

# QDLASER

## QLF1335-AD

1300 nm FP LASER TO-CAN

**Preliminary**

C00051-02 May 2011



### 1. DESCRIPTION

The QLF1335-AD is 1300 nm quantum dot laser diode device for use in extremely high temperature environment. The laser is mounted into a TO-56 header including a monitor PD for optical power control and hermetic sealed with a lens cap. Since quantum dot technologies are equipped with active layers of the device, it realizes excellent temperature characteristics and low power consumptions.

### 2. FEATURES

- 1300 nm FP-LD
- Wide temperature operation: -25 to 150deg.C
- $\Phi$ 5.6mm TO-CAN package

### 3. APPLICATION

- High temperature use

### 4. ABSOLUTE MAXIMUM RATING

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

PARAMETER	SYMBOL	RATING	UNIT
Light Output Power	$P_o$	10	mW
LD Forward Current	$I_F$	100	mA
LD Reverse Voltage	$V_{RLD}$	2	V
PD Forward Current	$I_{FPD}$	2	mA
PD Reverse Current	$I_{RPD}$	5	mA
PD Reverse Voltage	$V_{RPD}$	10	V
Operation Temperature ( $T_c$ )	$T_c$	-25 to 150	$^\circ\text{C}$
Storage Temperature	$T_{slg}$	-40 to 85	$^\circ\text{C}$
Lead Soldering Temperature (5 s)	$T_{sls}$	230	$^\circ\text{C}$

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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, 25deg.C	-	6	15	mA
		CW, 150 deg.C	-	18	25	mA
Operation current	$I_{op}$	CW, $P_o=4$ mW, 25deg.C	-	28	40	mA
		CW, $P_o=2$ mW, 150deg.C	-	40	50	mA
Operation voltage	$V_{op}$	CW, $P_o=4$ mW	-	1.3	1.6	V
Slope efficiency	$\eta$	CW, 25deg.C	0.18	0.22	-	W/A
		CW, 150deg.C	0.10	0.14	-	W/A
Center wavelength	$\lambda_c$	CW, $P_o=4$ mW, 25deg.C	1250	1293-	1310	nm
Spectral width	$\Delta\lambda$	CW, $P_o=4$ mW, RMS(-20dB), 25deg.C	-	2.8	4	nm
Monitor current	$I_m$	CW, $P_o=4$ mW, $V_{RD}=5$ V	50	700	1000	$\mu\text{A}$
Focal length	$D_f$	CW, $P_o=4$ mW, SI10/125	6.0	6.5	7.0	mm

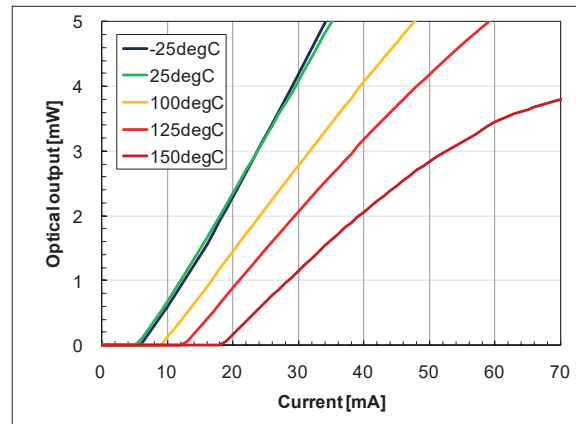


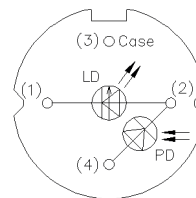
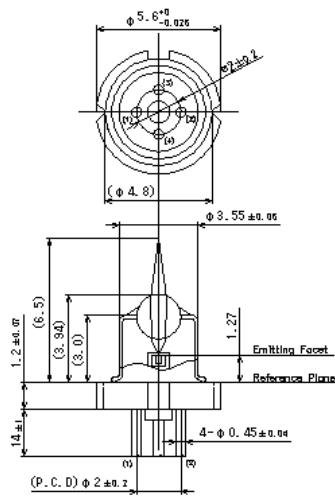
Fig. Typical L-I curves

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## 6. OUTLINE DRAWING



TOP VIEW

All dimensions in millimeters

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### 7. NOTICE

- Warranty period of products

Warranty period of products is one year from packing date.

- Safety Information

This product is classified as Class 1M 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

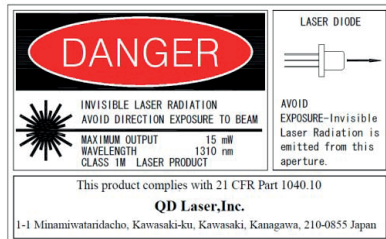
Semiconductor lasers are easily damaged by external stress such as excess temperature and ESD.

Please pay attention to handling products, and use within range of maximum ratings.

QDL 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 2002/95/EC.



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