

# High Power Red Laser Diode

**ADL-63V0BTP**

6-2D-LD63-074\_Rev.01

**638nm 0.5W 25°C TO56 PKG**

## Features

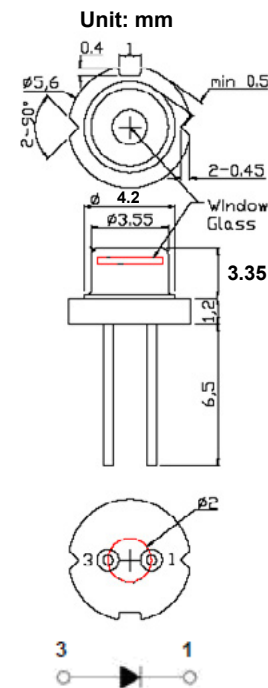
Highly power  
Higher brightness

## 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        | 500     | 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 ( $T_c=25^\circ\text{C}$ )

| Parameter                      | Symbol           | Min. | Typ. | Max. | Unit  | Conditions                   |
|--------------------------------|------------------|------|------|------|-------|------------------------------|
| Peak wavelength                | $\lambda$        | 632  | 638  | 644  | nm    | $P_o=0.5\text{W}$            |
| Polarization                   |                  |      | TM   |      |       |                              |
| Threshold current              | $I_{th}$         | -    | 200  | 300  | mA    |                              |
| Operating current              | $I_{op}$         | -    | 700  | 900  | mA    | $P_o=0.5\text{W}$            |
| Operating voltage              | $V_{op}$         | 1.9  | 2.5  | 3.0  | V     | $P_o=0.5\text{W}$            |
| Differential efficiency        | $\eta$           | -    | 1.0  | -    | mW/mA | $P_o=50\text{-}500\text{mW}$ |
| Parallel divergence angle      | $\theta_{//}$    | -    | 6    | -    | deg.  | $P_o=0.5\text{W}$            |
| Perpendicular divergence angle | $\theta_{\perp}$ | 25   | 36   | 45   | deg.  |                              |

\* 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 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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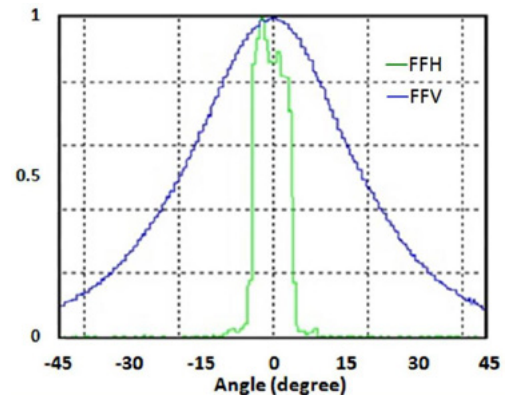
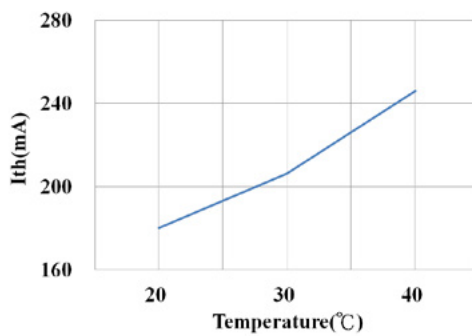
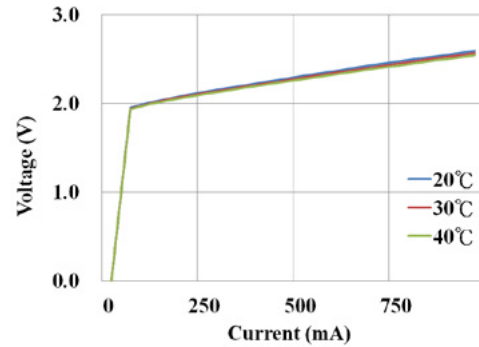
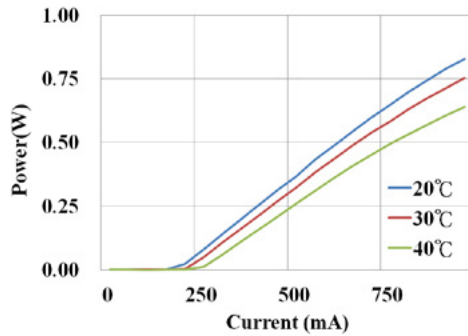
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