1310 nm Vertical-Cavity Surface-Emitting Laser

RC22xxx1-T13

Description

The RayCan 1310 nm single mode VCSEL 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

• Metro area network

• Gigabit Ethernet

Electrical and optical characteristics

(T = 25°C unless otherwise stated)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Threshold current	I_{th}		2	3	mA	
Forward voltage	V_f			3	V	
Series resistance	R_s		100	200	Ω	
Output power	P_o	0.7	1.0		mW	
Wavelength	λ	1290	1320	1340	nm	
Side mode suppression	$SMSR$	30	35		dB	
Rise and fall time	t_r t_f		~ 100 ~ 150		$psec$	(20%-80%)
Beam divergence	θ		10	12	$degree$	FWHM

Absolute maximum ratings

(T = 25°C unless otherwise stated)

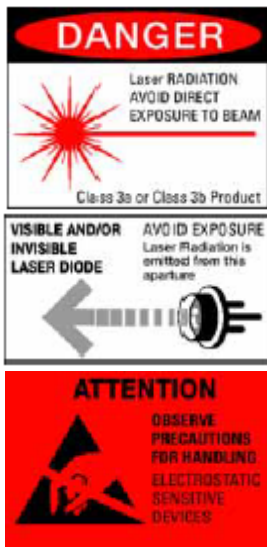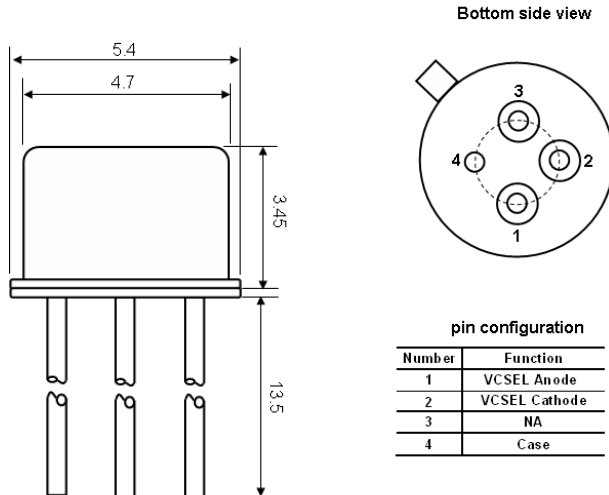| Parameter	Symbol	Rating	Unit	Notes
Forward current	I_f	15	mA	
Reverse voltage	V_r	5	V	
Operating temperature	T_{op}	0 ~ 70	^oC	
Storage Temperature	T_{stg}	0 ~ 100	^oC	
Reflow Temperature	T_{ref}	260	^oC	10 sec. 2 mm from case

Notice

Conditions exceeding those listed may cause permanent damage to the device. Devices subjected to conditions beyond the limits specified for extended periods of time may adversely affect reliability.

TO-46 flat cap VCSEL

Dimensions   unit : mm

Bottom side view

pin configuration

Number	Function
1	VCSEL Anode
2	VCSEL Cathode
3	NA
4	Case

Warning

The VCSEL is a class IIIb laser. Laser beams emitted from this product are hazardous to the naked eye. Avoid eye or skin exposure to direct or scattered radiation. Due to the size of the component, the applicable warning logotype, aperture label, and identification label can not be placed on the component.

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.

SEOUL VIOSYS

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