

QDLASER

QLD106B-6415

1064 nm DFB Laser Butterfly Package with SMPM connector

Preliminary

C00071-01 March 2012



1. DESCRIPTION

The QLD106B is a 1064-nm distributed feedback (DFB) laser suitable for short pulsed seed sources including picosecond pulse operation. The laser is assembled into a 7-pin butterfly package with SMPM connector.

2. FEATURES

- Single longitudinal mode operation at 1064 nm
- 7pin butterfly package with SMPM connector
- Short pulse operation

3. APPLICATION

- Seeder for fiber lasers
- Sensing

4. ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power	P_f	20	mW
LD Forward Current	I_f	100	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

5. OPTICAL AND ELECTRICAL CHARACTERISTICS

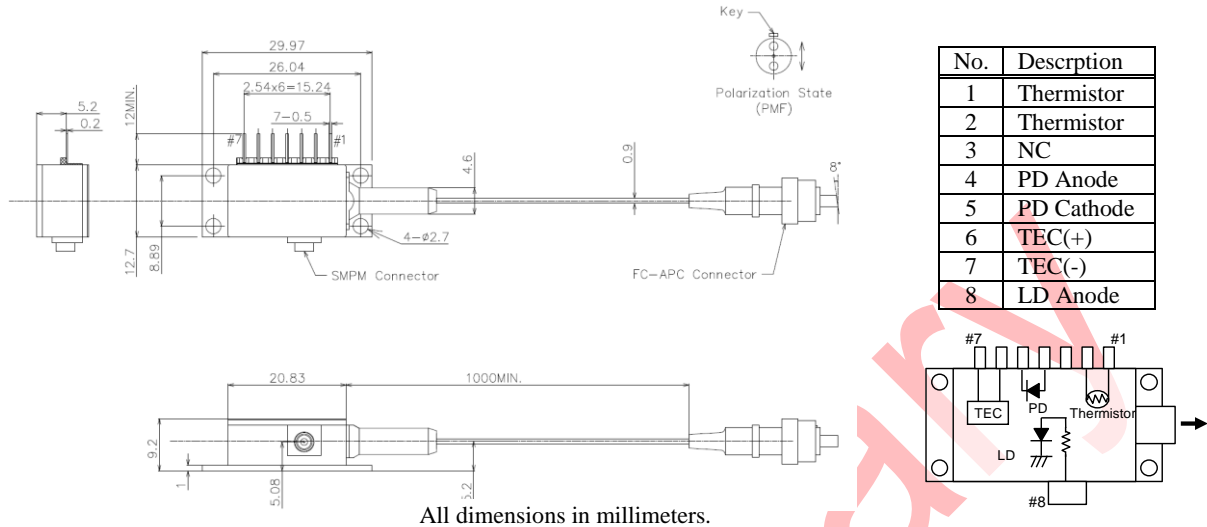
($T_{LD} = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	λ_p	CW, $P_f=15$ mW	1059	1064	1069	nm
Fiber Output Power	P_f	CW, $I_f=80$ mA	15	-	-	mW
Threshold Current	I_{th}	CW	-	20	-	mA
Sidemode Suppression Ratio	SMSR	CW, $P_f=15$ mW	-	40	-	dB
Polarization Extinction Ratio	PER	CW, $P_f=15$ mW	15	20	-	dB
Pulse Width	PW	Gain switch mode	-	50	-	psec
Spectral Linewidth	$\Delta\lambda$	Gain switch mode	-	0.1	-	nm
Thermistor Resistance	R_{th}	$T_{LD} = 25^\circ\text{C}$, B=3930K	9.5	10	10.5	k Ω
RF Input Impedance	Z_0	-	-	50	-	Ω
Cutoff Frequency	f_c	$I_f=80$ mA	7.5	-	-	GHz

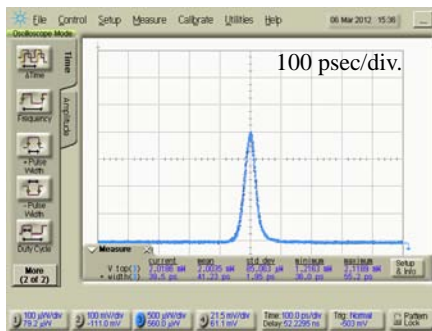
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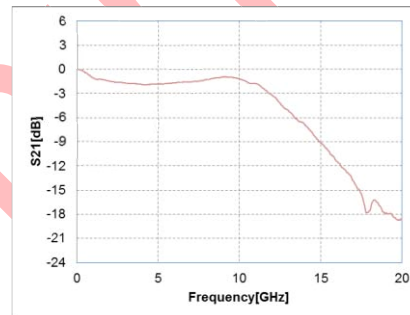
6. OUTLINE DRAWING AND PIN CONFIGURATION



7. TYPICAL OPERATING CHARACTERISTICS



Pulse waveform under gain switch operation



Frequency response (Op=80mA)

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.

QD Laser, Inc.

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