



VCCAx-85B25G

25Gb/s 850nm Multimode Dual Top Contact VCSEL Array

Data Sheet

Description

The Lasermate VCCAx-85B25G is an 850nm wavelength, Vertical Cavity Surface Emitting Laser (VCSEL) array available with up to 12 channels. The VCSEL is designed for use in 25Gbps data rate operation.

Features

- 850nm multimode emission
- 1x4, 1x8, 1x12 array bar with 250um pitch
- Data rate up to 25Gbps
- P and N bonding pads on top surface
- Low threshold and operation current

Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

Ordering Information

Part Number	Description
VCCA4-85B25G	25Gb/s 850nm multimode dual top contact VCSEL 1x4 array
VCCA8-85B25G	25Gb/s 850nm multimode dual top contact VCSEL 1x8 array
VCCA12-85B25G	25Gb/s 850nm multimode dual top contact VCSEL 1x12 array

Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	85	°C	
Operating Temperature	-40	85	°C	
Continuous Forward Current		12	mA	
Continuous Reverse Voltage		5	V	10uA

Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}	0.5	0.6	0.9	mA	
Slope Efficiency	η	0.3	0.4	0.5	mW/mA	$I_F=6mA$
Output Power	P_o	1.6	2.2		mW	$I_F=6mA$
Wavelength	λ_P	840		860	nm	$I_F=6mA$
Forward Voltage	V_F		2.0		V	$I_F=6mA$
Series Resistance	R_s		55		Ω	$I_F=6mA$
Spectral Width (RMS)	$\Delta\lambda$		0.5	0.6	nm	$I_F=6mA$
Beam Divergence	Θ		28	33	degree	$I_F=6mA (1/e^2)$
3dB Bandwidth	BW	15	16		GHz	$I_F=6mA$
Relative Intensity Noise	RIN		-140	-135	dB/Hz	$I_F=7mA, T=25^\circ C$

Note: All parameters except mentioned are measured at $I_F=6mA, 25^\circ C, CW$ operation.

Typical Characteristics

Fig. 1 Typical Optical Characteristics

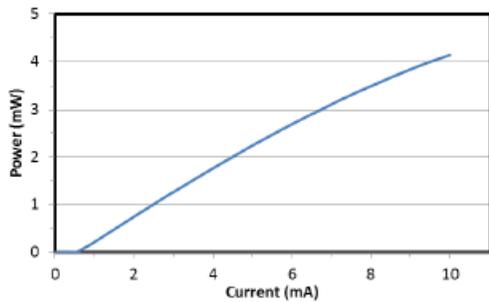
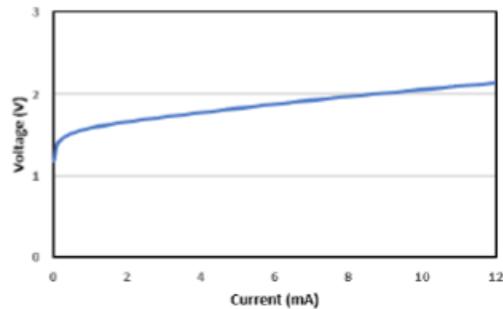
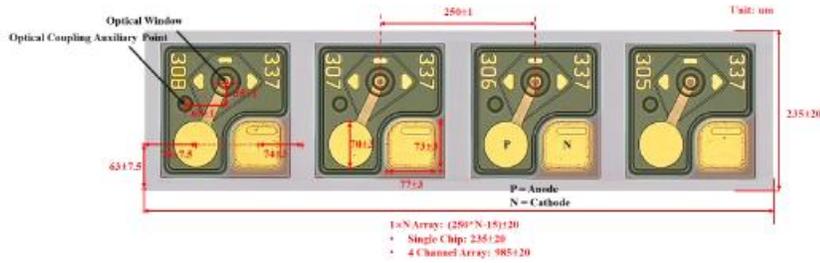


Fig. 2 Typical Electrical Characteristics



Outline Dimensions



- Chip length: 235±20μm
- Chip width: 235±20μm
- Pitch: 250μm
- Chip thickness: 150±12.5μm

Additional Notes

- The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product.
- Specifications are subject to change without notice.