

## Compact Fiber coupled CW Diode Bars at 9xx nm

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

#### DESCRIPTION

The new QD-Cxyzz-FL $\phi$  & QD-Cxyzz-FH $\phi$  series are equipped with an ultra compact and leak proof package. Operation wavelength is in the wavelength window 9xx 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-Cxyzz-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
- 9xx nm wavelength range
- Optical connectors SMA 905 (male)
- Standard fiber length : 1.5m, other length on request
- Conductively cooled package
- High compactness and leak proof package
- Improved Thermal Resistance



#### SPECIFICATIONS

**Wavelength range according to the Table:**

x	4	5	6	
$\lambda$	915	940	980	nm

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

PARAMETERS	QD-Cx820- F_4	QD-Cx830- F_4	QD-Cx940- F_4	QD-Cx820- F_6	QD-Cx830- F_6	QD-Cx940- F_6	UNITS
Fiber core diameter $\phi$	400			600			$\mu$ m
CW output power	20	30	40	20	30	40	W
Spectral width (FWHM)	Typ. 3 Max 4	Typ. 3 Max 4	Typ. 3 Max 5	Typ. 3 Max 4	Typ. 3 Max 4	Typ. 3 Max 5	nm nm
Threshold current	7	7	11	7	7	11	A
Operating current	Typ. 32 Max 38	Typ. 45 Max 52	Typ. 57 Max 65	Typ. 30 Max 38	Typ. 42 Max 50	Typ. 55 Max 62	A A
Operating voltage	< 2	< 2	< 2	< 2	< 2	< 2	V
Total efficiency	40	42	42	42	44	44	%

**Note:**

- Wavelength is given by "x" according to the Table.
- Standard tolerance on wavelength is +/- 5 nm.
- Variation of wavelength is approximately 0.3 nm/°C.
- 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.

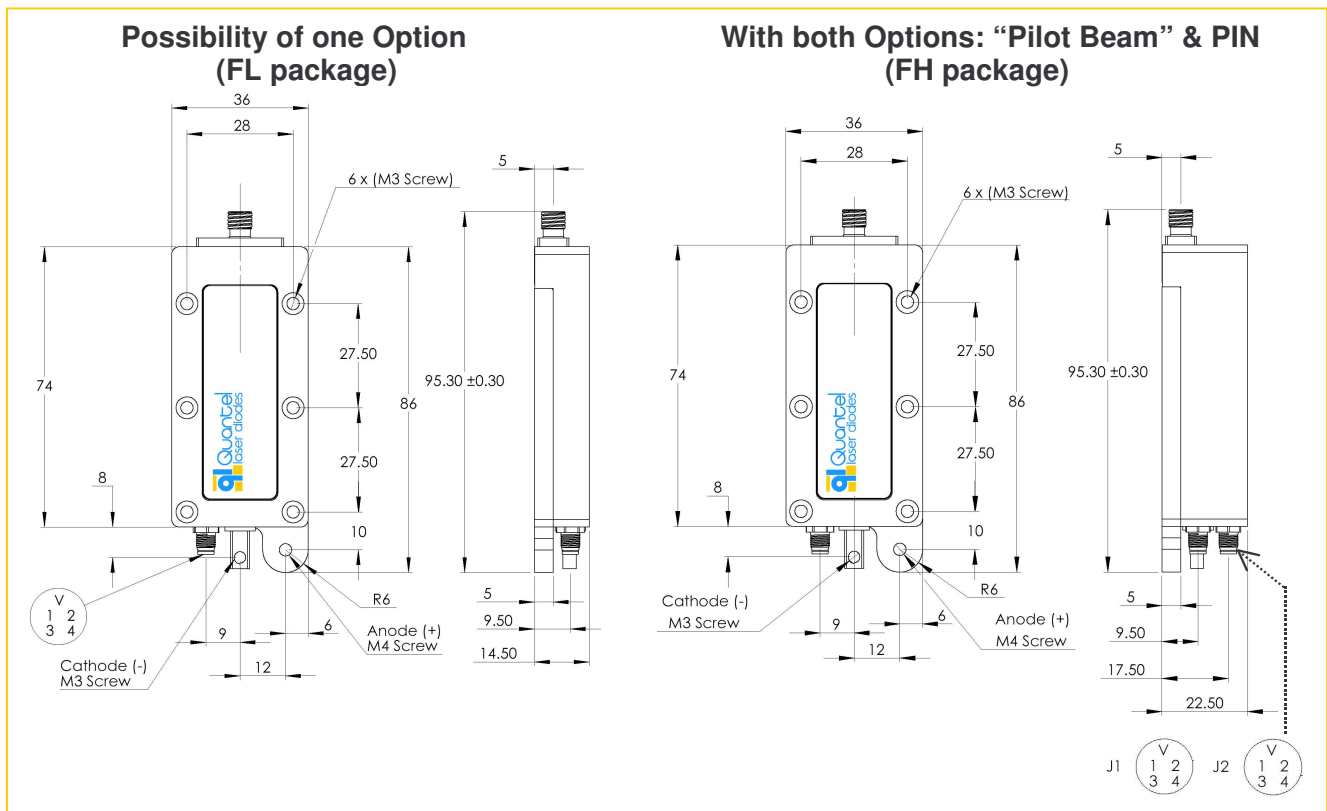
**Quantel Laser Diodes reserves the right to change specifications without prior notice**

### ABSOLUTE MAXIMUM RATINGS

PARAMETERS	QD-Cx820-F_4	QD-Cx830-F_4	QD-Cx940-F_4	QD-Cx820-F_6	QD-Cx830-F_6	QD-Cx940-F_6	UNITS
Reverse Voltage	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



	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