Optowell Co., Ltd.

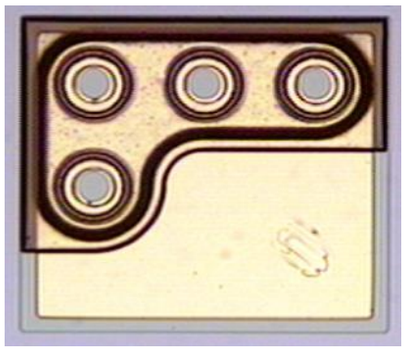
HV94-0015M1 Rev1.0

15mW 940 nm VCSEL Chip for Sensor

Features

: 940nm wavelength range
: 15mW VCSEL
: Multi_mode beam profile
: High reliability
: Other configurations available on request

Description



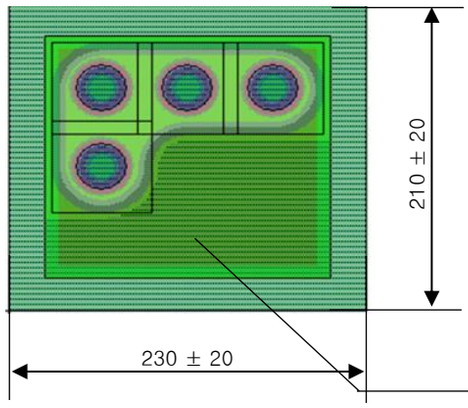
Applications

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

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 85 ℃
Operating Temperature	-10 to 70 ℃
Continuous Forward Current	30mA

Dimensions



Unit : μm
DIE Height : 150 ±15 μm

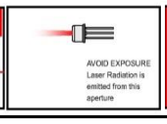
2F.Technovile-B,814 Palbok-dong 2-ga, Deokjin-gu, Jeonju-si Korea 561-844, KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com

Electro-Optics Characteristics (T_a=25℃ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		7.0		mA	CW
I_{th} Temperature Variation	ΔI_{th}		3.0		mA	T_a= -10 to 70 ℃
Slope Efficiency	η		1.0		W/A	I_f = 20 mA
η Temperature Variation	Δη / ΔT		-0.5		% / °C	T_a= -10 to 70 ℃ at 20mA
Optical Output Power	P_o		15		mW	I_f = 20 mA
Peak Wavelength	λ_P	930	940	950	nm	I_f = 20 mA
λ Temperature Varation	Δ λ / ΔT		0.06		nm/ °C	T_a= -10 to 70 ℃ at 20mA
Spectral Bandwidth (RMS)	Δ λ			2	nm	I_f = 20 mA
Beam Divergence	Θ		18		°	Po = 15 mW (FWHM)
Operating Voltage	V_f		1.8	2.2	V	I_f = 20 mA
Breakdown Voltage	V_b	-10			V	
Dynamic Resistance	R_d		19		Ohm	I_f = 20 mA

Notes

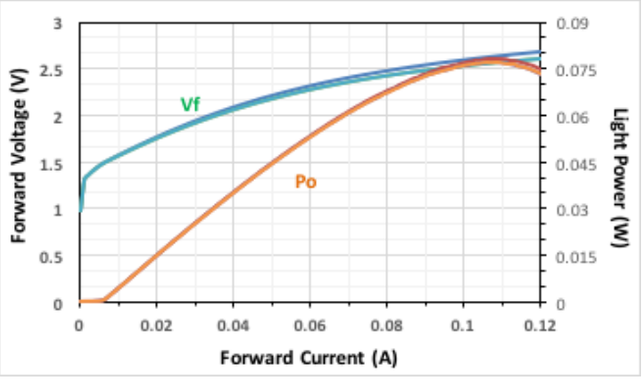
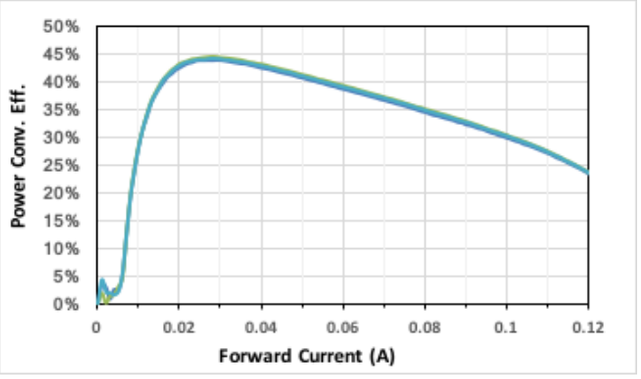
* These specifications are subject to change without notice.



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.

2F.Technovile-B,814 Palbok-dong 2-ga, Deokjin-gu, Jeonju-si Korea 561-844, KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com

Characteristics Curves

LIV Curve	Power conversion efficiency
	
Test PKG sample : To-Can type, To-46 **Test condition :** **CW Mode : IF step interval 1.0mA, Delay time 2msec**	**Test PKG sample : To-Can type, To-46** **Test condition :** **CW Mode : IF step interval 1.0mA, Delay time 2msec**

2F.Technovile-B,814 Palbok-dong 2-ga, Deokjin-gu, Jeonju-si Korea 561-844, KOREA
Tel. +82-63-214-1186 Fax. +82-63-214-1137 www.optowell.com sales@optowell.com