

## Features



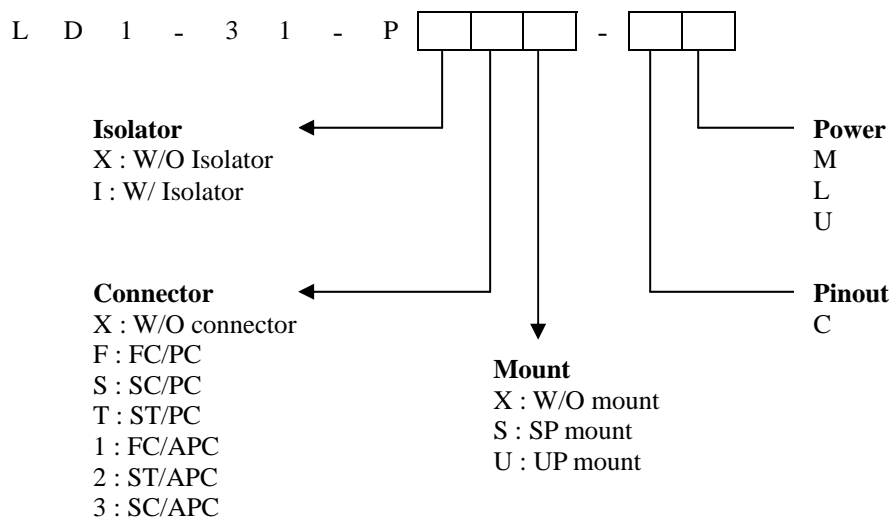
- InGaAsP MQW-DFB laser diode (LD)
- Built-in InGaAs monitor PIN photodiode (PD)
- Uncooled, hermetically sealed
- Low threshold current
- Fiber pigtail type with optional FC/SC/ST connector

## Applications

- Gigabit Ethernet

## Ordering Information

Part Number	Connector	Mount	Pin-out	Power
LD1-31-PXFX-CM	FC/PC	W/O	C	M
LD1-31-PXFX-CL	FC/PC	W/O	C	L
LD1-31-PXFX-CU	FC/PC	W/O	C	U



## Specifications

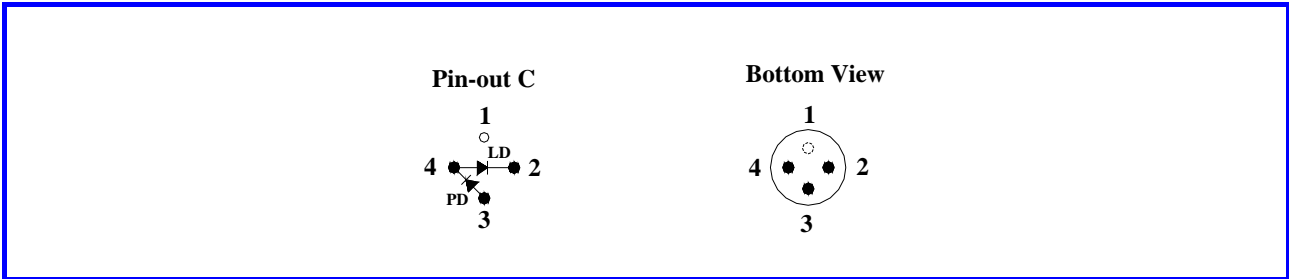
### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Storage temperature	$T_{stg}$	-40~+85	°C
Operating case temperature	$T_{op}$	0~+70	°C
Peak optical output power	M	1.5	mW
	L	3.0	
	U	4.0	
Reverse voltage (LD)	$V_{RL}$	2	V
Forward current (PD)	$I_{FP}$	2	mA
Reverse voltage (PD)	$V_{RP}$	15	V
Soldering temperature (10 sec.)	$S_{temp}$	260	°C

### Electrical and Optical Characteristics ( $T_C=25^\circ\text{C}$ , unless otherwise specified)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Threshold current	$I_{th}$	CW	-	8	20	mA
Center Wavelength	$\lambda_c$	$P_f$	1290	-	1330	nm
Fiber output power	M	CW, $I_{th}+25\text{mA}$	0.5	-	1.0	mW
	L		1.0	-	1.75	
	U		1.75	-	-	
Slope efficiency	M	CW	0.02	-	0.04	mW/mA
	L		0.04	-	0.07	
	U		0.07	-	-	
Operating voltage	$V_{op}$	$P_f$	-	-	1.7	V
Side mode suppression ratio	SMSR	CW, $0^\circ\text{C}\sim+70^\circ\text{C}$	30	-	-	dB
Rise time	$T_r$	$I_b = I_{th}$ , 20%~80%	-	-	0.35	nsec
Fall time	$T_f$	$I_b = I_{th}$ , 80%~20%	-	-	0.35	nsec
Tracking error	$\Delta P_f / P_f$	APC, $0^\circ\text{C}\sim+70^\circ\text{C}$	-	$\pm 1.0$	-	dB
Monitor current	$I_m$	$P_f, V_{RP}=1\text{V}$	50	-	-	$\mu\text{A}$
Monitor dark current	$I_d$	$V_{RP}=5\text{V}$	-	-	0.1	$\mu\text{A}$
Monitor capacitance	C	$V_{RP}=5\text{V}, f=1\text{MHz}$	-	-	20	pF

## Pin Assignment



## Package Outline Drawing

