

Features

- Data-rate of 1.25Gbps operation
- 1300nm FP LD laser and PIN photodetector
- Compliant with SFP MSA and SFF-8472 with Duplex LC receptacle
- Digital Diagnostic Monitoring:
Internal Calibration or External Calibration
- 2km transmission with 50/125µm MMF
- 1km transmission with 62.5/125µm MMF
- Compatible with RoHS
- +3.3V single power supply
- Operating case temperature:
Standard: 0 to +70°C
Industrial: -40 to +85°C



Applications

- Gigabit Ethernet
- Fiber Channel
- Switch to Switch interface
- Switched backplane applications
- Router/Server interface
- Other optical transmission systems

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.5	4.5	V
Storage Temperature	Ts	-40	+85	°C
Operating Humidity	-	5	85	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Tc	0		+70	°C
		-20		+85	
		-40		+85	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Supply Current	Icc			300	mA
Data Rate			1.25		Gbps

Optical and Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ_c		1300		nm	
Spectral Width (RMS)	$\Delta\lambda$			0.85	nm	
Average Output Power	P_{out}	-5		0	dBm	1
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time (20%~80%)	t_r/t_f			0.26	ns	
Data Input Swing Differential	V_{IN}	400		1800	mV	2
Input Differential Impedance	Z_{IN}	90	100	110	Ω	
TX Disable	Disable		2.0	V_{cc}	V	
	Enable		0	0.8	V	
TX Fault	Fault		2.0	V_{cc}	V	
	Normal		0	0.8	V	
Receiver						
Centre Wavelength	λ_c		1300		nm	
Receiver Sensitivity				-20	dBm	3
Receiver Overload		0			dBm	3
LOS De-Assert	LOS_D			-21	dBm	
LOS Assert	LOS_A	-35			dBm	
LOS Hysteresis		1		4	dB	
Data Output Swing Differential	V_{out}	400		1800	mV	4
LOS	High	2.0		V_{cc}	V	
	Low			0.8	V	

Notes:

1. The optical power is launched into MMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 2⁷-1 test pattern @1250Mbps, BER $\leq 1 \times 10^{-12}$.
4. Internally AC-coupled.

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-ESXD	Starview SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-SX 1300nm MM (LC), distance up to 2km for 50/125um and 1km for 62.5/125um	-5 to 0	-20 to 0	15	2	YES