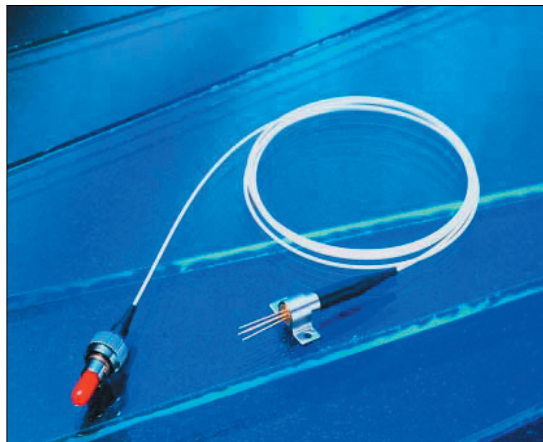


C-13-DFBA-PX-SXXXI/XXX-X



Features

- Laser diode with multi-quantum-well structure
- Un-cooled operation at -20 to +85°C
- Built-in InGaAs monitor photodiode
- Hermetically sealed active component
- Complies with Telcordia Technologies GR-468-CORE
- Single frequency operation with high SMSR
- Fiber pigtailed package with optional FC/ST/SC/MU/LC connector
- Design for Analog fiber-optics application

Absolute Maximum Rating (Tc=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power H&2	P_f	2.5(H)/4(2)	mW
Reverse Voltage	V_{RLD}	2	V
PD Reverse Voltage	V_{RPD}	20	V
PD Forward Current	I_{FPD}	2.0	mA
Operating Temperature	T_{opr}	-20 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=25°C)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	I_{th}	-	10	20	mA	CW
Operating Current	I_{op}	-	20	40	mA	CW, $P_f=P_f(\text{Min})$
Optical Output Power H 2	P_f	1 2	- -	2 -	mW	CW, $I_{th}+20\text{mA}$, kink free
Operating Voltage	V_F	-	1.2	1.8	V	CW, $P_f=P_f(\text{Min})$
Peak Wavelength	λ	1280	1310	1335	nm	CW, $P_f=P_f(\text{Min})$, RMS(-20dB) TC=-20~85°C
Side mode Suppression Ratio	S_r	30	40	-	dB	CW, $P_f=P_f(\text{Min})$, -20 to 85°C
Slope Efficiency H 2	Se	0.05 0.1	- -	0.1 -	mW/mA	CW, $P_f=P_f(\text{Min})$
Optical Isolation	OI	45 30	- -	- -	dB	-20<T _c <85°C
Rise Time/Fall Time	t_r/t_f	-	-	0.5	ns	$I_{bias}=I_{th}$, 10% to 90%
Relative Intensity Noise	RIN	-	-150	-145	dB/Hz	CW
Second Order Distortion	SSO	-	-	-40	dBc	Note 1
Third Order Distortion	STO	-	-	-50	dBc	Note 1
Monitor Current	I_m	100	-	-	μA	CW, $P_f=P_f(\text{Min})$, $V_{RPD}=2\text{V}$
Monitor Dark Current	I_{DARK}	-	-	1.0	μA	$V_{RPD}=5\text{V}$
Photodiode Capacitance	C	-	6	15	pF	$V_{RPD}=5\text{V}$, $f=1\text{MHz}$
Tracking Error	$\Delta P_f / P_f$	-1.5	-	1.5	dB	APC, -20 to +85°C

Note1. The laser is modulated with two-carrier tones ($f_1=13\text{MHz}$, $f_2=19\text{MHz}$) at OMI=15% per carrier tone

C-13-DFBA-PX-SXXXI/XXX-X

Pin Assignment

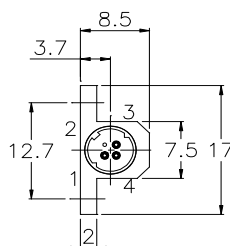
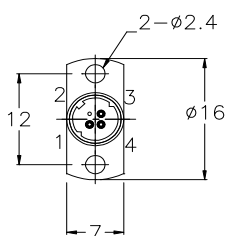
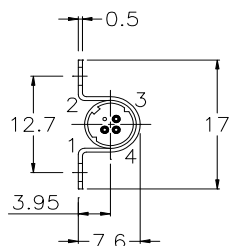
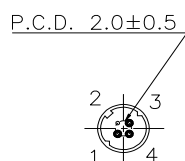
Units in mm.



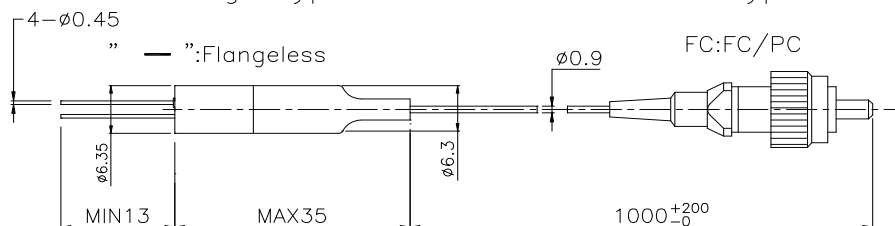
Pin 1 : Monitor Diode Anode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Cathode



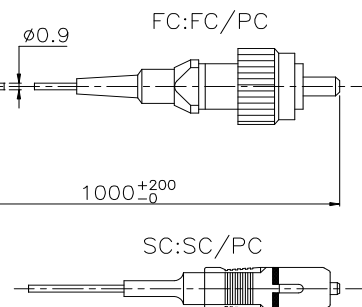
Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode



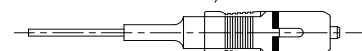
Flange Type



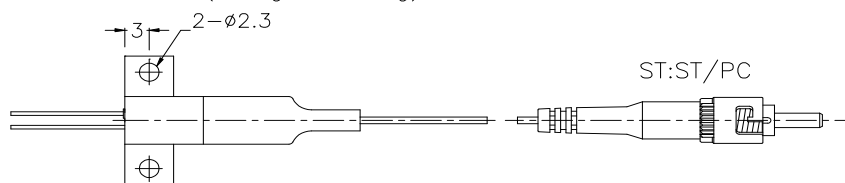
Connector Type



SC:SC/PC



"O":Horizontal (Omega Housing)

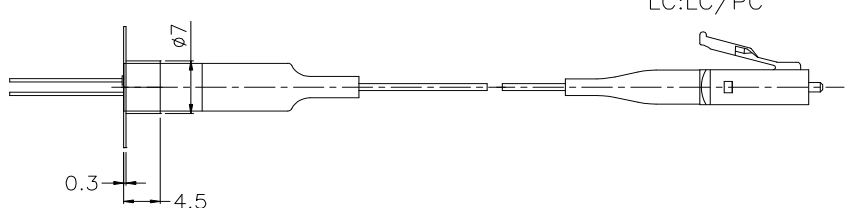


ST:ST/PC

MU:MUJ/PC

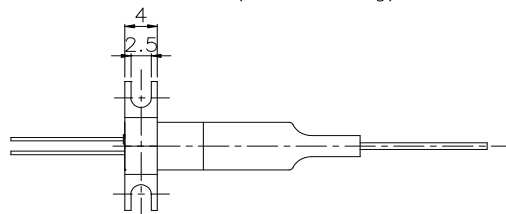


"V":Vertical



LC:LC/PC

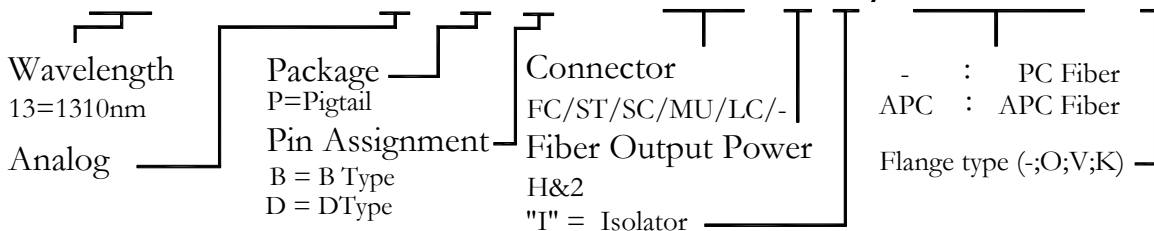
"K":Horizontal (KX Housing)



C-13-DFBA-PX-SXXXI/XXX-X

Ordering Information

C-13-DFBA-PX-SXXXI/XXX-X



Warnings

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.

Legal Notice

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