

C-13-DFB10-TK-SXC2I-HT (-01)



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 (Tc=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power	P_O	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}	-	10	15	mA	T=25°C
Optical Output Power	P_O	1.5	-	2.5	mW	$I_{op}=40mA, CW, T=25^\circ$
Operating Current	I_{op}	-	40	-	mA	T=25°C
Peak Wavelength	λ	1295	1310	1325	nm	CW, T=25°, @ I_{op}
Spectral Width (RMS)	$\Delta\lambda$	-	-	1	nm	$P_O=2mW, CW$
Side Mode Suppression	S_r	30	-	-	dB	CW, @ I_{op}
Wavelength Temperature Coefficient	$\delta\lambda/\delta T$	-	0.08	0.1	nm/°C	
Forward Voltage	V_F	-	1.5	-	V	CW, @ I_{op}
Rise/Fall Time, 20 to 80%*	t_r/t_f	-	40	-	ps	
Relative Intensity Noise	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 2³¹-1, Er=6.0dB, @ I_{op} and T=25°C

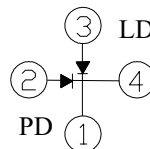
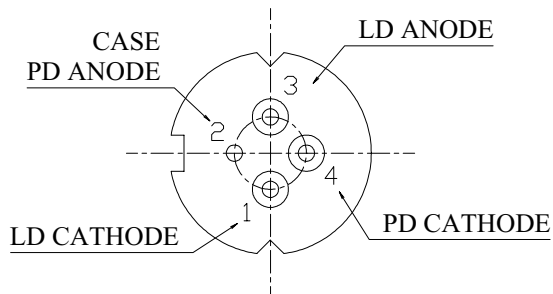
Pin Assignment

Part Number : C-13-DFB10-TK-SSC2I-HT
 C-13-DFB10-TK-SLC2I-HT
 C-13-DFB10-TK-SLC2I-HT-01

LD Pin Assignment

Units in mm.

Bottom view



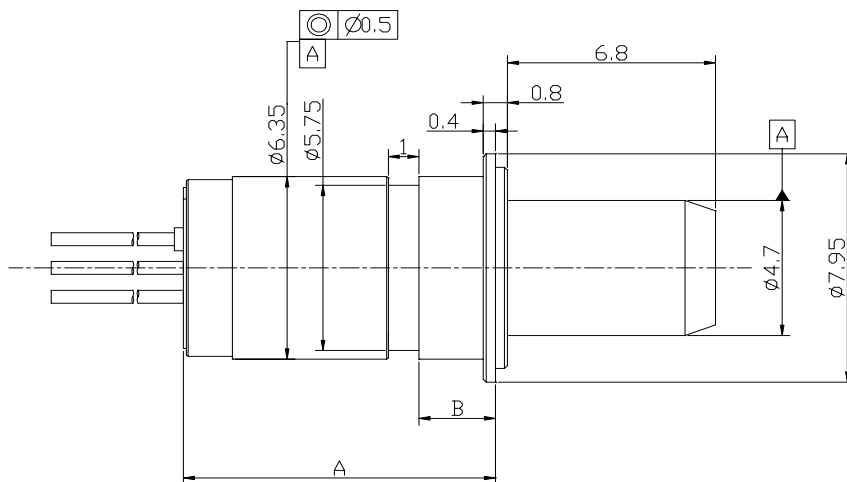
K Type

C-13-DFB10-TK-SXC2I-HT (-01)

Packaging Dimensions

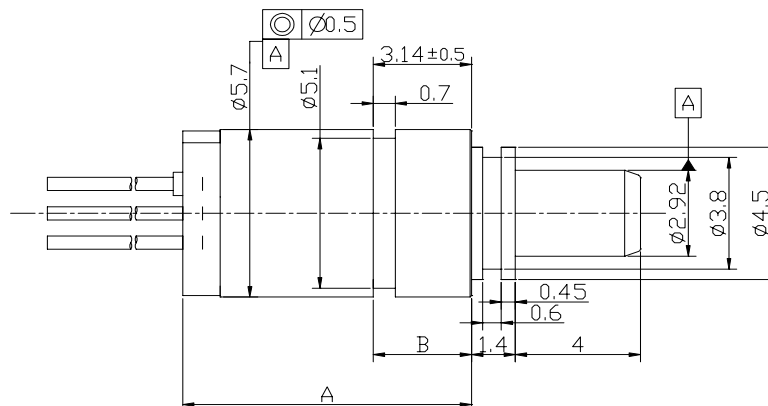
Units in mm

C-13-DFB10-TK-SSC2I-HT



DIMENSION: A=9.7~10.7 mm
DIMENSION: B=2.0~3.0 mm

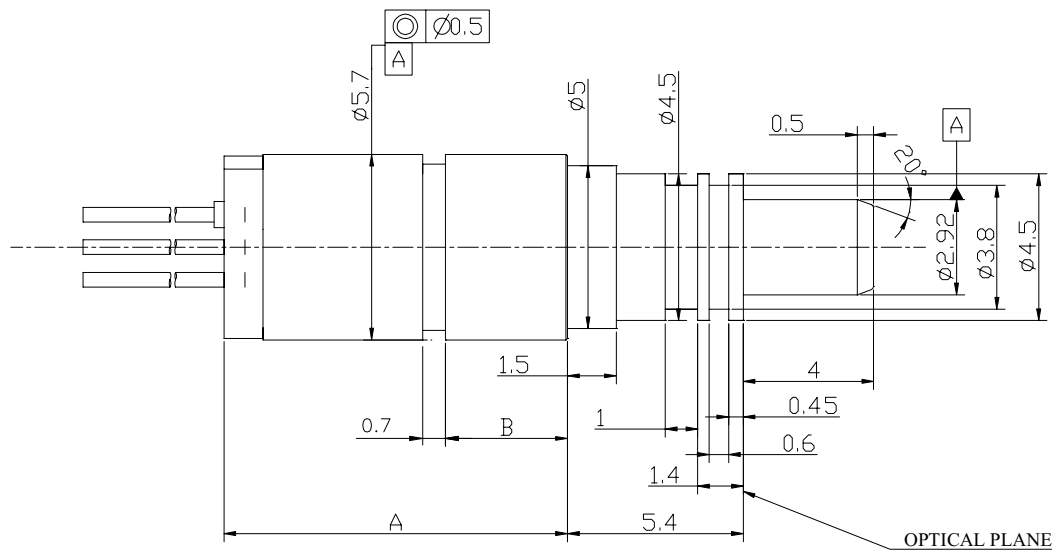
C-13-DFB10-TK-SLC2I-HT



DIMENSION: A=8.75~9.75 mm
DIMENSION: B=2.65~3.65 mm

C-13-DFB10-TK-SXC2I-HT (-01)

LC with APC Fiber Stub Type
C-13-DFB10-TK-SLC2I-HT-01



DIMENSION: A=10.1~11.3 mm
 DIMENSION: B=3.3~4.5 mm

C-13-DFB10-TK-SXC2I-HT (-01)

Ordering Information

Available Options:

C-13-DFB10-TK-SSC2I-HT
C-13-DFB10-TK-SLC2I-HT
C-13-DFB10-TK-SLC2I-HT-01

C	- 13	-DFB	10	- T	K	- S	XC	2	I	- HT	- 01
Application	wavelength	device	application	type	pinout	fiber type	connector	power	isolator	Temperature	Customer
Communicaton	13=1310nm	DFB=DFB	10=10Gbps	T=TOSA	K	S=Single mode	SC LC	2=1.5~2.5mW	I=isolator	HT=0~85°C	Customer specifics 01 : with APC fiber stub

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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