

AlGaInP | Visible Laser Diode

ADL-65078TU-1

650nm 5mW 70°C Reliable Operation

Features

High Output Power : 5mW 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

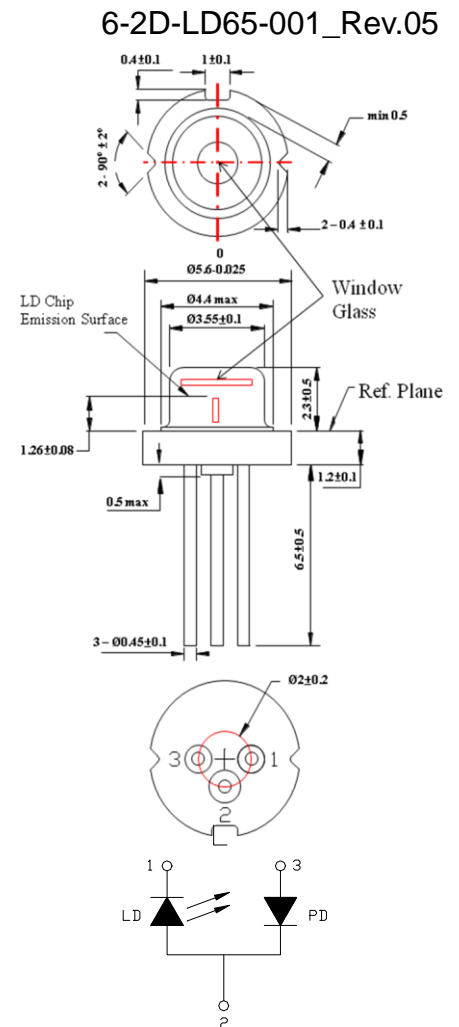
| Parameter | Symbol | Condition | Rating | Unit |
|----------------------|----------|-----------|---------|--------------------|
| Light output power | P_O | CW | 7 | mW |
| Reverse voltage (LD) | V_{RL} | - | 2 | V |
| Reverse voltage (PD) | V_{RD} | - | 30 | V |
| Forward current (PD) | I_{FD} | - | 10 | mA |
| Case temperature | T_C | - | -30~+70 | $^{\circ}\text{C}$ |
| Storage temperature | T_S | - | -40~+85 | $^{\circ}\text{C}$ |

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

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-----------------------------------|----------------------------|------|------|------|---------------|------------------------------------|
| Peak wavelength | λ | 645 | 655 | 660 | nm | $P_o=5\text{ mW}$ |
| Threshold current | I_{th} | - | 18 | 30 | mA | |
| Operating current | I_{op} | - | 30 | 42 | mA | $P_o=5\text{ mW}$ |
| Operating voltage | V_{op} | - | 2.2 | 2.5 | V | $P_o=5\text{ mW}$ |
| Differential efficiency | η | 0.2 | 0.45 | 0.6 | mW/mA | $P_o=3\text{-}5\text{mW}$ |
| Monitor current | I_m | 0.1 | 0.22 | 0.4 | mA | $P_o=5\text{mW}, V_{RD}=5\text{V}$ |
| Parallel divergence angle | $\theta_{//}$ | 7 | 8 | 9.5 | deg. | $P_o=5\text{ mW}$ |
| Perpendicular divergence angle | θ_{\perp} | 24 | 28 | 34 | deg. | |
| Parallel FFP deviation angle | $\Delta\theta_{//}$ | -3 | 0 | +3 | deg. | |
| Perpendicular FFP deviation angle | $\Delta\theta_{\perp}$ | -3 | 0 | +3 | deg. | |
| Emission point accuracy | $\Delta x\Delta y\Delta z$ | -80 | 0 | +80 | μm | |

• 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.



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