

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

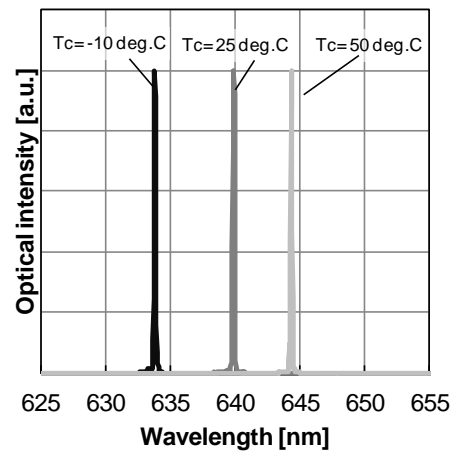
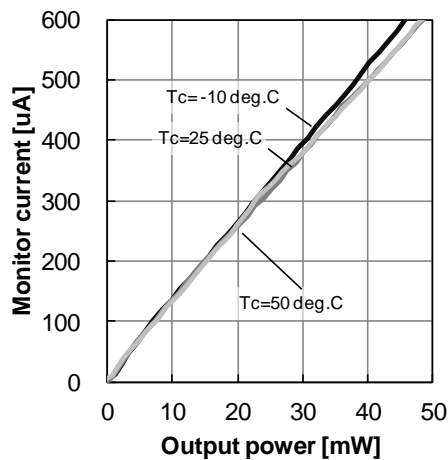
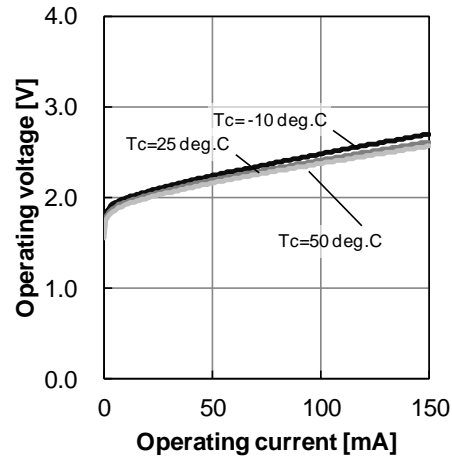
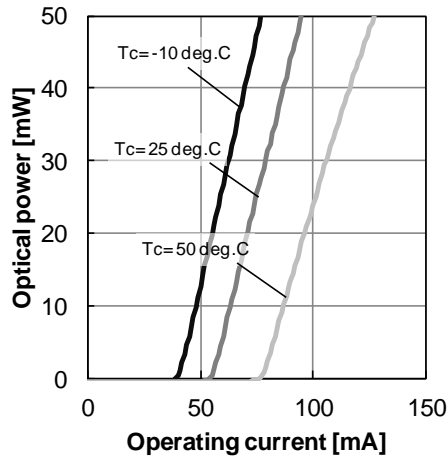
(CW operation, $T_c = 25^\circ\text{C}$, unless otherwise specified)

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

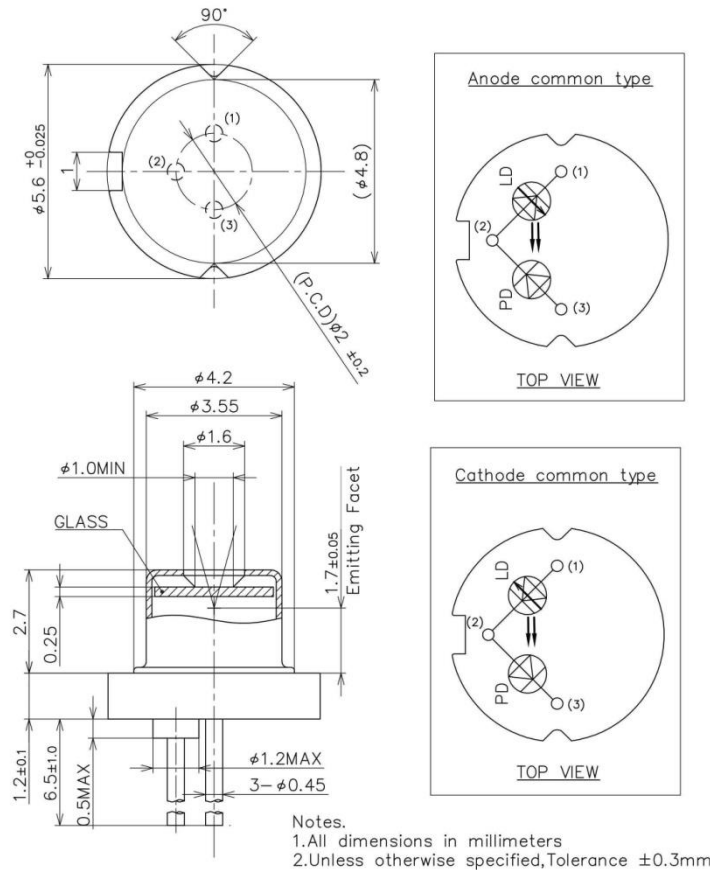
5. OPTICAL AND ELECTRICAL CHARACTERISTICS

($T_c = 25^\circ\text{C}$, 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	η	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	μA
Peak wavelength	λ_p	CW, $P_o=30\text{mW}$	635	640	645	nm
Beam divergence horizontal	θ_h	CW, $P_o=30\text{mW}$ (FWHM)	4	7	13	deg.
Beam divergence vertical	θ_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	μm



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.

QD Laser, Inc.

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