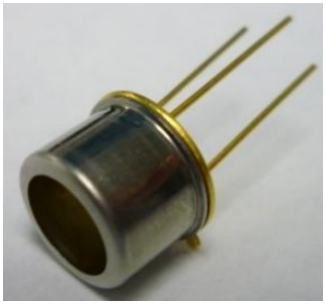
1mW Single-Mode 795nm VCSEL

PSM-TO-001-W0795

- *Vertical-Cavity Surface-Emitting Laser technology*
- *1mW single-fundamental-mode power at 795 nm*
- *Use for atomic clocks and magnetometers*
- *Reliable, high temperature operation*
- *TO-46 package*



Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Single-mode power	3mA, 20°C Heat-sink	1	1.5	--	mW
Threshold current	20°C Heat-sink	--	0.3	0.8	mA
Operating current	P_{out}, 20°C Heat-sink	--	2.2	3	mA
Operating voltage	P_{out}, 20°C Heat-sink	--	2.2	2.6	V
Differential resistance	P_{out}, 20°C Heat-sink	--	240	280	Ω
Slope efficiency	20°C Heat-sink	0.5	0.6	--	W/A
Conversion efficiency	P_{out}, 20°C Heat-sink	20	25	--	%
Center wavelength	P_{out}, 20°C Heat-sink	--	795	--	nm
SMSR (1)	P_{out}, 20°C Heat-sink	-25	-30	--	dB
PER (2)	P_{out},20°C Heat-sink	-20	-30	--	dB
Linewidth	P_{out}, 20°C Heat-sink	--	10	20	MHz
Wavelength shift	20°C Heat-sink	0.060	0.065	0.070	nm/°C
Beam divergence ($1/e^2$)	P_{out}, 20°C Heat-sink	--	16	20	°
Modulation speed (3)	P_{out}, 20°C Heat-sink	2	4	--	GHz

(1) Side-Mode Suppression Ratio
(2) Polarization Extinction Ratio
(3) Small signal, 3dB bandwidth

Ordering information

PSM – TO – 001 – W0795

- Package Type
- CW Output Power
- Wavelength (nm)

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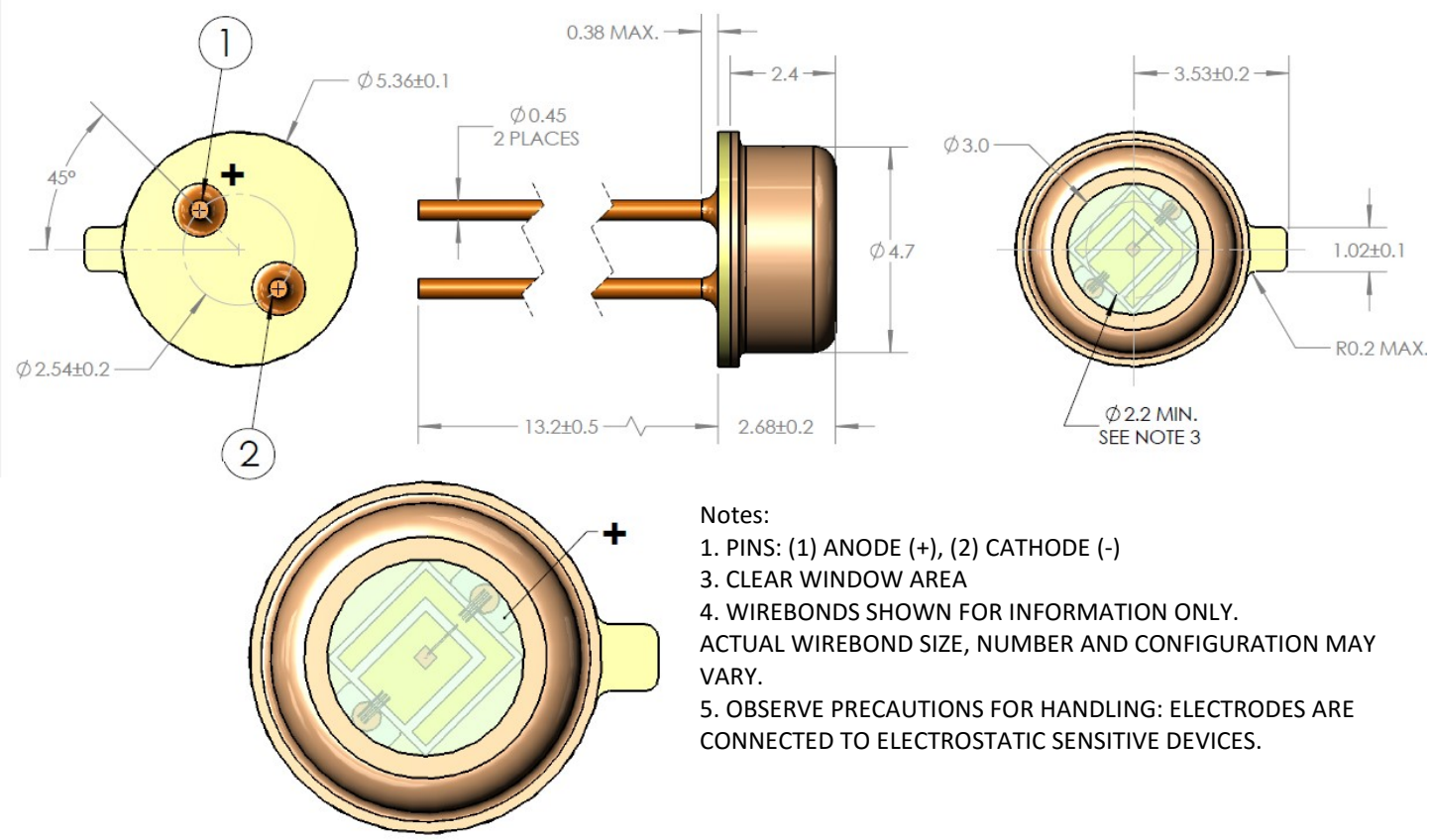
PRINCETON OPTRONICS

Mechanical Characteristics

PART	MATERIAL
Leads	Kovar
Cap	Kovar
Cap Finish	Nickel Plating (2 µm MIN.)
Base	Alloy 42
Base Finish	Nickel Plating (1.5 um MIN.) Gold Plating (0.38 um MIN.)



Notes:
1. PINS: (1) ANODE (+), (2) CATHODE (-)
3. CLEAR WINDOW AREA
4. WIREBONDS SHOWN FOR INFORMATION ONLY. ACTUAL WIREBOND SIZE, NUMBER AND CONFIGURATION MAY VARY.
5. 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