

**200W CW 976nm VCSEL Array**  
**Part # PCW-CS1-200-W0976-MC**

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80 °C)
- Wavelength stabilized & Narrow spectral width (<2nm)
- Mounted on micro-channel-cooler

**Optical & Electrical Characteristics**

| PARAMETER               | CONDITIONS          | MIN   | TYP     | MAX   | UNIT            |
|-------------------------|---------------------|-------|---------|-------|-----------------|
| CW Output Power         | 255A, 10C Heat-sink | 190   | 200     | --    | W               |
| Threshold current       | 20C Heat-sink       | 14    | 16      | 20    | A               |
| Operating current       | 200W, 10C Heat-sink | --    | 255     | 260   | A               |
| Operating voltage       | 200W, 10C Heat-sink | 2.8   | 3       | 3.2   | V               |
| Differential resistance | 200W, 10C Heat-sink | --    | 5.5     | 7     | mΩ              |
| Slope efficiency        | 10C Heat-sink       | 0.9   | 1       | --    | W/A             |
| Conversion efficiency   | 200W, 10C Heat-sink | 25    | 27      | --    | %               |
| Center wavelength       | 200W, 10C Heat-sink | 966   | 976     | 986   | nm              |
| Spectral width (FWHM)   | 200W, 10C Heat-sink | --    | 1       | 3     | nm              |
| Wavelength shift        | 10C Heat-sink       | 0.060 | 0.070   | 0.080 | nm/°C           |
| N.A. (4-sigma)          | 255A, 10C Heat-sink | --    | 0.15    | 0.2   | --              |
| Emission area           | --                  | --    | 4.7x4.7 | --    | mm <sup>2</sup> |

**Maximum Absolute Ratings**

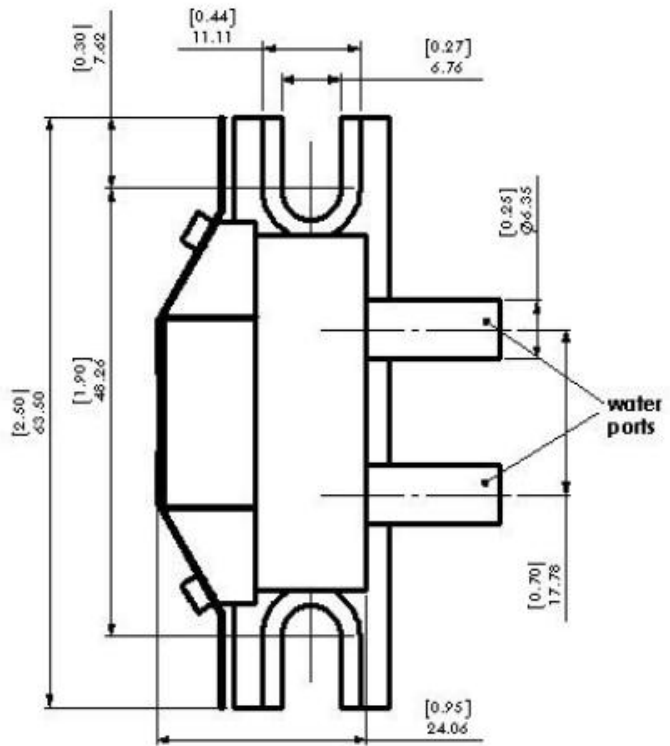
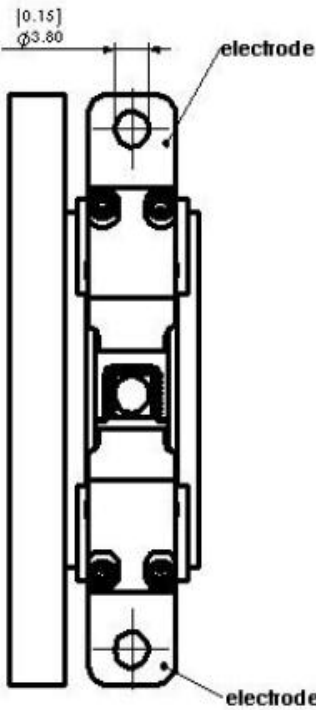
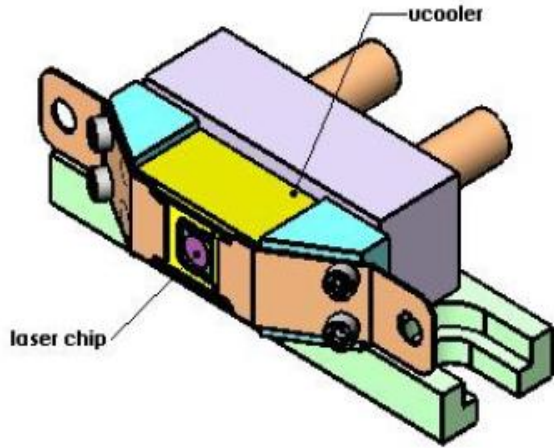
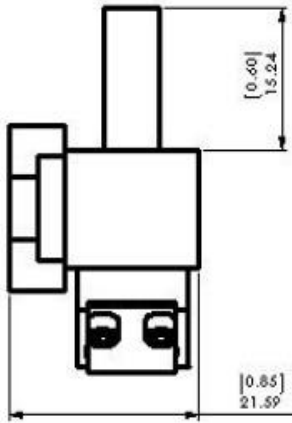
| PARAMETER             | CONDITIONS    |
|-----------------------|---------------|
| Forward current       | 290A          |
| Reverse current       | 25μA          |
| Operating temperature | 0 to +80 °C   |
| Storage temperature   | -40 to +80 °C |

**Ordering information**

PQCW – CS1 - 200 - W0976 -MC — Water Cooler

Package type \_\_\_\_\_ Wavelength (nm) \_\_\_\_\_  
Output Power (W) \_\_\_\_\_

# Mechanical Characteristics



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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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