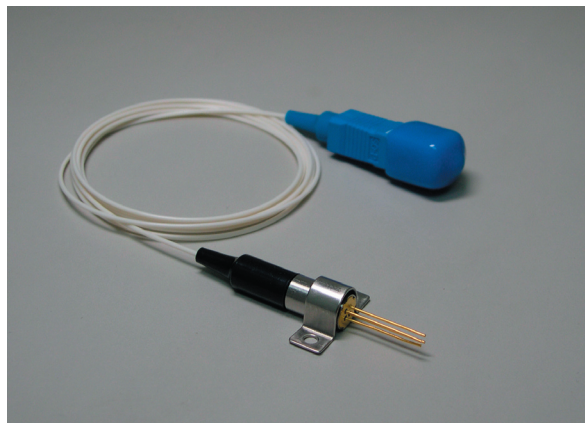


## C-13-DFB10-PK-SXXXX



### Features

- Uncooled DFB Laser diode with MQW structure
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Single frequency operation with high SMSR
- Integrated 4-pin TO-18 TOSA package, with built-in isolator, for SC/LC connector
- Designed for 10Gbps Ethernet application.

### Absolute Maximum Rating (T<sub>c</sub>=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power (Middle power) (High power)	P <sub>o</sub>	1(CW) 4(CW)	mW
LD Reverse Voltage	V <sub>RLD</sub>	2	V
LD Forward Current	I <sub>FLD</sub>	150	mA
PD Reverse Voltage	V <sub>RPD</sub>	10	V
PD Forward Current	I <sub>FPD</sub>	2.0	mA
Operating Temperature	T <sub>opr</sub>	0 to +70	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C

(All optical data refer to a coupled 9/125μm SM fiber)

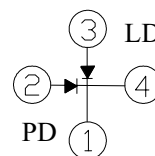
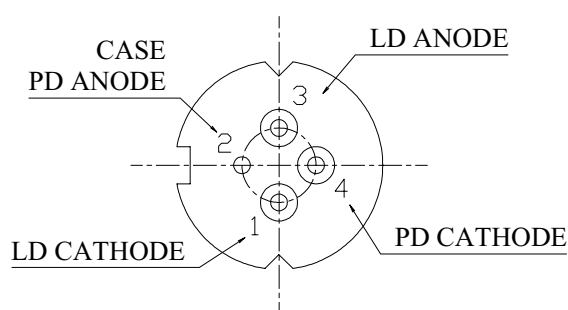
### Optical and Electrical Characteristics( T=0 to 85°C unless otherwise noted)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	I <sub>th</sub>	-	10	15	mA	T=25°C
Optical Output Power (Middle power) (High power)	P <sub>o</sub>	0.3 1.5	-	0.8 2.5	mW	I <sub>op</sub> =40mA, CW, T=25°
Operating Current	I <sub>op</sub>	-	40	-	mA	T=25°C
Peak Wavelength	λ	1295	1310	1325	nm	CW, T=25°, @ I <sub>op</sub>
Spectral Width (RMS)	Δλ	-	-	1	nm	P <sub>o</sub> =2mW, CW
Side Mode Suppression	Sr	30	-	-	dB	CW, @ I <sub>op</sub>
Wavelength Temperature Coefficient	δλ/δT	-	0.08	0.1	nm/°C	
Forward Voltage	V <sub>F</sub>	-	1.5	-	V	CW, @ I <sub>op</sub>
Rise/Fall Time, 20 to 80% *	t <sub>r</sub> /t <sub>f</sub>	-	40	-	ps	
Relative Intensity Noise	RIN	-	-	-130	dB/Hz	CW, T=25°C, @ I <sub>op</sub>
Tracking Error	ΔP <sub>f</sub> / P <sub>f</sub>	-1.5	-	1.5	dB	I <sub>m</sub> =constant, CW
PD Monitor Current	I <sub>m</sub>	100	-	-	μA	CW, V <sub>RPD</sub> =5V, T=25°C @ I <sub>op</sub>
PD Dark Current	I <sub>DARK</sub>	-	-	0.1	μA	V <sub>RPD</sub> =5V
PD Capacitance	C <sub>t</sub>	-	6	15	pF	V <sub>RPD</sub> =5V, f=1MHz

\* 10.3125 Gb/s PRBS 2<sup>31</sup>-1, Er=6.0dB, @ I<sub>op</sub> and T=25°C

Pin Assignment

## Bottom view



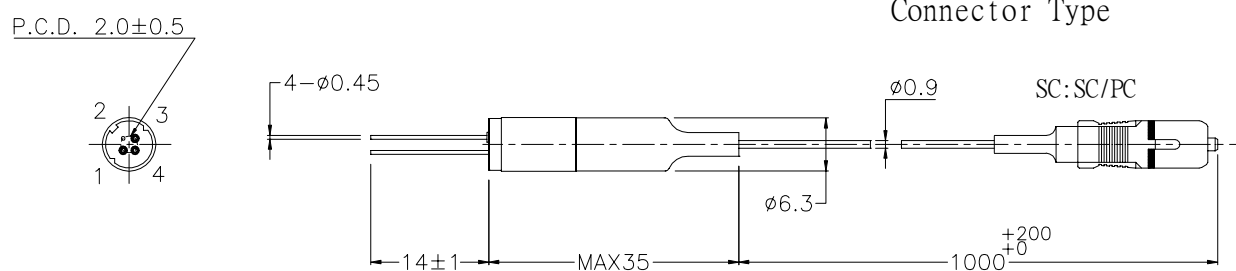
## K Type

C-13-DFB10-PK-SXXXX

Units in mm

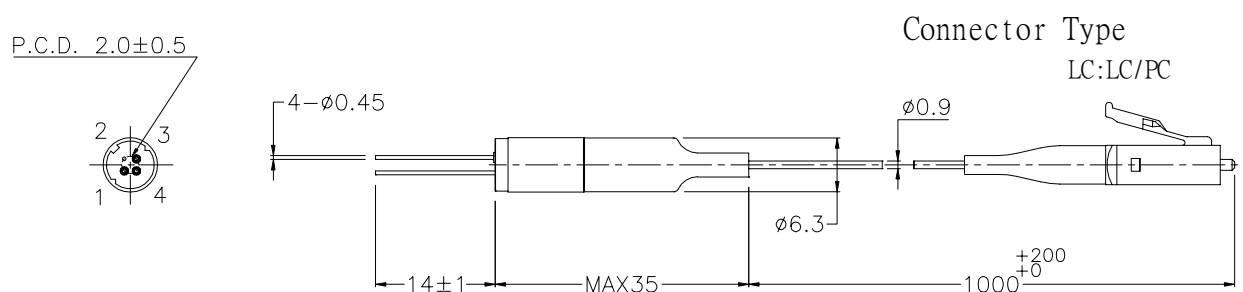
C-13-DFB10-PK-SSC2I

C-13-DFB10-PK-SSCLI



C-13-DFB10-PK-SLC2I

C-13-DFB10-PK-SLCLI



C-13-DFB10-PK-SXXXX

Ordering Information

Available Options:

C-13-DFB10-PK-SSC2I  
C-13-DFB10-PK-SLC2I  
C-13-DFB10-PK-SSCLI  
C-13-DFB10-PK-SLCLI

C	-	13	-	DFB	10	-	P	K	-	S	XX	X	X
Application		wavelength		device	application		type	pinout		fiber type	connector	power	isolator
Communication		13=1310nm		DFB=DFB	10=10Gbps		P=pigtail	K		S=Single mode	SC LC	2=1.5~2.5mW L=0.3~0.8mW	I=Isolator

**Handling Precautions:** This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

**Laser Safety:** Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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