



# 1250Mbps 1310nm Single-Mode 20km Industrial SFP Transceiver BT-SFP-IG20

## ❖ Overview

BT-SFP-IG20 transceiver is compliant with SFP MSA, high performance at low cost, which supports operating data-rate up to 1250Mbps.

The transmitter section and receiver section work independently in the transceiver. The receiver section contains an InGaAs Pin photodiode, a transimpedance amplifier and a post amplifier (with working data rate up to 1250 Mbps), functionally transmit received optical power into steady electrical data. The transmitter section contains a 1310nm FP laser diode with back-face monitor and a laser driver with APC function, transmitting input electrical data to steady optical output signal.

The product is compliant with the SFP MSA such as the LC optical interface receptacle, 3.3V supply voltage, TTL signal detect logic.

## ❖ Features

- ❖ 1310FP emission wavelength
- ❖ InGaAs photodiode pin receiver
- ❖ Operation data up to 1250Mbps
- ❖ Compliant with SFP MSA and SFF-8472
- ❖ Double LC receptacle
- ❖ Single 3.3V power supply
- ❖ Differential LVPECL input /output
- ❖ TTL Signal detection function and DDM.

## ❖ Specifications

Operating information				
Model	Input/ Output	Signal detect	Supply power	Operating Temperature
BT-SFP-IG20	AC/AC	TTL	+3.3V	-40°C to 75°C

Absolute maximum ratings				
Parameter	symbol	min	max	unit
Storage temperature	T <sub>s</sub>	-40	+85	°C
Operating temperature	T <sub>o</sub>	-40	+75	°C
Power supply	V <sub>cc</sub>	-0.5	+3.7	V



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BT-SFP-IG20 (1310nm FP and PIN, 20km)						
Transmit optical, electrical characteristics						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Differential Impedance	Rin		100		Ω	
Transmit Differential Input Voltage	VinPP	300		1600	mV	
Transmit disable input high voltage		2.0			V	
Transmit disable input low voltage				0.8	V	
Transmit fault input high voltage		2.0			V	
Transmit fault input low voltage				0.8	V	
Transmit disable assert time			0.14	5	us	
Launch optical power	Po	-9.5		-3	dBm	
Extinction ratio	ER	8.2			dB	
Central wavelength	λ		1310		nm	
Output spectrum width	Δλ			4	nm	

Receive electrical ,optical characteristics						
parameter	symbol	min	tipical	max	unit	note
Receiver differential output signal	VoutPP	400		1600	mV	
Receiver loss of signal Voltage high		2			nm	
Receiver loss of signal voltage low				0.8	dBm	
Receiver sensitivity	Sen			-21	dBm	
Maximum input power	PinMAX	-8			dBm	-
Signal detect range		-40		-22	dBm	-
Signal detect hysteresis		0.5			dB	-



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## ❖ Application

- Routing or server
- Switched backplane applications
- Other optical transmission systems

## ❖ Order Information

Model	Specification								
	Package	Data rate	Laser	Optical Power	Detector	Sensitivity	Temp	Reach	Interface
BT-SFP-IG20	SFP	1250M b/s	1310 FP	-9.5~-3 dBm	PIN+TIA	<-21dBm	-40~75	20	LC

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**WARRANTY:**

2 YEARS (EXPANDABLE UPTO 4 YEARS)

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