70W 808nm VCSEL Array on Micro-Channel-Cooler

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 (< 1 nm)*
- *Mounted on micro-channel-cooler*

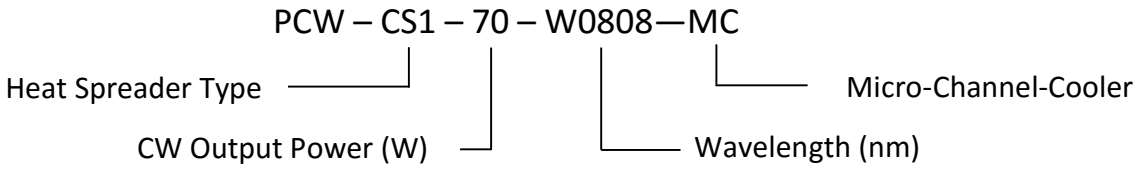
Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	90A, 20 °C Heat-sink	70	80	--	W
Threshold current	20 °C Heat-sink	--	10	15	A
Operating current	P_{out}, 20 °C Heat-sink	--	80	90	A
Operating voltage	P_{out}, 20 °C Heat-sink	--	2.3	2.7	V
Differential resistance	P_{out}, 20 °C Heat-sink	--	5.8	7	mΩ
Slope efficiency	20 °C Heat-sink	1	1.1	--	W/A
Conversion efficiency	40W, 20 °C Heat-sink	35	43	--	%
Center wavelength	P_{out}, 20 °C Heat-sink	800	808	816	nm
Spectral width (FWHM)	P_{out}, 20 °C Heat-sink	--	0.8	1	nm
Wavelength shift	20 °C Heat-sink	--	--	0.07	nm/°C
N.A. (4 sigma)	P_{out}, 20 °C Heat-sink	--	0.15	0.17	--
Emission area	--	--	4.7 x 4.7	--	mm^2

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

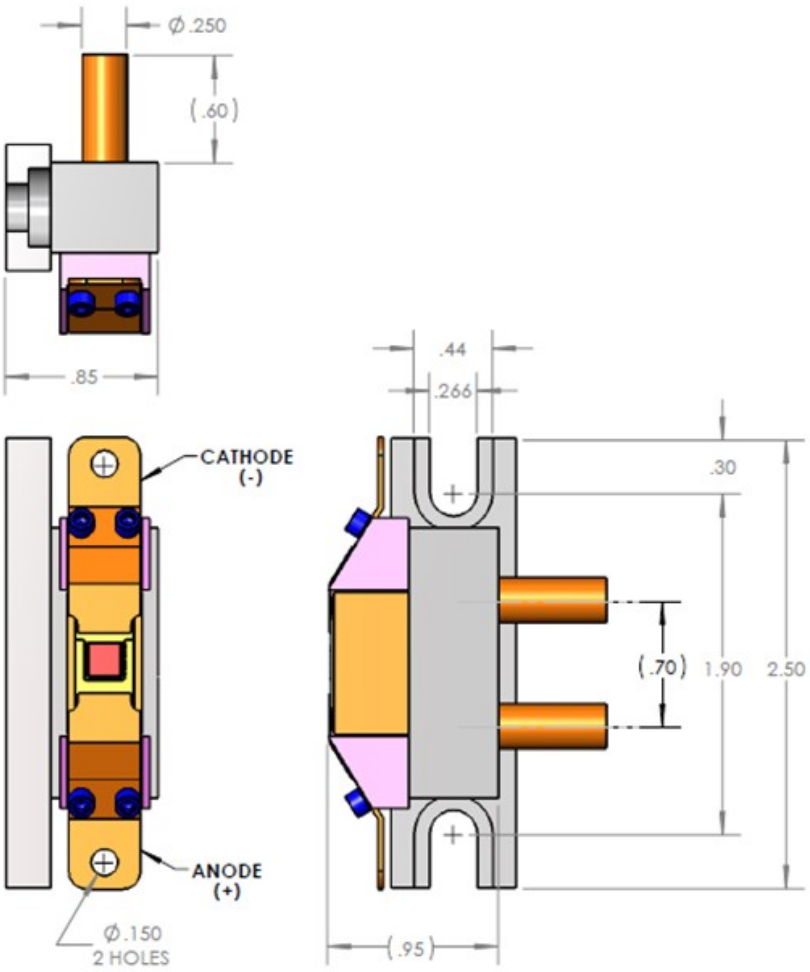
Ordering information

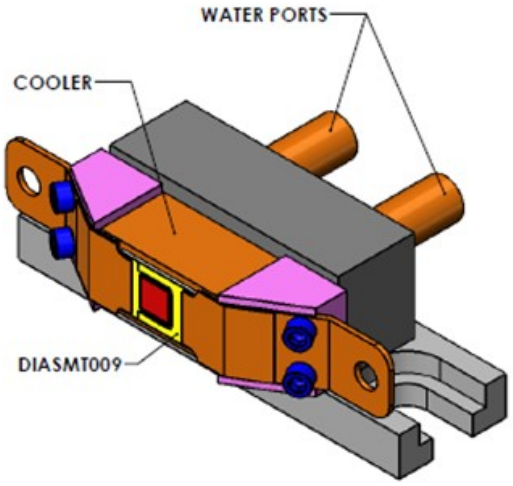


Princeton Optronics, Inc. ● 1 Electronics Drive ● Mercerville, New Jersey 08619
Voice: (609) 584-9696 ● Fax: (609) 584-2448 ● e-mail: sales@princetonoptronics.com ● www.princetonoptronics.com

PRINCETON OPTRONICS

Mechanical Characteristics





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.

Princeton Optronics reserves the right to change product design and specifications at any time without notice.
No license is granted by implication or otherwise under any patents or patent right of Princeton Optronics.
No responsibility is assumed for the use of these products, nor for any infringement on the rights of others resulting from the use of these products

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.

REV.C– 8/16