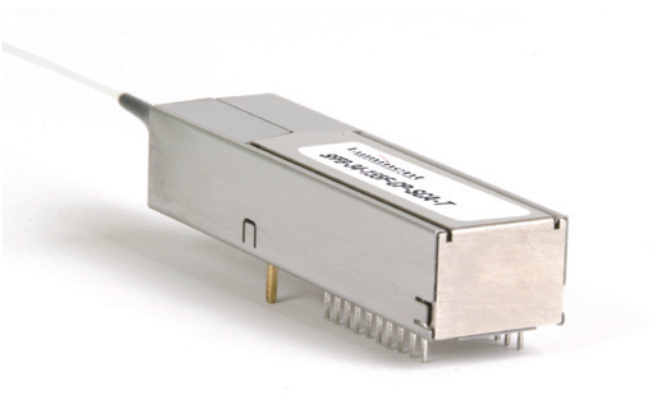


SFFB-34-155-BP



Features

- Burst transmit SFF PON transceiver
- 1310 nm FP Tx/1490 nm Rx
- Small Form Factor, pigtailed bi-directional
- 155 Mbps symmetric upstream Tx and Downstream Rx
- -40 to 85 °C temperature operation
- Single 3.3 V supply
- FSAN G.983.3 Class B Compliant

General Operating

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Voltage	V_{cc}	3.135	3.3	3.465	V
Total Current	I_{cc}	-	-	300	mA
Operating Temperature(case)	T_{opr}	-40	-	85	°C
Storage Temperature	T_{stg}	-40	-	85	°C

Transmitter Specifications (Optical)

Parameter	Symbol	Min	Typical	Max	Unit
Optical Power	P_{op}	-4	-	2	dBm
Average launch power of off Tx	P_{off}	-	-	-30	dBm
Wavelength	λ	1260	1310	1360	nm
$\Delta\lambda_{20}$		-	-	3	nm
Side Mode Suppression Ratio		30	-		dB
Extinction Ratio	ER	10	-		dB
Transmit eye mask		Fig 6, G.983.3			
Data Rate (Burst)		-	155	-	Mbps
Optical Rise time ^b		-	-	500	ps
Optical Fall time ^b		-	-	500	ps
Tolerance to TX back reflection ^a		-24	-		dB

a) 1 dB degradation of receiver sensitivity

b) 20% to 80% values

SFFB-34-155-BP

Transmitter Specifications (Electrical)

Parameter	Symbol	Min	Typical	Max	Unit
Input Differential Impedence	R_{in}	80	100	120	Ω
PECL Single Ended data input swing(LVPECL) ^c	$V_{in, p-p}$	300	-	1250	mV
Tx Burst Enable		-	12.86	-	ns
Tx Burst Disable		-	12.86	-	ns
PECL Single Ended input		300	-	1250	mV

c) dc coupled

Receiver Specifications (Optical)

Parameter	Symbol	Min	Typical	Max	Unit
Receiver Power Low ^d	$R_{sens, low}$	-	-	-28.5	dBm
Receiver Power High ^d	$R_{sens, high}$	-	-	-3	dBm
Damage Threshold for Receiver	$P_{in, damage}$	5	-	-	dBm
Wavelength ^e	λ	1480	1490	1500	nm
Data Rate		-	622	-	Mbps
Maximum Reflectance of Receiver	RX_r	-	-	-20	dB
LOS Assert	-	-28.5	-	-	dBm
LOS De-assert	-	-	-	-38.5	dBm
LOS Hysteresis	-	1	-	-	dB

d) at 10⁻¹⁰ BER, PRBS 2²³-1, 20 Km SMF, 36dB reflectance with tx operating and modulated

e) Operational over 1200-1625 nm range

Electrical Output

Parameter	Symbol	Min	Typical	Max	Unit
PECL Single ended data output swing(LVPECL) ^f	$V_{out, p-p}$	500	-	940	mV
Data output rise time ^g	t_r	-	-	500	ps
Data output fall time ^g	t_f	-	-	500	ps
Data output time delay		-	-	100	ns
Signal detect time delay		-	-	100	ns
Signal detect output HIGH (LVTTTL)		2.4	-	V_{cc}	V
Signal detect output LOW(LVTTL)		0	-	0.8	V

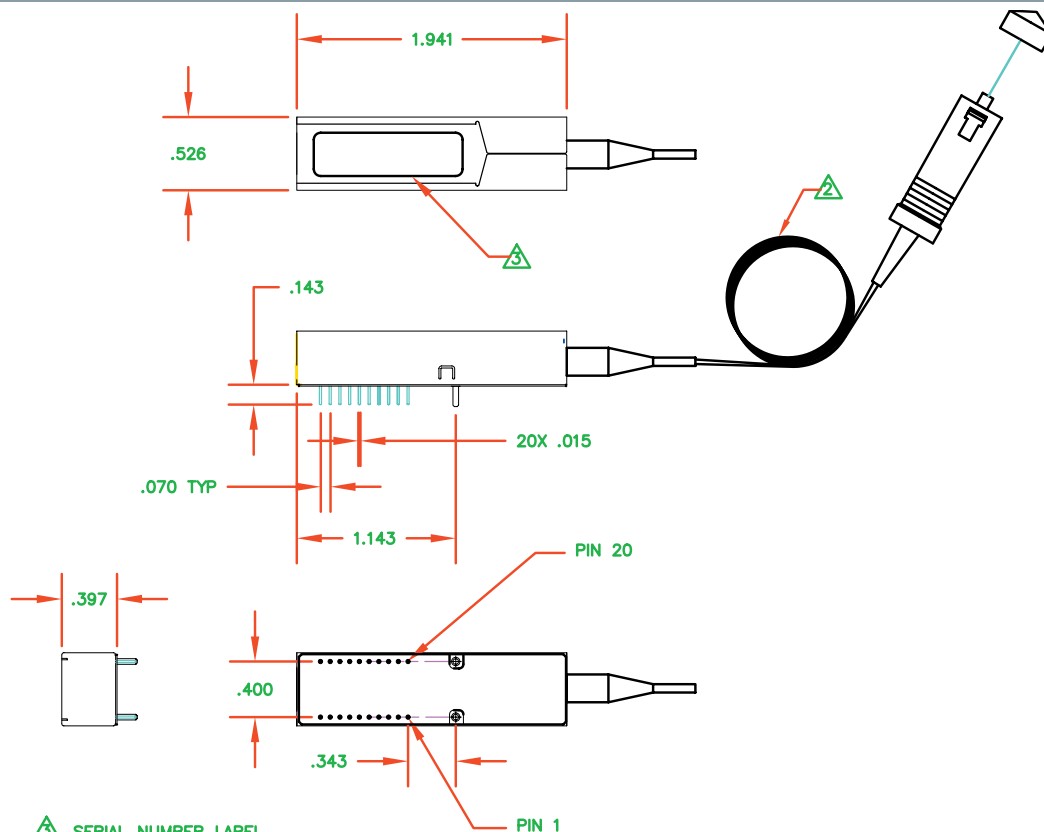
f) ac coupled

g) 20% to 80% values

Pinout Definitions

Pin	Function
1	RSSI
2	GND_Rx
3	GND_Rx
4	Ben+
5	Ben-
6	GND_Rx
7	Vcc_Rx
8	SD
9	RxD-
10	RxD+
11	Vcc_Tx
12	GND_Tx
13	Tx_Dis
14	TxD+
15	TxD-
16	GND_Tx
17	SCL
18	SDA
19	FAIL-
20	GND_Tx

Outline Drawing



△ SERIAL NUMBER LABEL.

△ 1.0 METER 900um BUFFERED FIBER TERMINATED WITH SC CONNECTOR OR UNLESS OTHERWISE SPECIFIED.

1. CUSTOMER MAKES ALL EXTERNAL CONNECTIONS TO FIBER COMPONENTS AND WIRING.

NOTES: UNLESS OTHERWISE SPECIFIED

SFFB-34-155-BP

Ordering information

SFFB -	Wavelengths -	Data Rate Tx (Mbps)	Data Rate Rx (Mbps)	Interface (Standard or Luminent Specified)	Adapter	Connector type -	Digital Diagnostics	Temperature Range	Customer Specific
					(Separator)				
	• TR - T= Transmit wavelength - R = Receive wavelength 3=1310 4=1490 5=1550						• Blank = no connector or receptacle - SCX - LCX - FCX - STX - X = blank = no connector - X = A (angled) - X= U (Ultra)		
							• Blank= no diagnostic - D1 = external calibration - D2 = internal calibration		
							• Blank = commercial - T = industrial Temp (-40 to 85°C) - R = reduced industrial Temp (-20 to 85)		
							• Blank = standard procedure - shipping instruction etc.		
	• 155 622 1250 2488								
	• Blank = symmetric - F= Four times Tx data rate - T= Twice Tx data rate - H= Half time Tx data rate - Q= Quarter Tx data rate								
	• SR1 - IR1 - IR2 - LR1 - LR2 - LR3 - LR (for CWDM) - LX - XD - ZX - A = Class A - B = Class B - C = Class C								
	• Blank= Receptacle - P = Pigtailed								

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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