QDLASER QLF1335-AD 1300 nm FP LASER TO-CAN

Preliminary C00051-02 May 2011



1. **DESCRIPTION**

The QLF1335-AD is 1300 nm quantum dot laser diode device for use in extremely high temperature environment. The laser is mounted into a TO-56 header including a monitor PD for optical power control and hermetic sealed with a lens cap. Since quantum dot technologies are equipped with active layers of the device, it realizes excellent temperature characteristics and low power consumptions.

2. FEATURES

- 1300 nm FP-LD
- Wide temperature operation: -25 to 150deg.C
- Φ 5.6mm TO-CAN package

3. APPLICATION

• High temperature use

4. ABSOLUTE MAXIMUM RATING

		$(T_c = 25^{\circ}C, unless otherwise specifie$		
PARAMETER	SYMBOL	RATING	UNIT	
Light Output Power	Po	10	mW	
LD Forward Current	I _F	100	mA	
LD Reverse Voltage	V _{RLD}	2	V	
PD Forward Current	I _{FPD}	2	mA	
PD Reverse Current	I _{RPD}	5	mA	
PD Reverse Voltage	V _{RPD}	10	V	
Operation Temperature (Tc)	T _c	-25 to 150	°C	
Storage Temperature	T _{stg}	-40 to 85	°C	
Lead Soldering Temperature (5 s)	T _{sld}	230	°C	

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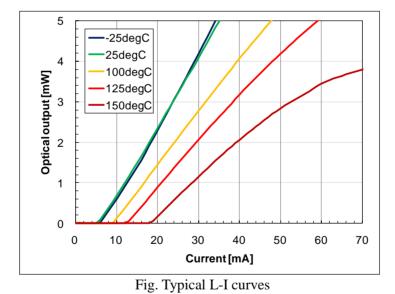
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		(T _c	$(T_c = 25^{\circ}C, unless otherwise specified)$				
PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT	
Threshold current	т	CW, 25deg.C	-	6	15	mA	
	I _{th}	CW, 150 deg.C	-	18	25	mA	
Operation current	т	CW, P _o =4 mW, 25deg.C	-	28	40	mA	
	I _{op}	CW, P _o =2 mW, 150deg.C	-	40	50	mA	
Operation voltage	V_{op}	CW, P _o =4 mW	-	1.3	1.6	V	
Slope efficiency	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CW, 25deg.C	0.18	0.22	-	W/A	
	η	CW, 150deg.C	0.10	0.14	-	W/A	
Center wavelength	λ_{c}	CW, P _o =4 mW, 25deg.C	1250	1293-	1310	nm	
Spectral width	Δλ	CW, P _o =4 mW, RMS(-20dB), 25deg.C	-	2.8	4	nm	
Monitor current	I _m	CW, $P_0=4$ mW, $V_{RD}=5$ V	50	700	1000	μΑ	
Focal length	$D_{\rm f}$	CW, P _o =4 mW, SI10/125	6.0	6.5	7.0	mm	

5. OPTICAL AND ELECTRICAL CHARACTERISTICS

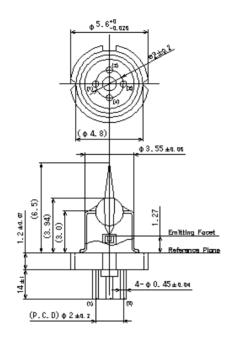


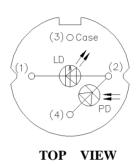
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6. OUTLINE DRAWING





All dimensions in millimeters

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QLF1335-AD

7. NOTICE

• Warrantary period of products

Warrantary period of products is one year from packing date.

• Safety Information

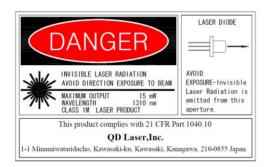
This product is classified as Class 1M laser product, and complies with 21 CFR Part 1040.10. Please do not take a look laser lighting in operations since laser devices may cause troubles to human eyes. Please do not eat, burn, break and make chemical process of the products since they contain GaAs material.

• Handing 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. QDL takes no responsibility for any failure or unusual operation resulting from improper handlig, or unusual physical or electrical stress.

• RoHS

This product conforms to RoHS compliance related EU Directive 2002/95/EC.



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