



華立捷科技股份有限公司

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5Gbps 850nm VCSEL Chip

Product Specifications

產品規格書



Features & Applications

- High Speed Datacenter
- Low Dependence of Electrical and Optical Characteristics over Temperature

Electro-Optical Characteristics (T = 25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Threshold Current	I_{th}	0.8	1.5	2	mA	T=25 °C
Output Power	P_{op}	1.2	1.8	***	mW	$I_f=5mA$
Slope Efficiency	η	0.35	0.4	0.55	mW/mA	$I_f=5mA$
Operating Voltage	V_{op}	***	1.9	***	V	$I_f=5mA$
Resistance	R_s	35	55	65	Ω	$I_f=5mA$
Wavelength	λ	840	850	860	nm	$I_f=5mA$
Spectral Bandwidth	$\Delta\lambda$	***	***	0.5	nm	$I_f=5mA$
Beam Divergence	θ	***	25	30	deg.	$I_f=5mA$ Full Width 1/ e ²
Rise Time (20~80%)	T_r	***	50	70	ps	$I_f=5mA$
Fall Time (20~80%)	T_f	***	50	70	ps	$I_f=5mA$
Wavelength Tuning over Temp.	***	***	0.07	***	nm/K	
3dB Bandwidth	f_{3dB}	3	***	***	GHz	$I_f=5mA$
Relative Intensity Noise	RIN	***	***	-130	dB/Hz	10GHz BW , $I_f=5mA$



Absolute Maximum Rating

Parameter	Min	Max.	Unit
Storage Temperature	-40	100	°C
Operating Temperature	0	85	°C
Continuous Forward Current	***	12	mA
Soldering Temperature	***	260	°C

Chip Dimensions

Chip Size: 250 x 230 x 150 μm (t) $\pm$ 15 μm

Bonding Pad : $\phi = 100 \mu\text{m}$

