

Features

- Up to 155Mb/s data links
- DFB laser transmitter
- PIN photo-detector
- Up to 80km on 9/125µm SMF
- Hot-pluggable SFP footprint
- BIDI LC/UPC type pluggable optical interface
- Low power dissipation
- Metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Single +3.3V power supply
- Support Digital Diagnostic Monitoring interface
- Compliant with SFF-8472
- Case operating temperature
Commercial: 0°C to +70°C
Extended: -10°C to +80°C
Industrial: -40°C to +85°C



Applications

- Switch to Switch Interface
- Fast Ethernet
- Switched Backplane Applications
- Router/Server Interface
- Other Optical Links

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Storage Temperature	Ts	-40		85	°C	
Relative Humidity	RH	5		95	%	
Power Supply Voltage	VCC	-0.5		4	V	
Signal Input Voltage		-0.3		Vcc+0.3	V	
Receiver Damage Threshold		5			dBm	

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70	°C	SV-SFP-OC3SD6x
		-40		85		SV-SFP-OC3SD6xH
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC			300	mA	
Power Supply Noise Rejection				100	mVp-p	100Hz to 1MHz
Data Rate			155/155		Mbps	TX Rate/RX Rate
Transmission Distance				80	KM	
Coupled Fiber		Single mode fiber				9/125um SMF

Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Average Output Power	POUT	-5		0	dBm	
Extinction Ratio	ER	8.2			dB	
Center Wavelength	λ_C	1290	1310	1330	nm	SV-SFP-OC3SD61
		1530	1550	1570		SV-SFP-OC3SD62
Side Mode Suppression Ratio	SMSR	30			dB	DFB Laser
Spectrum Bandwidth(-20dB)	σ			1	nm	
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Output Eye Mask	Compliant with G.957(class 1 laser safety)					

Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Optical Wavelength	λ_{IN}	1530	1550	1570	nm	SV-SFP-OC3SD61
		1290	1310	1330		SV-SFP-OC3SD62
Receiver Sensitivity	PIN			-33	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	-10			dBm	
Los Of Signal Assert	PA	-44			dBm	
Los Of Signal De-assert	PD			-33	dBm	Note (2)
LOS Hysteresis	PA-PD	0.5	2	6	dB	

Note (1): Measured with Light source 1550nm(1310nm), ER=8.2dB; BER = $<10^{-12}$ @PRBS=2²³-1 NRZ.

Note (2): When SD de-asserted, the RX data+/- output is signal output.

Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Total Supply Current	ICC			A	mA	Note (1)
Transmitter Disable Input-High	VDISH	2		V _{CC} +0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		V _{CC} +0.3	V	
Transmitter Fault Input-Low	VTxFL	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	Note (1)
LOSS Output Voltage-High	VLOSH	2		V _{CC} +0.3	V	LVTTL
LOSS Output Voltage-Low	VLOSL	0		0.8	V	

Note (1): A (TX) + B (RX) = 300mA (Not include termination circuit)

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-OC3SD61	Starview Single Fiber Bi-Directional SFP module 100BaseFX/ OC3 1310nm TX/ 1550nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 60km	-5 to 0	-33 to -10	28	60	YES
SV-SFP-OC3SD62	Starview Single Fiber Bi-Directional SFP module 100BaseFX/ OC3 1550nm TX/ 1310nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 60km	-5 to 0	-33 to -10	28	60	YES
SV-SFP-OC3SD61H	Starview Single Fiber Bi-Directional SFP module 100BaseFX/ OC3 1310nm TX/ 1550nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 60km, Industrial temperature range	-5 to 0	-33 to -10	28	60	YES
SV-SFP-OC3SD62H	Starview Single Fiber Bi-Directional SFP module 100BaseFX/ OC3 1550nm TX/ 1310nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 60km, Industrial temperature range	-5 to 0	-33 to -10	28	60	YES