



QLF093A-40B8/QLF093D-40B8

940 nm 285 mW FP LASER TO-CAN

C00178-03 March 2018



1. DESCRIPTION

The QLF093x-40B8 series is a 940 nm quantum well laser device 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

- 940 nm FP-LD
- $\Phi 5.6$ mm TO-CAN package
- High output power of 285 mW and high slope efficiency
- Lateral multi-mode
- Including monitor PD
- Two types of pin assignments: anode common type (QLF093A-40B8) / cathode common type (QLF093D-40B8)

3. APPLICATIONS

- Industrial applications
- Sensing

4. ABSOLUTE MAXIMUM RATING

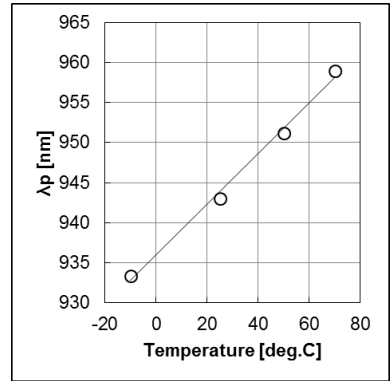
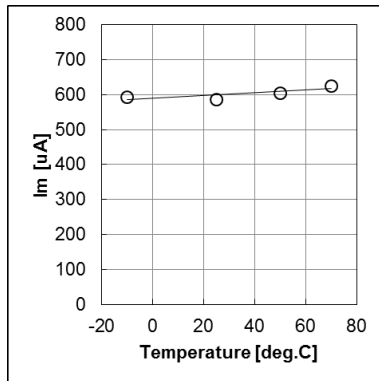
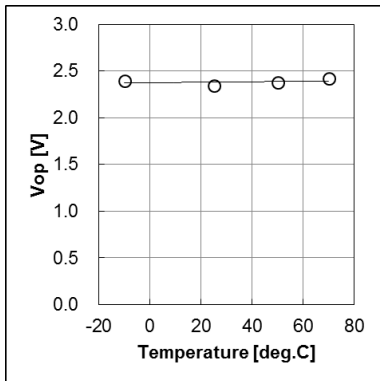
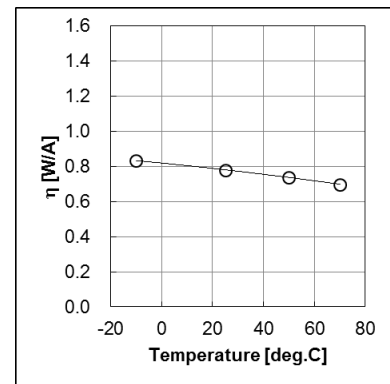
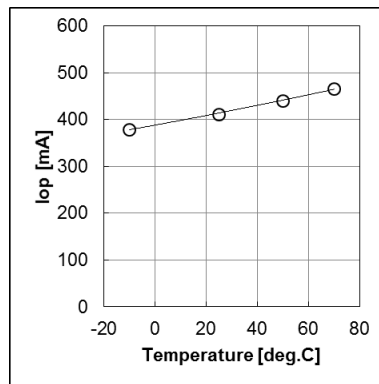
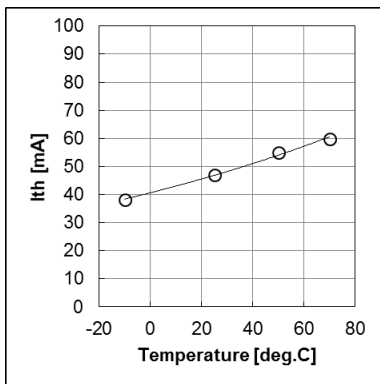
(CW operation, $T_c = 25^\circ\text{C}$, unless otherwise specified)

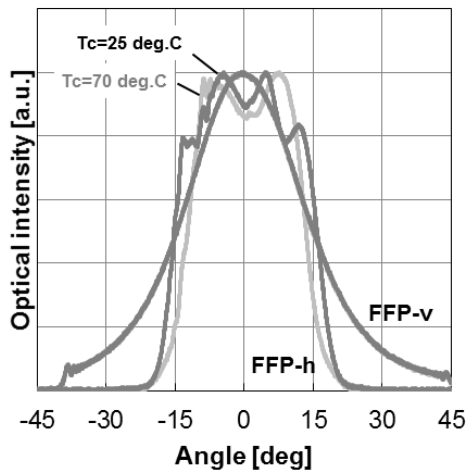
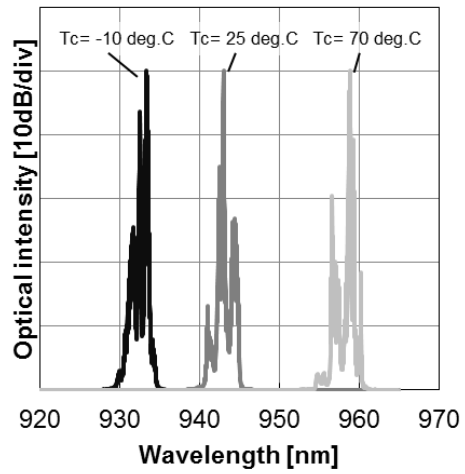
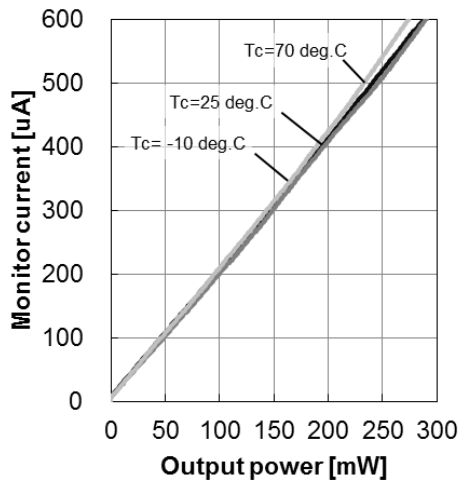
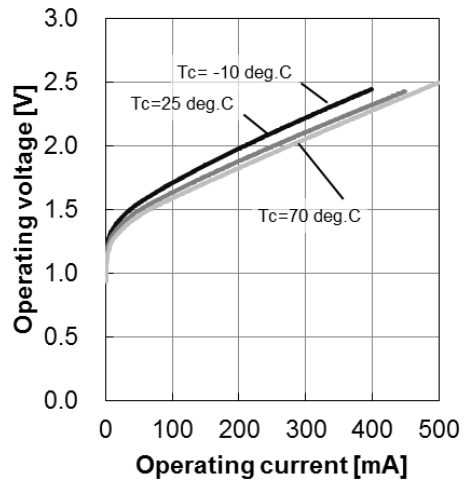
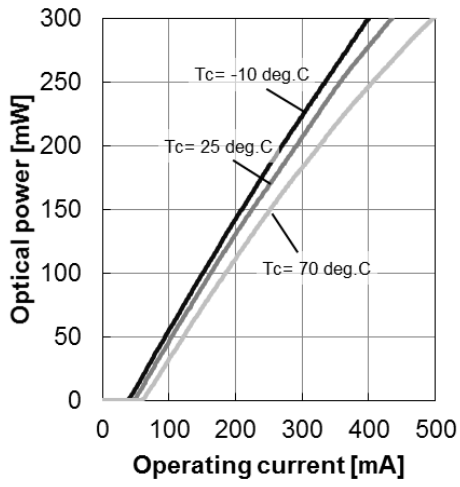
PARAMETER	SYMBOL	RATING	UNIT
Optical output power (CW)	P_o	295	mW
LD reverse voltage	V_{RLD}	2	V
PD reverse voltage	V_{RPD}	30	V
Operation temperature	T_c	-10 to 70	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to 85	$^\circ\text{C}$

5. OPTICAL AND ELECTRICAL CHARACTERISTICS

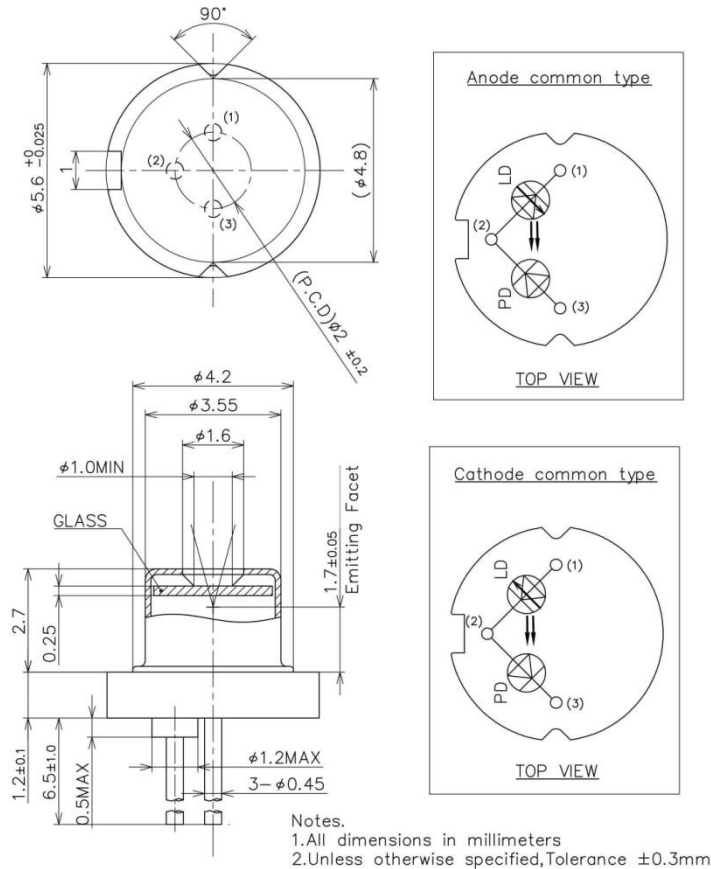
(T_c = 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Threshold current	I _{th}	CW	-	50	80	mA
Operation current	I _{op}	CW, P _o =285 mW	-	390	430	mA
Operation voltage	V _{op}	CW, P _o =285 mW	-	2.2	2.7	V
Slope efficiency	η	CW, P _o =5 - 285 mW	0.65	0.8	-	W/A
Monitor current	I _m	CW, P _o =285 mW, V _{RD} =5 V	-	600	-	μA
Peak wavelength	λ _p	CW, P _o =285 mW	920	940	960	nm
Far filed pattern horizontal	θ _h	CW, P _o =285 mW	26	30	34	deg.
Far filed pattern Vertical	θ _v	CW, P _o =285 mW	25	31	37	deg.
Beam angle Horizontal	Δθ _h	CW, P _o =285 mW	-3	-	3	deg.
Beam angle Vertical	Δθ _v	CW, P _o =285 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.

Contact : info@qdlaser.com <http://www.qdlaser.com>

Copyright 2015-2018 All Rights Reserved by QD Laser, Inc.

Keihin Bldg. 1F 1-1 Minamiwatarida-cho, Kawasaki-ku, Kawasaki, Kanagawa Zip 210-0855 Japan

All company or product names mentioned herein are trademarks or registered trademarks of their respective owners. Information provided in this data sheet is accurate at time of publication and is subject to change without advance notice.