

SV-SFP28-LRD4xx

25GbE 1270nm TX/ 1310nm RX (1310nm TX/ 1270nm) SM (LC) with DDM, distance up to 40km



Features

- Up to 25.78Gbps Data Links
- Up to 40km transmission on SMF
- 1310nm/1270nm DFB Laser and APD receiver
- Metal enclosure, for lower EMI
- 2-wire interface with integrated Digital Diagnostic monitoring
- Hot-pluggable SFP28 footprint
- Compliant with SFP+ MSA and SFF-8472 with duplex LC receptacle
- Single 3.3V power supply
- Power dissipation < 1.5 W
- Operating case temperature: 0 to +70°C

Applications

- 25GBASE-ER
- eCPRI and CPRI
- Compliant with SFF-8472 & 8431
- RoHS Compliant.

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP28-LRD41	Starview SFP28 Single Fiber Bi-Directional module supporting 25GbE 1270nm TX/ 1310nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km.	0 to +6	-17.5 to -6	17.5	40	Yes
SV-SFP28-LRD42	Starview SFP28 Single Fiber Bi-Directional module supporting 25GbE 1310nm TX/ 1270nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km.	0 to +6	-17.5 to -6	17.5	40	Yes

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _s	-40	85	°C
Relative Humidity	R _H	5	95	%
Power Supply Voltage	V _{CC}	-0.3	4	V
Signal Input Voltage	V _{SI}	V _{CC} -0.3	V _{CC} +0.3	V
Rx Damage Threshold	PR _{dmg}	-3		dBm

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Case Operating Temperature	T _{case}	0		70	°C
Power Supply Voltage	V _{CC}	3.14	3.3	3.47	V
Power Supply Current	I _{CC}			420	mA
Data Rate	BR		25.78		Gbps
Transmission Distance	TD			40	km
Coupled fiber			Single mode fiber		

Optical and Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ _c	1300	1310	1320	nm	
Spectral Width (-20dB)	Δλ			1	nm	
Average Output Power	P _{out}	0		6	dBm	
Average Launched Power(Laser Off)	P _{off}			-30	dBm	
Extinction Ratio	ER	3.5			dB	1
Input differential impedance	R _{in}		100		Ω	2
Single ended data input swing	V _{in,pp}	180		700	mV	
TX Disable	Disable	2.0		V _{CC} +0.3	V	
	Enable	0		0.8	V	
TX Fault	Fault	2.0		V _{CC} +0.3	V	
	Normal	0		0.8	V	
Output Eye Mask		{0.31,0.4,0.45,0.34,0.38,0.4}				

Receiver						
Centre Wavelength	λ_c	1260	1270	1280	nm	
Receiver Sensitivity				-17.5	dBm	3
Input Saturation Power (Overload)		-6			dBm	
Los Of Signal Assert	PA	-35			dBm	
Los Of Signal De-assert	PD			-19	dBm	
LOS -Hysteresis	PHys	0.5	2	6	dB	
Differential data output swing	Vout,pp	300		850	mV	4
LOS	High	2.0		Vcc+0.3	V	
	Low			0.8	V	

Notes:

1. Measured with a PRBS $2^{31}-1$ test pattern, @25.78Gb/s.
2. Connected directly to TX data input pins. AC coupled thereafter.
3. ER=3.5dB; BER $\leq 5 \times 10^{-5}$ @PRBS= $2^{31}-1$ NRZ.
4. Into 100 ohms differential termination.