850nm 120mW Oxide VCSEL Chip
VCC-85A120H

Data Sheet

Features

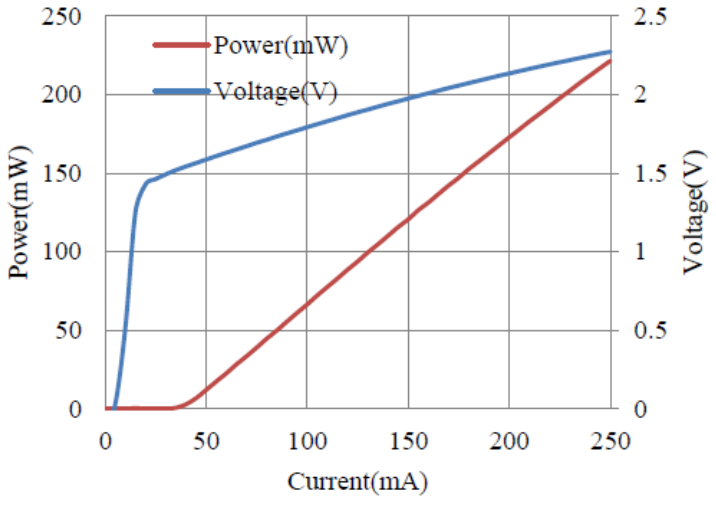
- 850nm multi-emitter VCSEL chip
- Typical 120mW output power at 150mA
- Number of emitters: 29
- Chip size: 290 x 280 ± 15 um
- Chip thickness: 150 ± 15 um

Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Rating	Unit	Conditions
Storage Temperature	T_{stg}	-40 to 125	°C	
Operating Temperature	T_{op}	-20 to 85	°C	
Continuous Forward Current	I_f	200	mA	
Solder reflow temperature	-	260	°C	10 seconds

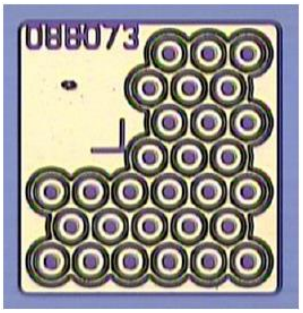
Electro-Optical Characteristics (T_a=25°C, CW operation unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		35		mA	
Optical Output Power	P_o		120		mW	I_f=150mA
Slope Efficiency	η		1.0		W/A	
Wavelength	λ_p	840	850	860	nm	I_f=150mA
Beam Divergence	Θ		25		°	I_f=150mA (1/e^2)
Forward Voltage	V_f		2.0	2.3	V	I_f=150mA
Power Conversion Efficiency	PCE		35		%	I_f=150mA
Wavelength Shift	$\Delta\lambda/\Delta T$		0.07		nm/°C	

Typical Characteristics



Typical electro / optical characteristics curves measured at 25℃, CW operation

Outline Dimensions



- Chip length: 290um +/- 10um
- Chip width: 280um +/- 10um
- Chip thickness: 150 +/- 15um
- Anode bond pad: 110 x 100 um
- Number of apertures: 29

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.