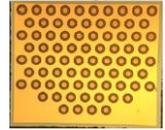




VCC-85A350H

850nm 350mW VCSEL Chip



Features

- 850nm wavelength range
- Typical 350mW output power at 400mA
- Multimode beam profile
- Multiple mesa type
- High reliability
- Chip size: 950 x 820 $\mu\text{m} \pm 15 \mu\text{m}$
- Chip thickness: 100 $\pm 15 \mu\text{m}$

Applications

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

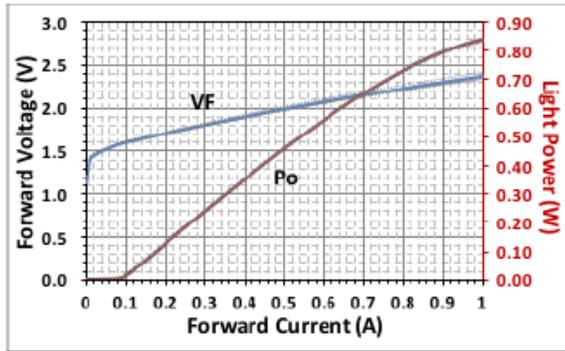
Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Rating	Unit	Conditions
Storage Temperature	T_{stg}	-40 to 85	$^{\circ}\text{C}$	
Operating Temperature	T_{op}	-10 to 85	$^{\circ}\text{C}$	
Continuous Forward Current		550	mA	

Electro-Optical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		85.0		mA	CW
Slope Efficiency	η		1.0		W/A	$I_f=400\text{mA}$
Optical Output Power	P_o		350		mW	$I_f=400\text{mA}$
Peak Wavelength	λ_p	840	850	860	nm	$I_f=400\text{mA}$
Spectral Bandwidth	$\Delta\lambda$			2.0	nm	$I_f=400\text{mA}$
Beam Divergence	Θ		20		$^{\circ}$	$P_o=350\text{mW}$ (FWHM)
Forward Voltage	V_f		1.9	2.2	V	$I_f=400\text{mA}$
Breakdown Voltage	V_b	-10			V	
Dynamic Resistance	R_d		1		Ohm	$I_f=400\text{mA}$
λ Temperature Variation	$\Delta\lambda / \Delta T$		0.06		nm/ $^{\circ}\text{C}$	$T_a=-10$ to 70°C at 400mA
I_{th} Temperature Variation	ΔI_{th}		20.0		mA	$T_a=-10$ to 70°C

Typical Characteristics

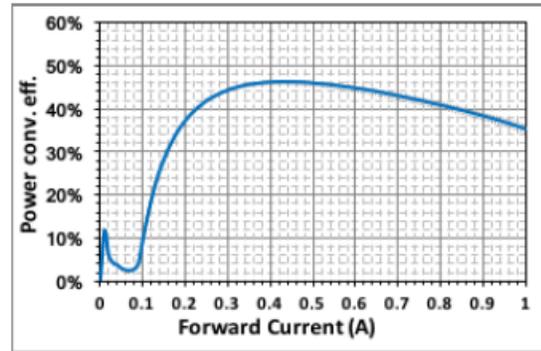
LIV Curve



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

Test Condition: CW Mode: IF Step interval 6mA, Delay time 2msec

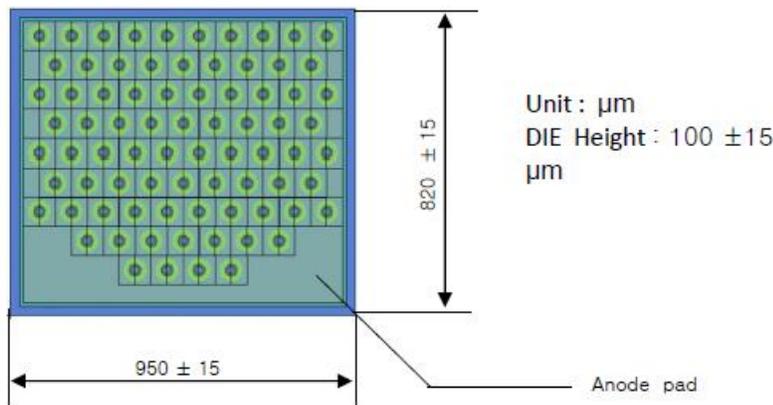
Power Conversion Efficiency



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

Test Condition: CW Mode: IF Step interval 6mA, 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.

