    | 2.2  | 2.5  | V     | $P_o=7\text{ mW}$                  |
| Differential efficiency           | $\eta$                     | 0.7  | 1.0  | 1.2  | mW/mA | $P_o=3\text{-}5\text{mW}$          |
| Monitor current                   | $I_m$                      | 0.1  | 0.13 | 0.2  | mA    | $P_o=7\text{mW}, V_{RD}=5\text{V}$ |
| Parallel divergence angle         | $\theta_{//}$              | 6    | 9    | 12   | deg.  | $P_o=7\text{ mW}$                  |
| Perpendicular divergence angle    | $\theta_{\perp}$           | 25   | 28   | 32   | deg.  |                                    |
| Parallel FFP deviation angle      | $\Delta\theta_{//}$        | -2   | 0    | +2   | deg.  |                                    |
| Perpendicular FFP deviation angle | $\Delta\theta_{\perp}$     | -2   | 0    | +2   | deg.  |                                    |
| Emission point accuracy           | $\Delta x\Delta y\Delta z$ | -80  | 0    | +80  | um    |                                    |

#### • Precautions

- \* Do not operate the device above maximum ratings. 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.

*For reference only. Contents above are subject to change without notice.*

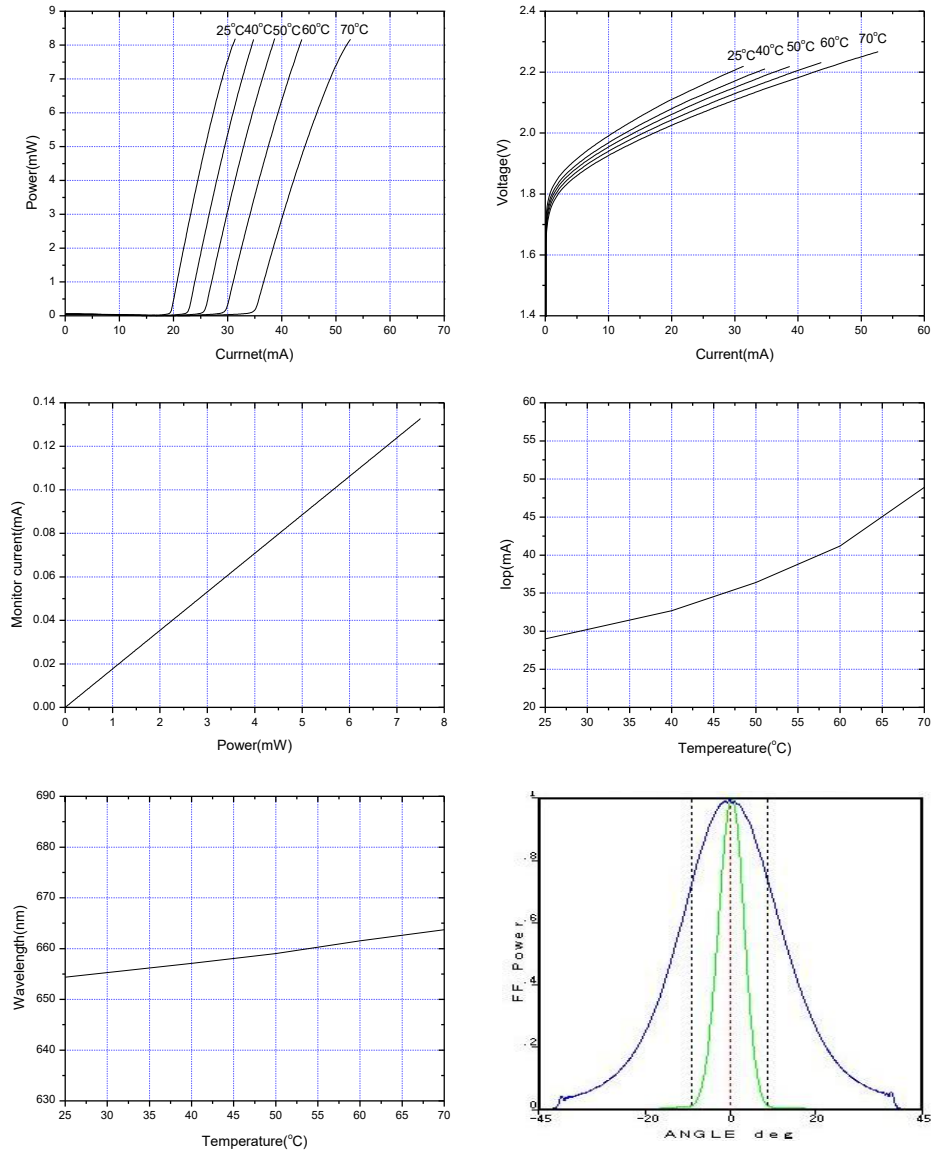


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6-2D-LD65-013\_Rev.01

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