



Standard 850 nm Implant VCSEL Specs (High-speed datacom & general purpose, $\geq 1.25\text{Gbps}$)

Available in singlet die and m x n Array forms

Dimension (250 X m)X(305 X n)X(120) μm^3 (m=1,...,4; n=1,...,12)

Parts number: **VX-Clmn** (m=1,...,4; n=1,...,9,A,B,C,..)

1. Optical and Electrical Characteristics

Parameter	Symbol	Min.	TYP.	Max.	Unit	Test Condition
Peak Wavelength	λ_p	830	845	860	(nm)	$I_f = 12\text{mA@RT}$
Spectral Width (RMS)	$\Delta\lambda$			0.85	(nm)	$I_f = 12\text{mA@RT}$
Beam Divergence	Θ		15	20	(Deg)	Full width at $1/e^2$; $I_f = 12\text{mA@RT}$
Forward Voltage	V_f	1.7	2.0	2.4	(V)	$I_f = 12\text{mA@RT}$
Threshold Current	I_{th}	2	4.5	7	(mA)	
Slope Efficiency	dP/dI	0.2	0.28	0.4	(W/A)	$I_f = 12\text{mA@RT}$
Optical output power	P_{out}		2.1		mW	$I_f = 12\text{mA@RT}$
Dynamic Resistance	dV/dI	15	35	45	(Ω)	$I_f = 12\text{mA@RT}$
Rise / Fall Time	t_r / t_f		100	200	ps	
Jitter p-p	t_j		40		ps	
λ_p Temperature Coefficient	$\delta\lambda_p/\delta T$		0.06		nm/ $^{\circ}\text{C}$	$T_A=0\sim 70^{\circ}\text{C}$, $I_f = 12\text{mA}$

2. Maximum Ratings

Parameter	Min.	Max.	Unit	Condition
Storage Temperature	-40	100	$^{\circ}\text{C}$	
Operating Temperature	0	70	$^{\circ}\text{C}$	
Continuous Forward Current		15	mA	
Continuous Reverse Voltage		5	(V)	

3. Physical dimensions

Parameter	Unit	TYP.
Die Length	μm	305
Die Width	μm	250
Die Height	μm	120
Bondpad size	μm	150 x 85

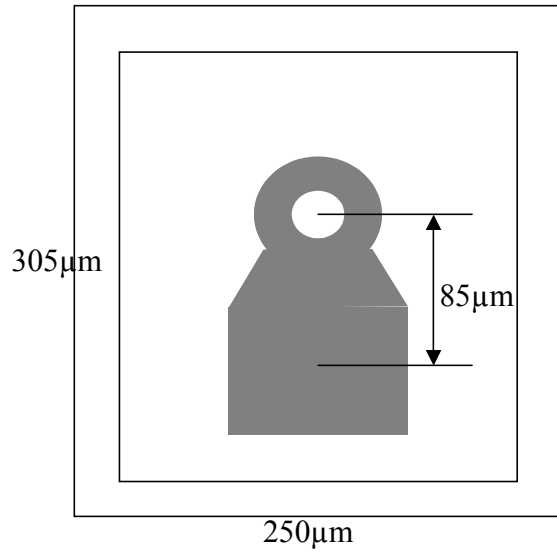
Note: These specifications are subject to change without notice.

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VX-Cimn Rev. A

DEVICE TOP VIEW



(Only metal patterns and scribe-channel mesa are shown here.)

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