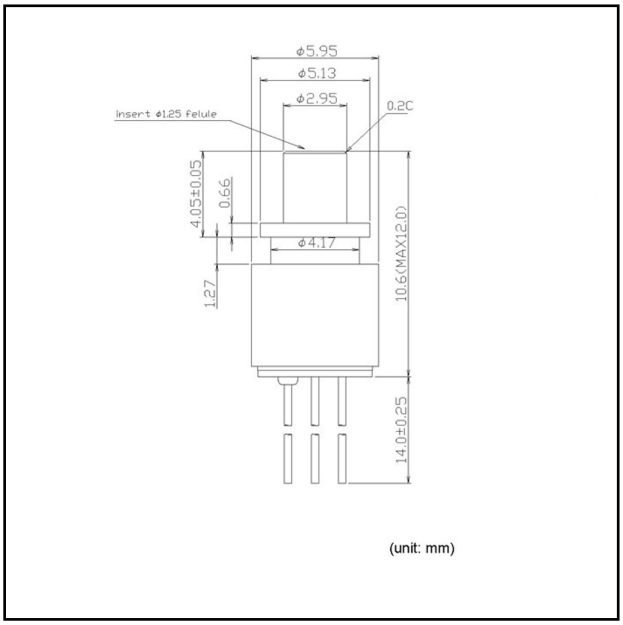
850nm VCSEL

KLD085VC-LTH32



Characteristics

- VCSEL（Vertical Cavity Surface Emitting Laser Diode)
- LC-TOSA type is provided
- Output power: 1mW
- Bandwidth: 4GHz
- Monitoring photodiode is built in

Applications

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

Package

- LC-TOSA

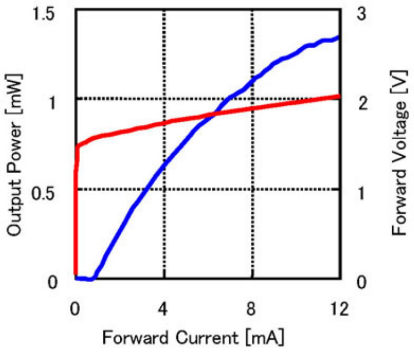
Absolute Maximum Ratings

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}	0 to +85	℃	-

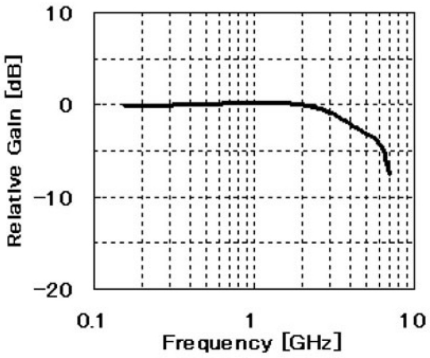
Electrical and Optical characteristics (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Bandwidth	BW	-	4	-	GHz	P_O=1.0mW
Forward voltage	V_F	-	1.9	-	V	CW I_F=7mA
Optical output power	P_O	0.6	1	-	mW	CW I_F=7mA
Peak wavelength	λ	840	850(λ p)	860	nm	λ p=Peak wavelength CW I_F=7mA
PD dark current	I_D	-	0.1	-	nA	V_{RPD}=5V
Spectral width	Δ λ	-	-	0.85	nm	CW I_F=7mA
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	-	0.1	-	mW/mA	CW I_F=7mA
PD monitor current	I_M	-	20	-	μA	CW I_F=7mA V_{RPD}=5V

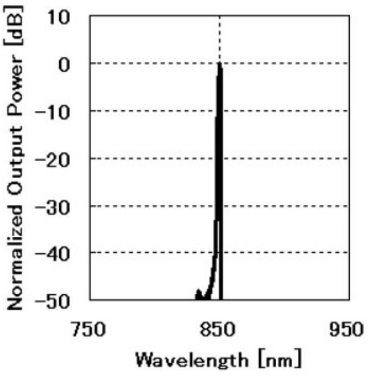
I-L I-V Characteristics



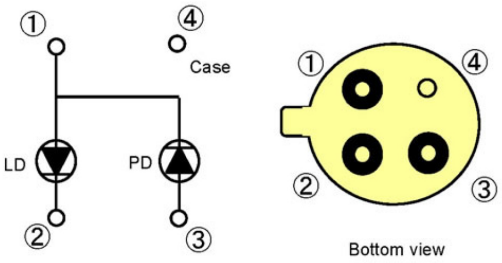
Frequency Response



Wavelength Characteristics



Pin Assignment



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Dexerials Corporation
1724 Shimotsuboyama, Shimotsuke-shi, Tochigi 323-0194, Japan
TEL：＋81-285-39-7950　https://www.dexerials.jp/en/