



## Features

- 1310nm InGaAsP MQW-FP laser diode
- 1550nm InGaAs photodiode with TIA
- Uncooled, hermetically sealed Tx and Rx
- Low threshold current
- Single mode fiber pigtail type with SC connector.
- Operating temperature range up to 0 ~ +70 °C

## Applications

- ATM/SONET OC-3

## Ordering Information

Part Number	TX wavelength	RX wavelength	Connector	Data rate
BF-3155-PXSX-CAX	1310 nm	1550 nm	SC/PC	155Mbps

## Specifications

### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Storage temperature	T <sub>stg</sub>	-40~+85	°C
Operating case temperature	T <sub>op</sub>	0~+70	°C
Peak optical output power	P <sub>f</sub>	1.0	mW
Reverse voltage (LD)	V <sub>RL</sub>	2	V
Forward current (PD)	I <sub>FP</sub>	2	mA
Reverse voltage (PD)	V <sub>RP</sub>	20	V
Soldering temperature (10 sec.)	S <sub>temp</sub>	260	°C

**Transmitter Electro-optical Characteristics (T=25°C, unless otherwise specified)**

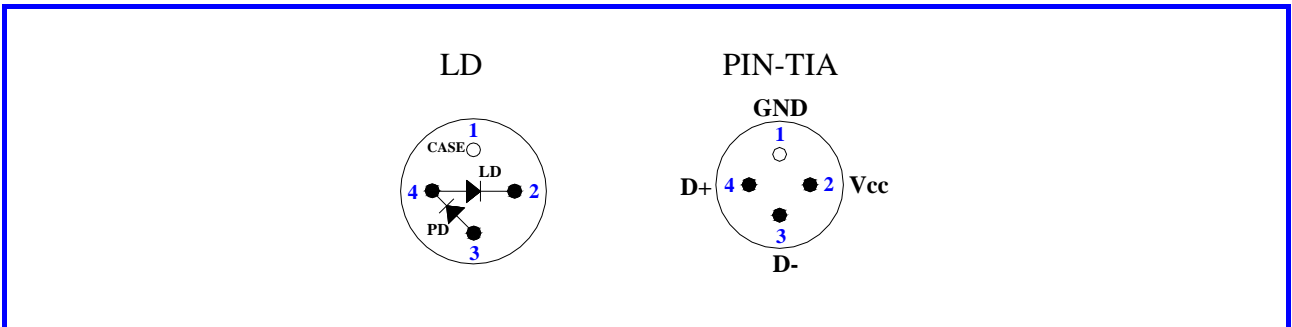
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Threshold current	$I_{th}$	CW	-	5	20	mA
Center Wavelength	$\lambda_c$	$P_f = 0.25\text{mW}$	1280	-	1340	nm
Fiber output power	$P_f$	CW, $I_{th} + 25\text{mA}$	0.25	-	0.75	mW
Slope efficiency	$Se$	CW	0.01	-	0.03	mW/mA
Operating voltage	$V_{op}$	$P_f = 0.25\text{mW}$	-	-	1.7	V
Spectral width	$\Delta\lambda$	CW, RMS	-	1.0	2.5	nm
Rise time	$T_r$	$I_b = I_{th}$ , 10%~90%	-	-	0.7	nsec
Fall time	$T_f$	$I_b = I_{th}$ , 90%~10%	-	-	0.7	nsec
Tracking error	$\Delta P_f / P_f$	APC, 0°C~+70°C	-	±1.0	-	dB
Monitor current	$I_m$	$P_f = 0.25\text{ mW}$ , $V_{RP} = 10\text{V}$	100	-	-	μA
Monitor dark current	$I_d$	$V_{RP} = 10\text{V}$	-	-	0.1	μA
Monitor capacitance	$C$	$V_{RP} = 10\text{V}$ , $f = 1\text{MHz}$	-	-	20	pF

**Receiver Electro-optical Characteristics (T=25°C, unless otherwise specified)**

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Power Supply	$V_{cc}$		3.0	3.3	3.6	V
Supply Current	$I_{cc}$	No load	-	-	25	mA
Bandwidth	BW		115	-	-	MHz
Operating Wavelength	$\lambda$		1480	-	1600	nm
Crosstalk	CRT		-	-	-45	dB
Sensitivity	S	Note1	-	-	-33	dBm
Saturation Power	$P_{sat}$	Note1	0	-	-	dBm
Output Resistance	$R_o$		-	50	-	ohm

Note1:  $\lambda = 1550\text{nm}$ , Extinction Ratio=9dB, 155Mbps, PRBS 2<sup>7</sup>-1, BER=1×10<sup>-10</sup>

## Pin Assignment



## Package Outline Drawing

