40W 808nm VCSEL Array on C-Mount

PCW-CA1-40-W0808

- *Vertical-Cavity Surface-Emitting Laser technology*
- *Very high reliability*
- *High temperature operation (up to 80 °C)*
- *Wavelength stabilized & narrow spectral width (< 1 nm)*

Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Output power	65A, 25 °C Heat-sink	40	50	--	W
Threshold current	25 °C Heat-sink	--	10	15	A
Operating current	P_{out}, 25 °C Heat-sink	--	60	65	A
Operating voltage	P_{out}, 25 °C Heat-sink	--	2.0	2.2	V
Differential resistance	P_{out}, 25 °C Heat-sink	--	15	18	mΩ
Slope efficiency	25 °C Heat-sink	0.85	0.95	--	W/A
Conversion efficiency	P_{out}, 25 °C Heat-sink	35	43	--	%
Center wavelength	P_{out}, 25 °C Heat-sink	800	808	816	nm
Spectral width (FWHM)	P_{out}, 25 °C Heat-sink	--	0.8	1	nm
Wavelength shift	25 °C Heat-sink	0.060	0.065	0.070	nm/°C
N.A. (4-sigma)	P_{out}, 25 °C Heat-sink	--	0.15	0.17	--
Emission area	--	--	4.7 x 4.7	--	mm^2

Maximum Absolute Ratings

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

Ordering information

PCW – CA1 – 40 – W0808

- PCW – Heat Spreader Type
- CA1 – Heat Spreader Type
- 40 – CW Output Power (W)
- W0808 – Wavelength (nm)

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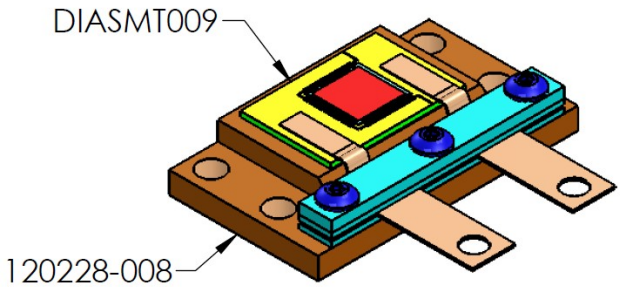
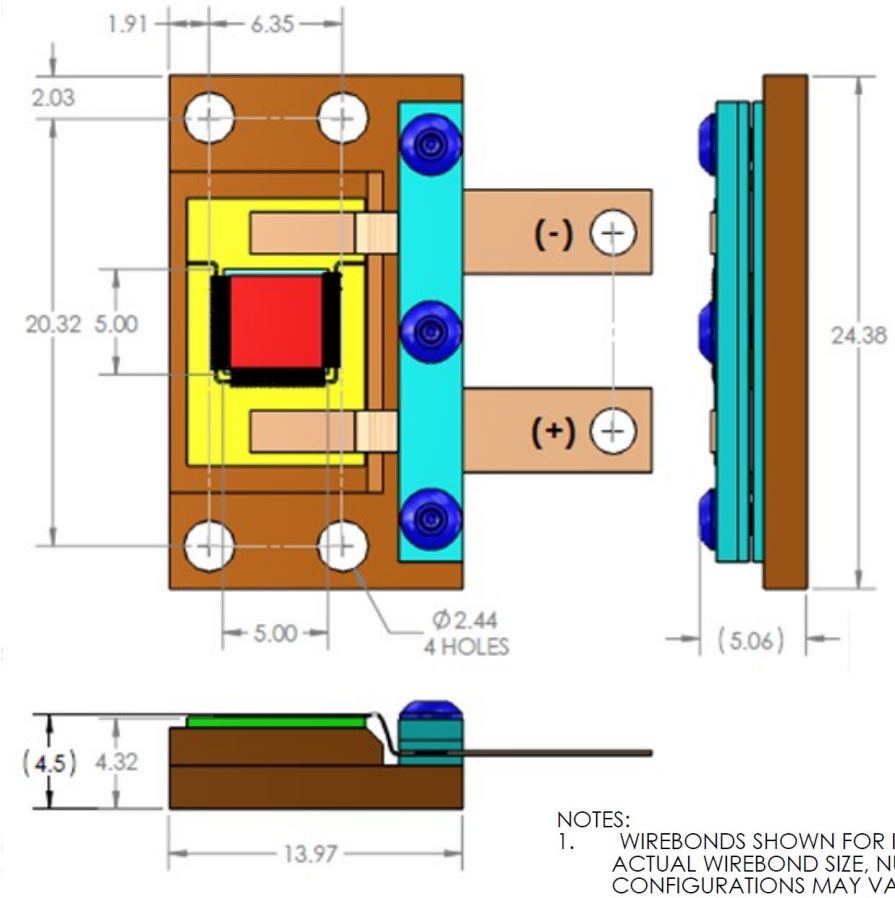
Mechanical Characteristics

PARAMETER	CONDITIONS
Package width	13.97 ± 0.01 mm
Package length	24.38 ± 0.01 mm
Package height	(5.06 mm)
Thermal resistance	< 0.3 °C/W
Max solder temperature	118 °C
Metallization	Ti/Pt/Au + 12µm Au





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.

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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