

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
- RoHS Compliant available

Absolute Maximum Ratings (T_c=25°C)

Parameter	Symbol	Rating	Unit
Fiber Output Power	H/2 P _f	2 (H)/3.5(2)	mW
Reverse Voltage	V _{RLD}	2	V
PD Reverse Voltage	V _{RPD}	20	V
PD Forward Current	I _{FPD}	2	mA
Operating Temperature	T _{opr}	-20 ~ 85	°C
Storage Temperature	T _{stg}	-40 ~ 85	°C

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

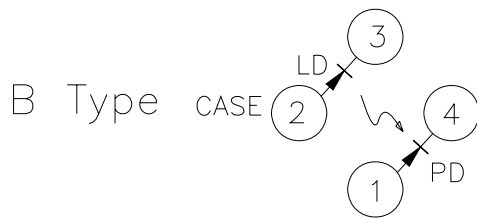
Optical and Electrical Characteristics (T_c=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Threshold Current	I _{th}	-	10	30	mA	CW
Operating Current	I _{op}	-	20	60	mA	CW, P _f = P _f (Min)
Optical Output Power	H 2 P _f	1 2	- -	2 -	mW	CW, I _{th} +25mA, kink free
Operating Voltage	V _F	-	1.2	1.8	V	CW, P _f = P _f (Min)
Peak Wavelength	λ	1530	1550	1570	nm	CW, P _f = P _f (Min), RMS(-20dB) T _c = -20~85°C
Side mode Suppression Ratio	S _r	30	40	-	dB	CW, P _f = P _f (Min), -20~85°C
Slope Efficiency	H 2 S _e	0.04 0.08	- -	0.08 -	mW/mA	CW, P _f = P _f (Min)
Optical Isolation	OI	45 30	- -	- -	dB	T _c =25°C -20°C < T _c < 85°C
Rise / Fall Time	T _r /T _f	-	-	0.5	ns	I _{bias} =I _{th} , 10~90%
Relative Intensity Noise	RIN	-	-150	-145	dB/Hz	CW
Second Order Distortion	SSO	-	-	-40	dBc	Note1

Third Order Distortion	STO	-	-	-50	dBc	Note1
Monitor Current	I_m	100	-	-	μA	CW, $P_f = P_f(\text{Min})$, $V_{RPD} = 2V$
Monitor Dark Current	I_{dark}	-	-	1	μA	$V_{RPD} = 5V$
Photodiode Capacitance	C	-	6	15	pF	$V_{RPD} = 5V$, $f = 1\text{MHz}$
Tracking Error	$\Delta P_f / P_f$	-1.5	-	1.5	dB	APC, -20~85°C

Note 1. The laser is modulated with two-carrier tones ($f_1=13\text{MHz}$, $f_2=19\text{MHz}$) at OMI=15% per carrier tone.

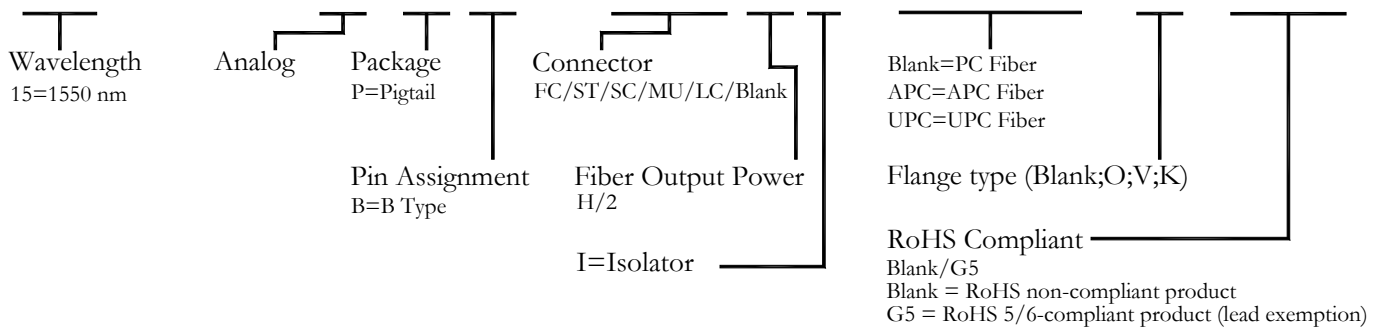
Pin Assignment



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

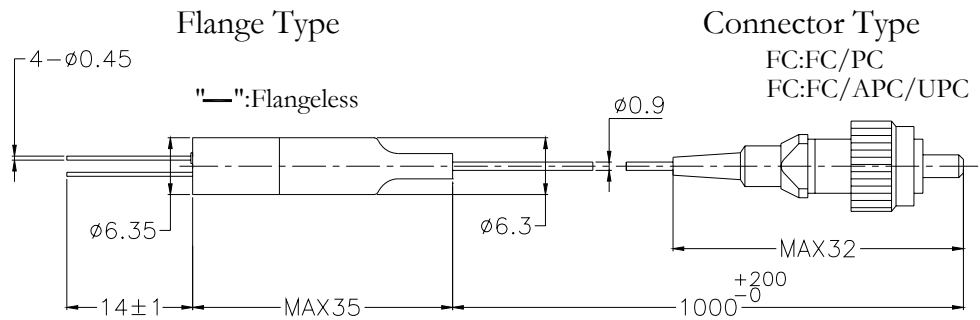
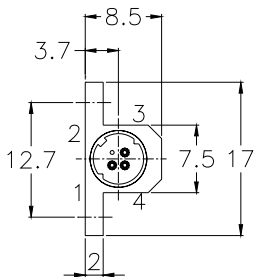
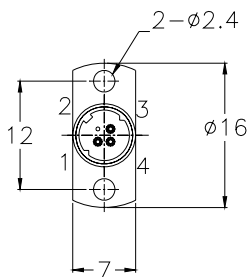
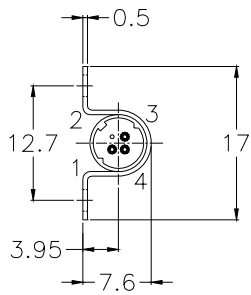
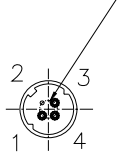
Ordering Information

C-15-DFBA-PB-SXXXI/XXX-X-XX

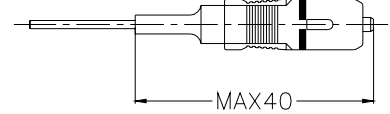


Packaging Dimensions (Units in mm)

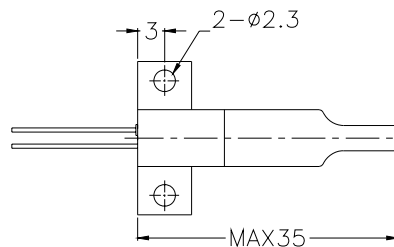
P.C.D. 2.0 ± 0.5



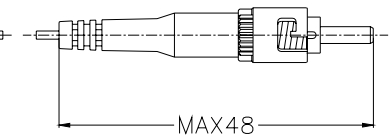
SC:SC/PC
SC:SC/APC/UPC



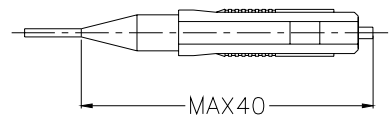
"O": Horizontal (Omega Housing)



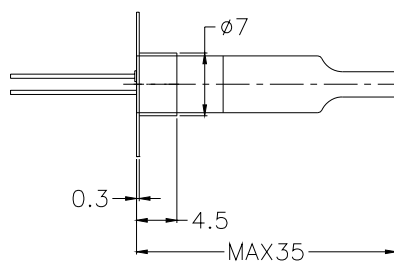
ST:ST/PC
ST:ST/APC/UPC



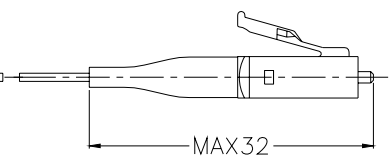
MU:MU Connector



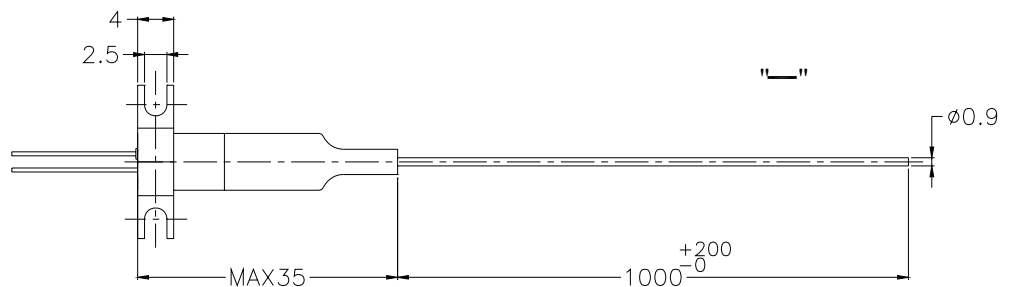
"V": Vertical



LC:LC/PC
LC:LC/APC/UPC



"K": Horizontal (KX Housing)



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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