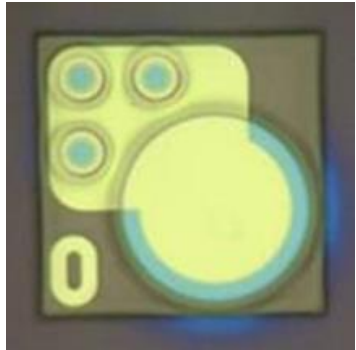
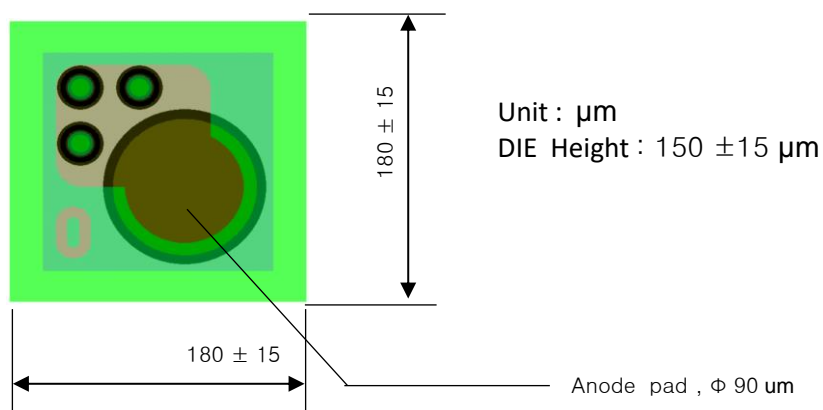




Features	Description
<ul style="list-style-type: none"> : 850nm wavelength range : 10mW VCSEL : Multi_mode beam profile : Multiple mesa type : High reliability : Other configurations available on request 	

Applications	Absolute Maximum Ratings								
<ul style="list-style-type: none"> : Consumer electronics : Safety sensor : Illumination light source : Proximity sensor 	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>Storage Temperature</td> <td>-40 to 85 °C</td> </tr> <tr> <td>Operating Temperature</td> <td>-10 to 60 °C</td> </tr> <tr> <td>Continuous Forward Current</td> <td>20mA</td> </tr> </tbody> </table>	Parameter	Rating	Storage Temperature	-40 to 85 °C	Operating Temperature	-10 to 60 °C	Continuous Forward Current	20mA
Parameter	Rating								
Storage Temperature	-40 to 85 °C								
Operating Temperature	-10 to 60 °C								
Continuous Forward Current	20mA								

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}		3.0		mA	CW
I_{th} Temperature Variation	ΔI_{th}		2.0		mA	$T_a = -10$ to 70°C
Slope Efficiency	η		1.0		W/A	$I_f = 13$ mA
Optical Output Power	P_o		10		mW	$I_f = 13$ mA
Peak Wavelength	λ_p	840	850	860	nm	$I_f = 13$ mA
λ Temperature Variation	$\Delta \lambda / \Delta T$		0.06		nm/ $^{\circ}\text{C}$	$T_a = -10$ to 70°C at 13mA
Beam Divergence	Θ		20		$^{\circ}$	$P_o = 10$ mW (FWHM)
Operating Voltage	V_f		2.2	2.5	V	$I_f = 13$ mA
Breakdown Voltage	V_b	-10			V	
Dynamic Resistance	R_d		30		Ohm	$I_f = 13$ mA

Notes

* These specifications are subject to change without notice.

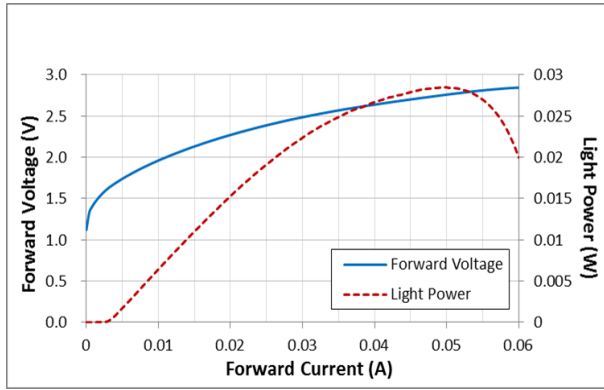


NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye 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.



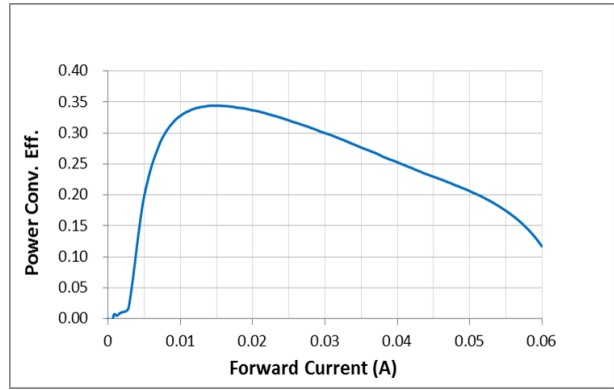
Characteristics Curves

LIV Curve



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

Power conversion efficiency



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