

# QDLASER

## QLD123F-4010

1240 nm DFB Laser TO-CAN

C00085-04 Aug. 2013



### 1. DESCRIPTION

The QLD123F-4010 is a 1240-nm distributed feedback (DFB) laser suitable for gas sensing applications. The laser is mounted into a TO-56 header and hermetically sealed with a flat-type cap.

### 2. FEATURES

- Single-longitudinal-mode operation at 1240 nm
- CW and pulsed operation
- $\Phi 5.6\text{mm}$  TO-CAN package

### 3. APPLICATIONS

- Gas analysis
- Optical Time Domain Reflectometer (OTDR)

### 4. ABSOLUTE MAXIMUM RATINGS

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

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power	$P_O$	30	mW
LD Forward Current	$I_F$	200	mA
LD Reverse Voltage	$V_{RLD}$	2	V
Operating Temperature	$T_c$	0 to 60	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to 85	$^\circ\text{C}$
Lead Soldering Temperature (5 s)	$T_{sld}$	260	$^\circ\text{C}$

## 5. OPTICAL AND ELECTRICAL CHARACTERISTICS

(Pulsed operation\*, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	T <sub>c</sub>	MIN	TYP	MAX	UNIT
Threshold Current	I <sub>th</sub>	-	0°C	-	4	10	mA
			25°C	-	4	10	
			60°C	-	7	15	
Optical Output Power	P <sub>O</sub>	I <sub>op</sub> = 150 mA	60°C	15	17	-	mW
Operating Current	I <sub>op</sub>	P <sub>O</sub> = 10 mW	0°C	-	50	90	mA
			25°C	-	50	90	
			60°C	-	65	100	
Operating Voltage	V <sub>op</sub>	P <sub>O</sub> = 10 mW	0°C	-	1.53	1.9	V
			25°C	-	1.47	1.9	
			60°C	-	1.46	1.9	
Peak Wavelength	λ <sub>p</sub>	P <sub>O</sub> = 10 mW	0°C	1234	1237	1239	nm
			25°C	1237	1239	1241	
			60°C	1240	1242	1245	
Side Mode Suppression Ratio	SMSR	P <sub>O</sub> = 10 mW	0°C	30	40	-	dB
			25°C	30	40	-	
			60°C	30	40	-	

\* Pulse width = 10 μs, Duty = 1%

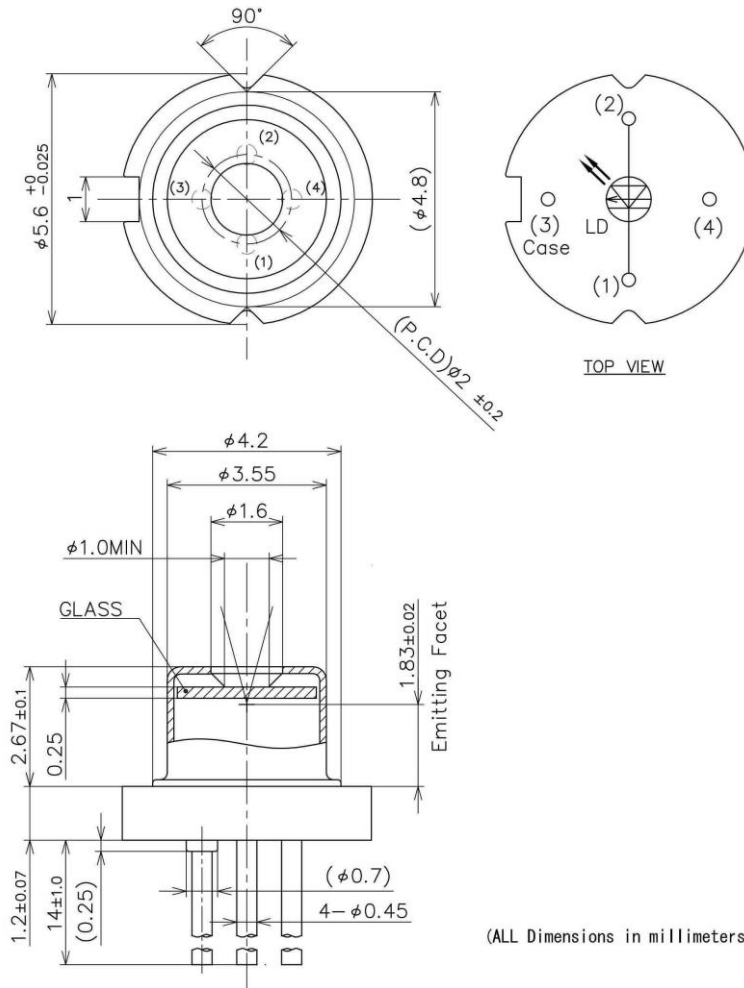
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## 6. OUTLINE DRAWINGS



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## 7. NOTICES

- Safety Information

This product is classified as Class 3R 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

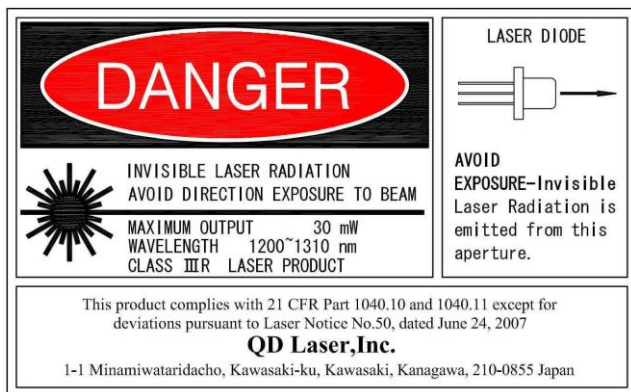
Semiconductor lasers are easily damaged by external stress such as excess temperature and ESD.

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 EU Directive 2002/95/EC.



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