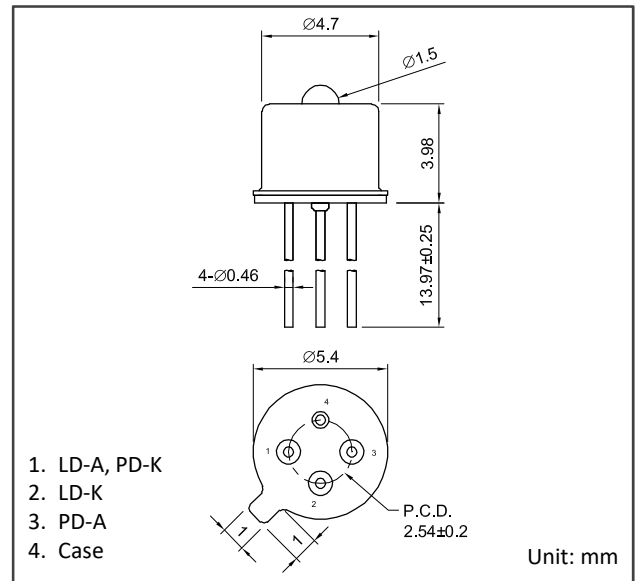


### Description

KYOSEMI VCSEL (Vertical Cavity Surface Emitting Laser) is suitably applied to short range high-data-rate transmission systems. Signal modulation up to 4 GHz is attainable.



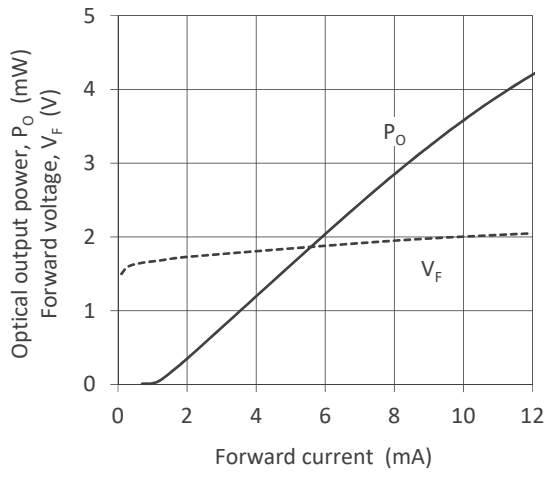
### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Note
LD forward current	$I_F$	12	mA	
LD reverse voltage	$V_R$	5	V	
PD forward current	$I_{FPD}$	10	mA	
PD reverse voltage	$V_{RPD}$	15	V	
Operating temperature	$T_{opr}$	0 to +85	°C	
Storage temperature	$T_{stg}$	-40 to +85	°C	

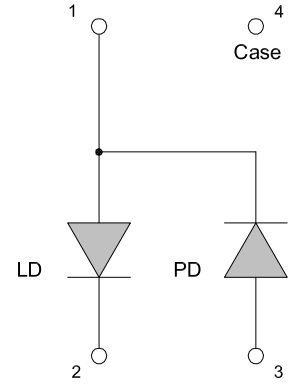
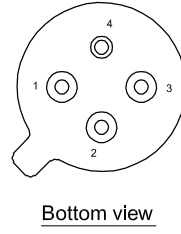
### Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward voltage	$V_F$	-	1.9	-	V	CW, $P_O=2.5mW$
Threshold current	$I_{th}$	-	1.0	1.4	mA	CW
Optical output power	$P_O$	-	2.5	-	mW	CW, $I_F=7mA$
Slope efficiency	$\eta$	0.3	0.4	0.7	mW/mA	CW, $P_O=2.5mW$
Peak emission wavelength	$\lambda$	840	850	860	nm	CW, $P_O=2.5mW$
Spectral bandwidth at 50%	$\Delta\lambda$	-	-	0.85	nm	CW, $P_O=2.5mW$
Half angle	$2\theta$	14	-	30	deg.	FWHM, CW, $P_O=2.5mW$
Bandwidth	BW	-	4	-	GHz	$P_O=2.5mW$
PD monitor current	$I_M$	-	20	-	$\mu A$	CW, $P_O=2.5mW$ , $V_{RPD}=2V$
PD dark current	$I_D$	-	0.1	-	nA	$V_{RPD}=5V$
PD total capacitance	$C_t$	-	50	60	pF	$V_{RPD}=2V$ , $f=1MHz$

I-L, I-V Characteristics



Pin Assignment



- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (2011/65/EU).



**Opto-technologies for the Future**

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## **KYOTO SEMICONDUCTOR Co.,Ltd.**

<b>Headquarters :</b> 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan	TEL: +81-75-605-7311
<b>Tokyo Sales Office:</b> 24 <sup>th</sup> Sky Bldg.2F, 1-34-3 Shinjuku Shinjuku-ku, Tokyo 160-0022 Japan	TEL: +81-3-5312-5360
<b>Kansai Sales Office:</b> 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan	TEL: +81-75-605-7314
<b>Kyosemi Opto America Corp:</b> 4655 Old Ironsides Suite 230 Santa Clara, California 95054 USA	TEL: +1-408-492-9361
<b>Eniwa Operation:</b> 385-31 Toiso Eniwa-shi, Hokkaido 061-1405 Japan	TEL: +81-123-34-3111
<b>Kamisunagawa Operation:</b> 70-1 Kamisunagawa Kamisunagawa-cho Sorachi-gun, Hokkaido 073-0200 Japan	TEL: +81-125-62-3611