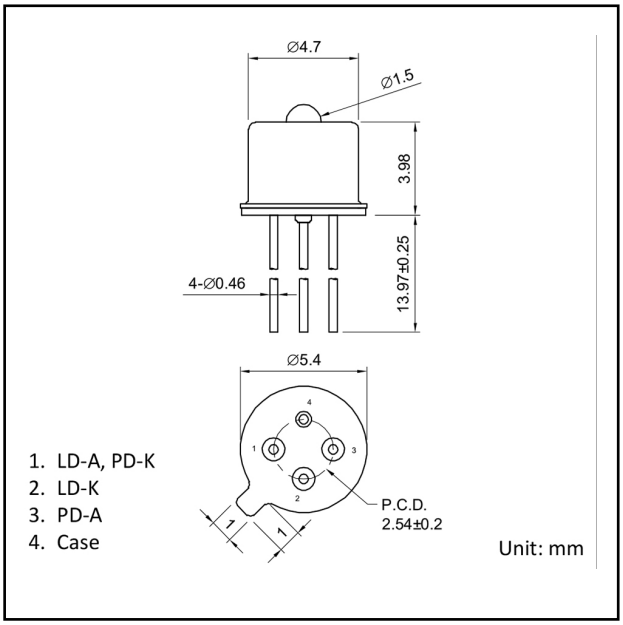
850nm VCSEL

KLD085VC-H32

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.



Characteristics

- VCSEL (Vertical Cavity Surface Emitting Laser Diode)
- Bandwidth: 4GHz

Applications

- Short range optical communication
- High-data-rate transmission

Package

- TO-CAN

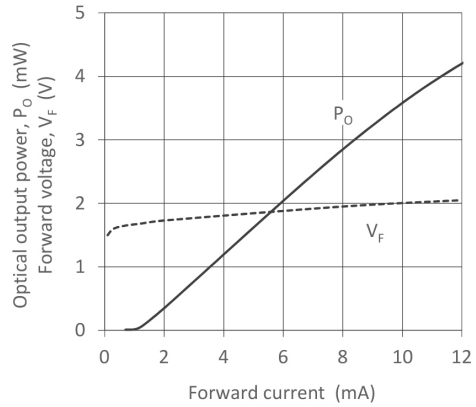
Absolute Maximum Ratings

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

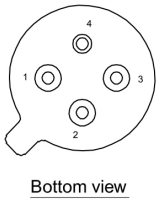
Electrical and Optical characteristics (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Bandwidth	BW	-	4	-	GHz	P_O=2.5mW
Forward voltage	V_F	-	1.9	-	V	CW P_O=2.5mW
Optical output power	P_O	-	2.5	-	mW	CW I_F=7mA
Peak wavelength	λ	840	850(λ p)	860	nm	λ p=Peak wavelength CW P_O=2.5mW
PD dark current	I_D	-	0.1	-	nA	V_{RPD}=5V
Beam divergence	2 θ	14	-	30	deg.	FWHM CW P_O=2.5mW
Spectral width	Δ λ	-	-	0.85	nm	CW P_O=2.5mW
PD total capacitance	C_t	-	50	60	pF	V_{RPD}=5V f=1MHz
Threshold current	I_{th}	-	1	1.4	mA	CW
Slope efficiency	η	0.3	0.4	0.7	mW/mA	CW P_O=2.5mW
PD monitor current	I_M	-	20	-	μA	CW P_O=2.5mW V_{RPD}=2V

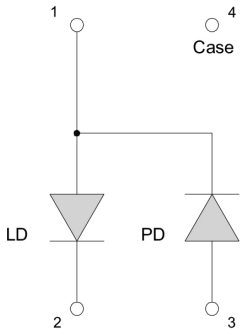
I-L, I-V Characteristics



Pin Assignment



Bottom view



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