PRINCETON OPTRONICS

30W QCW 1064nm VCSEL Array Submodule
Part # PQCW-CS6-30-W1064
(Preliminary)

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

Optical & Electrical Characteristics

PARAMETER	CONDITIONS *	MIN	TYP	MAX	UNIT
QCW Output Power	45A, 20C Heat-sink	30	33	--	W
Threshold current	20C Heat-sink	--	4	6	A
Operating current	30W, 20C Heat-sink	--	40	45	A
Operating voltage	30W, 20C Heat-sink	--	2.3	2.6	V
Differential resistance	30W, 20C Heat-sink	--	23	30	mΩ
Slope efficiency	20C Heat-sink	0.8	0.9	--	W/A
Conversion efficiency	30W, 20C Heat-sink	30	40	--	%
Center wavelength	30W, 20C Heat-sink	1054	1064	1074	nm
Spectral width (FWHM)	30W, 20C Heat-sink	--	0.8	1	nm
Wavelength shift	20C Heat-sink	--	--	0.070	nm/°C
N.A. (4-sigma)	30W, 20C Heat-sink	--	0.15	0.17	--
Emission area	--	--	2.6x2.6	--	mm^2

* QCW test conditions: 100 usec pulse-width, 1% Duty cycle

Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	50A
Reverse current	25μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

Ordering information

PQCW – CS6 - 30 - W1064

- CS6: Package type
- 30: QCW Output Power (W)
- W1064: Wavelength (nm)

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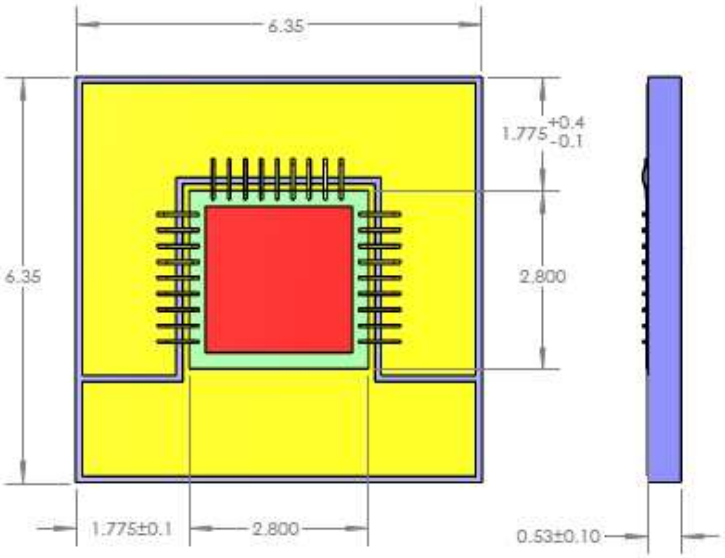
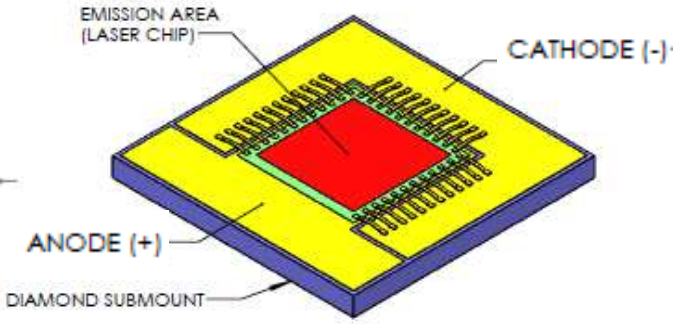
Mechanical Characteristics

PARAMETER	VALUE
Package width	6.35 +/-0.01 mm
Package length	6.35 +/-0.01 mm
Package height	0.70 +/-0.01 mm
Thermal resistance	< 0.6 °C/W
Max solder temperature	140 °C
Metalization	Ti/Pt/Au + 12μm Au





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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.C – 01/13

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