

QDLASER

QLD1061-AD

1047 nm DFB Laser Butterfly Package

Preliminary

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1. DESCRIPTION

The QLD1061-AD is a 1047-nm distributed feedback (DFB) laser butterfly package

2. FEATURES

- Single longitudinal mode operation at 1047nm
- 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
- Aerospace
- Sensing

4. ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATING	UNIT
Fiber Output Power	P_O	15	mW
LD Forward Current	I_F	180	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)	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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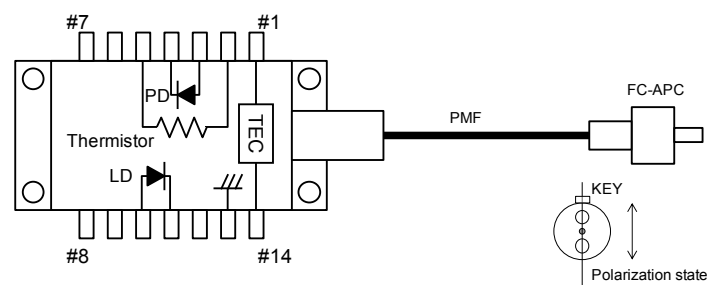
5. OPTICAL AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Peak Wavelength	λ_p	CW, $P_f=10\text{ mW}$	1042	1047	1052	nm
Spectral Width (FWHM)	$\Delta\nu$	CW, $P_f=10\text{mW}$	-	5	20	MHz
Temperature Coefficient of λ_p	$d\lambda_p/dT$	CW	-	0.1	-	nm/K
Current Coefficient of λ_p	$d\lambda_p/dI$	CW	-	0.02	-	nm/mA
Fiber Output Power	P_f	CW	10	-	-	mW
Threshold Current	I_{th}	CW	-	20	-	mA
Operation Current	I_{op}	CW, $P_f=10\text{mW}$	-	100	180	mA
Operation Voltage	V_{op}	CW, $P_f=10\text{ mW}$	-	1.6	2.0	V
Sidemode Suppression Ratio	SMSR	CW, $P_f=10\text{ mW}$	-	40	-	dB
Polarization Extinction Ratio	PER	CW, $P_f=10\text{mW}$	15	20		dB
Monitor PD Current	I_m	CW, $P_f=10\text{mW}$		100		μA
Thermistor Resistance	R_{th}	$T_{LD} = 25^{\circ}\text{C}$, $B=3900\text{K}$	9.5	10	10.5	$\text{k}\Omega$

6. 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 (-)



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