



VCC-98A2G

1.25/2.5Gbps 980nm Multimode VCSEL Die

Data Sheet

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

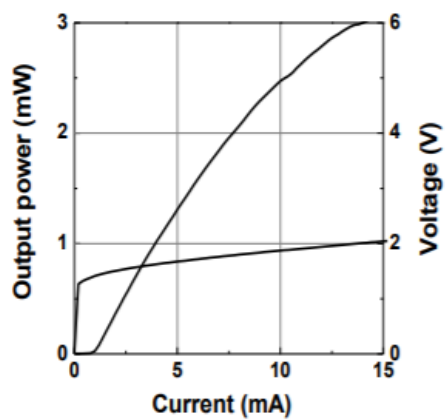
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	100	°C	
Operating Temperature	0	85	°C	
Continuous Forward Current		12	mA	
Continuous Reverse Voltage		5	V	10uA

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 ₀ =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

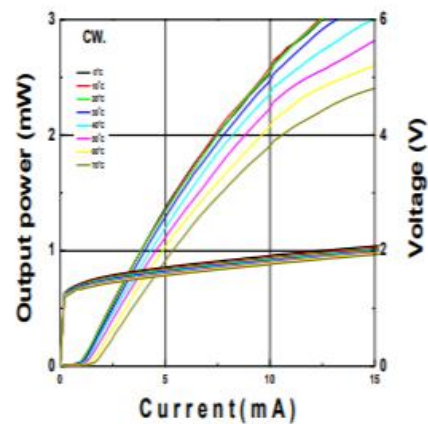
Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I _{th} Temperature Variation	ΔI _{th}		1.5		mA	T _a =0 to 85°C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T _a =0 to 85°C, I _f =6mA
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T _a =0 to 85°C, I _f =6mA

Typical Characteristics

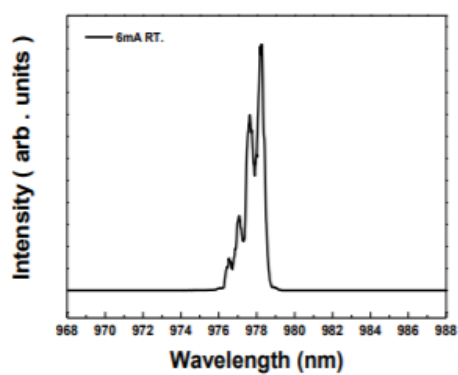
LIV Curve



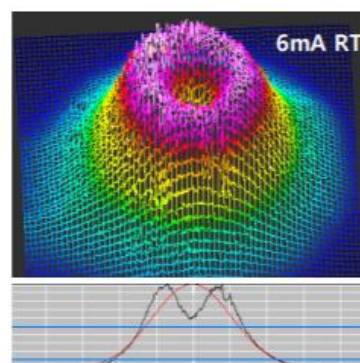
LIV vs. Temperature



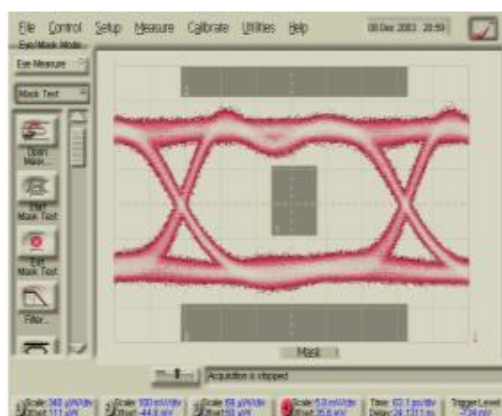
EL Spectrum



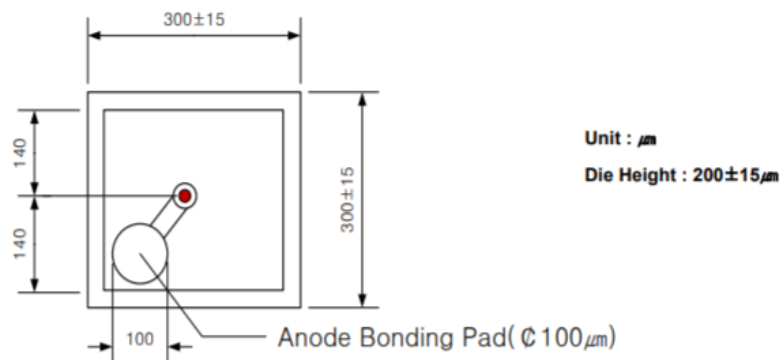
FFP



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.
- Specifications are subject to change without notice.