



## 1.25/2.5Gbps Multi-Mode 850nm VCSEL Chip

Part No. VCC-85A2G

### Features

- 850nm VCSEL chip
- High data rate 1.25/2.5Gbps
- Low current operation available
- High reliability

### Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel



### Specifications

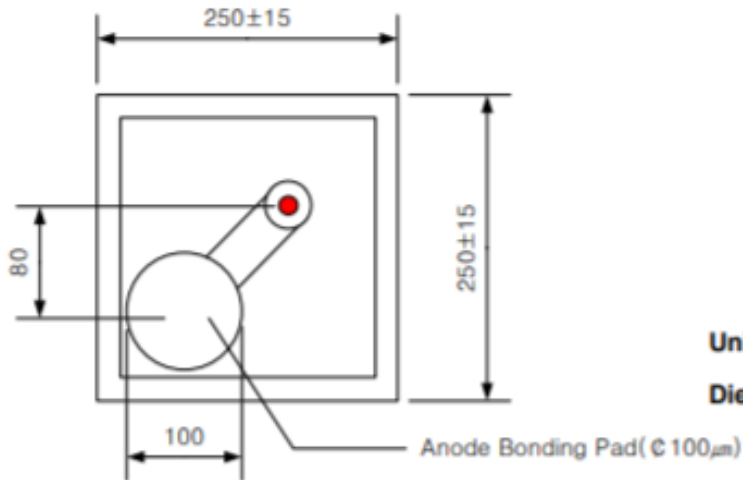
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	100	°C	
Operating Temperature	0	85	°C	
Continuous Forward Current		12	mA	
Continuous Reverse Voltage		5	V	10uA

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>		1.5	3	mA	CW
Slope Efficiency	η	0.2	0.3	0.5	W/A	I <sub>f</sub> =7mA
Optical Output Power	P <sub>o</sub>		1.8		mW	I <sub>f</sub> =7mA
Peak Wavelength	λ <sub>P</sub>	840	850	860	nm	I <sub>f</sub> =7mA
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I <sub>f</sub> =7mA
Beam Divergence	Θ	14		30	°	P <sub>0</sub> =1.8mW, (Full Width, 1/e <sup>2</sup> )
Forward Voltage	V <sub>f</sub>		1.8	2.2	V	I <sub>f</sub> =7mA
Breakdown Voltage	V <sub>b</sub>		-10		V	
Dynamic Resistance	R <sub>d</sub>	20	35	55	Ohm	I <sub>f</sub> =7mA
Rise and Fall Times	t <sub>r</sub> /t <sub>f</sub>			110	ps	20% to 80%

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> =0 to 85°C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T <sub>a</sub> =0 to 85°C, I <sub>f</sub> =7mA
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T <sub>a</sub> =0 to 85°C, I <sub>f</sub> =7mA



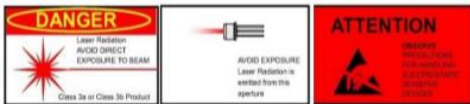
## Outline Dimensions



Unit :  $\mu$ m

Die Height : 200±15 $\mu$ m

## 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.

The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification/identification label cannot be placed on the component itself.

Note: Specifications are subject to change without notice.