

TSD-8B12-653

High Performance 10 Gbps Coplanar Oxide VCSEL

Preliminary

FEATURES:

- 1XN array bar with 250um pitch(N=2,4,8,12)
- Capable to run 10 Gbps
- P and N bonding pad on top surface
- Wide operation temperature range -45°C ~ 85°C



ELECTRO-OPTICAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		0.8	1.2	mA	
Output Power	P_o		1.6		mW	$I_F=6$ mA
Slope Efficiency	η	0.25	0.3	0.5	mW/mA	$I_F=6$ mA
Wavelength	λ_p	840		860	nm	$I_F=6$ mA
Forward Voltage	V_F		2.0	2.4	V	$I_F=6$ mA
Series Resistance	R_S		55	60	Ω	$I_F=6$ mA
Beam Divergence	θ	15		35	degree	$I_F=6$ mA (1/e ²)
Spectral width (RMS)	$\Delta \lambda$		0.35	0.45	nm	$I_F=6$ mA
Rise Times (20%~80%)	T_r		40		ps	$I_F=6$ mA
Fall Times (20%~80%)	T_f		40		Ps	$I_F=6$ mA
3dB Bandwidth	BW	9			GHz	$I_F=6$ mA

Notes:

All parameters except mentioned are measured at $I_F=6$ mA, 25°C, CW operation.

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	125	°C	
Operating Temperature	-45	85	°C	
Continuous Forward Current		10	mA	
Continuous Reverse Voltage		5	V	10μA

