

## Compact Fiber coupled CW Diode Bars at 808 nm

### QD-C1yzz- FL $\phi$ & QD-C1yzz- FH $\phi$

#### DESCRIPTION

The new QD-C1yzz-FL $\phi$  & QD-C1yzz-FH $\phi$  series are equipped with an ultra compact and leakproof package. Operation wavelength is in the wavelength window 808 nm.

These products integrate highly performing micro optics. Optical power, up to 40W CW, is delivered through a single multimode fiber terminated by a SMA connector. Small fiber diameter and low numerical aperture lead to high brightness and high optical power density.

The low profile package, QD-C1yzz-FL $\phi$  (*only 38cm<sup>3</sup>*), is proposed with red pilot beam or PIN photodiode as options.

The low thermal resistance of the assembly allows efficient heat transfer and thermal regulation.

These products are ideal for applications which request high brightness sources for efficient pumping solid-state lasers, medical applications, material processing, micromachining...

#### MAIN FEATURES

- Up to 40W CW optical output power
- 808nm wavelength window range
- Optical connectors SMA 905 (male)
- Standard fiber length: 1.5m (other lengths upon request)
- Conductively cooled package
- High compactness and leakproof package
- Improved Thermal Resistance



#### SPECIFICATIONS

**Wavelength: 808nm window**

**Fiber Numerical Aperture: 0.22**  
**Temperature: +25°C**  
 (Internal CTN: 10k. $\Omega$  @ 25°C)

PARAMETERS	QD-C1820- F_4	QD-C1830- F_4	QD-C1940- F_4	QD-C1820- F_6	QD-C1830- F_6	QD-C1940- F_6	UNITS	
Fiber core diameter	400 ( $\Phi= 4$ )			600 ( $\Phi= 6$ )			$\mu\text{m}$	
CW output power	20	30	40	20	30	40	W	
Spectral width (FWHM)	2	2	2	2	2	2	nm	
	3	3	3	3	3	3	nm	
Threshold current	9	9	14	9	9	14	A	
Operating current	Typ.	32	43	56	30	41	56	A
	Max	38	50	62	35	45	62	A
Operating voltage	< 2	< 2	< 2	< 2	< 2	< 2	V	
Total efficiency	37	41	40	40	43	43	%	

**Note:**

- Variation of wavelength is approximately 0.3 nm/°C
- Standard tolerance on wavelength is +/- 3 nm
- Power monitoring (PIN photodiode) or Pilot laser beam (Red aiming beam = 1mW @ 635nm) upon request
- Fiber with NA 0.16 available on request
- Standard fiber coating: metallic, PVC coating on request
- Operating at higher power or higher temperature will accelerate component ageing, increase threshold current and decrease slope efficiency

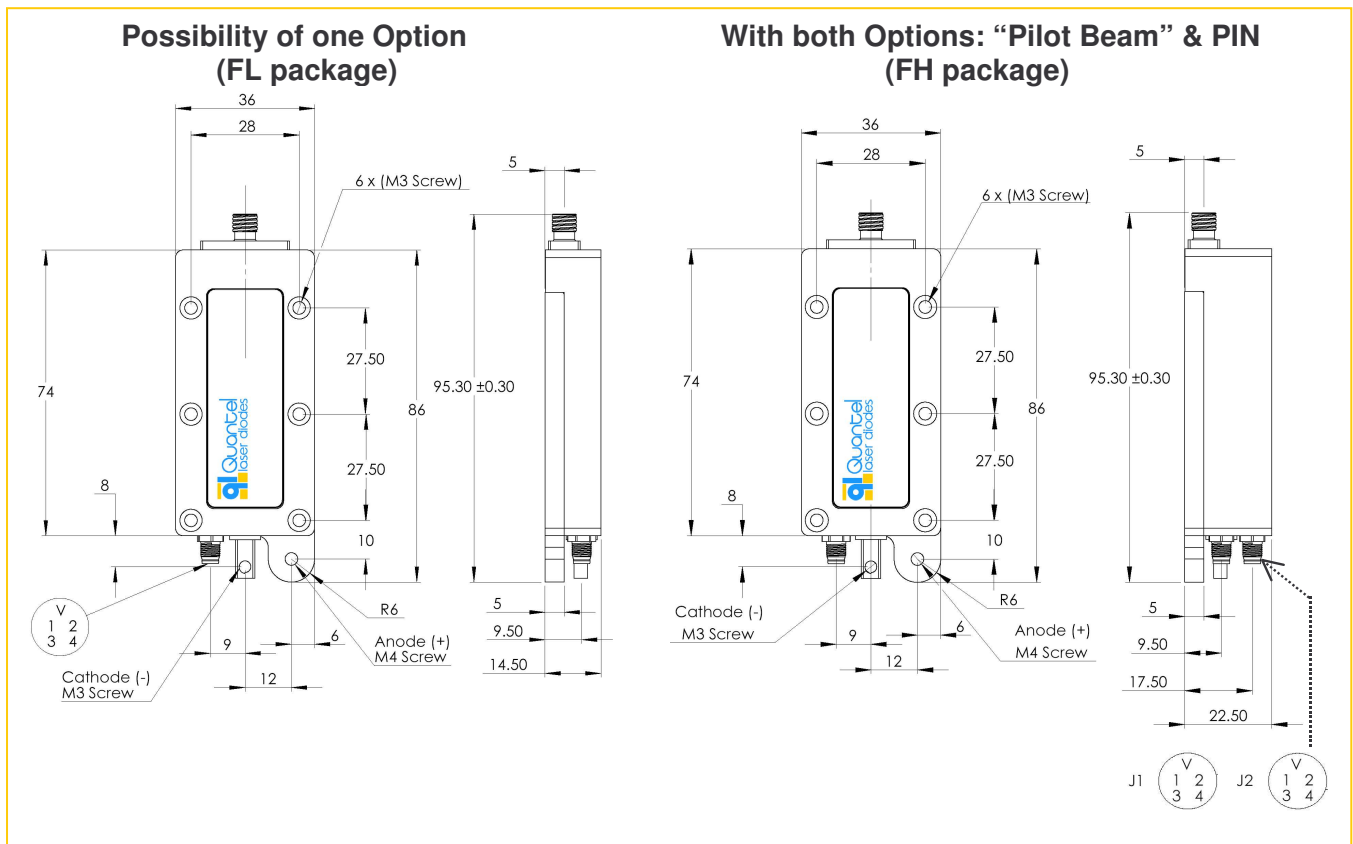
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## ABSOLUTE MAXIMUM RATINGS

PARAMETERS	QD-C1820-F_4	QD-C1830-F_4	QD-C1940-F_4	QD-C1820-F_6	QD-C1830-F_6	QD-C1940-F_6	UNITS
Reverse voltage	3	3	3	3	3	3	Volt
Case Operating temperature	+5 to +35						°C
Storage temperature	-40 to +65						°C

## PACKAGE SPECIFICATIONS

- dimensions are in mm
- standard tolerances are  $\pm 0.2$  mm



Option	No Option	Pilot beam	PIN	J 1	J 2
1	nc	0 V	PIN anode	1 Pilot: 0 V	nc
2	nc	+5 V	PIN cathode	2 Pilot: +5 V	PIN cathode
3		CTN (thermistor)		3 CTN	PIN anode
4		CTN (thermistor)		4 CTN	nc