

Laser Diode



L638P040



Description

Thorlabs Ø5.6 mm, TO-18 can package discrete laser diode is a compact light source suited to many applications. Our lasers are fully compatible with our entire line of Laser Diode and TEC Controllers as well as our selection of Laser Diode Mounts and Collimation Solutions.

Specifications

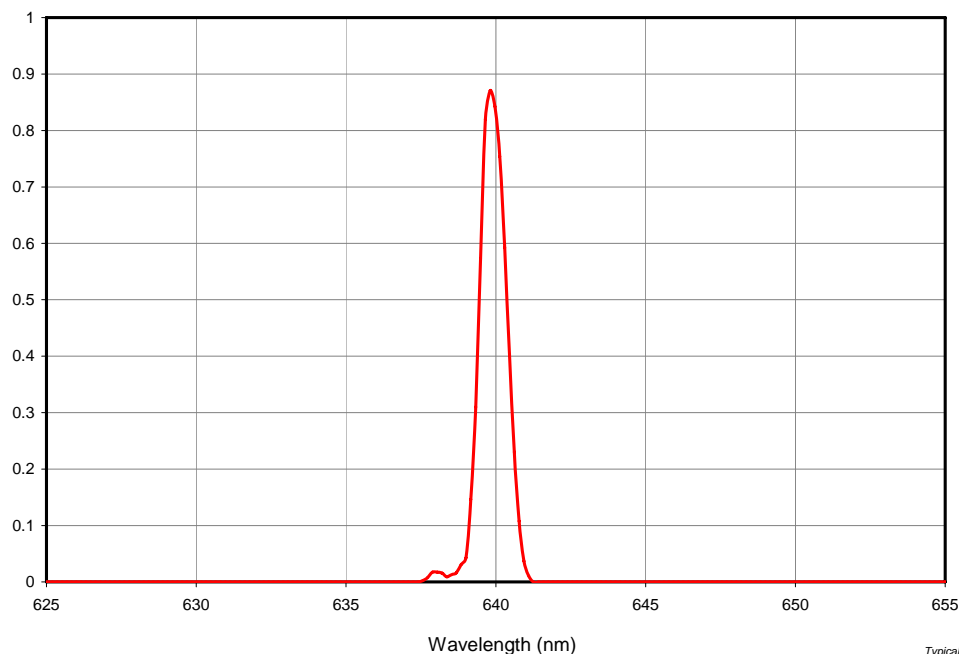
($P_o = 40 \text{ mW}$, $T_c = 25 \text{ }^\circ\text{C}$)

| Specification | Symbol | Max |
|--|-------------|-----------|
| LD Reverse Voltage, V | $V_{R(LD)}$ | 2 |
| PD Reverse Voltage, V | $V_{R(PD)}$ | 30 |
| Operation Case Temperature, $^\circ\text{C}$ | T_{op} | -10 to 50 |
| Storage Temperature, $^\circ\text{C}$ | T_{STG} | -40 to 85 |

| Specification | Symbol | Min | Typ | Max |
|--|------------------|-----|-----|-----|
| Wavelength, nm | λ_p | 628 | 638 | 648 |
| Output Power, mW | P_o | - | 40 | 45 |
| Threshold Current, mA | I_{th} | - | 45 | 65 |
| Operation Current, mA | I_{op} | - | 92 | 115 |
| Operating Voltage, V | V_{op} | - | 2.4 | 2.6 |
| Beam Divergence, deg | $\theta_{//}$ | 8 | 10 | 14 |
| | θ_{\perp} | 16 | 21 | 25 |
| Slope Efficiency, mW/mA | η | 0.4 | 0.5 | 0.7 |
| Monitor Current, mA | I_m | - | 0.3 | 0.6 |
| Astigmatism, μm | A_s | - | - | 15 |
| Beam Angle Deviation, deg | $\theta_{//}$ | -3 | - | 3 |
| | θ_{\perp} | -3 | - | 3 |
| Emission Point Accuracy, μm | ΔX | -80 | - | 80 |
| | ΔY | -80 | - | 80 |
| | ΔZ | -80 | - | 80 |



L638P040 Normalized Output Power

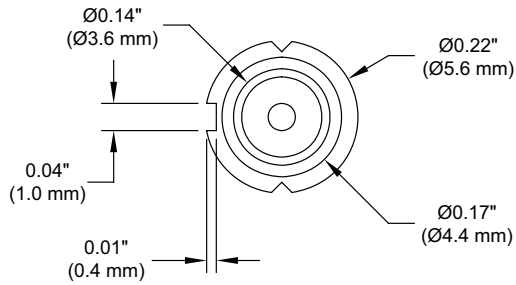


Typical values only

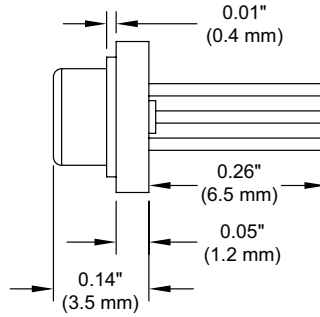
Drawings



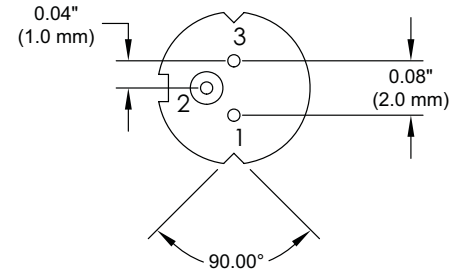
Top View



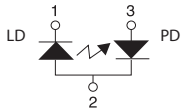
Side View



Bottom View



Pin Code 5A



Pin Description

- 1 Laser Cathode
- 2 Case Common
- 3 Monitor Diode Anode

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