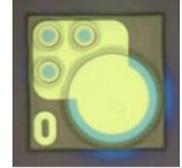




VCC-85A10H

850nm 10mW VCSEL Chip



Features

- 850nm multi-emitter VCSEL chip
- Output power: 10mW
- Multimode beam profile
- Multiple mesa type
- High reliability

Applications

- Consumer electronics
- Safety sensor
- Illumination light source
- Proximity sensor

Specifications

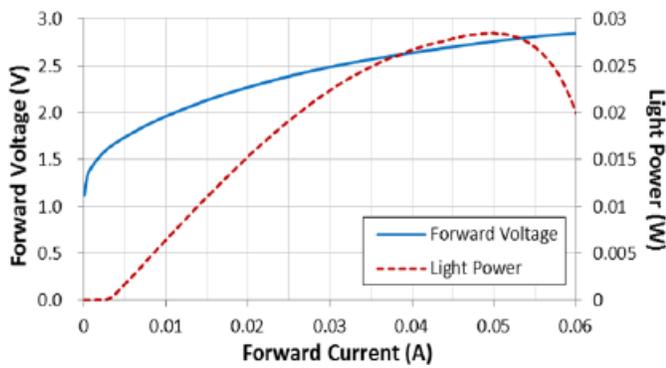
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	85	°C	
Operating Temperature	-10	60	°C	
Continuous Forward Current		20	mA	

Electro-Optical Characteristics (T _a =25°C unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I _{th}		3.0		mA	CW
Slope Efficiency	η		1.0		W/A	I _f =13mA
Optical Output Power	P _o		10		mW	I _f =13mA
Peak Wavelength	λ _P	840	850	860	nm	I _f =13mA
Beam Divergence	Θ		20		°	P _o =10mW (FWHM)
Operating Voltage	V _f		2.2	2.5	V	I _f =13mA
Breakdown Voltage	V _b	-10			V	
Series Resistance	R _d		30		Ohm	I _f =13mA

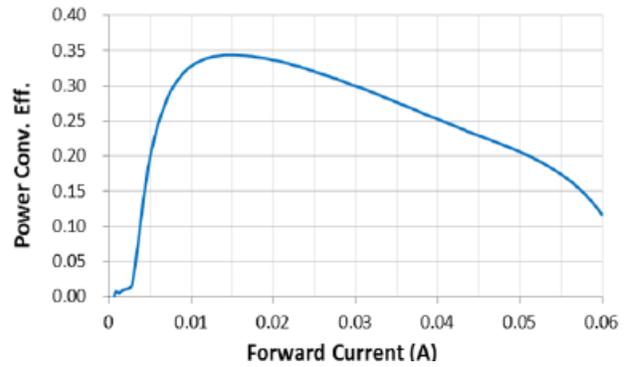
Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I _{th} Temperature Variation	ΔI _{th}		2.0		mA	T _a =-10 to 70°C
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T _a =-10 to 70°C, I _f =13mA

Typical Characteristics

LIV Curve



Power Conversion Efficiency



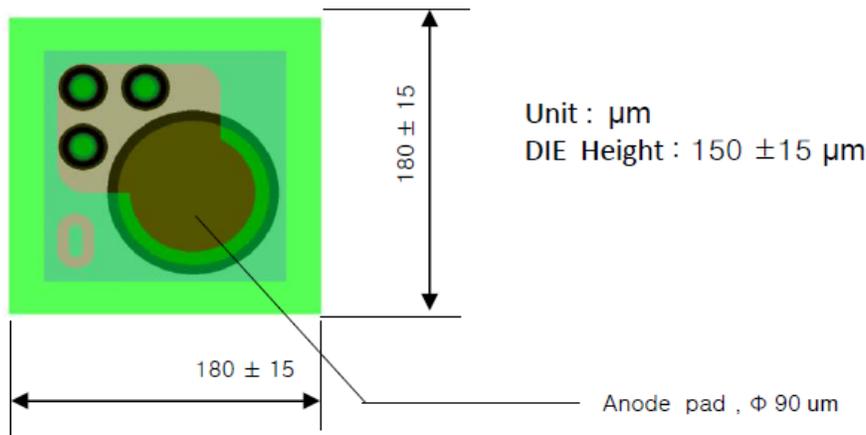
Test PKG sample: TO-Can type, TO-46

Test condition: CW Mode: I_f step interval 2mA, Delay time 2msec

Test PKG sample: TO-Can type, TO-46

Test condition: CW Mode: I_f step interval 2mA, Delay time 2msec

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.