

RayCan *1550 nm Vertical-Cavity Surface-Emitting Laser*

RC3xxx1-S

Description

The RayCan 1550 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	2.5	4	<i>mA</i>	
Forward voltage	V_f		3		<i>V</i>	
Series resistance	R_s		100	200	Ω	
Output power	P_o	0.7	~ 0.9		<i>mW</i>	
Wavelength	λ	1510	1550	1580	<i>nm</i>	
Rise and fall time	t_r t_f		~ 100 ~ 150		<i>psec</i>	(20%-80%)
Side mode suppression	<i>SMSR</i>	30	35		<i>dB</i>	
Beam divergence	θ	8	10	12	<i>degree</i>	FWHM

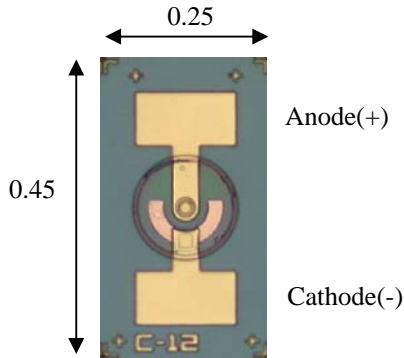
Absolute maximum ratings

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

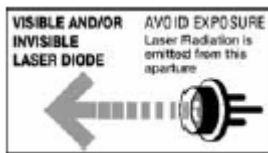
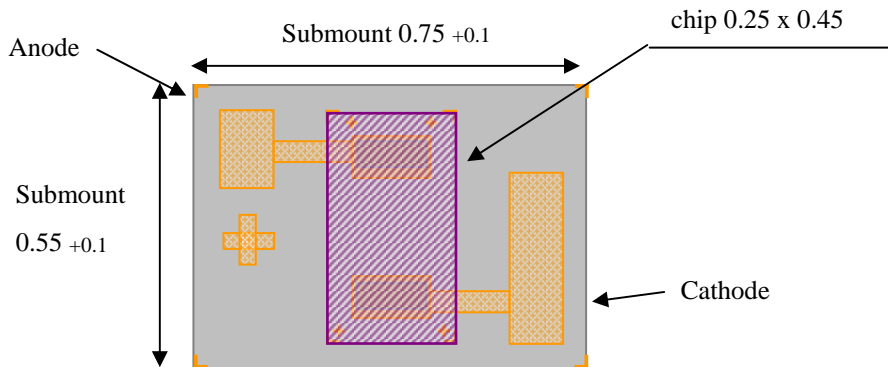
VCSEL chip & chip on submount

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

KT Center 2F, 138 Gajeong-dong, Yusong-gu, Daejeon 305-350
 Korea Tel : +82-42-867-1550 Fax : +82-42-867-1551
 E-mail : raycan@raycan.com www.raycan.com