QDLASER

QLD1061-6430-11

1064 nm DFB Laser Butterfly Package C00088-02 August 2015

1. DESCRIPTION

The QLD1061-6430-11 is a 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
- Fiber-pigtailed 14-pin butterfly package with a TEC
- Optical isolator integration
- Polarization maintaining fiber integration
- CW/Pulse operation
- 250μm fiber coating diameter

3. APPLICATIONS

- Seeder for fiber lasers
- Sensing

4. ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power (CW)	P_f	50	mW
LD Forward Current (CW)	I_F	250	mA
Peak Output power (Pulse 10 ns /1 MHz)	P_{f_pulse}	150	mW
LD Peak Current (Pulse 10 ns /1 MHz)	I_{F_pulse}	600	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

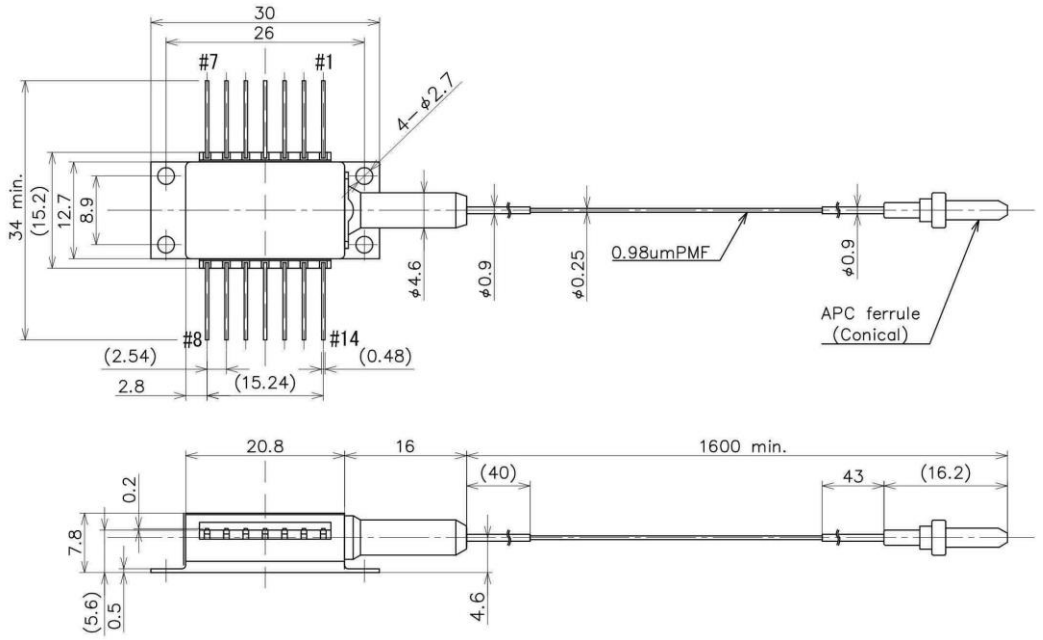
5. OPTICAL AND ELECTRICAL CHARACTERISTICS

(T_{LD} = 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	λ_p	CW, P_f =30 mW	1059*	1064	1069*	nm
Temperature Coefficient of λ_p	$d\lambda_p/dT$	CW	-	0.08	-	nm/K
Current Coefficient of λ_p	$d\lambda_p/dI$	CW	-	0.008	-	nm/mA
Threshold Current	I_{th}	CW	-	15	20	mA
CW Fiber Output Power	P_f	CW	30	-	-	mW
Pulsed Peak Output Power	P_{f_peak}	5 ns/100 kHz	-	100	-	mW
Operation Current	I_{op}	CW, P_f =30 mW	-	110	160	mA
Operation Voltage	V_{op}	CW, P_f =30 mW	-	1.5	1.8	V
Pulsed Peak Operation Current	I_{op_peak}	P_{f_peak} =100 mW		320	-	mA
Pulse Width	t_{pw}	Pulsed	0.05**	-	100	ns
Duty Cycle	D.C.	Pulsed	-	-	2	%
Sidemode Suppression Ratio	SMSR	CW, P_f =30 mW	30	50	-	dB
		Pulsed 4 ns /1 MHz / P_{f_peak} =50 mW	30	40	-	dB
Polarization Extinction Ratio	PER	CW, P_f =30 mW	15	20	-	dB
Monitor PD Current	Im	CW, P_f =30 mW	50	200	800	μA
Thermistor Resistance	Rth	T_{LD} = 25°C, B=3900 K	9.5	10	10.5	kΩ

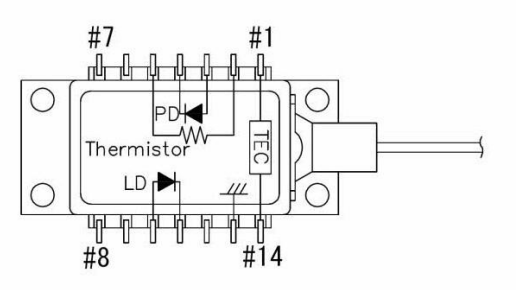
*Peak wavelength torelance of +/- 1 nm is available as an option.
**Pulse width of 0.05 ns could be achieved under gain switch operation.

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 2011/65/EU.