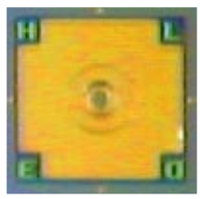
PRINCETON OPTRONICS



2mW Single-Mode 1064nm VCSEL Chip
Part # PSM-TC-002-W1064

- *Vertical-Cavity Surface-Emitting Laser technology*
- *>2mW single-fundamental-mode power at 1064nm*
- *Top-side emission*
- *Custom wavelengths available (808-1064nm)*

Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Single-mode Power	4mA, 25C Heat-sink	2	2.5	--	mW
Threshold current	25C Heat-sink	--	0.4	0.6	mA
Operating current	2mW, 25C Heat-sink	--	4	5	mA
Operating voltage	2mW, 25C Heat-sink	--	2.4	2.6	V
Differential resistance	2mW, 25C Heat-sink	--	220	250	Ω
Slope efficiency	25C Heat-sink	0.65	0.75	--	W/A
Conversion efficiency	1.1mW, 25C	28	30	--	%
Center wavelength	2mW, 25C Heat-sink	1054	1064	1074	nm
SMSR	2mW, 25C Heat-sink	-25	-30	--	dB
Wavelength shift	25C Heat-sink	0.060	0.065	0.070	nm/°C
Beam divergence	2mW, 25C Heat-sink	--	17	21	°

(1) Side-Mode Suppression Ratio
(2) Full-width $1/e^2$

Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	6mA
Reverse current	25μA
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

Ordering information

PSM - TC - 002 – W1064

- Package type
  - TC=Die
  - TCS=Chip-on-submount
- CW Output Power (mW)
- Wavelength (nm)

M SQUARE
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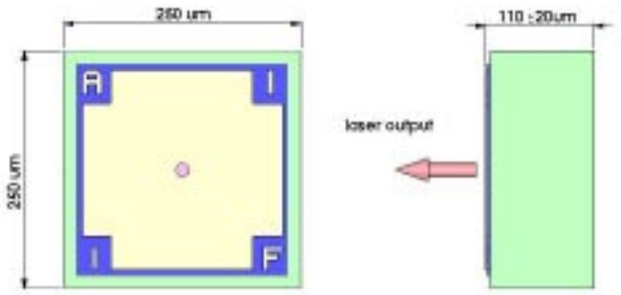
〒815-0041 福岡市南区野間1-10-18 TEL(092)554-6800 FAX(092)554-6802

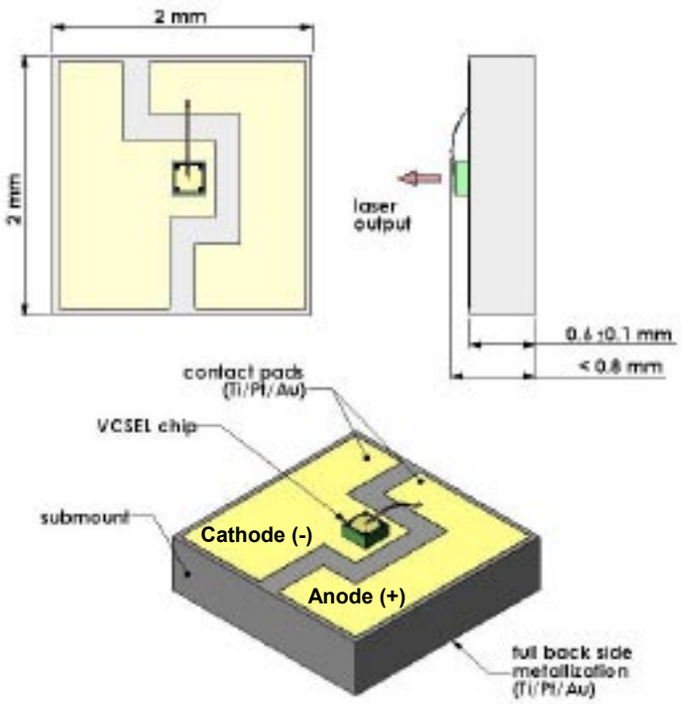
Mechanical Characteristics

Package Option TC: Bare die



PARAMETER	VALUE
Die width	250 +/-10μm
Die length	250 +/-10μm
Die height	110 +/-20μm
Max solder temperature	330 °C

Package Option TCS: Chip on submount



PARAMETER	VALUE
Package width	2.0 +/-0.05mm
Package length	2.0 +/-0.05mm
Package height	< 0.7mm
Max solder temperature	150 °C
Metalization	Ti/Pt/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 IIIB 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.

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