

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
- Φ 5.6mm 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_{RLD}	2	V
PD reverse voltage	V_{RPD}	30	V
Operation temperature	T_c	-10 to 70	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to 85	$^\circ\text{C}$

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

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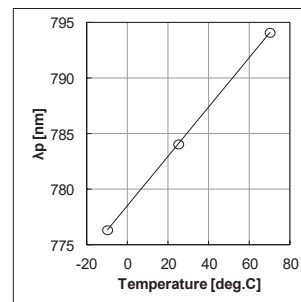
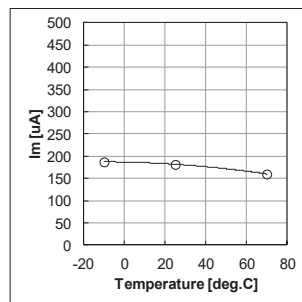
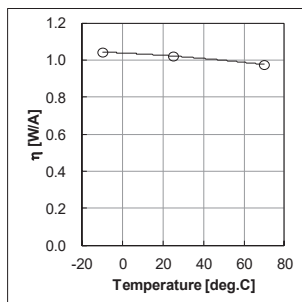
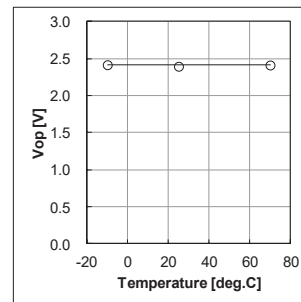
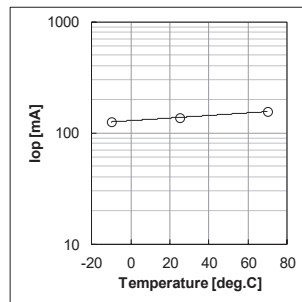
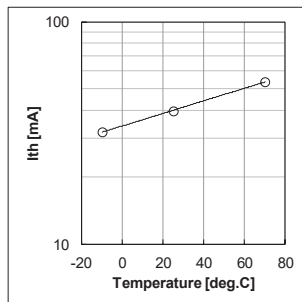
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5. OPTICAL AND ELECTRICAL CHARACTERISTICS

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

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



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