



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

Package type

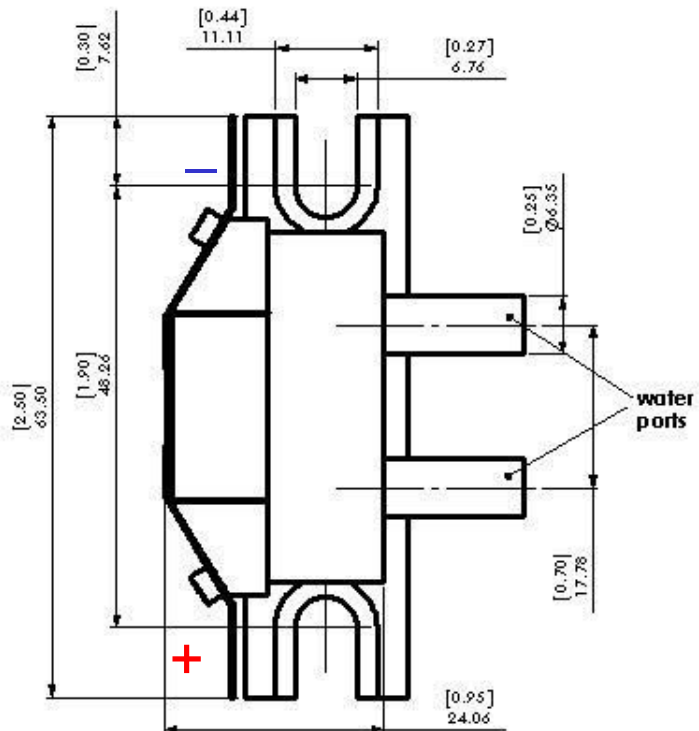
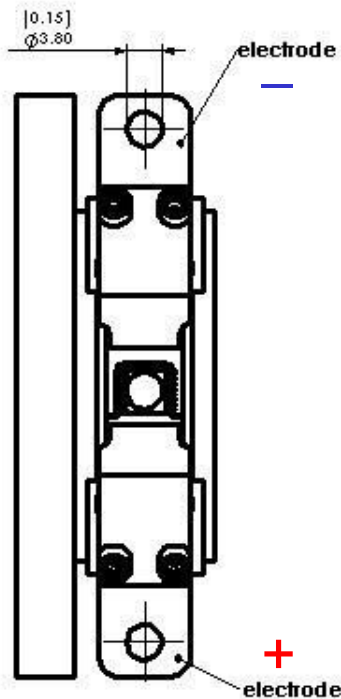
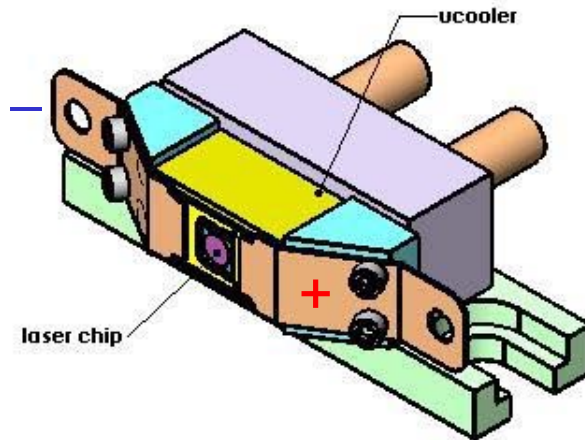
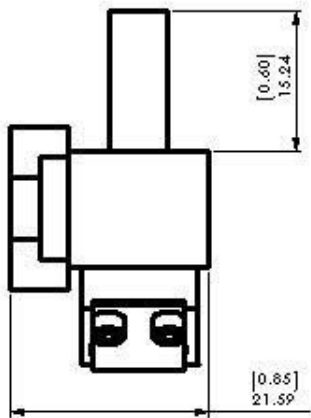
Wavelength (nm)

CW Output Power (W)



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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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