



1.25/2.5Gbps Multi-Mode 980nm VCSEL Chip

Part No. VCC-98A2G

Features

- 980nm 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

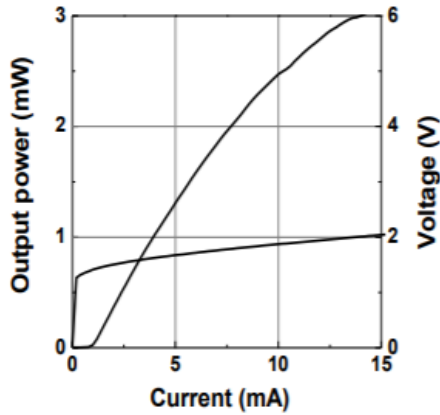
Electro-Optical Characteristics (T _a =25°C unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I _{th}		1.5		mA	CW
Slope Efficiency	η	0.2	0.3	0.5	W/A	I _f =6mA
Optical Output Power	P _o		1.5		mW	I _f =6mA
Peak Wavelength	λ _P	970	980	990	nm	I _f =6mA
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I _f =6mA
Beam Divergence	Θ	14		30	°	P _o =1.5mW, (Full Width, 1/e ²)
Forward Voltage	V _f		1.6	2.0	V	I _f =6mA
Breakdown Voltage	V _b		-10		V	
Dynamic Resistance	R _d	25	35	55	Ohm	I _f =6mA
Laser Turn-On Time	t _{ON}			50	ns	Mod. Freq. = 200kHz

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I _{th} Temperature Variation	ΔI _{th}		1.5		mA	T _a =0 to 85°C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T _a =0 to 85°C, I _f =6mA
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T _a =0 to 85°C, I _f =6mA

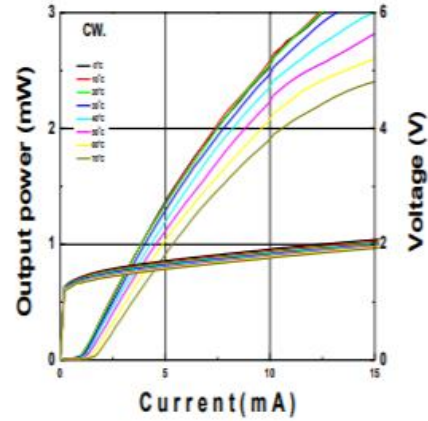


Typical Characteristics

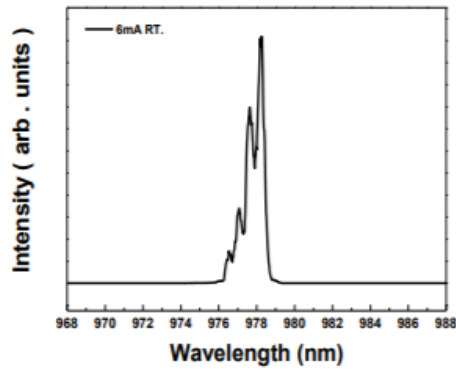
LIV Curve



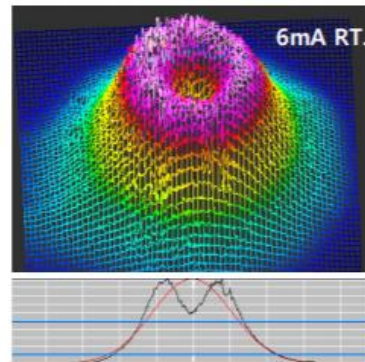
LIV vs. Temperature



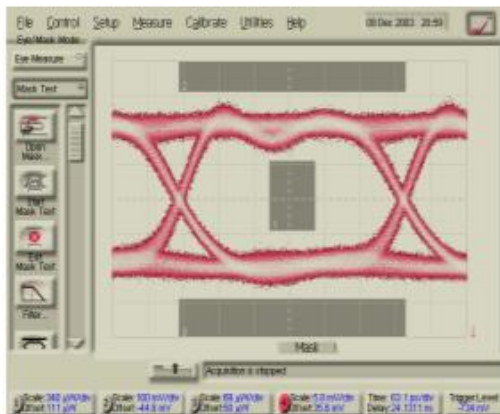
EL Spectrum

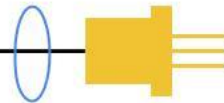


FFP

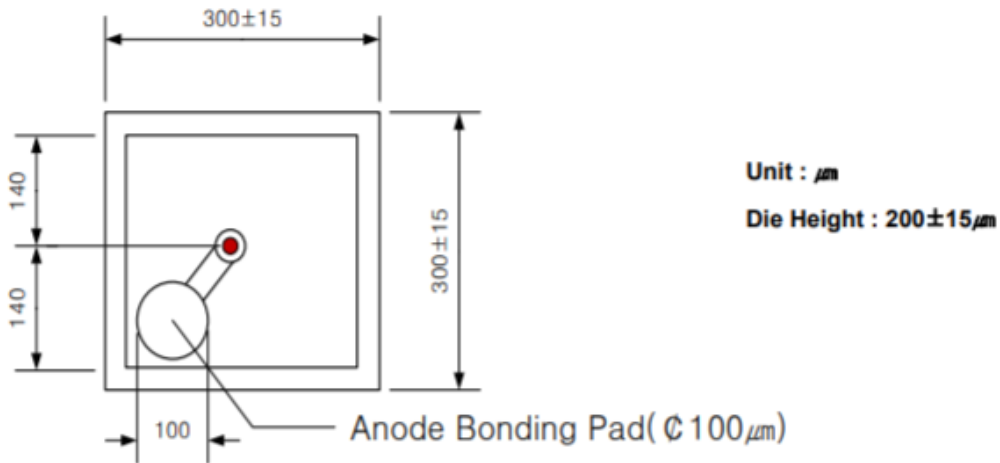


Eye Diagram

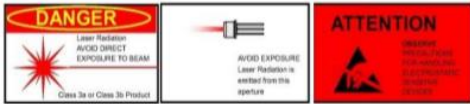




Outline Dimensions



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.

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.