

# RayCan 1310 nm Vertical-Cavity Surface-Emitting Laser

## RC2xxx2-S

### Description

The RayCan 1310 nm VCSEL array is designed for high-speed, high-performance communication applications.

### Features

- Low dependence of electrical and optical characteristics over temperature
- Data rates from OC-3 to OC-48

### Applications

- Access network for long distance (>2 km)
- Metro area network
- Gigabit Ethernet

### Electrical and optical characteristics (T = 20°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Threshold current	$I_{th}$	1	2	4	mA	
Forward voltage	$V_f$		3	4	V	
Series resistance	$R_s$		100	200	$\Omega$	
Output power	$P_o$	0.5	0.7		mW	
Wavelength	$\lambda$	1290	1310	1360	nm	
Rise and fall time	$t_r$ $t_f$		~ 100 ~ 150		psec	(20%-80%)
Beam divergence	$\theta$	7	9	11	degree	FWHM

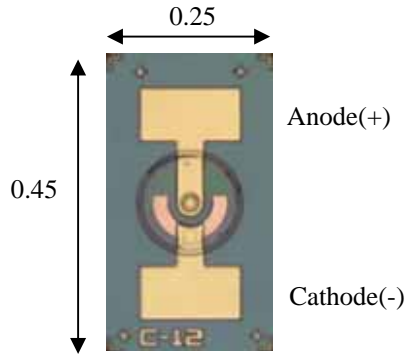
### Absolute maximum ratings

Parameter	Symbol	Rating	Unit	Notes
Forward current	$I_f$	10	mA	
Reverse voltage	$V_r$	5	V	
Operating temperature	$T_{op}$	70	°C	
Storage Temperature	$T_{stg}$	0 ~ 100	°C	
Reflow Temperature	$T_{ref}$	260	°C	10 sec. max

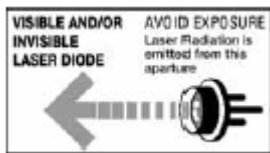
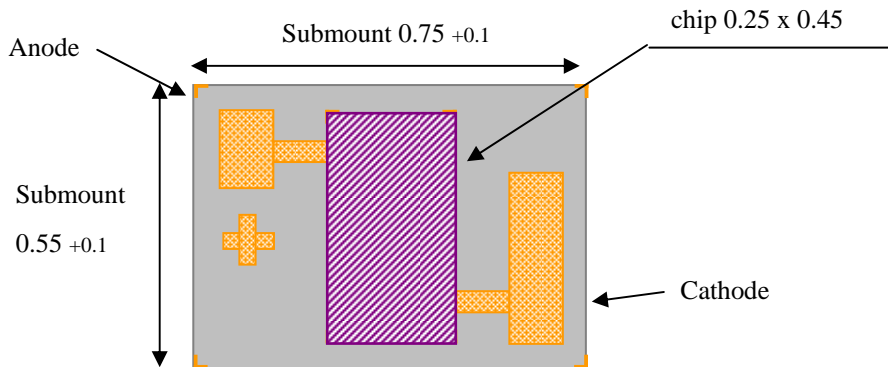
**VCSEL chip & chip on submount**

**Dimensions** unit : mm

Chip : top side view



Chip on sub-mount : top side view



**Warning**

Laser beams emitted from this product are hazardous to the naked eye. Avoid eye or skin exposure to direct or scattered radiation.

**Caution**

This product is sensitive to the electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product.

**RayCan**

KTCenter 2F, 138 Gajeong-dong, Yusong-gu, Daejeon 305-350  
 Korea Tel : +82-42-867-1550 Fax : +82-42-867-1551  
 E-mail : [Hraycan@raycan.comH](mailto:Hraycan@raycan.comH) [Hwww.raycan.comH](http://www.raycan.comH)