

SM68-3N001 Pre1.0

1mW 680 nm VCSEL Chip

Features

- : 680nm wavelength range
- : 1mW VCSEL
- : Low threshold and operating currents
- :

Description



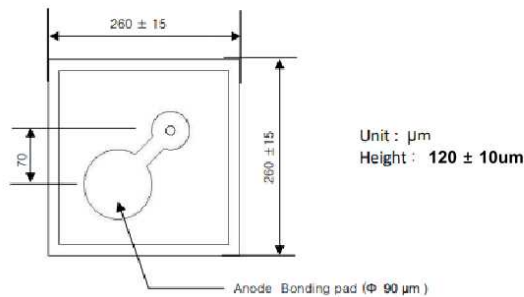
Applications

- : Industrial Sensors
- : Low light laser therapy
- :
- :

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 65 °C
Operating Temperature	0 to 50 °C
Continuous Forward Current	10mA
Continuous Reverse Voltage	5V(@10uA)

Dimensions



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Electro-Optics Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		1.5		mA	CW
I_{th} Temperature Variation	ΔI_{th}		1.0		mA	$T_a = 0$ to 50°C
Slope Efficiency	η		0.4		W/A	$I_f = 5\text{mA}$
Optical Output Power	P_o		1.5		mW	$I_f = 5\text{mA}$
Peak Wavelength	λ_p	670	680	690	nm	$I_f = 5\text{mA}$
λ Temperature Variation	$\Delta \lambda / \Delta T$		0.06		nm/ $^{\circ}\text{C}$	$T_a = 0$ to 50°C at 5mA
Beam Divergence	Θ		20		$^{\circ}$	$P_o = 1.5\text{ mW}$ (Full width, $1/e^2$)
Operating Voltage	V_f		2.5		V	$I_f = 5\text{mA}$
Breakdown Voltage	V_b	-10			V	
Dynamic Resistance	R_d		100		Ohm	$I_f = 5\text{mA}$

Notes

* These specifications are subject to change without notice.



NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.

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