

Features

- Single 3.3 V supply
- Supports 1.0625/2.125/4.25Gb/s Fiber Channel Operation
- Gigabit Ethernet compatible
- 1550nm DFB Laser and APD photo detector
- SFP MSA SFF-8074i compliant
- Digital Diagnostic SFF-8472 compliant
- Digital Diagnostic Monitoring:
Internal Calibration or External Calibration
- Compatible with RoHS
- Distance up to 80 km Transmission
- Operating case temperature:
Standard : 0 to +70°C



Applications

- Tri Rate 1.0625 / 2.125 / 4.25Gbps Fiber Channel
- 1.25Gbps 1000Base-LX Ethernet and 1000Base-LX10 (Rate selectable version)

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units	Notes
Power Supply Voltage	Vcc-Vee	0	3.6	V	-
Storage Temperature	Tst	-40	+85	°C	-
Operating Humidity	RH	5	90	%	Non-condensing

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Tc	0		+70	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Supply Current	Icc			300	mA

Optical and Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Data Rate			4.25		Gb/S	
Centre Wavelength	λ_c	1510	1550	1590	nm	
Spectral Width (-20dB)	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Output Power(BOL)	P _{out}	2		5	dBm	1
Extinction Ratio	ER	5			dB	
Average Launch Power-OFF Transmitter	P _{out}			-40	dBm	
Optical Eye Diagram	Fibre Channel Compliant					
Optical Rise/Fall Time (20%-80%)	t _r /t _f			130	ns	
Data Input Swing Differential	V _{IN}	200		2400	mV	2
Input Differential Impedance	Z _{IN}	90	100	120	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	1470		1610	nm	
Receiver Sensitivity(BOL)	Sen@4FC			-24	dBm	3
	Sen@2FC			-26		
	Sen@FC			-28		
LOS De-Assert	LOS _D			-25	dBm	
LOS Assert	LOS _A	-35			dBm	
LOS Hysteresis		0.5		6	dB	
Receiver Reflectance				-20	dB	
Data Output Swing Differential	V _{out}	400		820	mV	4
Loss of Signal (LOS) Assert Time	T _{Assert}			500	nS	
Loss of Signal (LOS) Deassert Time	T _{Deassert}			500	nS	
LOS	High	2.0		V _{cc}	V	
	Low			0.8	V	

Notes:

1. The optical power is launched into SMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 2⁷-1 test pattern @4250Mbps, BER ≤ 1 × 10⁻¹².
4. CML Output, internally AC-coupled.

Diagnostics Specification

Parameter	Range	Unit	Accuracy	Calibration
Temperature	0 to +70	°C	±3°C	Internal / External
Voltage	3.0 to 3.6	V	±3%	Internal / External
Bias Current	0 to 100	mA	±10%	Internal / External
TX Power	2 to 5	dBm	±3dB	Internal / External
RX Power	-26 to -3	dBm	±3dB	Internal / External

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-4GLXD8	Starview SFP module Multi-rate 125Mbps to 4.25Gbps Fiber Optic 1550nm SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 80km	2 to 5	-35 to -25	37	80	YES