

## 100W 808nm VCSEL Array on C-Mount

### PQCW-CA1-100-W0808

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability
- High temperature operation (up to 80 °C)
- High power density
- Wavelength stabilized & narrow spectral width (< 1 nm)

#### Optical & Electrical Characteristics

PARAMETER	CONDITIONS*	MIN	TYP	MAX	UNIT
QCW Output power	120A, 25°C Heat-sink	100	120	--	W
Threshold current	25 °C Heat-sink	--	15	22	A
Operating current	P <sub>out</sub> , 25 °C Heat-sink	--	100	120	A
Operating voltage	P <sub>out</sub> , 25 °C Heat-sink	--	2.9	3.2	V
Differential resistance	P <sub>out</sub> , 25 °C Heat-sink	--	14	17	mΩ
Slope efficiency	25 °C Heat-sink	1	1.1	--	W/A
Conversion efficiency	40W, 25 °C Heat-sink	40	45	--	%
Center wavelength	P <sub>out</sub> , 25 °C Heat-sink	800	808	816	nm
Spectral width (FWHM)	P <sub>out</sub> , 25 °C Heat-sink	--	1	2	nm
Wavelength shift	25 °C Heat-sink	--	--	0.070	nm/°C
N.A. (4-sigma)	P <sub>out</sub> , 25 °C Heat-sink	--	0.18	0.20	--
Emission area	--	--	4.7 x 4.7	--	mm <sup>2</sup>

\*QCW Conditions: 100 μs pulse-width, 3% duty cycle (30Hz)

#### Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	150 A
Reverse current	25 μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C
Pulse width/duty-cycle	200 μs / 2%

#### Ordering information

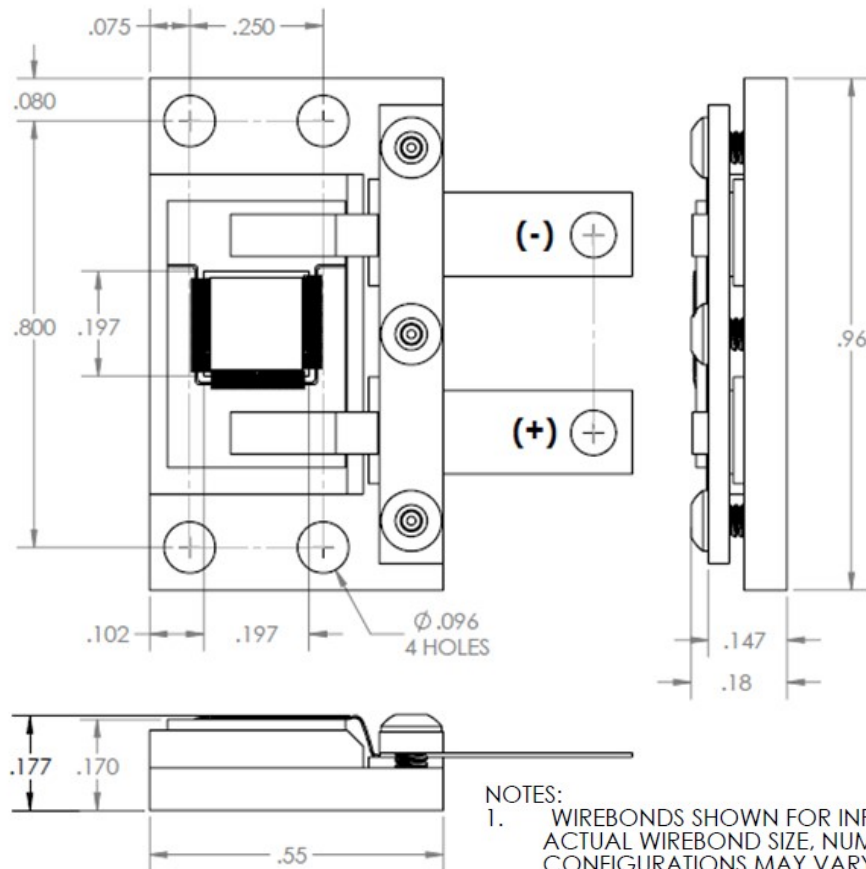
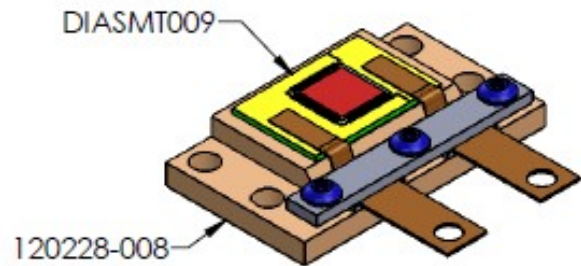
PQCW – CA1 – 100 – W0808

Heat Spreader Type \_\_\_\_\_ Wavelength (nm) \_\_\_\_\_

CW Output Power (W) \_\_\_\_\_

## Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	13.97 ± 0.1 mm
Package length	24.38 ± 0.1 mm
Package height	4.57 ± 0.1 mm
Thermal resistance	< 0.3 °C/W
Max solder temperature	118 °C
Metallization	Ti/Pt/Au + 12 μm Au



### NOTES:

1. WIREBONDS SHOWN FOR INFORMATION ONLY. ACTUAL WIREBOND SIZE, NUMBER AND CONFIGURATIONS MAY VARY.
2. OBSERVE PRECAUTIONS FOR HANDLING: ELECTRODES ARE CONNECTED TO ELECTROSTATIC SENSITIVE DEVICES.

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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eye-wear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear eye protection when operating.



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