

# High Power Red Laser Diode

**ADL-63T01NP**

6-2D-LD63-086\_Rev.02

**635nm 0.7W TO9 (9mm) PKG**

## Features

High power  
High brightness  
Long lifetime

## Applications

Laser display  
PDT  
Biochemistry  
Military  
Medical/Life and health sciences  
Illumination

## Absolute maximum ratings

| Parameter            | Symbol   | Condition | Rating  | Unit |
|----------------------|----------|-----------|---------|------|
| Light output power   | $P_o$    | CW        | 800     | mW   |
| Reverse voltage (LD) | $V_{RL}$ | -         | 2       | V    |
| Case temperature     | $T_c$    | -         | -10~+30 | °C   |
| Storage temperature  | $T_s$    | -         | -40~+85 | °C   |

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

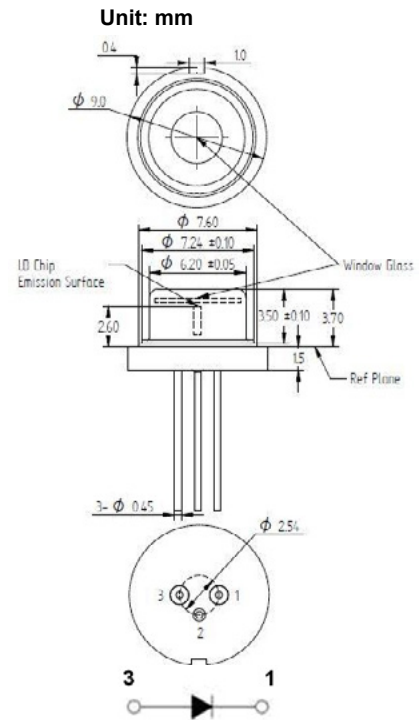
| Parameter                      | Symbol           | Min. | Typ. | Max. | Unit  | Conditions                   |
|--------------------------------|------------------|------|------|------|-------|------------------------------|
| Peak wavelength                | $\lambda$        | 628  | 638  | 648  | nm    | $P_o=700\text{mW}$           |
| Emitter size                   |                  | -    | 50   | -    | um    |                              |
| Polarization                   |                  |      | TM   |      |       |                              |
| Threshold current              | $I_{th}$         | -    | 500  | 600  | mA    |                              |
| Operating current              | $I_{op}$         | -    | 1400 | 1600 | mA    | $P_o=700\text{mW}$           |
| Operating voltage              | $V_{op}$         | -    | 2.5  | 3.0  | V     | $P_o=700\text{mW}$           |
| Differential efficiency        | $\eta$           | -    | 0.85 | -    | mW/mA | $P_o=20\text{-}200\text{mW}$ |
| Parallel divergence angle      | $\theta_{  }$    | -    | 7    | -    | deg   | $P_o=700\text{mW}$           |
| Perpendicular divergence angle | $\theta_{\perp}$ | -    | 22   | -    | deg   | $P_o=700\text{mW}$           |

\* Sufficient heat dissipation is required for CW operation.

### • 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 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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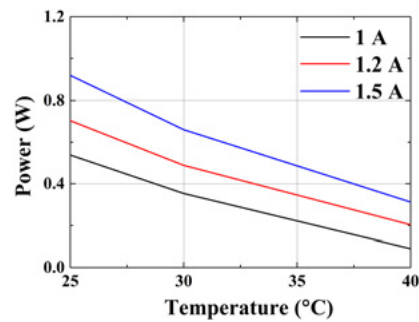
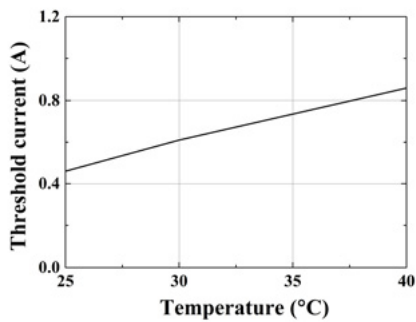
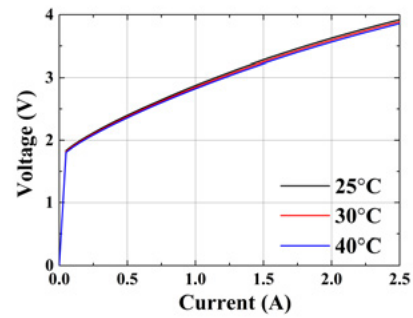
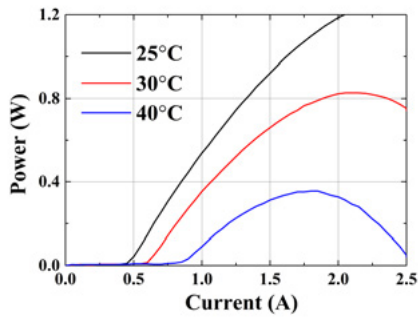
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