



70W CW 808nm VCSEL Array on Micro-Channel-Cooler Part # PCW-CS1-70-W0808-MC

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80 °C)
- Low thermal resistance (~0.16 °C/W)
- Wavelength stabilized & Narrow spectral width (<1nm)
- Mounted on micro-channel-cooler

Optical & Electrical Characteristics

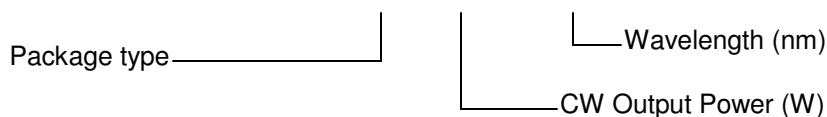
| PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|-------------------------|--------------------|-----|---------|-------|-----------------|
| CW Output Power | 90A, 20C Heat-sink | 70 | 80 | -- | W |
| Threshold current | 20C Heat-sink | -- | 10 | 15 | A |
| Operating current | 70W, 20C Heat-sink | -- | 80 | 90 | A |
| Operating voltage | 70W, 20C Heat-sink | -- | 2.3 | 2.7 | V |
| Differential resistance | 70W, 20C Heat-sink | -- | 5.8 | 7.0 | mΩ |
| Slope efficiency | 20C Heat-sink | 1 | 1.1 | -- | W/A |
| Conversion efficiency | 40W, 20C Heat-sink | 35 | 43 | -- | % |
| Center wavelength | 70W, 20C Heat-sink | 800 | 808 | 816 | nm |
| Spectral width (FWHM) | 70W, 20C Heat-sink | -- | 0.8 | 1 | nm |
| Wavelength shift | 20C Heat-sink | -- | -- | 0.070 | nm/°C |
| N.A. (4-sigma) | 70W, 20C Heat-sink | -- | 0.15 | 0.17 | -- |
| Emission area | -- | -- | 4.7x4.7 | -- | mm ² |

Maximum Absolute Ratings

| PARAMETER | CONDITIONS |
|-----------------------|---------------|
| Forward current | 150A |
| Reverse current | 25μA |
| Operating temperature | 0 to +80 °C |
| Storage temperature | -40 to +80 °C |

Ordering information

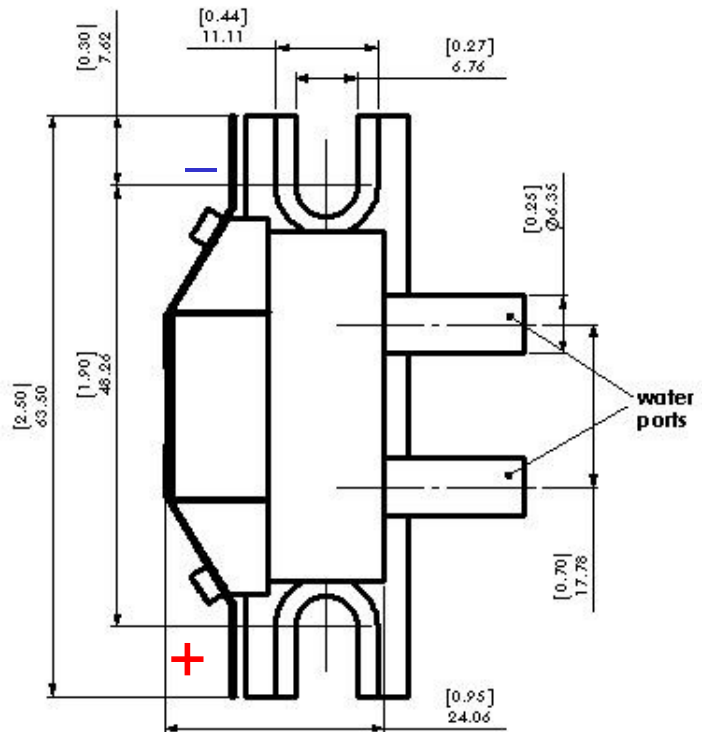
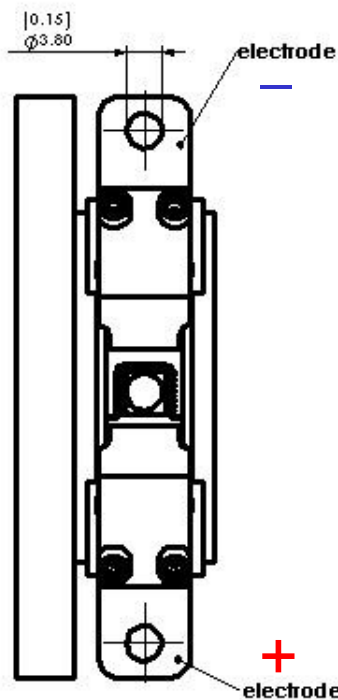
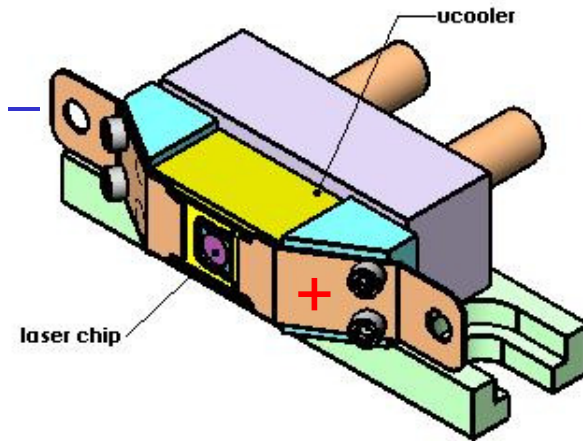
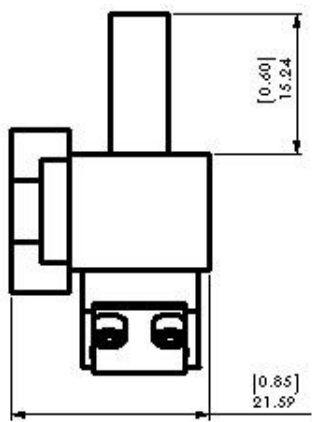
PCW - CS1 - 70 - W0808-MC



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Mechanical Characteristics

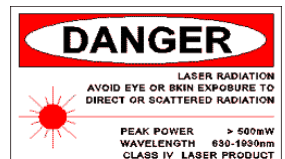


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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate 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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