AXT Product Information

850 nm VCSEL Chips

(with oxidation process)

(Datacom, General Purpose)

1. Optical and Electrical Characteristics

Parameter	Symbol	Min.	TYP.	Max.	Unit	Test Condition
Peak Wavelength	λ_p	830	845	860	nm	I_f = 4mA@RT
Spectral Width(FWHM)	$\Delta\lambda$	---	0.5	1	nm	I_f = 4mA@RT
Beam Divergence	Θ	10	16	20	Deg	Full width at half maximum (FWHM)
Threshold Voltage	V_{th}	1.5	1.6	1.8	V	I_f = 0.3mA@RT
Forward Voltage	V_f	1.7	2.1	2.5	V	I_f = 4mA@RT
Threshold Current	I_{th}	0.5	1	3	mA	
Peak Optical Power	P_{max}	1	2	4.5	mW	
Peak Power Current	I_{pmax}	6	8	12	mA	
Slop Efficiency	dP/dI	0.25	0.38	0.45	W/A	I_f = 4mA@RT
Dynamic Resistance	dV/dI	40	55	65	Ω	I_f = 4mA@RT
Reverse Breakdown Voltage	V_b	5	10	15	V	
Operation Temperature Range	T_{op}	0	25	85	C	

2. Maximum Ratings

Parameter	Min.	Max.	Unit	Condition
Storage Temperature	-30	100	C	
Operating Temperature	-30	90	C	
Continuous Forward Current		8	mA	
Continuous Reverse Voltage		5	V	

Note 1. This chart is a target performance of chips made from wafers with 14um light-emitting and 10um of oxidation apertures.
Note 2. These specifications are subject to change without notice.

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AXT VCSEL TECHNOLOGIES

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