

# Infrared Laser Diode

## ADL-85Y51Y-F1

T6-2D-LD85-005\_Rev.00

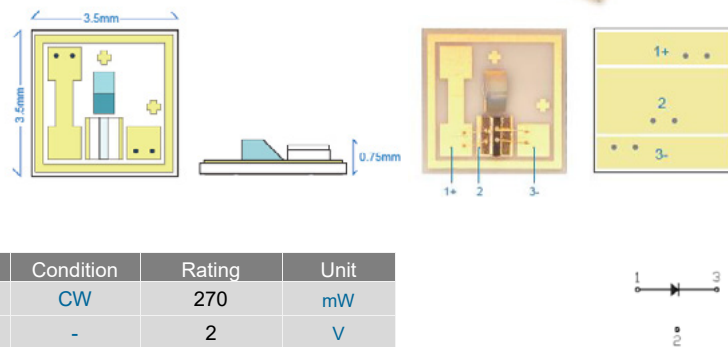
850nm 250mW

### Features

High wavelength stability at different temperature  
High power conversion efficiency  
Open package

### Applications

Moving sensor/Gesture  
Photoelectric sensors  
3D sensing  
ToF applications  
Security



### Absolute Maximum Ratings

| Parameter           | Symbol   | Condition | Rating | Unit |
|---------------------|----------|-----------|--------|------|
| Light Output Power  | $P_O$    | CW        | 270    | mW   |
| Reverse Voltage(LD) | $V_{RL}$ | -         | 2      | V    |
| Case Temperature    | TC       | -         | -10~60 | °C   |
| Storage Temperature | TS       | -         | -40~85 | °C   |

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

| Parameter                      | Symbol           | Min. | Typ. | Max. | Unit  | Condition                     |
|--------------------------------|------------------|------|------|------|-------|-------------------------------|
| Peak Wavelength                | $\lambda$        | 840  | 850  | 860  | nm    | $P_o=250\text{mW}$            |
| Threshold Current              | $I_{th}$         | -    | 68   | 90   | mA    |                               |
| Operating Current              | $I_{op}$         | -    | 310  | 360  | mA    | $P_o=250\text{mW}$            |
| Operating Voltage              | $V_{op}$         | -    | 1.9  | 2.4  | V     | $P_o=250\text{mW}$            |
| Differential Efficiency        | $\eta$           | -    | 1.0  | -    | mW/mA | $P_o=200\text{-}250\text{mW}$ |
| Parallel Divergence Angle      | $\theta_{//}$    | -    | 8    | -    | deg.  | $P_o=250\text{mW}$            |
| Perpendicular Divergence Angle | $\theta_{\perp}$ | -    | 17   | -    | deg.  |                               |

- \* Sufficient heat dissipation is required for CW operation.
- \* The characteristics was tested under cw condition.
- \* Divergence angle measurement was based on FWHM

### • 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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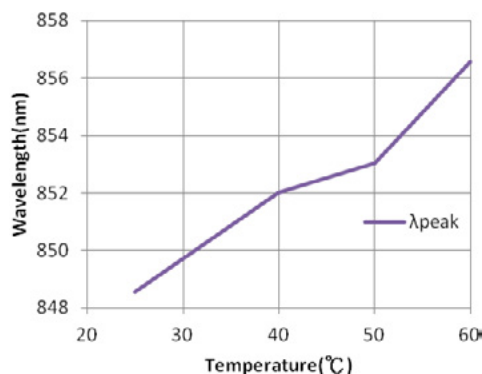
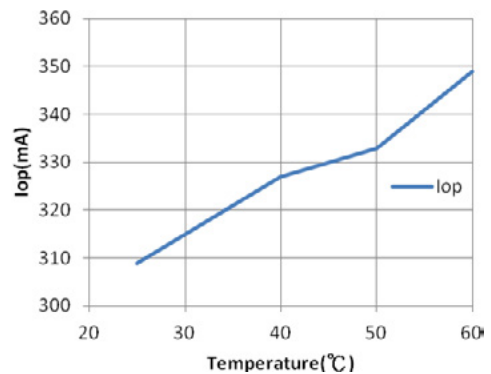
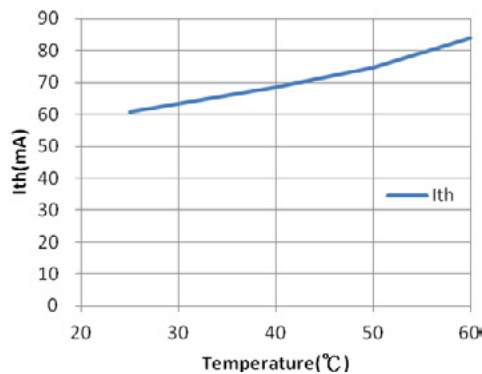
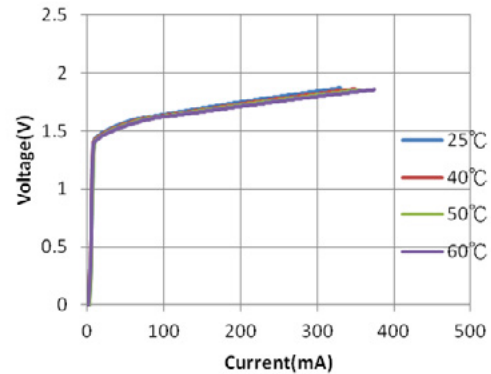
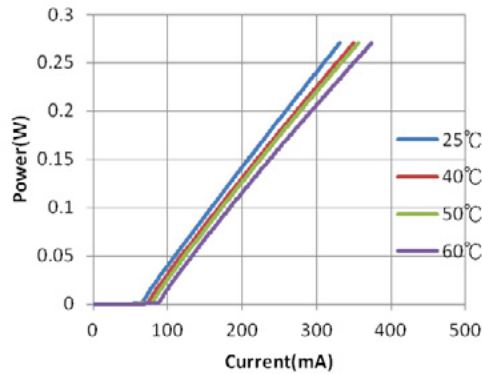
**Arima**  
LASERS

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# ADL-85Y51IY-F1

T6-2D-LD85-005\_Rev.00

850nm 250Mw



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