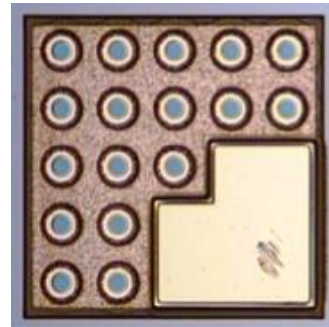


Features

- : 850nm wavelength range
- : Peak 100mW VCSEL by pulse mode operation
- : Multi_mode beam profile
- : High reliability
- : Other configurations available on request

Description



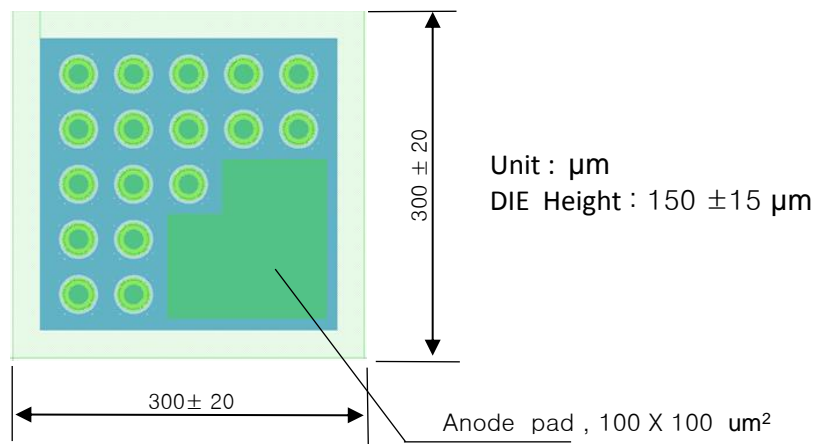
Applications

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

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 85 °C
Operating Temperature	-10 to 70 °C
Continuous Forward Current	60mA

Dimensions

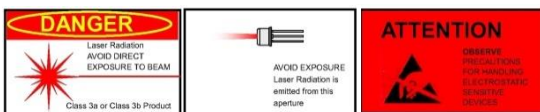


Electro-Optics Characteristics ($T_a=25^\circ\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		18		mA	CW
I_{th} Temperature Variation	ΔI_{th}		10		mA	$T_a = -10$ to 70°C
Slope Efficiency	η		1.0		W/A	$I_f = 60\text{mA}$
η Temperature Variation	$\Delta\eta / \Delta T$		-0.8		% / $^\circ\text{C}$	$T_a = -10$ to 70°C at 60mA
Peak Optical Output Power	P_o		100		mW	Peak Pulse Current 110mA (50% duty ratio)
Peak Wavelength	λ_p	840	850	860	nm	Peak Pulse Current 110mA (50% duty ratio)
λ Temperature Variation	$\Delta\lambda / \Delta T$		0.06		nm / $^\circ\text{C}$	$T_a = -10$ to 70°C at 60mA
Spectral Bandwidth (RMS)	$\Delta\lambda$			2	nm	$I_f = 60\text{mA}$
Beam Divergence	Θ		20		$^\circ$	Peak $P_o = 100\text{mW}$ (FWHM)
Operating Voltage	V_f		2.0	2.3	V	Peak current = 110 mA
Breakdown Voltage	V_b	-10			V	$I_r = 10\mu\text{A}$
Dynamic Resistance	R_d		4.5		Ohm	Peak current = 110 mA

Notes

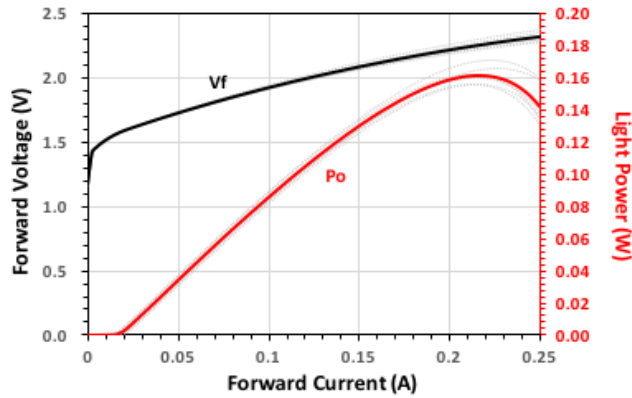
* These specifications are subject to change without notice.



NOTICE	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
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.

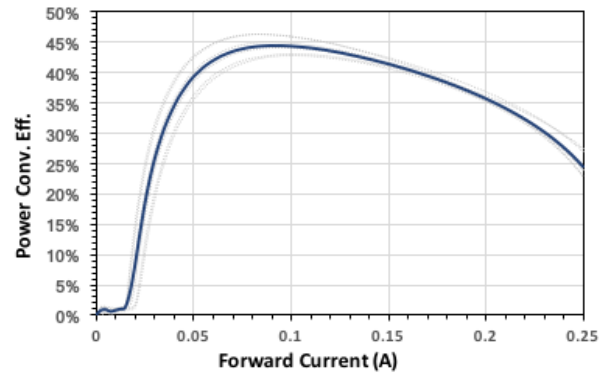
Characteristics Curves

LIV Curve

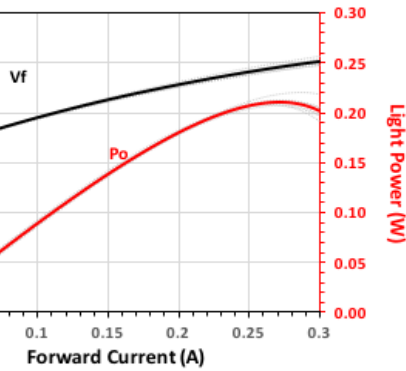


Test PKG sample : To-Can type, To-46
 Test condition :
 CW Mode : IF step interval 2.5mA, Delay time 2msec

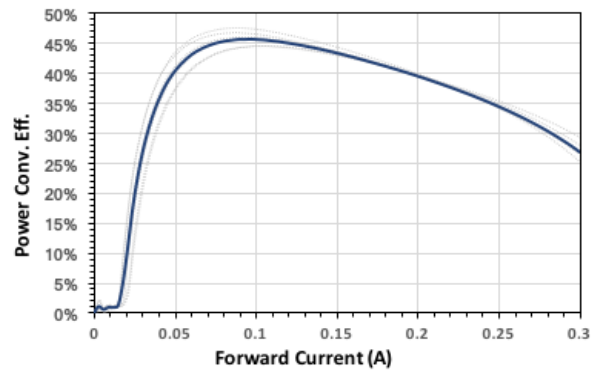
Power conversion efficiency



Test PKG sample : To-Can type, To-46
 Test condition :
 CW Mode : IF step interval 2.5mA, Delay time 2msec



Test PKG sample : To-Can type, To-46
 Test condition :
 QCW Mode : IF step interval 3mA, 1kHz,
 50% duty ratio.



Test PKG sample : To-Can type, To-46
 Test condition :
 CW Mode : IF step interval 3mA, 1kHz,
 50% duty ratio.