

QDLASER

QLF1339-AA

1310 nm FP LASER TO-CAN

Preliminary

C00042-02 Nov. 2010



1. DESCRIPTION

The QLF1339-AA is 1310 nm quantum dot laser diode device for use in telecom and datacom applications up to 2.5Gbps speed. The laser is mounted into a TO-56 header without PD monitor 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

- 1310 nm FP-LD
- $\Phi 5.6$ mm TO-CAN package
- Wide temperature operation: -10 to 85 deg.C
- PD less type

3. APPLICATION

- Optical communication

4. ABSOLUTE MAXIMUM RATING

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

PARAMETER	SYMBOL	RATING	UNIT
Light Output Power	P_o	6	mW
LD Forward Current	I_F	80	mA
LD Reverse Voltage	V_{RLD}	2	V
Operation Temperature (T_c)	T_c	-10 to 85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to 100	$^\circ\text{C}$
Lead Soldering Temperature (5 s)	T_{sld}	230	$^\circ\text{C}$

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5. OPTICAL AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	TEST CONDITION	T_c	MIN	TYP	MAX	UNIT
Threshold current	I_{th}	CW	-10°C	-	8	15	mA
			25°C				
			85°C				
Operation current	I_{op}	CW, $P_o=5$ mW	-10°C	-	28	40	mA
			25°C				
			85°C				
Operation voltage	V_{op}	CW, $P_o=5$ mW	-10°C	-	1.4	1.6	V
			25°C				
			85°C				
Slope efficiency	η	CW	-10°C	0.23	0.28	-	W/A
			25°C				
			85°C				
Saturation power	P_{sat}	CW	85°C	6	-	-	mW
Center wavelength	λ_c	CW, $P_o=5$ mW	-10°C	1275	1289	1345	nm
			25°C		1305		
			85°C		1335		
Spectral width	$\Delta\lambda$	CW, $P_o=5$ mW RMS(-20dB)	-10°C	-	2.9	4.0	nm
			25°C		2.6		
			85°C		2.1		
Rise and fall time	T_r, T_f	$I_b = I_{th}$, $P_o=5$ mW, 10-90%	25°C	-	0.05	-	nsec
Optical power coupled to fiber	P_f	CW, $P_o=5$ mW, SI10/125	25°C	-	0.85	-	mW
Focal length	D_f	CW, $P_o=5$ mW, SI10/125	25°C	-	6.25	-	mm
Ray Axis	θ_{xy}	CW, $P_o=5$ mW	25°C	-	0	-	deg.
Beam angle	θ_z	CW, $P_o=5$ mW	25°C	-	1.1	-	deg.

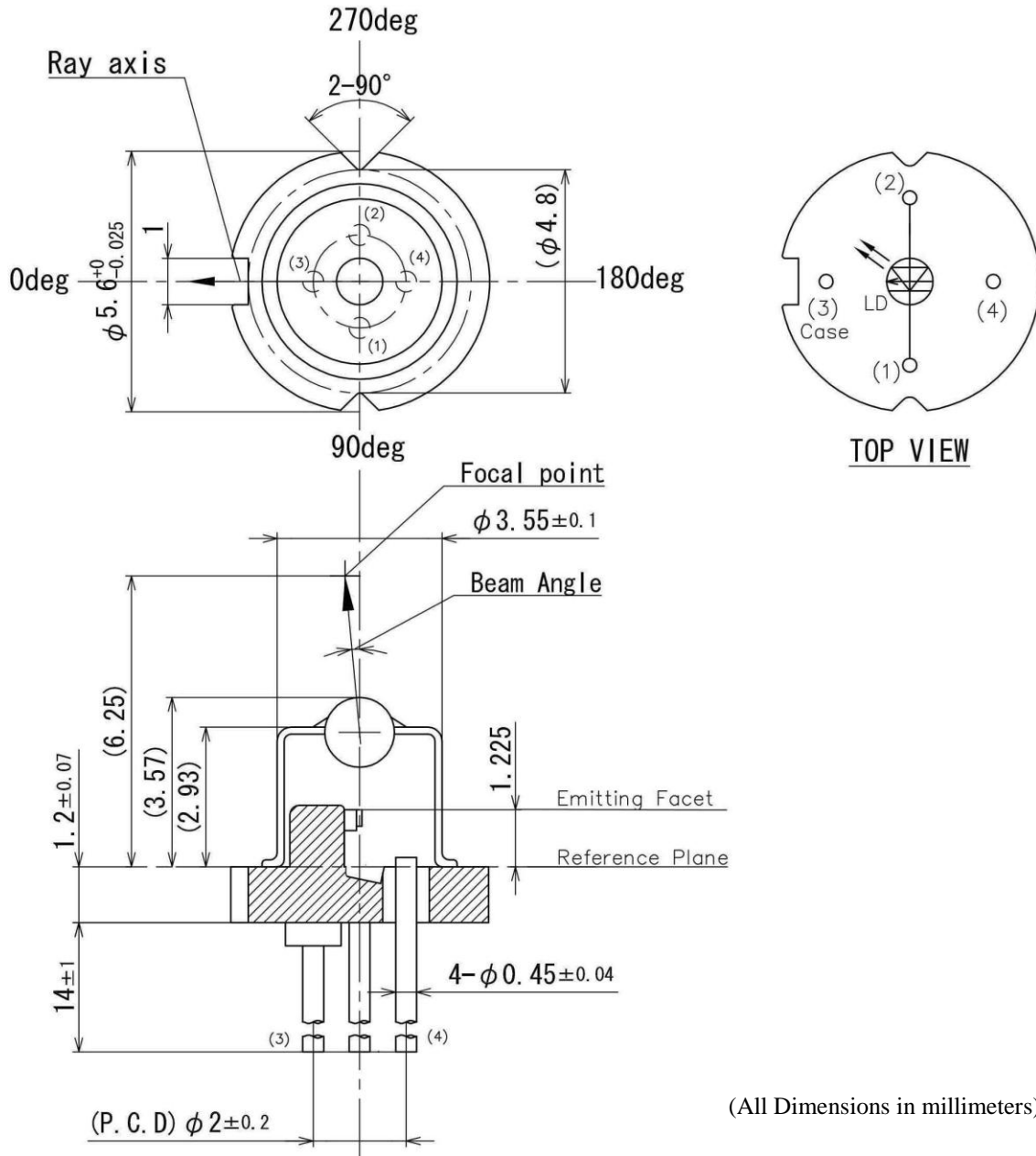
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6. Outline Drawing



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7. Notice

- 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.

- Handling products

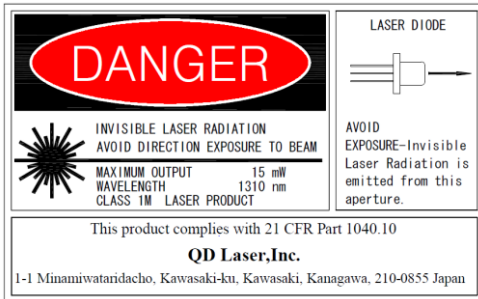
Semiconductor lasers are easily damaged by external stress such as excess temperature and ESD.

Please pay attention to handling products, and use within range of maximum ratings.

QDL 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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