

## 15W 1064nm VCSEL Array on CE-Mount PCW-CE-15-W1064

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80 °C)
- Wavelength stabilized & narrow spectral width (< 2nm)
- Ideal for medical and illumination applications
- Easily soldered to heat exchanger

### Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	I <sub>op</sub> , 20°C Heat-sink	15	18	--	W
Threshold current	20°C Heat-sink	--	2	6	A
Operating current	P <sub>OUT</sub> , 20°C Heat-sink	--	19	22	A
Operating voltage	P <sub>OUT</sub> , 20°C Heat-sink	--	2.1	2.5	V
Differential resistance	P <sub>OUT</sub> , 20°C Heat-sink	--	32	40	mΩ
Slope efficiency	20°C Heat-sink	0.8	0.95	--	W/A
Conversion efficiency	P <sub>OUT</sub> , 20°C Heat-sink	35	42	--	%
Center wavelength	P <sub>OUT</sub> , 20°C Heat-sink	1050	1064	1080	nm
Spectral width(FWHM)	P <sub>OUT</sub> , 20°C Heat-sink	--	1	2	nm
Wavelength shift	20°C Heat-sink	--	--	0.075	nm/°C
N.A. (4-sigma)	P <sub>OUT</sub> , 20°C Heat-sink	--	0.15	0.22	--
Emission area	--	--	2.6 x 2.6	--	mm <sup>2</sup>

### Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	30 A
Reverse current	25 μA
Operation temperature	0 to +80°C
Storage temperature	-40 to +80°C

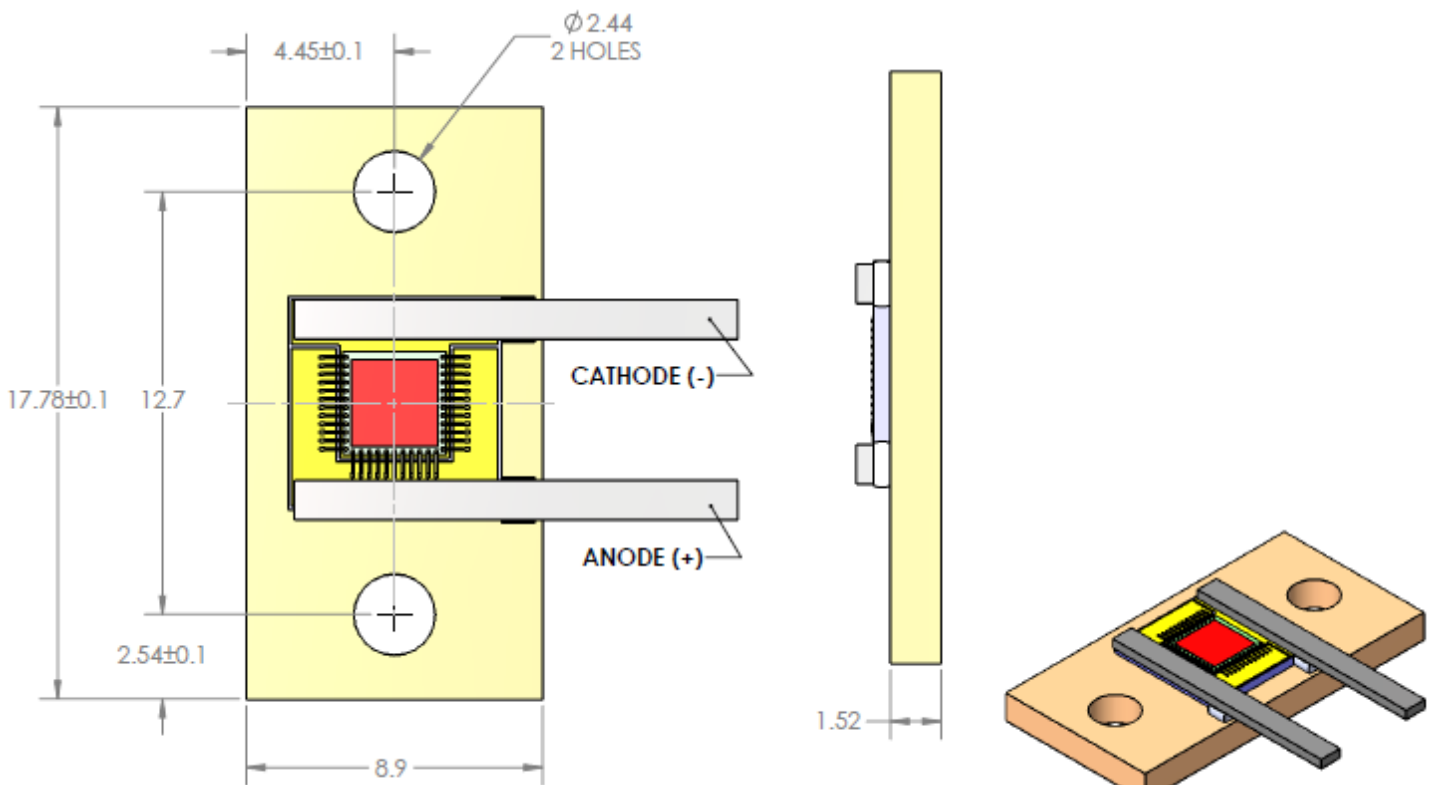
### Ordering Information

#### PCW – CE – 15 – W1064

Heat-spreader Type \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ Wavelength (nm)  
\_\_\_\_\_ CW Output Power (W)

## Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	8.9 ± 0.1 mm
Package length	17.78 ± 0.1 mm
Package height	2.0 ± 0.1 mm
Light emitting area	2.6 x 2.6 mm <sup>2</sup>
Max solder temperature	118 °C



### 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.

Copyright © 2013 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.

