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# RLT1070-10MG

- Infrared Radiation Source
- 1070 nm ± 10 nm
- 10 mW CW
- 5.6 mm TO package, flat window
- Built in Monitor PD

RoHS COMPLIANT Pb Pb-Free

## Description

**RLT1070-10MG** is a Laser Diode emitting at 1070 nm with rated output power of 10 mW CW at room temperature. The 5.6 mm TO package includes a cap and flat window, and contains a built in **monitor PD**.

## Maximum Ratings

| Parameter | Symbol | Values Min. | Values Max. | Unit |
|---|---|---|---|---|
| Optical Output Power | $P_O$ | | | mW |
| Operating Temperature | $T_{CASE}$ | -10 | +60 | °C |
| Storage Temperature | $T_{STG}$ | -40 | +80 | °C |
| Soldering Temperature | $T_{SOLD}$ | | | °C |

## Specifications

| Parameter | Symbol | Values Min. | Values Typ. | Values Max. | Unit |
|---|---|---|---|---|---|
| Central Wavelength | $\lambda_C$ | 1060 | 1070 | 1080 | nm |
| Optical Output Power | $P_O$ | - | 10 | 11 | mW |
| Emitting Area | WxH | | 3 x 1.5 | | µm |
| Threshold Current | $I_{TH}$ | - | 15 | 25 | mA |
| Forward Current | $I_{OP}$ | - | 25 | 35 | mA |
| Forward Voltage | $U_{OP}$ | - | 1.6 | 2.4 | V |
| Beam Divergence | ΘII | 6 | 8 | 12 | deg. |
| Beam Divergence | Θ⊥ | 20 | 25 | 30 | deg. |
| Spectral Width (FWHM) | Δλ | - | 1.5 | - | nm |
| Static Alignment | Δa II x | - | - | < ±3 | deg. |
| Positional Accuracy | ΔX, ΔY, ΔZ | - | - | ±100 | µm |
| Mode Structure | | | SM | | - |
| Slope Efficiency | η | - | 0.8 | - | mW/mA |
| Monitor Current | $I_M$ | 0.01 | - | 0.2 | mA |

* Wavelength drift under temperature change: - <0.3 nm/°C

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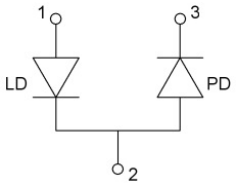
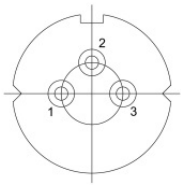
## Electrical Connection

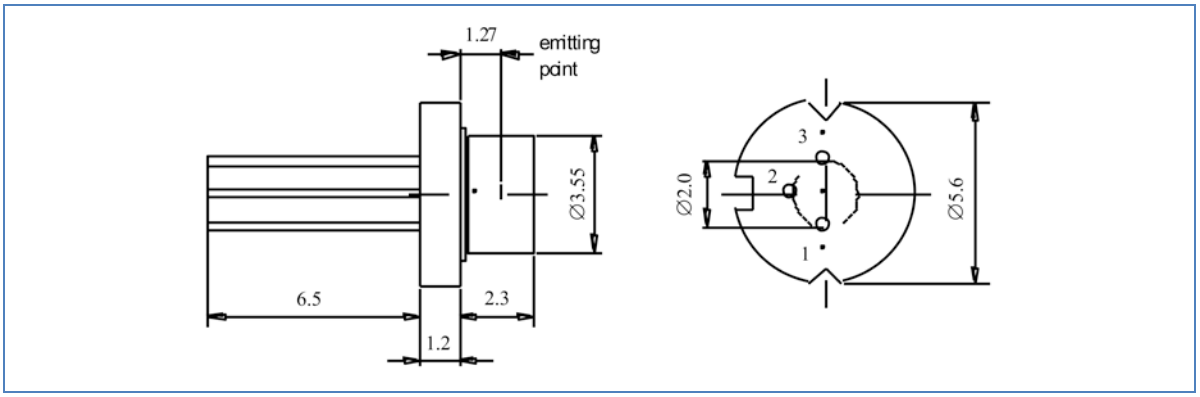
| Lead | Description |
|---|---|
| PIN 1 | LD Anode |
| PIN 2 | LD Cathode, PD Anode (case) |
| PIN 3 | PD Cathode |




Bottom View


## Drawing




All dimensions in mm

## Mounting Instruction

In order to maintain lifetime and stability of the laser diode it is essential to provide efficient heat management. Heat dissipation is possible through the base plate only. For long time stable operation proper contact between laser diode base plate and heat sink is mandatory.

## Safety Advice

This laser module emits highly concentrated ultra violet light which can be **hazardous to the human eye**. This module is classified as **Class 3B laser product** according to **IEC 60825-1** and **21 CFR Part 1040.10 Safety Standards**. Actual laser light emitted and precautions necessary strongly depend on mode of operation.


This product is comply with 21 CFR Part 1040.10