

Features

- Up to 155Mbps data-rate
- 1550nm DFB laser and APD photo detector for 160km transmission
- Compliant with SFP MSA and SFF-8472 with duplex LC receptacle
- Digital Diagnostic Monitoring:
Internal Calibration or External Calibration
- Compatible with RoHS
- +3.3V single power supply
- Operating case temperature:
Standard : 0 to +70°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	Standard	0		+70	°C
	Industrial	-20		+80	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Supply Current	Icc			300	mA
Data Rate			155		Mbps

Optical and Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ_c	1480	1550	1580	nm	
Spectral Width (-20dB)	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	35			dB	
Average Output Power	P _{out}	1		5	dBm	1
Extinction Ratio	ER	9			dB	
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	1260		1580	nm	
Receiver Sensitivity				-37	dBm	4
Receiver Overload		-10			dBm	4
LOS De-Assert	LOS _D			-39	dBm	
LOS Assert	LOS _A	-45			dBm	
LOS Hysteresis		1		4	dB	
Data Output Swing Differential	V _{out}	370		1800	mV	5
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 2²³-1 test pattern 155Mbps, BER $\leq 1 \times 10^{-10}$.
4. Internally AC-coupled.

Diagnostics Specification

Parameter	Range	Unit	Accuracy	Calibration
Temperature	0 to +70	°C	±3°C	Internal / External
	-20 to +85			
Voltage	3.0 to 3.6	V	±3%	Internal / External
Bias Current	0 to 100	mA	±10%	Internal / External
TX Power	1 to +5	dBm	±3dB	Internal / External
RX Power	-35 to -10	dBm	±3dB	Internal / External

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-OC3SD16	Starview SFP module with Digital Diagnostic Monitoring (DDM), 100BaseFX/ OC3 1550nm SM (LC), distance up to 160km	1 to 5	-37 to -10	36	160	YES