QD LASER

# QLF063A-4080T30/QLF063D-4080T30

640 nm 80mW FP LASER TO-CAN, Tc=30deg.C C00127-03 March 2021

## 1. DESCRIPTION

The QLF063A-4080T30 is a 640 nm quantum well laser device designed for visible laser application. The laser diode is mounted into a TO-56 header including a monitor PD and hermetic sealed with a flat glass cap.

## 2. FEATURES

- 640 nm FP-LD
- Operating temperature range=-10 to 30deg.C
- Φ5.6mm TO-CAN package
- Including monitor PD
- Two types of pin assignments: anode common type (QLF063A-4080T30)
  cathode common type (QLF063D-4080T30)

## 3. APPLICATIONS

- Industrial laser markers
- Measuring instruments

## 4. ABSOLUTE MAXIMUM RATING

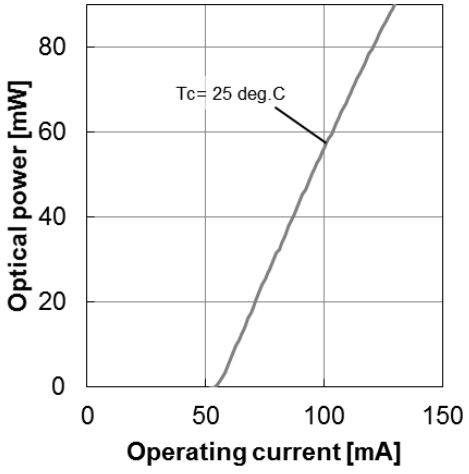
(CW operation, $T_c$ = 25°C, unless otherwise specified)

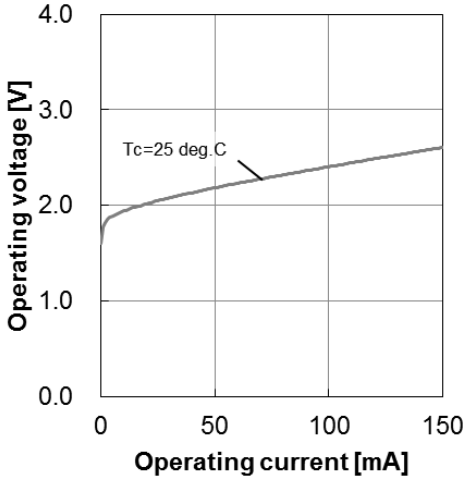
| PARAMETER | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Optical output power | $P_o$(CW) | 90 | mW |
| LD reverse voltage | $V_{RLD}$ | 2 | V |
| PD reverse voltage | $V_{RPD}$ | 30 | V |
| Operation temperature | $T_c$ | -10 to 30 | °C |
| Storage temperature | $T_{stg}$ | -40 to 85 | °C |

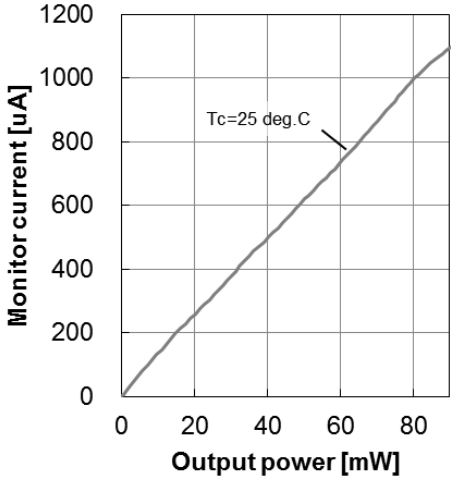
## 5. OPTICAL AND ELECTRICAL CHARACTERISTICS

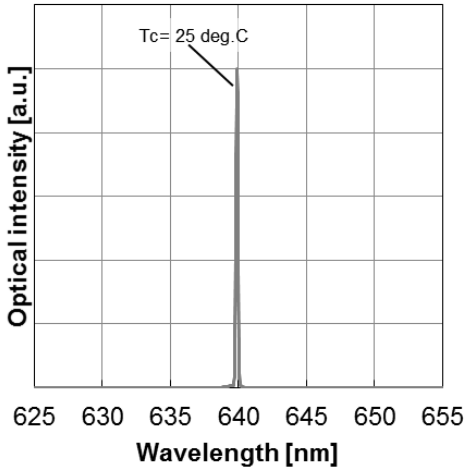
($T_c$ = 25°C, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Threshold current | $I_{th}$ | CW | - | 60 | 100 | mA |
| Operation current | $I_{op}$(CW) | CW, $P_o$=80mW | - | 135 | 160 | mA |
| Operation voltage | $V_{op}$ | CW, $P_o$=80mW | - | 2.4 | 3.2 | V |
| Slope efficiency | $\eta$ | CW, $P_o$=5 - 80mW | 0.8 | 1.0 | - | W/A |
| Monitor current | $I_m$ | CW, $P_o$=80mW, $V_{RD}$=5 V | 400 | 1000 | 1800 | μA |
| Peak wavelength | $\lambda_p$ | CW, $P_o$=80mW | 635 | 641 | 650 | nm |
| Far filed pattern horizontal | $\theta_h$ | CW, $P_o$=80mW | 4 | 7 | 13 | deg. |
| Far filed pattern vertical | $\theta_v$ | CW, $P_o$=80mW | 11 | 15 | 22 | deg. |
| Beam angle Horizontal | $d\theta_h$ | CW, $P_o$=80 mW | -3 | - | 3 | deg. |
| Beam angle vertical | $d\theta_v$ | CW, $P_o$=80 mW | -3 | - | 3 | deg. |

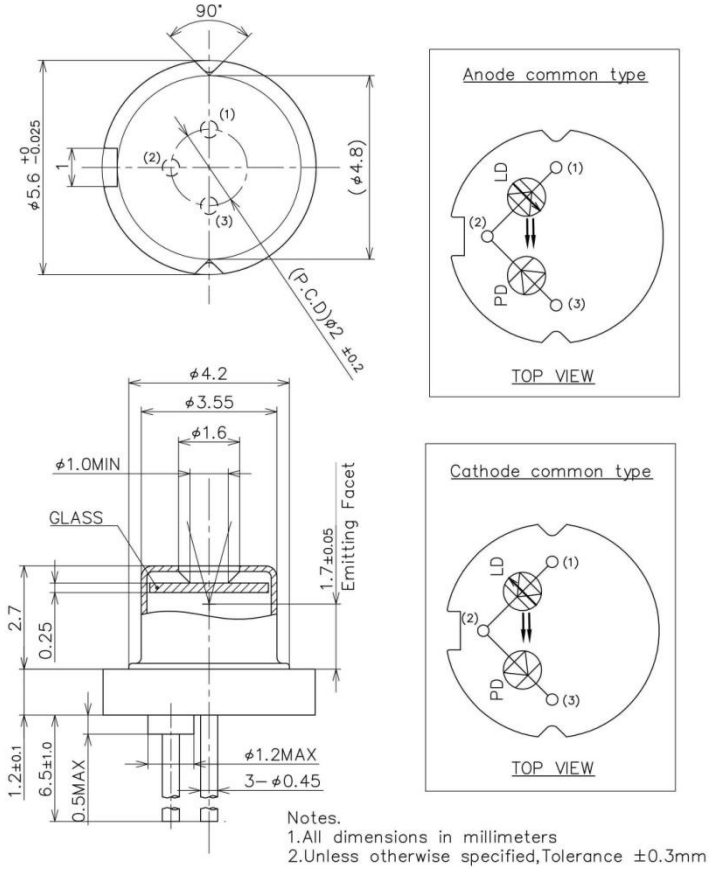


## 6. Outline Drawing




**Notice**

- Safety Information

This product is classified as Class 3B laser product, and complies with 21 CFR Part 1040.10.
Please do not take a look laser lighting in operations since laser devices may cause troubles to human eyes.
Please do not eat, burn, break and make chemical process of the products since they contain GaAs material.

- Handling products

Semiconductor lasers are easily damaged by external stress such as excess temperature and ESD.Please pay attention to handling products, and use within range of maximum ratings. QD Laser takes no responsibility for any failure or unusual operation resulting from improper handling, or unusual physical or electrical stress.

- RoHS

This product conforms to RoHS compliance related Directive (EU) 2015/863.

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