

# QDLASER

## QLF073A/QLF073D

785 nm FP LASER TO-CAN

C00066-07 April 2017



### 1. DESCRIPTION

The QLF073A/QLF073D are 785 nm quantum well laser devices designed for high output power 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

- 785 nm FP-LD
- $\Phi 5.6\text{mm}$  TO-CAN package
- High output power and high slope efficiency
- Including monitor PD
- Two types of pin assignments: anode common type (QLF073A)/cathode common type (QLF073D)

### 3. APPLICATIONS

- Particle inspections
- Measuring instruments

### 4. ABSOLUTE MAXIMUM RATING

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

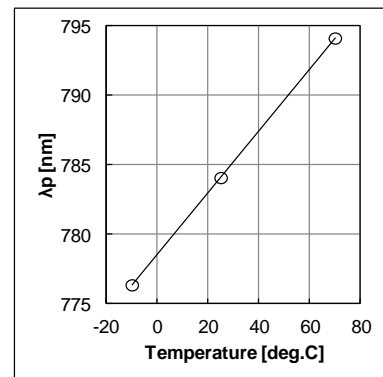
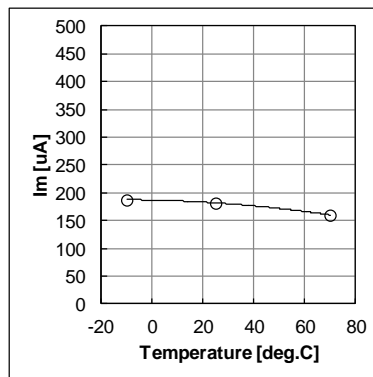
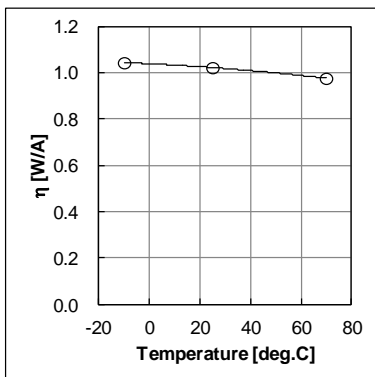
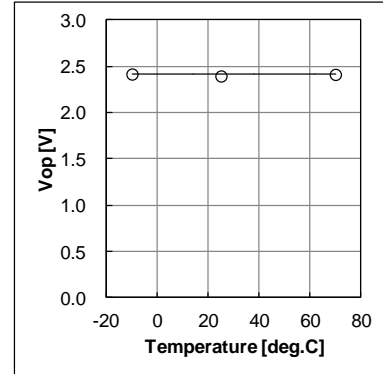
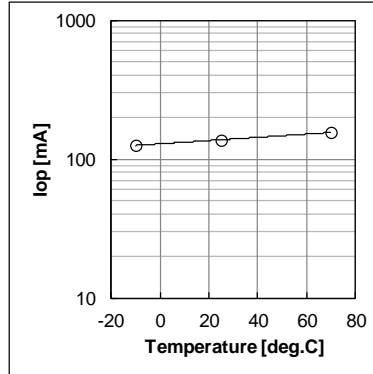
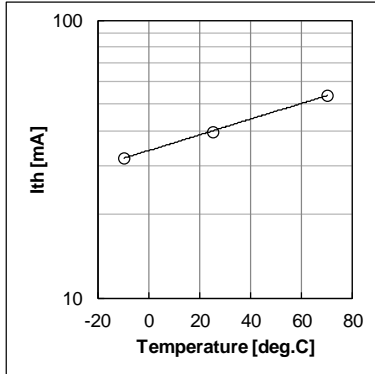
PARAMETER	SYMBOL	RATING	UNIT
Optical output power	$P_o(\text{CW})$	120	mW
	$P_o(\text{Pulse})^*$	280	mW
LD reverse voltage	$V_{\text{RLD}}$	2	V
PD reverse voltage	$V_{\text{RPD}}$	30	V
Operation temperature	$T_c$	-10 to 70	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-40 to 85	$^\circ\text{C}$

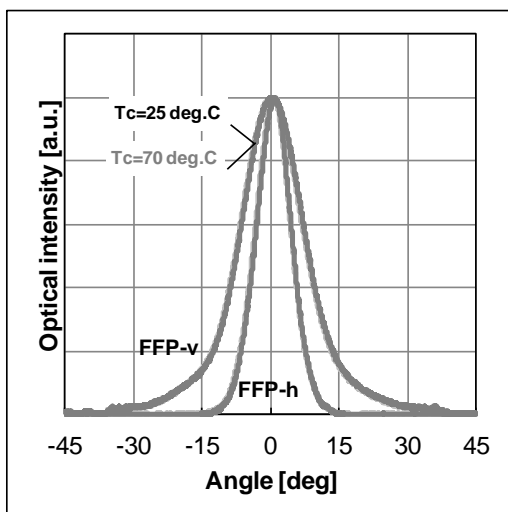
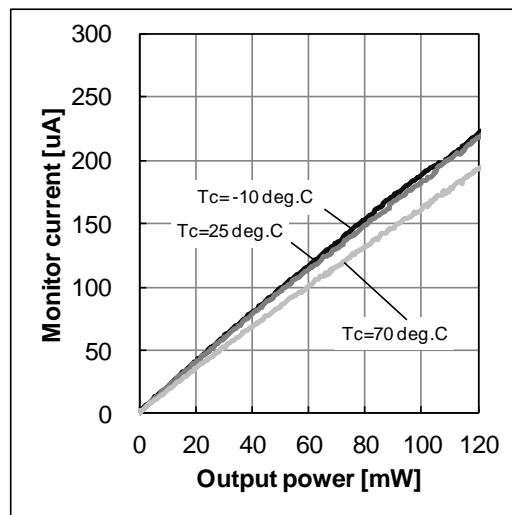
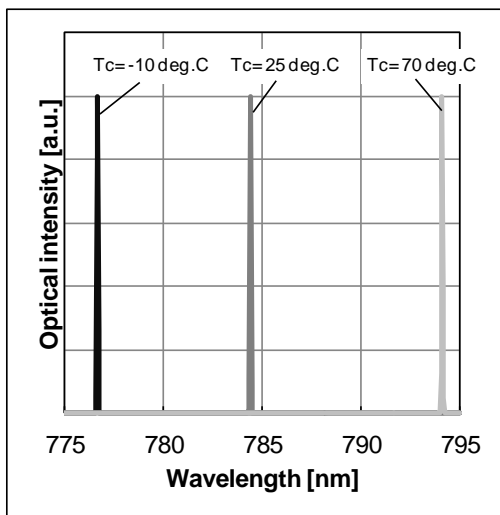
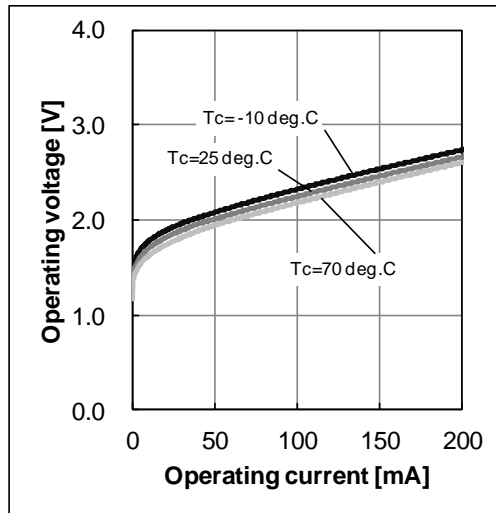
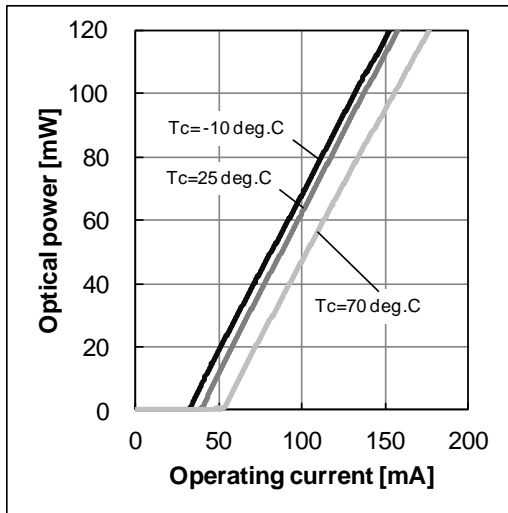
\*note : Pulse width < 50nsec, Duty < 50%

## 5. OPTICAL AND ELECTRICAL CHARACTERISTICS

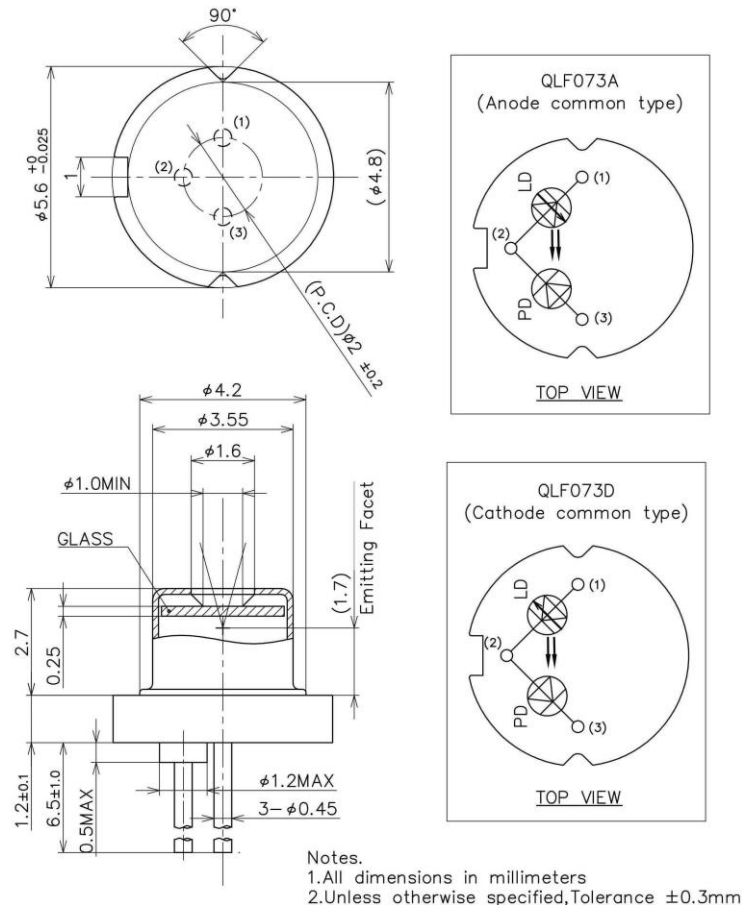
( $T_c = 25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Threshold current	$I_{th}$	CW	-	35	55	mA
Operation current	$I_{op}$	CW, $P_o=100\text{ mW}$	-	135	190	mA
Operation voltage	$V_{op}$	CW, $P_o=100\text{ mW}$	-	2.3	2.8	V
Slope efficiency	$H$	CW, $P_o=5 - 100\text{ mW}$	0.8	1.0	-	W/A
Monitor current	$I_m$	CW, $P_o=100\text{ mW}$ , $V_{RD}=5\text{ V}$	50	190	600	$\mu\text{A}$
Peak wavelength	$\lambda_p$	CW, $P_o=100\text{ mW}$	775	783	795	nm
Beam divergence horizontal	$\theta_h$	CW, $P_o=100\text{ mW}$ ( FWHM )	6	9	12	deg.
Beam divergence vertical	$\theta_v$	CW, $P_o=100\text{ mW}$ ( FWHM )	13	16	19	deg.
Beam angle Horizontal	$\Delta\theta_h$	CW, $P_o=100\text{ mW}$	-3	-	3	deg.
Beam angle vertical	$\Delta\theta_v$	CW, $P_o=100\text{ mW}$	-3	-	3	deg.





## 6. Outline Drawing



## 7. 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 at 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 EU Directive 2011/65/EU.

QD Laser, Inc.

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