VCC-85B25G

25Gb/s 850nm Multimode Dual Top Contact VCSEL

Data Sheet

Description

The Lasermate VCC-85B25G is an 850nm wavelength, Vertical Cavity Surface Emitting Laser (VCSEL) die designed for use in 25Gbps data rate operation.

Features

- 850nm multimode emission
- High 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

Specifications

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

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=7mA
Relative Intensity Noise	RIN		-140	-135	dB/Hz	I_F=7mA, T=25°C

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

Typical Characteristics

Fig. 1 Typical Optical Characteristics

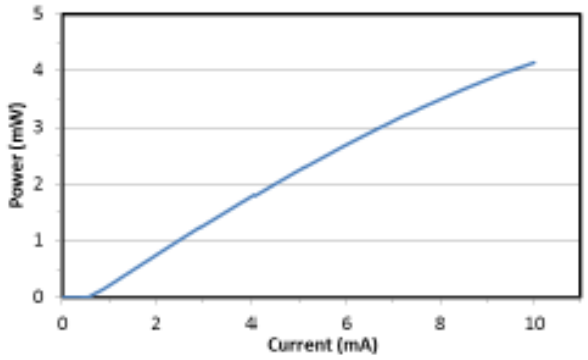
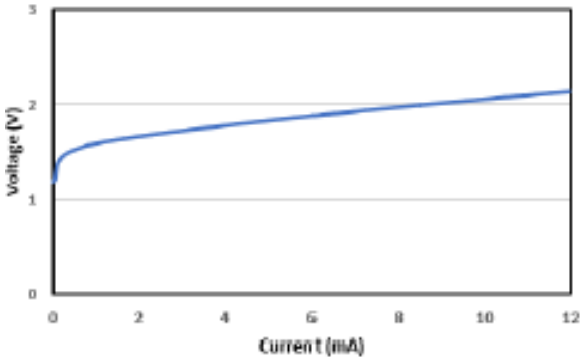
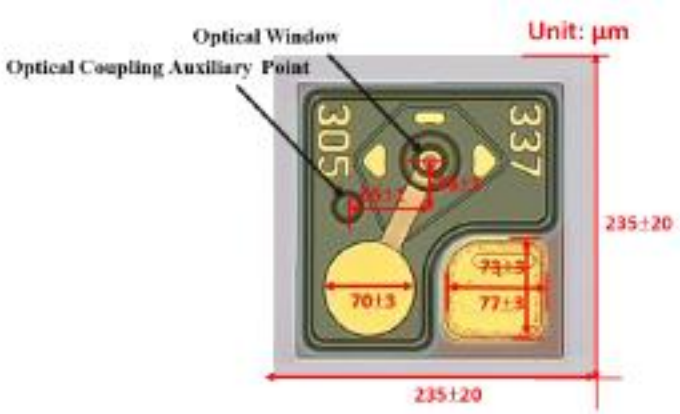


Fig. 2 Typical Electrical Characteristics



Outline Dimensions



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

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.