Optowell Co., Ltd.

SM85-3N001W Rev1.0

2.5Gbps Multi-Mode 850nm VCSEL Chip

Features

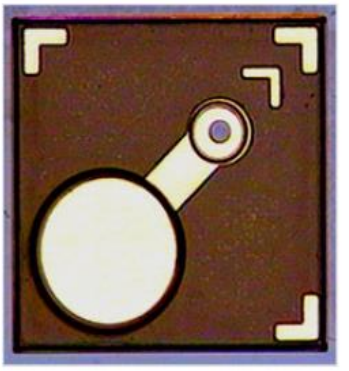
: 850nm wavelength range

: High data rate > 2.5Gbps

: Low current and voltage

: Other configurations available on request

Description



Applications

: High speed Data Communications

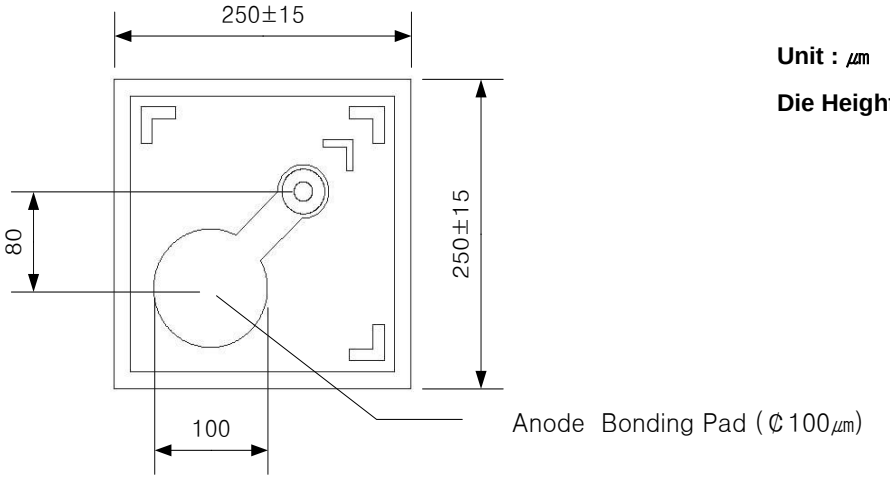
: Gigabit Ethernet

: Fiber Channel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 ℃
Operating Temperature	-40 to 85 ℃
Continuous Forward Current	12mA
Continuous Reverse Voltage	5V (@10μA)

Dimensions



Unit : ㎛

Die Height : 200±15㎛

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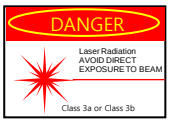
Electro-Optics Characteristics (T_a=25℃ unless otherwise stated)

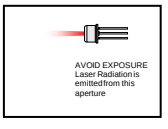
Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		1.0	2.0	mA	Cw
I_{th} Temperature Variation	ΔI_{th}			2.0	mA	T_a=-40 to 85 °C
Slope Efficiency	η		0.3	0.5	W/A	I_f = 7mA
η Temperature Variation	Δη / ΔT		-0.5		%/ °C	T_a=-40 to 85 °C at 7mA
Optical Output Power	P_o		1.8		mW	I_f = 7mA
Peak Wavelength	λ	840	850	860	nm	I_f = 7mA
λ Temperature Variation	Δ λ / ΔT		0.06			T_a=-40 to 85 °C at 7mA
Spectral Bandwidth (RMS)	Δ λ			0.85	nm	I_f = 7mA
Beam Divergence	Θ	14		30	°	P_0=1.8mW, (Full Width,1/e^2)
Operating Voltage	V_f		1.8	2.2	V	I_f = 7mA
Breakdown Voltage	V_b		-10		V	
Dynamic Resistance	R_d		40	55	Ohm	I_f = 7mA

Notes

1. High power or sub-milliampere threshold current can be provided on request.
2. Tighter wavelength specifications are available on request.
3. Our technological team have amassed a wealth of experience in the development of the epitaxy and processing of VCSELs. If you have a specific application for a VCSEL, please call or e-mail. One of our specialists will be happy to discuss your particular requirements

* 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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