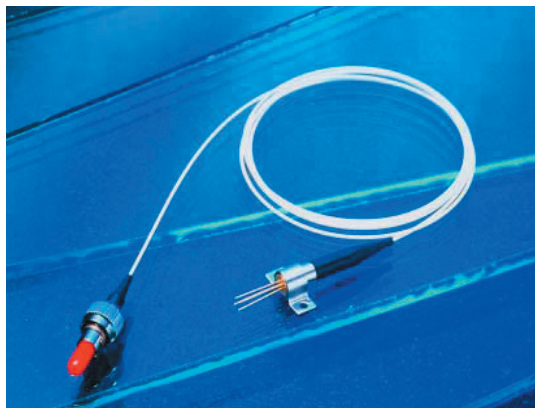


## C-15-DFBA-PX-SXXXI/XXX-X



## 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<sub>c</sub>=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power H&2	P <sub>f</sub>	2(H)/3.5(2)	mW
Reverse Voltage	V <sub>RLD</sub>	2	V
PD Reverse Voltage	V <sub>RPD</sub>	20	V
PD Forward Current	I <sub>FDP</sub>	2.0	mA
Operating Temperature	T <sub>opr</sub>	-20 to +85	°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=25°C)

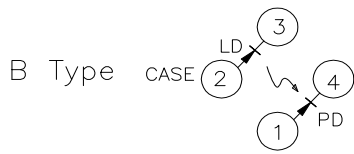
Parameter	Symbol	Min	Typical	Max	Unit	Test Condition	
Threshold Current	I <sub>th</sub>	-	10	30	mA	CW	
Operating Current	I <sub>op</sub>	-	20	60	mA	CW, P <sub>f</sub> =P <sub>f</sub> (Min)	
Optical Output Power	P <sub>f</sub>	H	1	-	2	mW	CW, I <sub>th</sub> +25mA, kink free
2		2	-	-			
Operating Voltage	V <sub>f</sub>	-	1.2	1.8	V	CW, P <sub>f</sub> =P <sub>f</sub> (Min)	
Peak Wavelength	λ	1530	1550	1570	nm	CW, P <sub>f</sub> =P <sub>f</sub> (Min), RMS(-20dB) TC=-20~85°C	
Side mode Suppression Ratio	S <sub>r</sub>	30	40	-	dB	CW, P <sub>f</sub> =P <sub>f</sub> (Min), -20 to 85°C	
Slope Efficiency	Se	H	0.04	-	0.08	mW/mA	CW, P <sub>f</sub> =P <sub>f</sub> (Min)
2		0.08	-	-			
Optical Isolation	OI		45	-	-	dB	T <sub>c</sub> =25°C -20°C<T <sub>c</sub> <85°C
		30	-	-			
Rise Time/Fall Time	t <sub>r</sub> /t <sub>f</sub>	-	-	0.5	ns	I <sub>bias</sub> =I <sub>th</sub> , 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 <sub>m</sub>	100	-	-	μA	CW, P <sub>f</sub> =P <sub>f</sub> (Min), V <sub>RPD</sub> =2V	
Monitor Dark Current	I <sub>DARK</sub>	-	-	1.0	μA	V <sub>RPD</sub> =5V	
Photodiode Capacitance	C	-	6	15	pF	V <sub>RPD</sub> =5V, f=1MHz	
Tracking Error	ΔP <sub>f</sub> /P <sub>f</sub>	-1.5	-	1.5	dB	APC, -20 to +85°C	

**Note1.**The laser is modulated with two-carrier tones (f<sub>1</sub>=13MHz, f<sub>2</sub>=19MHz) at OMI=15% per carrier tone

## C-15-DFBA-PX-SXXXI/XXX-X

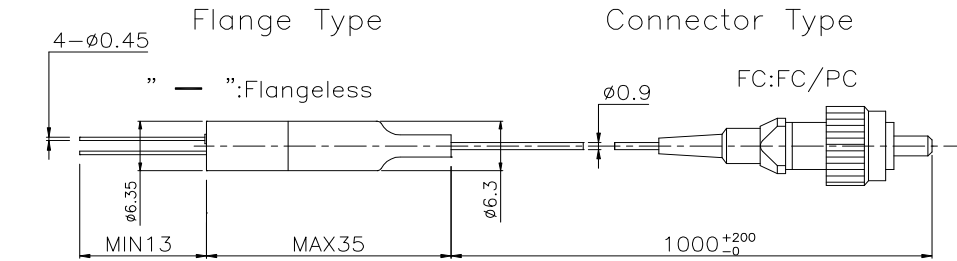
Pin Assignment

Units in mm.

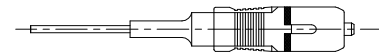


- Pin 1 : Monitor Diode Anode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Laser Cathode
- Pin 4 : Monitor Diode Cathode

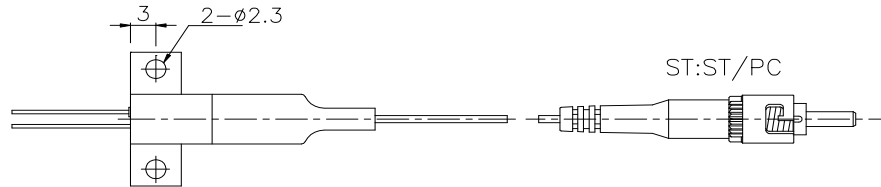
P.C.D. 2.0±0.5



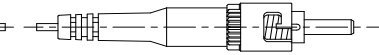
SC:SC/PC



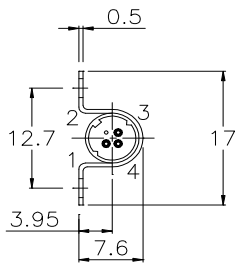
"O":Horizontal (Omega Housing)



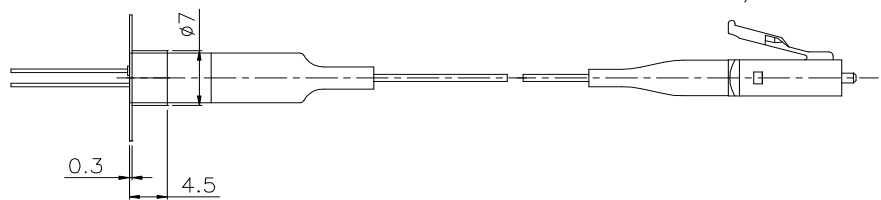
ST:ST/PC



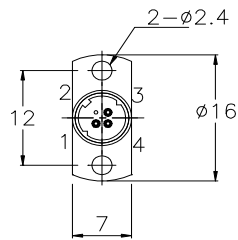
MU:MUJ/PC



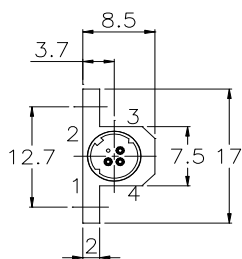
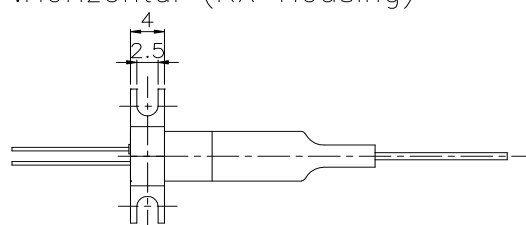
"V":Vertical



LC:LC/PC

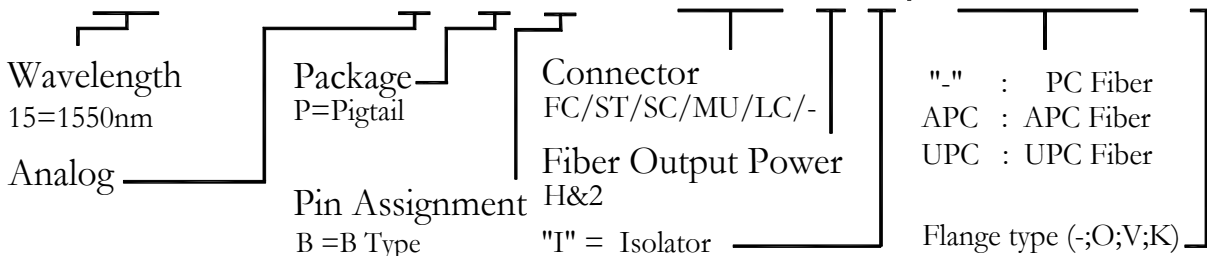


"K":Horizontal (KX Housing)



Ordering Information

# C-15-DFBA-PB-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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