VCC-85A25H
850nm 25mW VCSEL Chip

Data Sheet

Features

- 850nm multi-emitter VCSEL chip
- Output power: 25mW
- Multimode beam profile
- High reliability

Applications

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

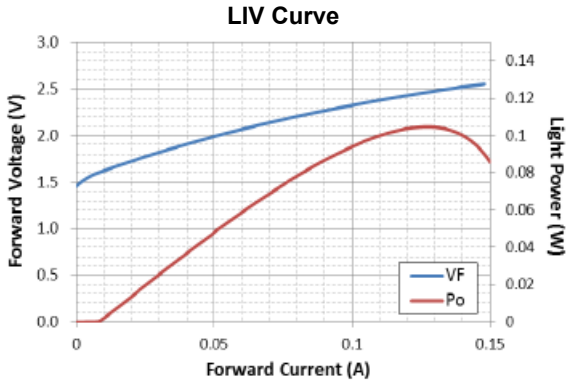
Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	85	°C	
Operating Temperature	-10	70	°C	
Continuous Forward Current		40	mA	

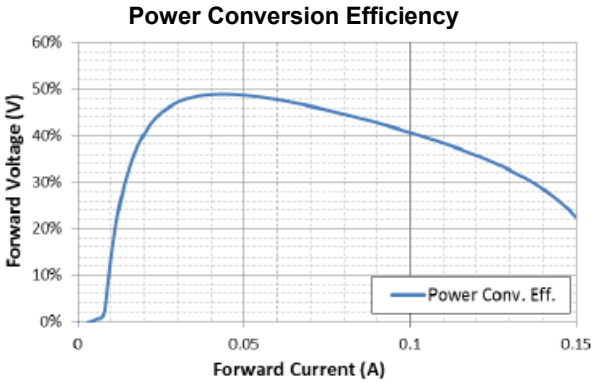
Electro-Optical Characteristics (T_a=25°C unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		7.0		mA	CW
Slope Efficiency	η		1.0		W/A	I_f=30mA
Optical Output Power	P_o		23		mW	I_f=30mA
Peak Wavelength	λ_P	840	850	860	nm	I_f=30mA
Beam Divergence	Θ		20		°	I_f=30mA (FWHM)
Operating Voltage	V_f		1.9	2.3	V	I_f=30mA
Breakdown Voltage	V_b	-10			V	
Dynamic Resistance	R_d		10		Ohm	I_f=30mA

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I_{th} Temperature Variation	ΔI_{th}		3.0		mA	T_a=-10 to 70°C
λ Temperature Coefficient	$\Delta\lambda/\Delta T$		0.06		nm/°C	T_a=-10 to 70°C, I_f=30mA
η Temperature Variation	$\Delta\eta/\Delta T$		-0.5		%/°C	T_a=-10 to 70°C, I_f=30mA

Typical Characteristics



Test PKG sample: TO-can type, TO-46
Test condition: CW: IF step interval 1.5mA, Delay time 2msec



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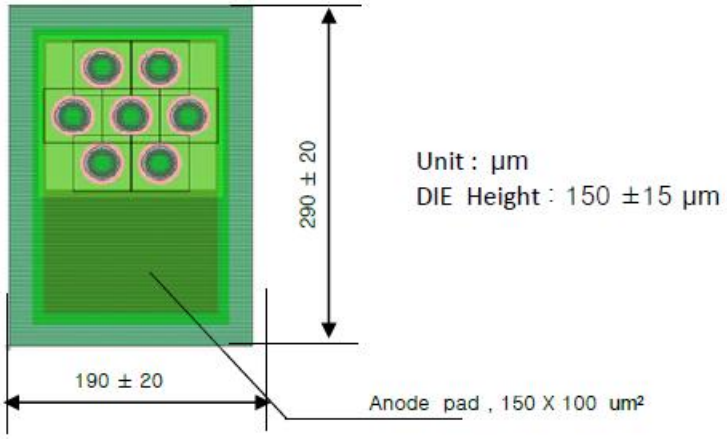
Outline Dimensions



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.