

## 2W 945nm VCSEL Array on Surface Mount Carrier

### PCW-SMV-2-W0945

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

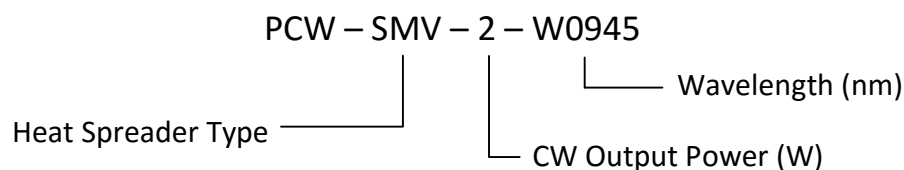
### Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	$I_{OP}$ , 20°C Heat-sink	2	2.2	--	W
Threshold current	20°C Heat-sink	0.4	0.6	1.1	A
Operating current	$P_{OUT}$ , 20°C Heat-sink	--	3	3.4	A
Operating voltage	$P_{OUT}$ , 20°C Heat-sink	1.8	2.0	2.4	V
Differential resistance	20°C Heat-sink	0.15	0.21	0.25	$\Omega$
Slope efficiency	20°C Heat-sink	--	0.85	--	W/A
Conversion efficiency	$P_{OUT}$ , 20°C Heat-sink	30	40	--	%
Center wavelength	$P_{OUT}$ , 20°C Heat-sink	935	945	955	nm
Spectral width (FWHM)	$P_{OUT}$ , 20°C Heat-sink	--	1	--	nm
Wavelength shift	20°C Heat-sink	--	--	0.07	nm/°C
N.A. (4-sigma)	$P_{OUT}$ , 20°C Heat-sink	--	0.17	--	--
Emission area	--	--	1 x 1	--	mm <sup>2</sup>

### Maximum Absolute Ratings

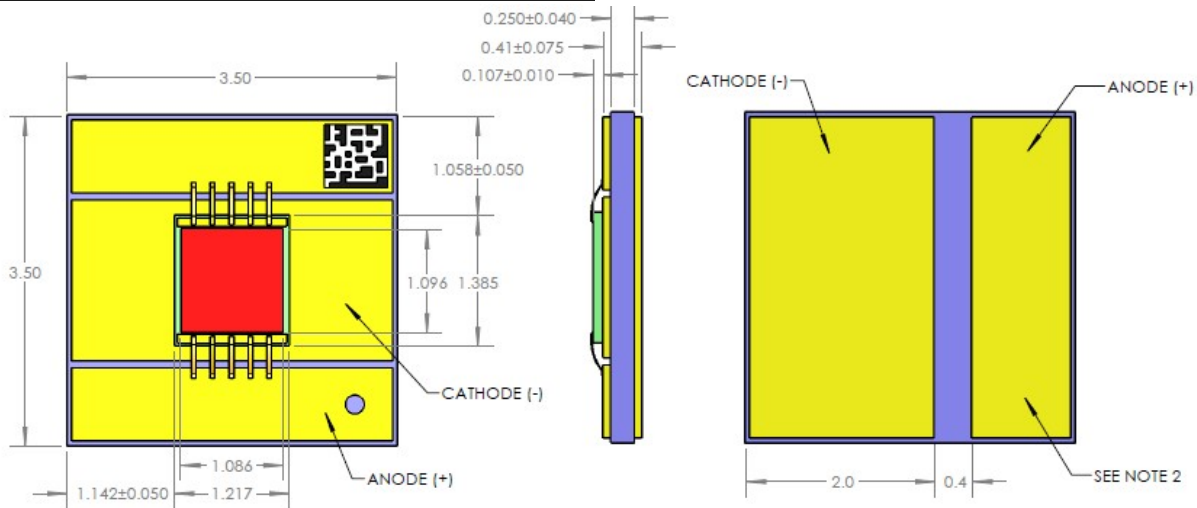
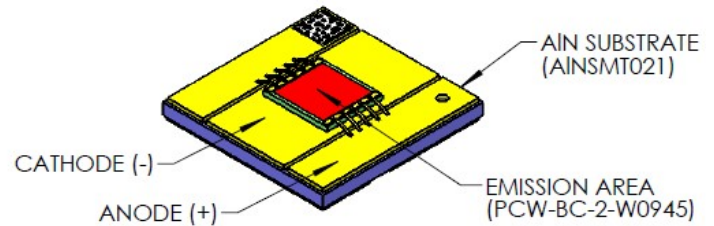
PARAMETER	CONDITIONS
Forward current	5 A
Reverse current	25 $\mu$ A
Operating temperature	0 to 85 °C
Storage temperature	-40 to +85 °C

### Ordering information

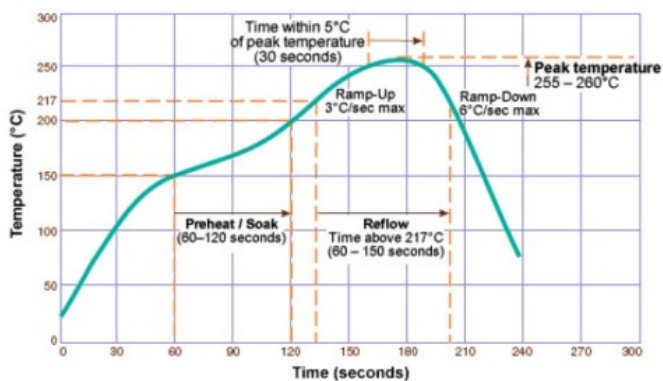


## Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	3.0 ± 0.1 mm
Package length	3.0 ± 0.1 mm
Package height	0.51 ± 0.7 mm
Die Size	1.1 x 1.1 mm <sup>2</sup>
Max solder temperature	260 °C



## Reflow Parameters



### NOTES:

1. TOPSIDE AND BACKSIDE METALLIZATION: Cu/Ni/Au. METALLIZATION PULLBACK: 0.05 mm.
2. COPPER FILLED VIAS.
3. WIREBOND SHOWN FOR INFORMATION ONLY. ACTUAL WIREBOND SIZE, NUMBER AND CONFIGURATIONS MAY VARY.

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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.B – 8/16