



PRELIMINARY

**8W QCW 945nm VCSEL Array on Surface Mount
Carrier**

PQCW-SMV-8-W0945

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability
- Wavelength stabilized & narrow spectral width (<1nm typ.)
- Easily soldered to carrier / heat-exchanger

Optical & Electrical Characteristics

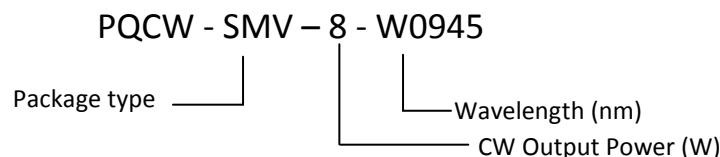
PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
QCW* Output Power	I _{op} , 20C Heat-sink	8	8.1	--	W
Threshold current	20C Heat-sink	0.5	0.9	1.3	A
Operating current	8W, 20C Heat-sink	--	10	12	A
Operating voltage	8W, 20C Heat-sink	2.1	2.3	2.5	V
Differential resistance	8W, 20C Heat-sink	0.10	0.13	0.16	Ohm
Slope efficiency	20C Heat-sink	--	0.85	--	W/A
Conversion efficiency	8W, 20C Heat-sink	30	35	--	%
Center wavelength	8W, 20C Heat-sink	935	945	955	nm
Spectral width (FWHM)	8W, 20C Heat-sink	--	1	--	nm
Wavelength shift	20C Heat-sink	--	--	0.070	nm/°C
N.A. (4-sigma)	8W, 20C Heat-sink	--	0.17	--	--
Emission area	--	--	1.56x1.96	--	mm ²

*100us, 1% duty cycle

Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	20A
Reverse current	25uA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

Ordering information

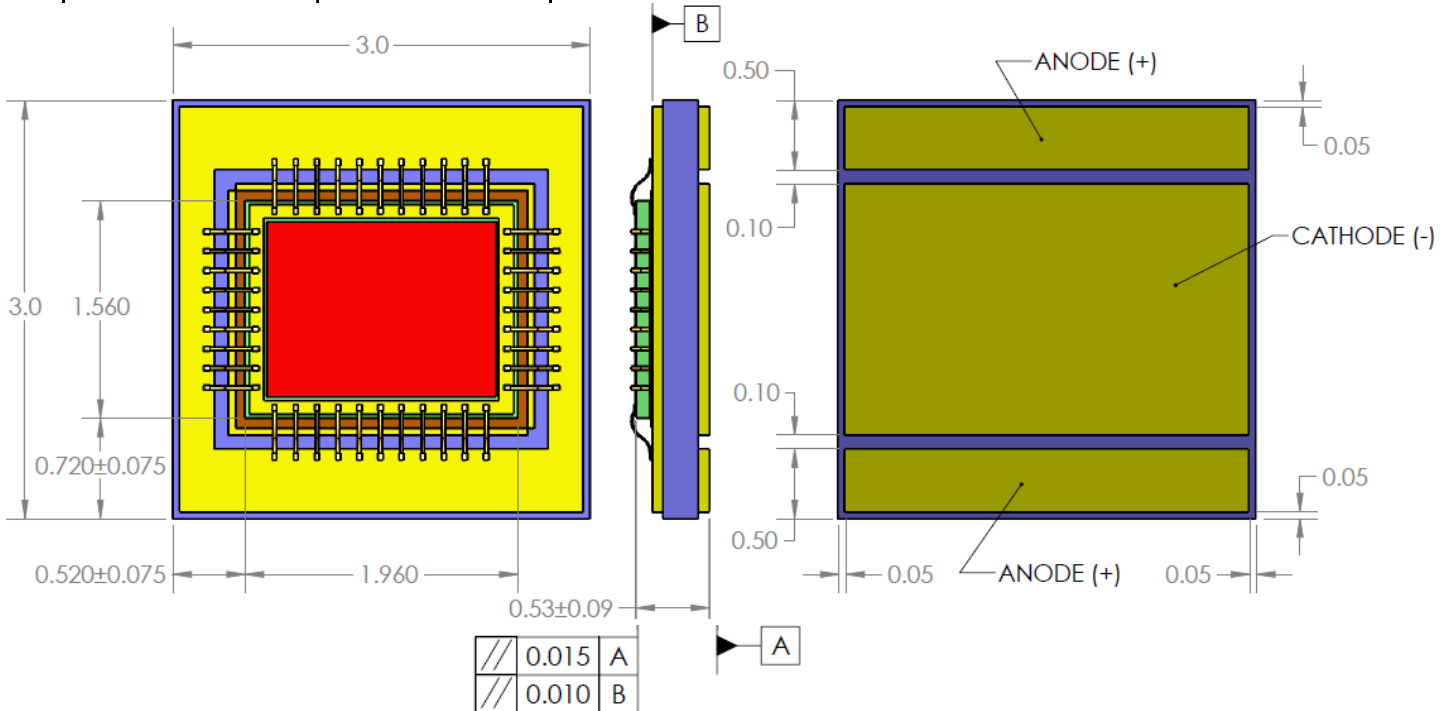


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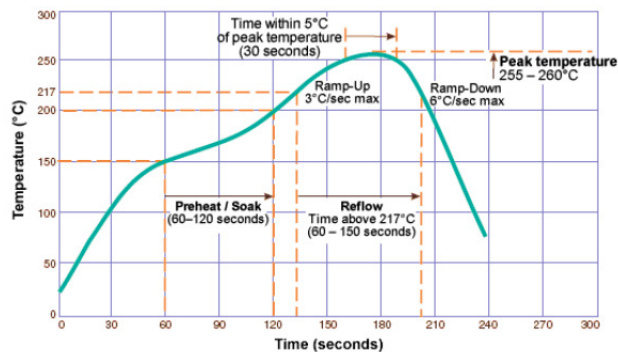
Voice: (609) 584-9696 * Fax: (609) 584-2448 * E-mail: sales@princetonoptronics.com * www.princetonoptronics.com

Mechanical Characteristics

PARAMETER	VALUE
Package width	3.0 ±0.1 mm
Package length	3.0 ±0.1 mm
Package height	0.53 ±0.09 mm
Light emitting area	1.56mm x 1.96mm
Max solder temperature	260 °C



Reflow Parameters

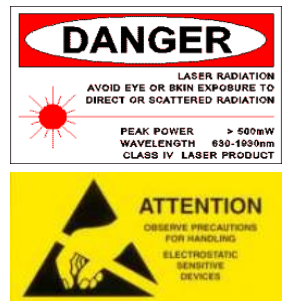


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Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting Class IV radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate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



REV.A – 6/15

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