

QDLASER

QLD106D-64D0

1064 nm 400mW Pulsed DFB Laser Butterfly Package

Preliminary

C00106-01 May 2013



1. DESCRIPTION

The QLD106D-64D0 is a high power pulsed 1064-nm distributed feedback (DFB) laser for use in seeder for fiber lasers and sensing 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 1064 nm
- High peak output power of 400mW under pulsed operation
- 1-10nsec pulse width available
- Fiber-pigtailed 14-pin butterfly package with a TEC
- Optical isolator integration
- Polarization maintaining fiber integration

3. APPLICATION

- Seeder for fiber lasers
- Sensing

4. ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power (CW)	P_f	50	mW
LD Forward Current (CW)	I_f	250	mA
Peak Output power (Pulse 10nsec/1MHz)	P_{f_pulse}	600	mW
LD Peak Current (Pulse 10nsec/1MHz)	I_{F_pulse}	2	A
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

5. OPTICAL AND ELECTRICAL CHARACTERISTICS

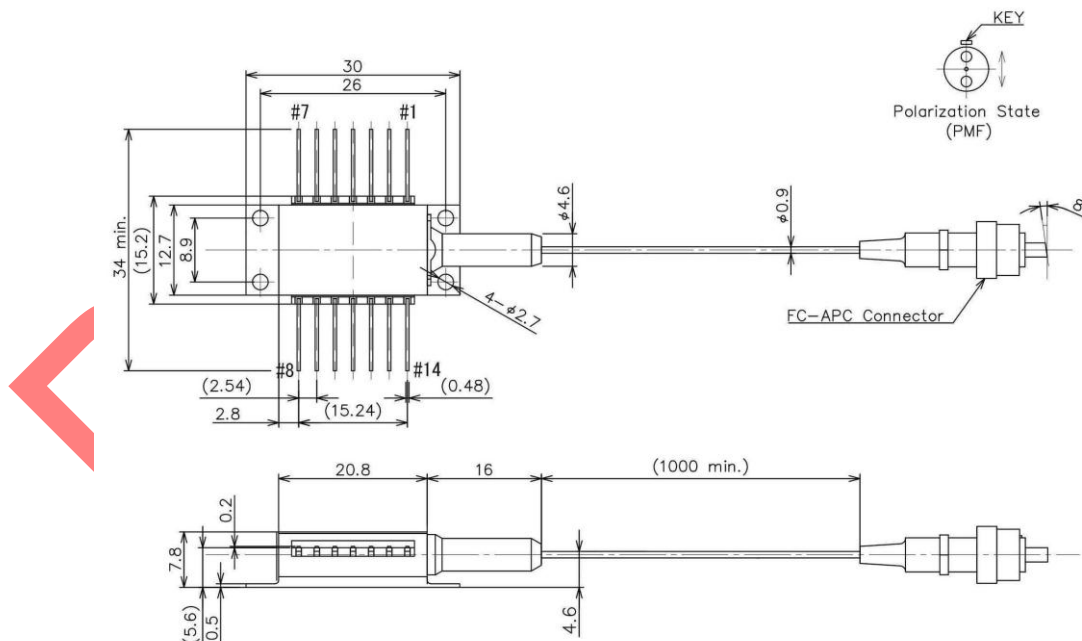
($T_{LD} = 25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	λ_p	CW, $P_f=40$ mW	1059*	1064	1069*	nm
Temperature Coefficient of λ_p	$d\lambda_p/dT$	CW / Pulsed	-	0.08	-	nm/K
Threshold Current	I_{th}	CW / Pulsed	-	50	-	mA
CW Fiber Output Power	P_f	CW, $I_f=150$ mA	-	40	-	mW
CW Operation Voltage	V_{op}	CW, $P_f=40$ mW	-	1.8	-	V
Pulsed Peak Output Power	P_{f_peak}	Pulsed, $I_{f_peak}=1.6$ A	400	500	-	mW
Pulse Width	t_{pw}	Pulsed	1	-	10**	nsec
Duty Cycle	D.C.	Pulsed	-	-	1**	%
Sidemode Suppression Ratio	SMSR	CW, $P_f=40$ mW	30	40	-	dB
		Pulsed 5nsec/100kHz	25	30	-	dB
Polarization Extinction Ratio	PER	CW	15	20	-	dB
Monitor PD Current	I_m	CW, $P_f=40$ mW	-	300	-	μA
Thermistor Resistance	R_{th}	$T_{LD} = 25^{\circ}\text{C}$, $B=3900\text{K}$	9.5	10	10.5	$\text{k}\Omega$

(*) Tighter wavelength tolerance is available as an option.

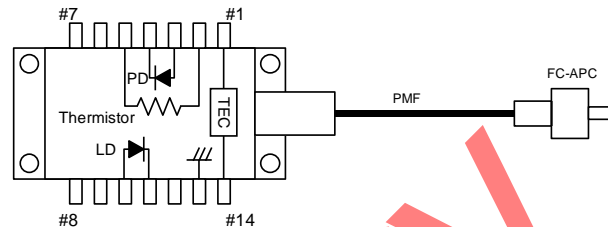
(**) Longer pulse width or higher duty cycle is available with proper adjustment of a peak current. Please ask QDL for more detail.

6. OUTLINE DRAWING



7. 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 (-)



8. 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 2002/95/EC.

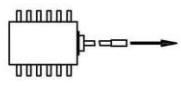


DANGER

INVISIBLE LASER RADIATION
AVOID DIRECTION EXPOSURE TO BEAM

MAXIMUM OUTPUT 1 W
WAVELENGTH 1000~1200 nm
CLASS IV LASER PRODUCT

LASER DIODE



AVOID EXPOSURE-Invisible Laser Radiation is emitted from this aperture.

This product complies with 21 CFR Part 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24, 2007

QD Laser, Inc.

1-1 Minamiwataridacho, Kawasaki-ku, Kawasaki, Kanagawa, 210-0855 Japan

QD Laser, Inc.

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

Copyright 2013 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.

distributed by

3 / 3