



# VCC-85A14G

## 14Gbps 850nm Multimode VCSEL Die

Data Sheet

### Features

- Multi-mode 850nm VCSEL chip
- High data rate 14Gbps
- Two top-side wire bond pads

### Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

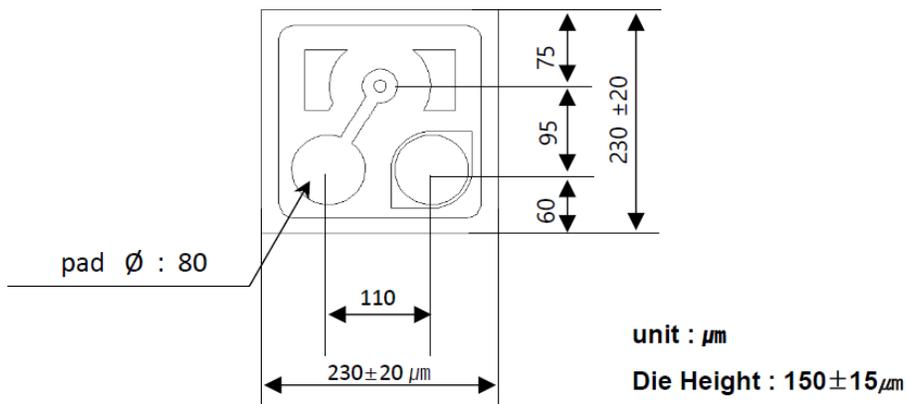
### Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	100	°C	
Operating Temperature	0	85	°C	
Continuous Forward Current		10	mA	
Continuous Reverse Voltage		5	V	10uA

Electro-Optical Characteristics (T <sub>a</sub> =25°C unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I <sub>th</sub>		0.6		mA	CW
Slope Efficiency	η		0.5		W/A	I <sub>f</sub> =6mA
Optical Output Power	P <sub>o</sub>		3.0		mW	I <sub>f</sub> =6mA
Peak Wavelength	λ <sub>P</sub>	840	850	860	nm	I <sub>f</sub> =6mA at room temperature
Spectral Bandwidth (RMS)	Δλ			0.5	nm	I <sub>f</sub> =6mA
Beam Divergence	Θ	14		30	°	I <sub>f</sub> =6mA, (Full Width, 1/e <sup>2</sup> )
Forward Voltage	V <sub>f</sub>		2.2	2.5	V	I <sub>f</sub> =6mA
Breakdown Voltage	V <sub>b</sub>		-10		V	
Dynamic Resistance	R <sub>d</sub>		80	100	Ohm	I <sub>f</sub> =6mA

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I <sub>th</sub> Temperature Variation	ΔI <sub>th</sub>		1.5		mA	T <sub>a</sub> =-40 to 85°C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T <sub>a</sub> =-40 to 85°C, I <sub>f</sub> =6mA
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T <sub>a</sub> =-40 to 85°C, I <sub>f</sub> =6mA

## Outline Dimensions



## 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.