

100W 975nm VCSEL Array on Micro-Channel-Cooler PCW-CS1-100-W0975-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 (< 1 nm)
- Mounted on micro-channel-cooler
- Custom wavelengths available (808-1064 nm)

Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	135A, 25 °C Heat-sink	100	110	--	W
Threshold current	25 °C Heat-sink	--	16	20	A
Operating current	P _{out} , 25 °C Heat-sink	--	125	135	A
Operating voltage	P _{out} , 25 °C Heat-sink	--	2.1	2.5	V
Differential resistance	P _{out} , 25 °C Heat-sink	--	5.8	7	mΩ
Slope efficiency	25 °C Heat-sink	0.85	0.95	--	W/A
Conversion efficiency	55W, 25 °C Heat-sink	40	43	--	%
Center wavelength	P _{out} , 25 °C Heat-sink	965	975	985	nm
Spectral width (FWHM)	P _{out} , 25 °C Heat-sink	--	0.8	1	nm
Wavelength shift	25 °C Heat-sink	0.060	0.065	0.07	nm/°C
N.A. (4 sigma)	P _{out} , 25 °C Heat-sink	--	0.15	0.17	--
Emission area	--	--	4.7 x 4.7	--	mm ²

Maximum Absolute Ratings

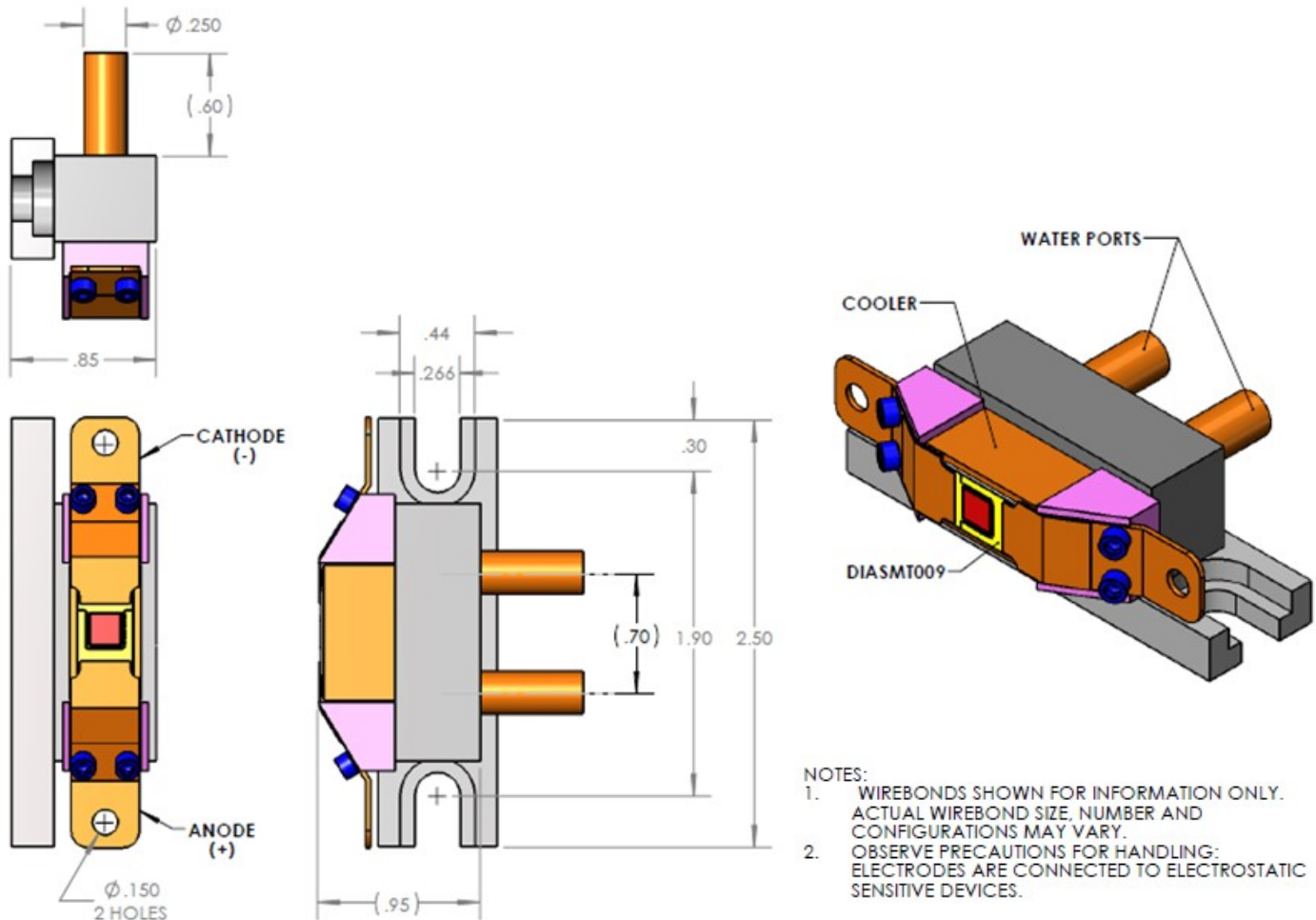
PARAMETER	CONDITIONS
Forward current	280 A
Reverse current	25 μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

Ordering information

PCW – CS1 – 100 – W0975 – MC

Heat Spreader Type
CW Output Power (W)
Wavelength (nm)
Micro-Channel-Cooler

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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