

## 15W 808nm VCSEL Array Submodule PQCW-CS6-15-W0808

- Vertical-Cavity Surface-Emitting Laser technology
- Very high reliability, can operate at high temperatures (up to 80°C)
- Wavelength stabilized & narrow spectral width (< 1 nm)
- Easily soldered to heat exchanger

### Optical & Electrical Characteristics

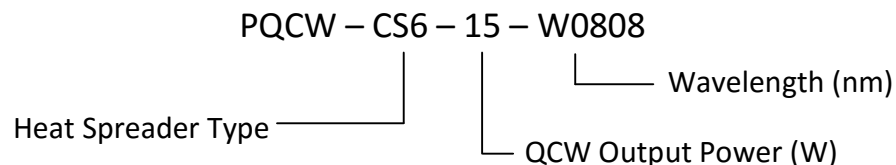
PARAMETER	CONDITIONS*	MIN	TYP	MAX	UNIT
QCW Output power	20A, 20°C Heat-sink	15	18	--	W
Threshold current	20 <sup>0</sup> C Heat-sink	--	2	3	A
Operating current	P <sub>out</sub> , 20°C Heat-sink	--	18	20	A
Operating voltage	P <sub>out</sub> , 20°C Heat-sink	--	2	2.5	V
Differential resistance	P <sub>out</sub> , 20°C Heat-sink	--	50	55	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	--	0.8	1	nm
Wavelength shift	20°C Heat-sink	--	--	0.070	nm/°C
N.A. (4 sigma)	P <sub>out</sub> , 20°C Heat-sink	--	0.15	0.17	--
Emission area	--	--	1.5 x 1.5	--	mm <sup>2</sup>

\* 100 microseconds, 1% Duty Cycle

### Maximum Absolute Ratings

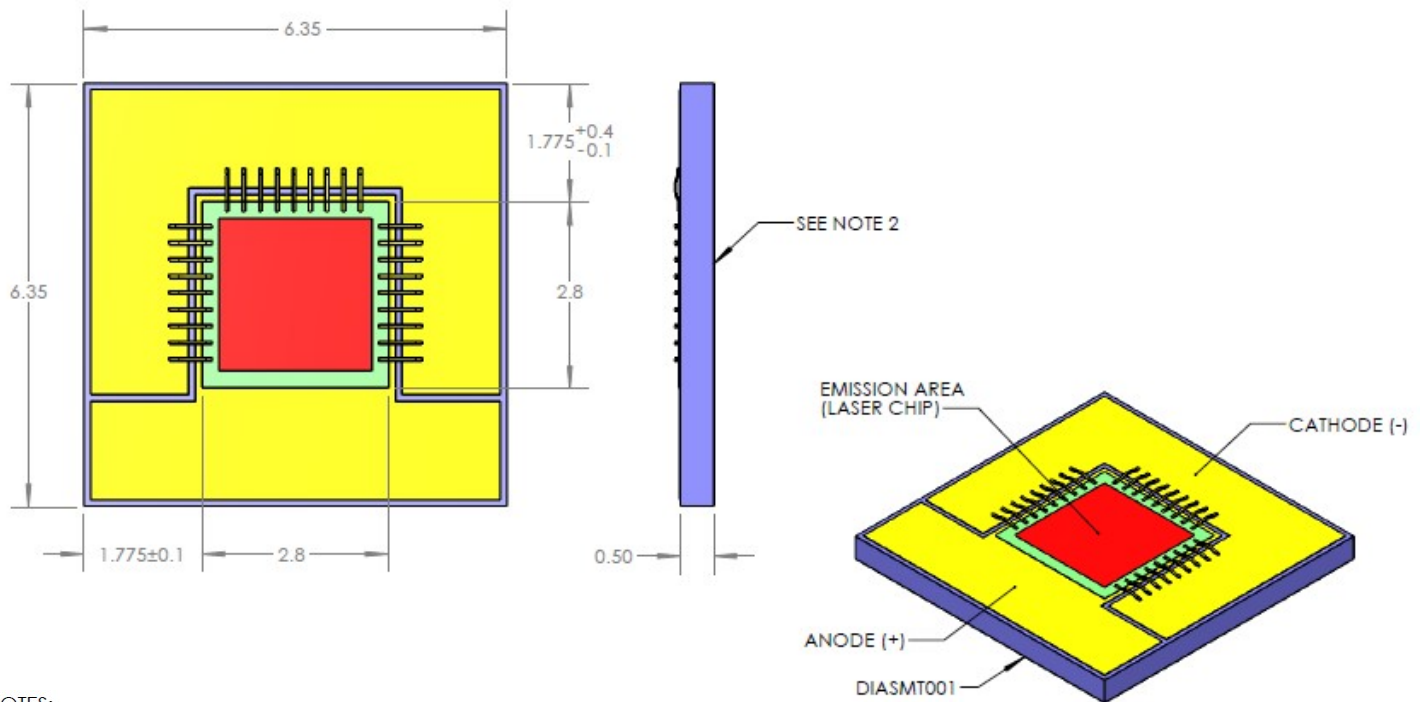
PARAMETER	CONDITIONS
Forward current	25 A
Reverse current	25 μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

### Ordering information



## Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	6.35 ± 0.01 mm
Package length	6.35 ± 0.01 mm
Package height	0.60 ± 0.01 mm
Thermal resistance	< 0.6 °C/W
Max solder temperature	140 °C
Metallization	Ti/Pt/Au + 12 μm Au



### NOTES:

1. ANODE AND CATHODE METALLIZATION: Ti/Pt/Au + 12 μm Au PLATING.  
METALLIZATION PULLBACK: 0.10 ± 0.05 mm.
2. FULL BACKSIDE METALLIZATION: Ti/Pt/Au
3. WIREBONDS SHOWN FOR INFORMATION ONLY.  
WIREBOND SIZE, NUMBER AND CONFIGURATIONS MAY VARY.

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.



REV.D- 8/16