

# SFP 1.25Gb/s Transceiver without DDMI

Hot Pluggable , 1490nm/1310nm SFP with LC Receptacle, Single-Mode Transceiver

## Features

- ◇ 1490nm DFB Single Mode bi-directional Transmission Technology
- ◇ SFP Multi-source Package with LC Receptacle
- ◇ Up to 1.25Gb/s Data Links
- ◇ Distance Up to 20KM
- ◇ Hot-Pluggable Capability
- ◇ Single +3.3V Power Supply
- ◇ Isolation > 30dB, Cross Talk < -45dB
- ◇ Compliant with Specifications for IEEE802.3Z
- ◇ Compliant with Bellcore TA-NWT-000983
- ◇ Eye Safety Designed to Meet Laser Class1, Compliant with IEC60825-1
- ◇ RoHS compliance

## Applications

- ◇ Gigabit Ethernet
- ◇ Fiber Channel
- ◇ WDM Application

## Specification

Electrical and Optical Characteristics: (Condition:  $T_a=T_{OP}$ )

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter Differential Input Volt	+/-TX_DAT	200		2400	mV p-p
Supply Current	I <sub>CC</sub>		130	180	mA
Tx_Disable Input Voltage – Low	V <sub>IL</sub>	0		0.8	V
Tx_Disable Input Voltage – High	V <sub>IH</sub>	2.0		V <sub>CC</sub>	V
Tx_Fault Output Voltage – Low	V <sub>OL</sub>	0		0.8	V
Tx_Fault Output Voltage – High	V <sub>OH</sub>	2.0		V <sub>CC</sub>	V
Receiver Differential Output Volt	+/-RX_DAT	600		1400	mV p-p
Rx_LOS Output Voltage- Low	V <sub>OL</sub>	0		0.8	V
Rx_LOS Output Voltage- High	V <sub>OH</sub>	2.0		V <sub>CC</sub>	V

## Transmitter Section

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	1250	-	Mb/s
Centre Wavelength-D	$\lambda_c$	1485	1490	1496	nm
Centre Wavelength-U		1260	1310	1360	
Output Spectral Width	$\Delta\lambda(-20dB)$	-	-	1	nm
Average Output Power	P <sub>o</sub>	D:-9 U:-9	-	D:-3 U:-3	dBm
Extinction Ratio	EXT	9	-	-	dB
Data Input Voltage-High	V <sub>IHS</sub>	V <sub>CC</sub> -1.16	-	V <sub>CC</sub> -0.89	V
Data Input Voltage -Low	V <sub>ILS</sub>	V <sub>CC</sub> -1.82	-	V <sub>CC</sub> -1.48	V
Supply Current	I <sub>CC</sub>	-	90	150	mA
Output Optical Eye	Compliant with IEEE802.3Z				

## Receiver Section

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Parameter	Symbol	Min.	Typical	Max.	Unit
Receive Sensitivity	$P_{\min}$	-	-	-23	dBm
Maximum Input Power	$P_{\max}$	-3	-	-	dBm
Signal Detect Threshold-Assertion:	$SD_{\text{HIGH}}$	-	-	-23	dBm
Signal Detect Threshold-Deassertion:	$SD_{\text{LOW}}$	-32	-	-	dBm
Hysteresis	-	-	3.0	-	dBm
Output High Voltage	$V_{\text{OH}}$	$V_{\text{CC}}-1.03$	-	$V_{\text{CC}}-0.89$	V
Output Low Voltage	$V_{\text{OL}}$	$V_{\text{CC}}-1.82$	-	$V_{\text{CC}}-1.63$	V
Operating Wavelength-D	$\lambda_{\text{C}}$	1260	1310	1360	nm
Operating Wavelength-U		1485	1490	1496	
Supply Current	$I_{\text{CC}}$	-	80	110	mA

### Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	$T_{\text{ST}}$	-40	+85	°C
Operating Temperature	$T_{\text{IP}}$	0	+70	°C
Input Voltage	$T_{\text{CC}}$	0	+5	V

### Recommended Operating Environment:

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	$V_{\text{CC}}$	+3.1	+3.3	+3.5	V
Operating Temperature	$T_{\text{OP}}$	0	-	+70	°C