

# QDLASER

## QLD1061-7030 series

1070 nm 30 mW DFB Laser Butterfly Package

Preliminary

C00087-03 August 2015



### 1. DESCRIPTION

The QLD1061-7030 series is a 1070-nm distributed feedback (DFB) laser for use in scientific and industrial applications. The laser is assembled into a 14-pin butterfly package with an optical isolator, a monitor PD and a thermo-electric cooler.

### 2. FEATURES

- Single longitudinal mode operation at 1070 nm
- Fiber-pigtailed 14-pin butterfly package with a TEC
- Optical isolator integration
- Polarization maintaining fiber integration
- CW/Pulse operation

### 3. APPLICATIONS

- Seed source for fiber laser
- Sensing

### 4. ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power	$P_f$	50	mW
LD Forward Current	$I_f$	250	mA
LD Reverse Voltage	$V_{RLD}$	2	V
TEC Drive Current	$I_{TEC}$	2	A
TEC Drive Voltage	$V_{TEC}$	4.3	V
Operation Temperature	$T_c$	0 to 60	°C
Storage Temperature	$T_{stg}$	-40 to 85	°C
Lead Soldering Temperature (5 s)	$T_{sld}$	230	°C

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## 5. OPTICAL AND ELECTRICAL CHARACTERISTICS

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

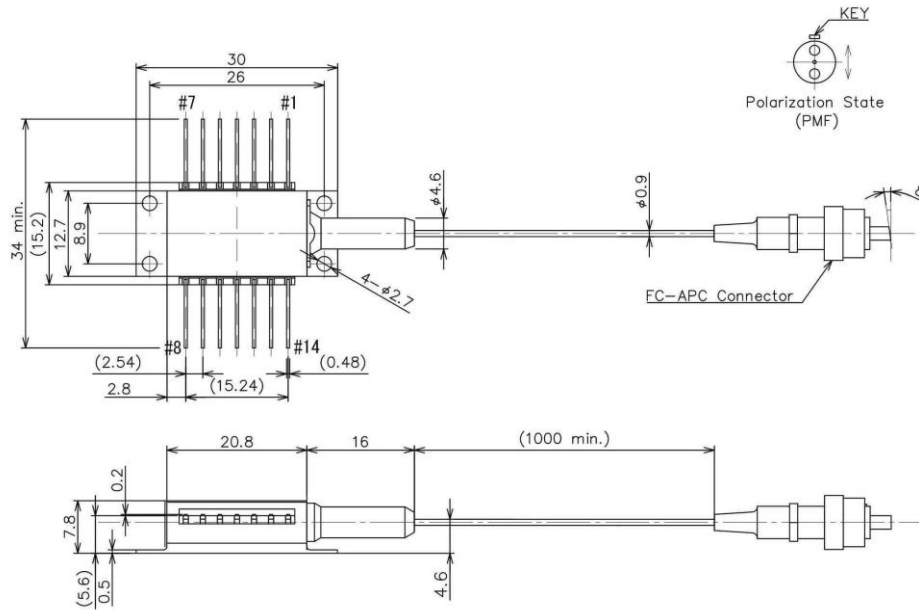
PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	$\lambda_p$	CW, $P_f=30$ mW	1065*	1070	1075*	nm
Temperature Coefficient of $\lambda_p$	$d\lambda_p/dT$	CW	-	0.08	-	nm/K
Current Coefficient of $\lambda_p$	$d\lambda_p/dI$	CW	-	0.01	-	nm/mA
Fiber Output Power	$P_f$	CW	30	-	-	mW
Threshold Current	$I_{th}$	CW	-	30	-	mA
Operation Current	$I_{op}$	CW, $P_f=30$ mW	-	150	200	mA
Operation Voltage	$V_{op}$	CW, $P_f=30$ mW	-	1.7	2.0	V
Sidemode Suppression Ratio	SMSR	CW, $P_f=30$ mW	-	40	-	dB
Polarization Extinction Ratio	PER	CW, $P_f=30$ mW	15	20	-	dB
Monitor PD Current	$I_m$	CW, $P_f=30$ mW	100	300	1000	$\mu\text{A}$
Thermistor Resistance	$R_{th}$	$T_{LD} = 25^{\circ}\text{C}$ , $B=3900$ K	9.5	10	10.5	$\text{k}\Omega$

\*Peak wavelength tolerance of  $\pm 2$  nm is available as an option.

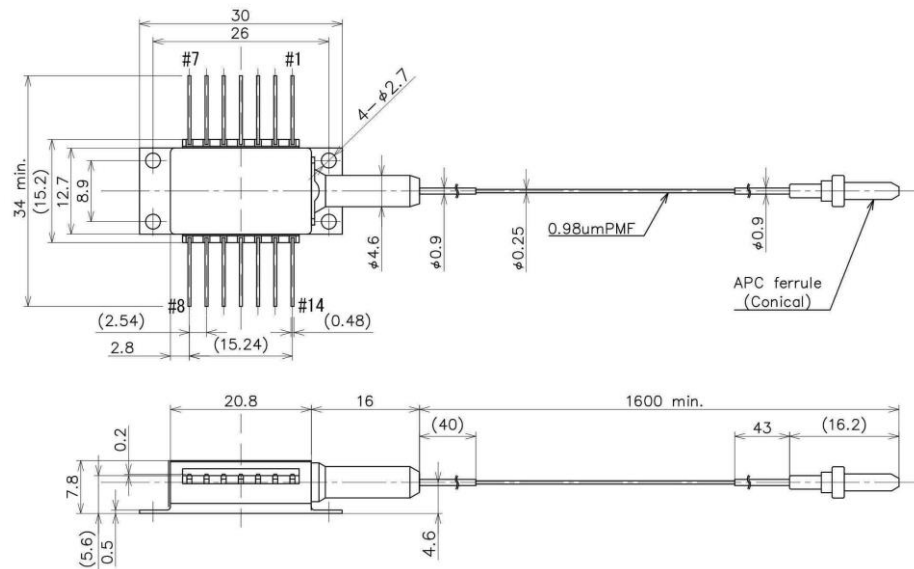
## 6. PRODUCT PART NUMBER

Part Number	Fiber Type	Fiber Diameter	Connector
QLD1061-7030	Polarization maintaining fiber	900 $\mu\text{m}$	FC/APC
QLD1061-7030-11		250 $\mu\text{m}$	Ferrule

## 7. OUTLINE DRAWING



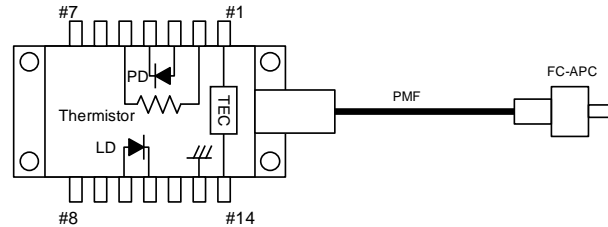
(a) 900 μm fiber diameter and FC/APC connector type (QLD1061-7030)



(b) 250 μm fiber diameter and ferrule type (QLD1061-7030-11)

## 8. PIN CONFIGURATION

No.	Description	No.	Description
1	TEC (+)	8	NC
2	Thermistor	9	NC
3	PD Anode	10	Laser Anode
4	PD Cathode	11	Laser Cathode
5	Thermistor	12	NC
6	NC	13	Case Ground
7	NC	14	TEC (-)



## 9. 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.

<p><b>DANGER</b></p> <p>INVISIBLE LASER RADIATION AVOID DIRECTION EXPOSURE TO BEAM</p> <p>MAXIMUM OUTPUT 300 mW WAVELENGTH 1000~1200 nm CLASS 3B LASER PRODUCT</p>	<p>LASER DIODE</p> <p>AVOID EXPOSURE-Invisible Laser Radiation is emitted from this aperture.</p>
<p>This product complies with 21 CFR Part 1040.10</p> <p><b>QD Laser, Inc.</b></p> <p>1-1 Minamiwataridacho, Kawasaki-ku, Kawasaki, Kanagawa, 210-0855 Japan</p>	

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