



# High Performance 10Gbps Coplanar Oxide VCSEL Chip Array VCCx-85D10G

Data Sheet



## Features

- 850nm oxide VCSEL chip 1xN array bar with 250um pitch (N=2,4,8,12)
- High data rate capable of running 10Gbps
- P and N bonding pads on top surface
- Wide operation temperature range -40 to 85°C

## Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

## Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	125	°C	
Operating Temperature	-40	85	°C	
Continuous Forward Current		10	mA	
Continuous Reverse Voltage		5	V	10uA

Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	$I_{th}$		0.8	1.2	mA	
Slope Efficiency	$\eta$	0.25	0.3	0.5	mW/mA	$I_f=6mA$
Optical Output Power	$P_o$		1.6		mW	$I_f=6mA$
Peak Wavelength	$\lambda_p$	840		860	nm	$I_f=6mA$
Spectral Width (RMS)	$\Delta\lambda$		0.35	0.45	nm	$I_f=6mA$
Beam Divergence	$\theta$	15		35	°	$I_f=6mA, (1/e^2)$
Forward Voltage	$V_f$		2.0	2.4	V	$I_f=6mA$
Series Resistance	$R_s$		55	60	Ohm	$I_f=6mA$
Rise Time (20%-80%)	$T_r$		40		ps	$I_f=6mA$
Fall Time (20%-80%)	$T_f$		40		ps	$I_f=6mA$
3dB Bandwidth	BW	9			GHz	$I_f=6mA$

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

