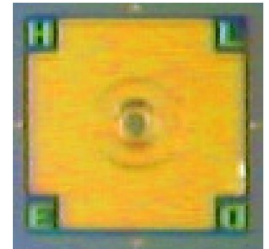


## 1mW Single-Mode 850nm VCSEL PSM-TO-001-W0850

- Vertical-Cavity Surface-Emitting Laser technology
- > 1mW single-fundamental-mode power at 808 nm
- Top-side emission
- Custom wavelengths available (808 - 1064 nm)



### Optical & Electrical Characteristics

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
CW Single-mode power	$I_{op}$ , 25°C Heat-sink	0.75	1	--	mW
Threshold current	25°C Heat-sink	--	0.25	0.4	mA
Operating current	$P_{out}$ , 25°C Heat-sink	--	2	3	mA
Operating voltage	$P_{out}$ , 25°C Heat-sink	--	2.2	2.5	V
Differential resistance	$P_{out}$ , 25°C Heat-sink	--	200	220	$\Omega$
Slope efficiency	25°C Heat-sink	0.8	0.9	--	W/A
Conversion efficiency	1.4mW, 25°C Heat-sink	30	35	--	%
Center wavelength	$P_{out}$ , 25°C Heat-sink	840	850	860	nm
SMSR (1)	$P_{out}$ , 25°C Heat-sink	-25	-30	--	dB
Wavelength shift	25°C Heat-sink	0.060	0.065	0.070	nm/°C
Beam divergence ( $1/e^2$ )	$P_{out}$ , 25°C Heat-sink	--	16	20	°

(1) Side-Mode Suppression Ratio

### Maximum Absolute Ratings

PARAMETER	CONDITIONS
Forward current	20 mA
Reverse current	25 $\mu$ A
Operating temperature	0 to +80 °C
Storage temperature	-40 to +80 °C

### Ordering information

PSM – TO – 001 – W0850

Package Type:

BC = Bare Die

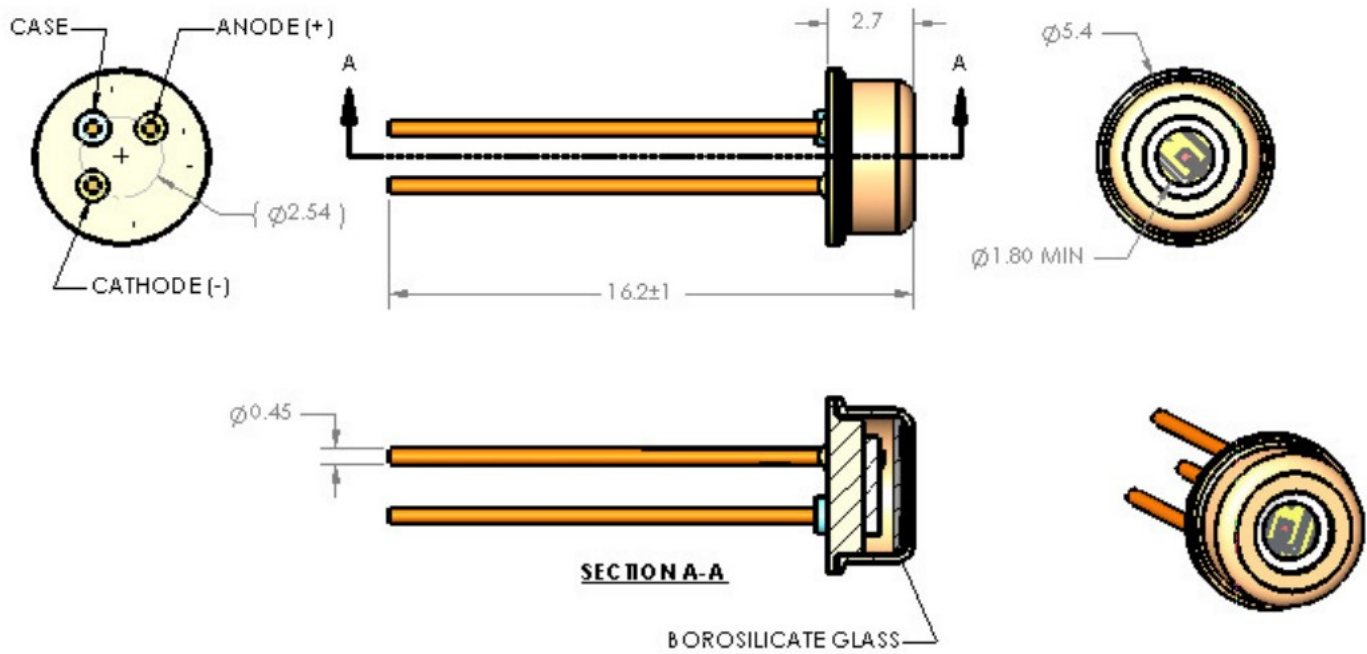
TO = TO-46

BCS = Chip-on-submount

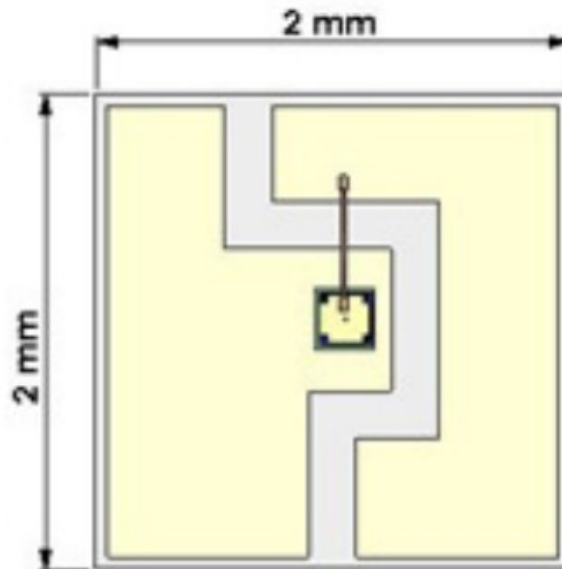
Wavelength (nm)

CW Output Power

**TO-46 Package**



**TO-46 Package**



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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