



4W CW 850nm VCSEL Array
Part # PCW-SMV-4-W0850

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80 °C)
- Wavelength stabilized & Narrow spectral width (<2nm)
- Mounted on surface mount

Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Operating output power	I _{op} , 60C	4	--	--	W
Threshold current	60C CW	1	1.7	2.6	A
Operating current	4W, 60C CW	4.8	5.5	6.5	A
Operating voltage	4W, 60C CW	1.75	1.9	2.2	V
Resistance	60C CW	50	75	100	mΩ
Slope efficiency	60C CW	0.9	1.05	1.15	W/A
Conversion efficiency	4W, 60C CW	35	40	--	%
Center wavelength	4W, 60C CW	840	850	860	nm
Spectral width (FWHM)	4W, 60C CW	--	1	2.5	nm
Wavelength shift	60C CW	--	--	0.070	nm/°C
Beam Divergence	60C CW	15	19	25	deg 1/e ² , full angle
Emission area	--	--	1.55x1.58	--	mm ²
Die Size	--	--	2.0x2.0	--	mm ²

Maximum Absolute Ratings

PARAMETER	CONDITIONS
Reverse current	10mA
Reverse voltage	5V
Operating temperature	10 to 80 °C
Storage temperature	-40 to 80 °C
Overshoot current	10A

Ordering information

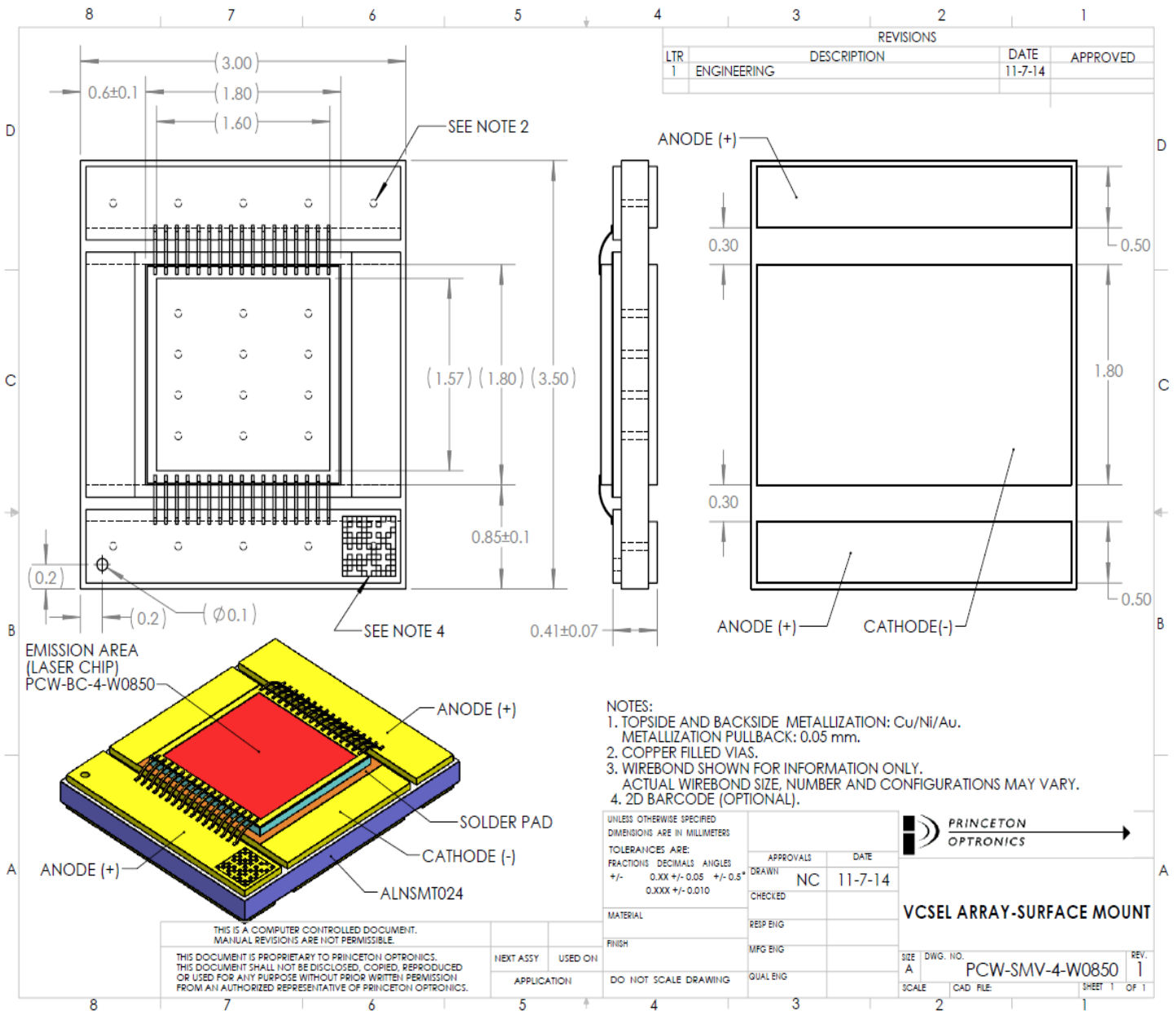
PCW – SMV - 4 – W0850

Package type _____ Wavelength (nm) _____
Output Power (W) _____

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

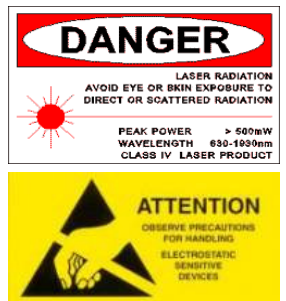
Mechanical Specifications



Copyright © 2014 Princeton Optronics, Inc. All Rights Reserved.

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. A - 11/14

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