

## 6W 808nm VCSEL Array on CE-Mount PCW-CE-6-W0808

- Vertical-Cavity Surface-Emitting Laser technology
- Uniform and speckle free illumination
- Selectable beam divergence upon request
- Circular symmetric output beam for low cost lensing
- Operates at high temperatures reliably
- Ideal for target designation

### Optical & Electrical Characteristics

| PARAMETER                           | CONDITIONS                        | MIN | TYP       | MAX   | UNIT            |
|-------------------------------------|-----------------------------------|-----|-----------|-------|-----------------|
| CW Output Power                     | I <sub>op</sub> , 20°C Heat-sink  | 6   | 8         | --    | W               |
| Threshold current                   | 20°C Heat-sink                    | --  | 2         | 3     | A               |
| Operating current                   | P <sub>OUT</sub> , 20°C Heat-sink | --  | 8         | 10    | 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 | --  | 80        | 100   | mΩ              |
| Slope efficiency                    | 20°C Heat-sink                    | 1   | 1.1       | --    | W/A             |
| Conversion efficiency               | P <sub>OUT</sub> , 20°C Heat-sink | 35  | 44        | --    | %               |
| Center wavelength                   | P <sub>OUT</sub> , 20°C Heat-sink | 800 | 808       | 816   | nm              |
| Spectral width(FWHM)                | P <sub>OUT</sub> , 20°C Heat-sink | --  | 1         | 3     | nm              |
| Wavelength shift                    | 20°C Heat-sink                    | --  | --        | 0.070 | Nm/°C           |
| Beam divergence (1/e <sup>2</sup> ) | P <sub>OUT</sub> , 20°C Heat-sink | 17  | 19.5      | --    | °               |
| Emission area                       | --                                | --  | 1.5 x 1.5 | --    | mm <sup>2</sup> |

### Maximum Absolute Ratings

| PARAMETER             | CONDITIONS  |
|-----------------------|-------------|
| Forward current       | 10 A        |
| Reverse current       | 25 μA       |
| Operation temperature | 0 to 80°C   |
| Storage temperature   | -40 to 80°C |

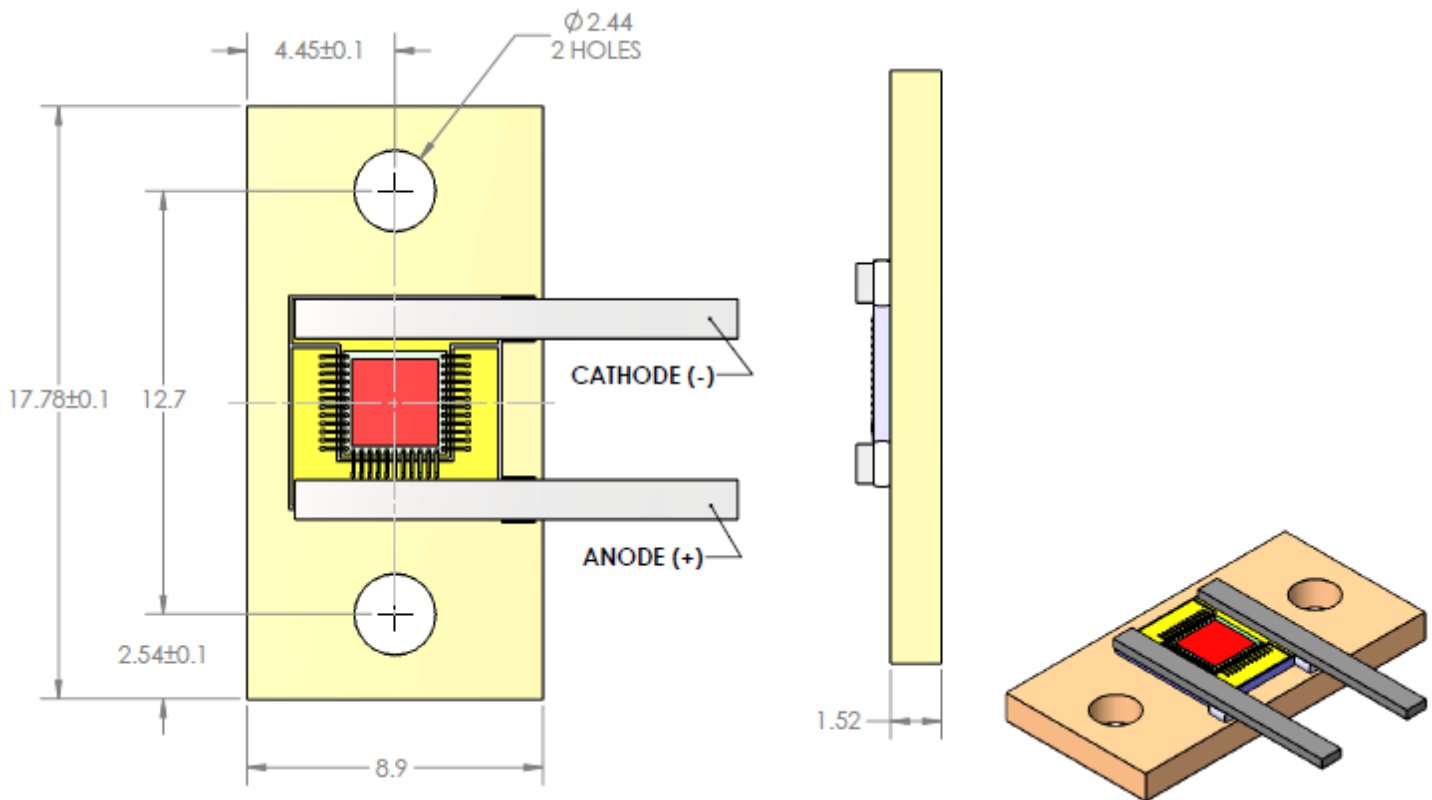
### Ordering Information

PCW – CE – 6 – W0808

Form Factor / Heat-spreader Type ┌ ┌ Wavelength (nm)  
└ └ CW Output Power (W)

## Mechanical Characteristics

| PARAMETER              | CONDITIONS                |
|------------------------|---------------------------|
| Package width          | 8.9 ± 0.1 mm              |
| Package length         | 17.8 ± 0.1 mm             |
| Package height         | 3.0 ± 0.1 mm              |
| Light emitting area    | 1.5 x 1.5 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 © 2014 Princeton Optronics, Inc.  
All Rights Reserved.

Princeton Op \_\_\_\_\_ o 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.

