

# QLF063A-4030T50/QLF063D-4030T50

640 nm 30mW FP LASER TO-CAN

C00125-05 February 2019



## 1. DESCRIPTION

The QLF063A-4030T50/QLF063D-4030T50 are 640 nm quantum well laser devices 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 50deg.C
- Φ5.6mm TO-CAN package
- Including monitor PD
- Two types of pin assignments : Anode common type (QLF063A-4030T50)  
: Cathode common type (QLF063D-4030T50)

## 3. APPLICATIONS

- Industrial laser markers
- Measuring instruments

## 4. ABSOLUTE MAXIMUM RATING

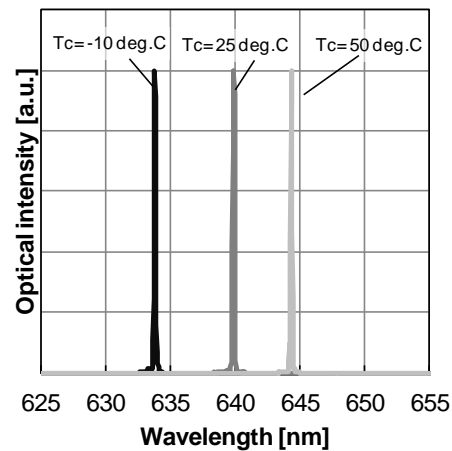
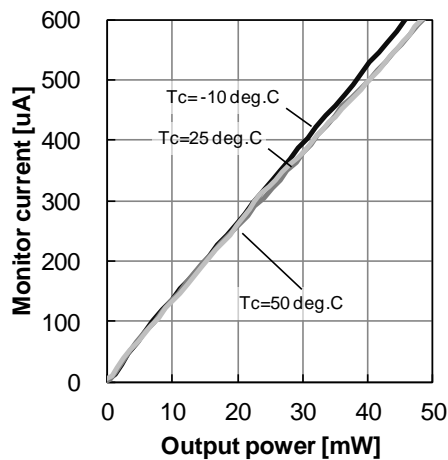
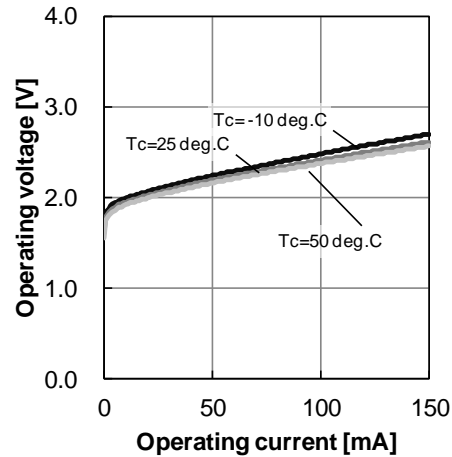
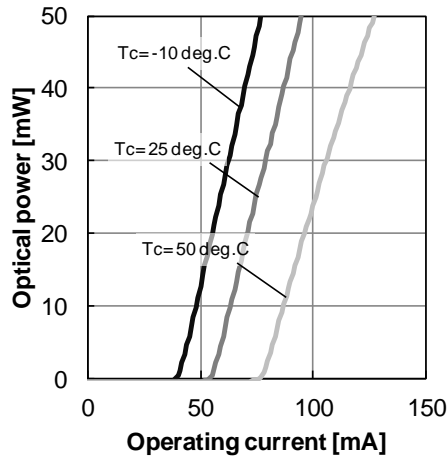
(CW operation,  $T_c = 25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Optical output power	$P_o(\text{CW})$	50	mW
LD reverse voltage	$V_{\text{RLD}}$	2	V
PD reverse voltage	$V_{\text{RPD}}$	30	V
Operation temperature	$T_c$	-10 to 50	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-40 to 85	$^\circ\text{C}$

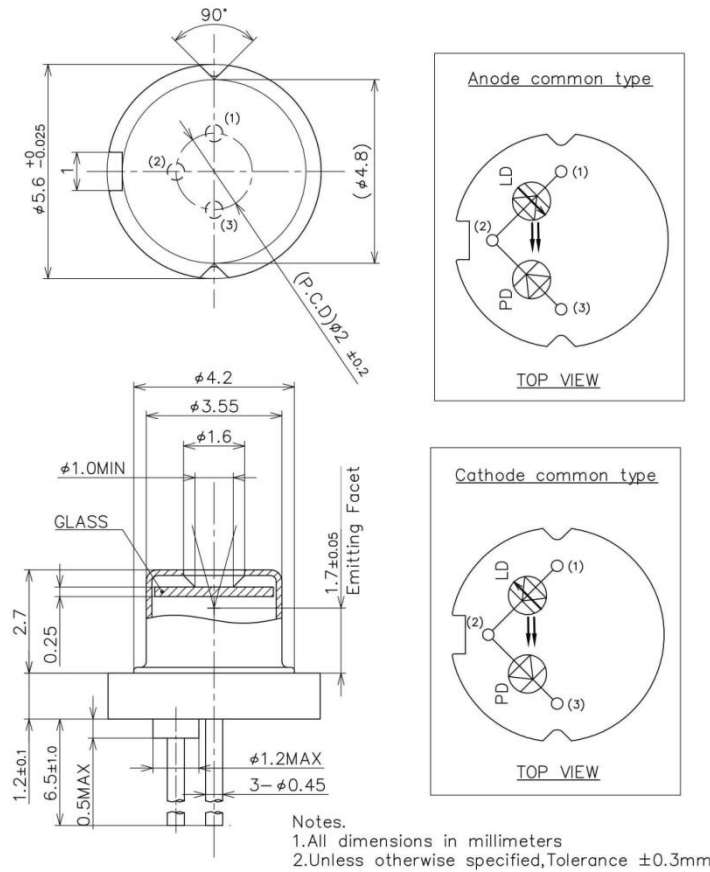
5. OPTICAL AND ELECTRICAL CHARACTERISTICS

( $T_c = 25^\circ\text{C}$ , 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, $P_o=30\text{mW}$	-	90	140	mA
Operation voltage	$V_{op}$	CW, $P_o=30\text{mW}$	-	2.3	3.0	V
Slope efficiency	$\eta$	CW, $P_o=5 - 30\text{mW}$	0.8	1.0	-	W/A
Monitor current	$I_m$	CW, $P_o=30\text{mW}$ , $V_{RD}=5\text{ V}$	50	300	700	$\mu\text{A}$
Peak wavelength	$\lambda_p$	CW, $P_o=30\text{mW}$	635	640	645	nm
Beam divergence horizontal	$\theta_h$	CW, $P_o=30\text{mW}$ (FWHM)	4	7	13	deg.
Beam divergence vertical	$\theta_v$	CW, $P_o=30\text{mW}$ (FWHM)	11	15	22	deg.
Beam angle Horizontal	$\Delta\theta_h$	CW, $P_o=30\text{ mW}$	-3	-	3	deg.
Beam angle vertical	$\Delta\theta_v$	CW, $P_o=30\text{ mW}$	-3	-	3	deg.
Emission point accuracy	$\Delta X, \Delta Y, \Delta Z$	-	-50	0	50	$\mu\text{m}$



**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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