4W 850nm VCSEL Array

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 (< 2 nm)*
- *Mounted on surface mount*

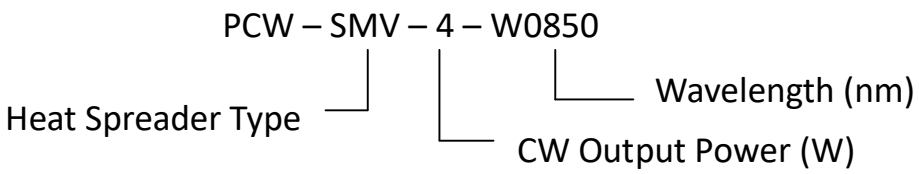
Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	I_{OP}, 20°C	4	--	--	W
Threshold current	20°C	1	1.7	2.6	A
Operating current	P_{OUT} , 20°C	4.8	5.5	6.5	A
Operating voltage	P_{OUT}, 20°C	1.75	1.9	2.2	V
Differential resistance	P_{OUT}, 20°C	50	75	100	mΩ
Slope efficiency	20°C	0.9	1.05	1.15	W/A
Conversion efficiency	P_{OUT}, 20°C	35	40	--	%
Center wavelength	P_{OUT}, 20°C	840	850	860	nm
Spectral width (FWHM)	P_{OUT}, 20°C	--	1	2.5	nm
Wavelength shift	20°C	--	--	0.07	nm/°C
Beam divergence ($1/e^2$)	20°C, full angle	15	19	25	°
Emission area	--	--	1.55x1.58	--	mm^2

Maximum Absolute Ratings

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

Ordering information



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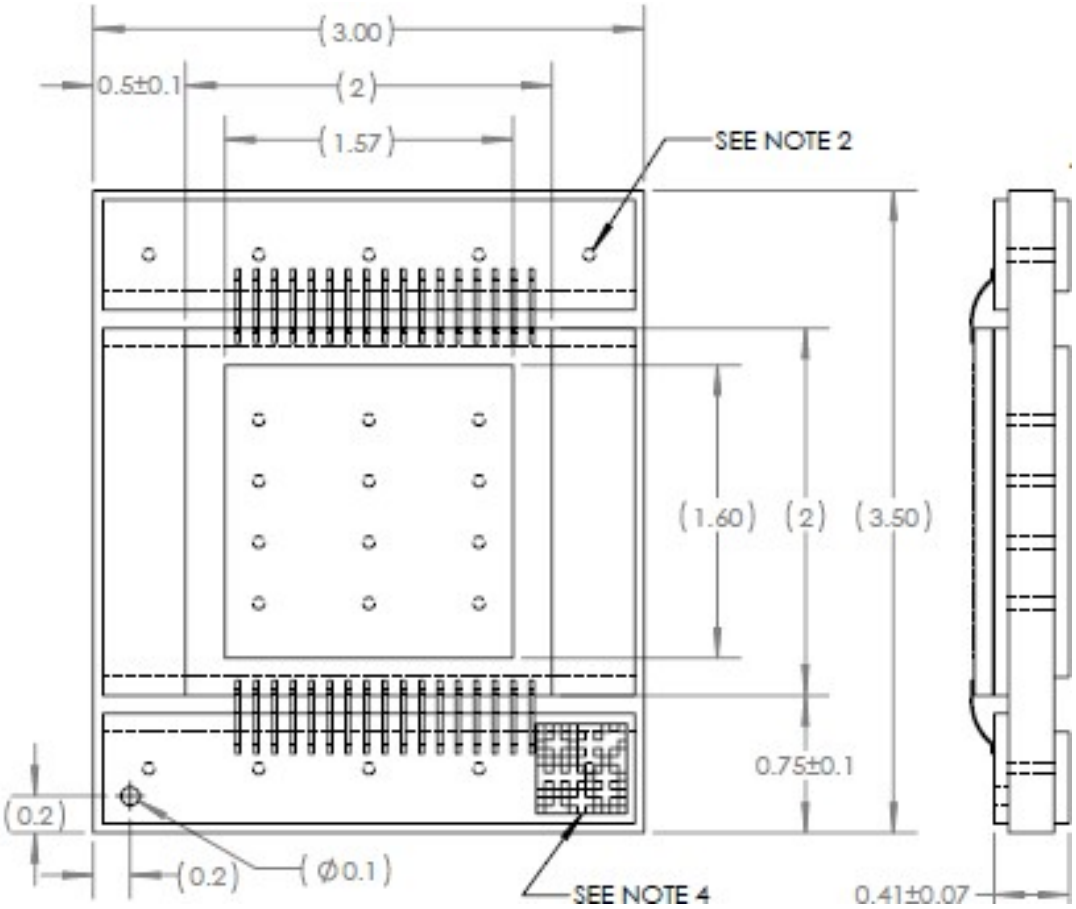
PRINCETON OPTRONICS

Mechanical Characteristics

PARAMETER	CONDITIONS
Die size	2.0 x 2.0 mm^2



NOTES:
1. TOPSIDE AND BACKSIDE METALLIZATION: Cu/Ni/Au.
   METALLIZATION PULLBACK: 0.05mm
2. COPPER FILLED VIAS.
3. WIREBONDS SHOWN FOR INFORMATION ONLY.
   ACTUAL WIREBOND SIZE, NUMBER AND CONFIGURATION MAY VARY.
4. 2D BARCODE (OPTIONAL)

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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