QDLASER

QLD1061-5330

1053 nm DFB Laser Butterfly Package

Preliminary

C00044-03 August 2013



1. DESCRIPTION

The QLD1061-5330 is a 1053-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 1053 nm
- Fiber-pigtailed 14-pin butterfly package with a TEC
- Optical isolator integration
- Polarization maintaining fiber integration
- CW/Pulse operation

3. APPLICATION

- Seed laser for fiber lasers
- Sensing

4. ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATING	UNIT
Optical Output power	$P_{\rm f}$	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	$T_{\rm c}$	0 to 60	°C
Storage Temperature	$T_{ m stg}$	-40 to 85	°C
Lead Soldering Temperature (5 s)	$T_{\rm sld}$	230	°C



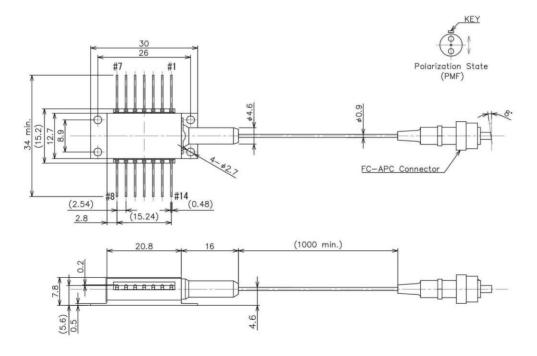
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5. OPTICAL AND ELECTRICAL CHARACTERISTICS

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

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PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	λ_{p}	CW, $P_f = 30 \text{ mW}$	1050	1052	1054	nm
Spectral Width (FWHM)	Δν	CW, $P_f = 30 \text{ mW}$	-	4	20	MHz
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
Fiber Output Power	$P_{\rm f}$	CW	30	-	-	mW
Threshold Current	I_{th}	CW	-	20	-	mA
Operation Current	I_{op}	$CW, P_f = 30 \text{ mW}$	-	150	200	mA
Operation Voltage	V_{op}	$CW, P_f = 30 \text{ mW}$	-	1.7	2.0	V
Sidemode Suppression Ratio	SMSR	$CW, P_f = 30 \text{ mW}$	-	40	-	dB
Polarization Extinction Ratio	PER	$CW, P_f = 30mW$	15	20		dB
Monitor PD Current	Im	$CW, P_f = 30mW$	50	100	500	μΑ
Thermistor Resistance	Rth	$T_{LD} = 25^{\circ}C, B=3900K$	9.5	10	10.5	kΩ
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6. OUTLINE DRAWING

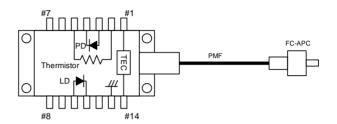




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7. PIN CONFIGURATION

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.



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