

C-13-010-PK-SXXXX



**Features**

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

**Absolute Maximum Rating (Tc=25°C)**

Parameter	Symbol	Value	Unit
Fiber Output Power (Middle power) (High power)	$P_o$	2(CW) 4(CW)	mW
LD Reverse Voltage	$V_{RLD}$	2	V
LD Forward Current	$I_{FLD}$	150	mA
PD Reverse Voltage	$V_{RPD}$	10	V
PD Forward Current	$I_{FPD}$	2.0	mA
Operating Temperature	$T_{opr}$	0 to +85	°C
Storage Temperature	$T_{stg}$	-40 to +85	°C

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

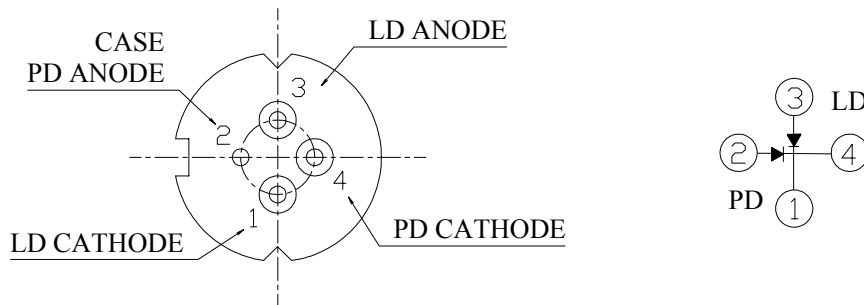
**Optical and Electrical Characteristics( T=0 to 85°C unless otherwise noted)**

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	$I_{th}$	-	8	12	mA	T=25°C
Optical Output Power (Middle power) (High power)	$P_o$	0.63 1.5	-	1.26 2.5	mW	$I_{op}=40mA, CW, T=25^\circ$
Operating Current	$I_{op}$	-	40	-	mA	T=25°C
Peak Wavelength	$\lambda$	1295	1310	1325	nm	CW, T=25°, @ $I_{op}$
RMS Spectral Width	$\Delta\lambda$	-	2	5	nm	CW, @ $I_{op}$
Forward Voltage	$V_F$	-	1.5	-	V	CW, @ $I_{op}$
Rise/Fall Time, 20 to 80%*	$t_r/t_f$	-	40	-	ps	
RIN	RIN	-	-	-130	dB/Hz	CW, T=25°C, @ $I_{op}$
Tracking Error	$\Delta P_f / P_f$	-1.5	-	1.5	dB	$I_m$ =constant, CW
PD Monitor Current	$I_m$	100	-	-	µA	CW, $V_{RPD}=5V, T=25^\circ C$ @ $I_{op}$
PD Dark Current	$I_{DARK}$	-	-	0.1	µA	$V_{RPD}=5V$
PD Capacitance	$C_t$	-	6	15	pF	$V_{RPD}=5V, f=1MHz$

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

Pin Assignment

# Bottom view



## K Type

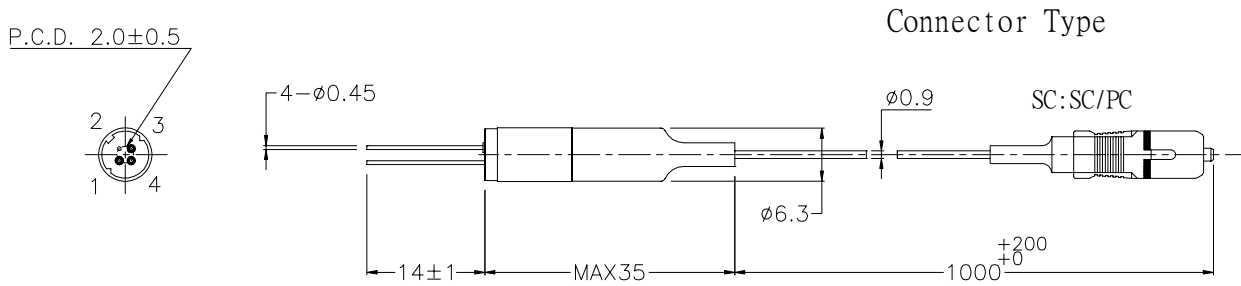
C-13-010-PK-SXXXX

Packaging Dimensions

Units in mm

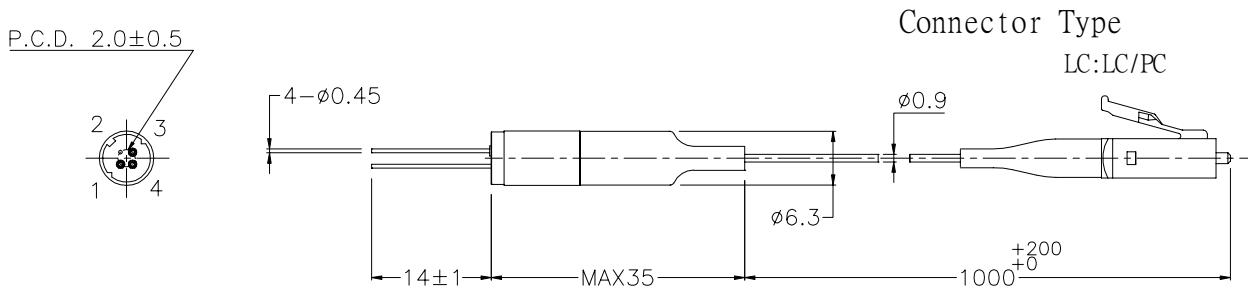
C-13-010-PK-SSC2I

C-13-010-PK-SSCMI



C-13-010-PK-SLC2I

C-13-010-PK-SLCMI



Ordering Information

Available Options:

- C-13-010-PK-SSC2I
- C-13-010-PK-SLC2I
- C-13-010-PK-SSCMI
- C-13-010-PK-SLCMI

<b>C</b>	<b>- 13 -</b>	<b>0</b>	<b>10 -</b>	<b>P</b>	<b>K -</b>	<b>S</b>	<b>XX</b>	<b>X</b>	<b>X</b>
<u>Application</u>	<u>Wavelength</u>	<u>Device</u>	<u>Application</u>	<u>Type</u>	<u>Pinout</u>	<u>Fiber type</u>	<u>Connector</u>	<u>Power</u>	<u>Isolator &amp; Fiber stub</u>
Communicaton	13=1310nm	0=FP	10=10Gbps	P=pigtail	K	S=Single mode	SC LC	2=1.5~2.5mW M=0.3~1mW	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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