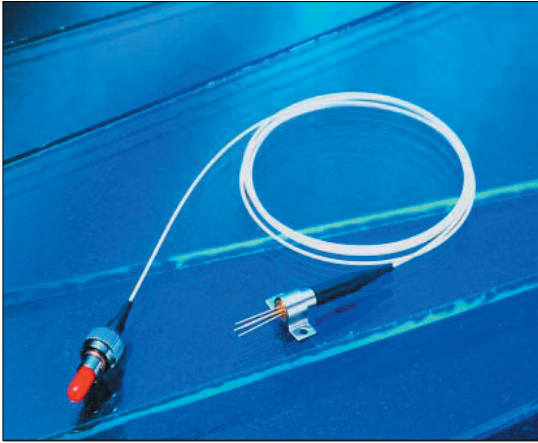


C-13-DFBA-PX-SXXXI/XXX-X



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 (T_c=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 _{FDP}	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 (Min)
Optical Output Power	P _f	1	-	2	mW	CW, I _{th} +20mA, kink free
H 2		2	-	-		
Operating Voltage	V _F	-	1.2	1.8	V	CW, P _f =P _f (Min)
Peak Wavelength	λ	1280	1310	1335	nm	CW, P _f =P _f (Min), RMS(-20dB) TC=-20~85°C
Side mode Suppression Ratio	S _r	30	40	-	dB	CW, P _f =P _f (Min), -20 to 85°C
Slope Efficiency	Se	0.05	-	0.1	mW/mA	CW, P _f =P _f (Min)
H 2		0.1	-	-		
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 (Min), V _{RPD} =2V
Monitor Dark Current	I _{DARK}	-	-	1.0	μA	V _{RPD} =5V
Photodiode Capacitance	C	-	6	15	pF	V _{RPD} =5V, f=1MHz
Tracking Error	ΔP _f / P _f	-1.5	-	1.5	dB	APC, -20 to +85°C

Note1. The laser is modulated with two-carrier tones (f₁=13MHz, f₂=19MHz) at OMI=15% per carrier tone

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

Pin Assignment

Units in mm.

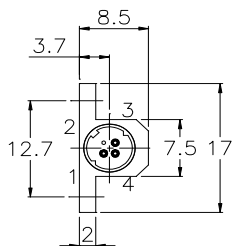
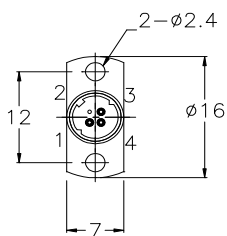
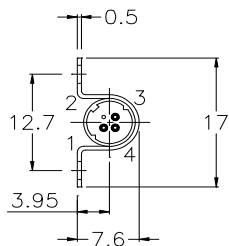


- Pin 1 : Monitor Diode Anode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Laser Cathode
- Pin 4 : Monitor Diode Cathode

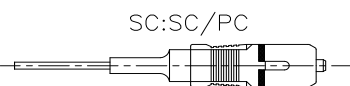
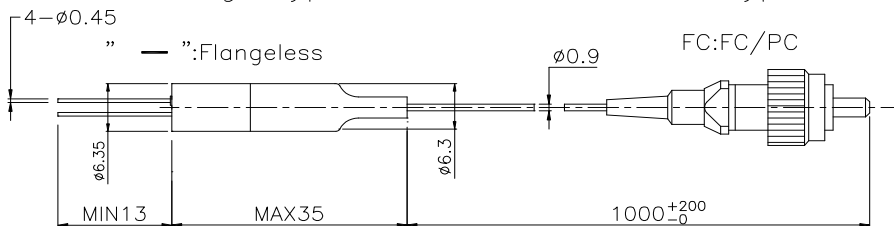


- Pin 1 : Laser Anode and Monitor Diode Cathode
- Pin 2 : Case Gnd
- Pin 3 : Laser Cathode
- Pin 4 : Monitor Diode Anode

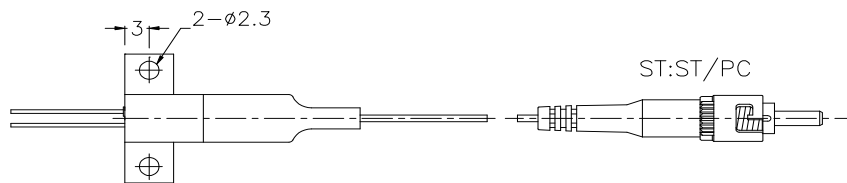
P.C.D. 2.0±0.5



Flange Type



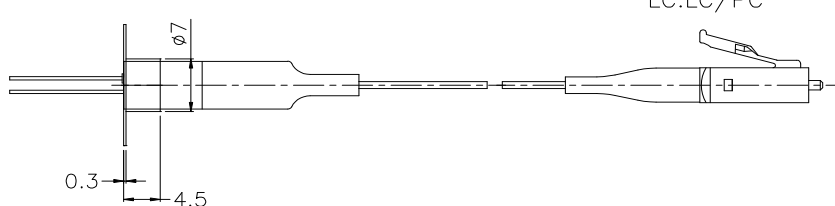
"O":Horizontal (Omega Housing)



MU:MUJ/PC

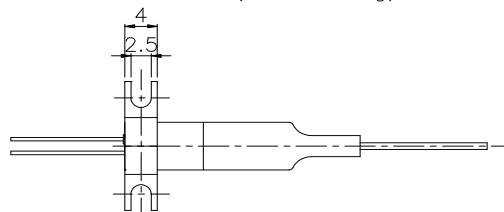


"V":Vertical

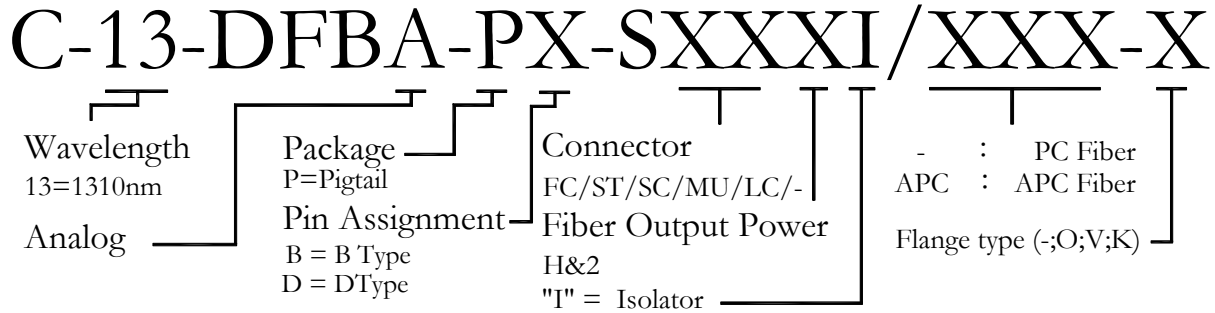


LC:LC/PC

"K":Horizontal (KX Housing)



Ordering Information



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.

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