

# SV-SFP-2GSXD

2.125Gbps to 2.7 Gbps, 850nm, Multi mode, 300m, with DDM



## Features

- Up to 2.7Gb/s data links with DDM
- 850nm VCSEL laser transmitter and PIN photo-detector
- Hot-pluggable SFP footprint
- Duplex 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  
 Industrial: -40°C to +85°C

## Applications

- 1x and 2x Fiber Channel
- Switch to Switch Interface
- Gigabit Ethernet
- Switched Backplane Applications
- Router/Server Interface
- Other Optical Links

## Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
<b>SV-SFP-2GSXD</b>	Starview SFP module Multi-rate 2.125Gbps to 2.7 Gbps Fiber Optic 850nm MM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 300m	-10 to -3	-18 to -3	5	0.3	YES
<b>SV-SFP-2GSXDH</b>	Starview SFP module Multi-rate 2.125Gbps to 2.7 Gbps Fiber Optic 850nm MM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 300m, Industrial temperature range	-10 to -3	-18 to -3	5	0.3	YES

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40		85	°C
Storage Ambient Humidity	HA	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
		0		70		SV-SFP-2GSXD
Case Operating Temperature	Tcase	-40		85	°C	SV-SFP-2GSXDH
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC			280	mA	
Data Rate			2500/2500	2700	Mbps	TX Rate/RX Rate
Transmission Distance				550	M	
Coupled Fiber		Multi mode fiber				50/125um MMF

## Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Average Output Power	POUT	-10		-3	dBm	
Extinction Ratio	ER	8.2			dB	
Center Wavelength	$\lambda_C$	830	850	860	nm	VCSEL Laser
Spectrum Bandwidth(RMS)	$\sigma$			0.85	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	$\lambda_{IN}$	770	850	860	nm	PIN-TIA
Receiver Sensitivity	PIN			-18	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	-3			dBm	
LOS De-assert	LOSD			-19	dBm	
LOS Assert	LOSA	-35			dBm	Note (2)
LOS Hysteresis		0.5	2	6	dB	

Note (1): Measured with Light source 850nm, ER=8.2dB; BER = $<10^{-12}$  @PRBS=2<sup>23</sup>-1 NRZ

Note (2): When LOS de-asserted, the RX data+/- output is High-level (fixed)

## 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 <sub>CC</sub> +0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		V <sub>CC</sub> +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 <sub>CC</sub> +0.3	V	
LOSS Output Voltage-Low	VLOSL	0		0.8	V	LVTTL

Note (1): A (TX) + B (RX) = 280mA (Not include termination circuit)