

SV-SFP28-LRD4H

25Gbps 1310nm SM (LC) with DDM,
 distance up to 40km



Features

- Operating Data Rate Support 24.33G and 25.78Gbps with CDR engaged mode
- Operating Data Rate Support 9.95G and 10.31Gbps with CDR bypassed mode
- 1295~1320nm UnCooled DFB-LD Transmitter
- APD Receiver
- Single 3.3V Power Supply
- Distance up 40km
- Duplex LC Connector Interface, Hot Pluggable
- Built-in Dual CDR
- Compliant with MSA SFP+ Specification SFF-8402
- Power Dissipation(Standard) < 1.5W(TBD)
- Safety Certification: TUV/UL/FDA

Applications

- CPRI Option 10
- 25GbE
- Other Optical Link

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP28-LRD4H	Starview SFP28 module supporting 25Gbps 1310nm SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km, Industrial temperature range	-1 to 6	-21 to -4	20	40	Yes

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	+85	°C
Supply Voltage	VCC	-0.5	+4.0	V
Operating Relative Humidity	RH	0	85	%

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	TC	Industria 	-40	85	°C
Power Supply Voltage	VCC	3.135		3.465	V
Power Supply Current	ICC	Industria 		433	mA

Performance Specifications – Electrical

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
CML Inputs (Differetial)	Vin	200		900	mVpp	AC coupled inputs
Input Impedance (Differential)	Zin		100		ohms	Connected directly to TX pins
Tx_DISABLE Input Voltage – High		2		Vcc+0.3	V	
Tx_DISABLE Input Voltage – Low		-0.3		0.8	V	
Receiver						
CML Outputs (Differetial)	Vout	300		1000	mVpp	AC coupled outputs
Rx_LOS Output Voltage – High		2.4		Vcc+0.3	V	
Rx_LOS Output Voltage – Low		-0.3		0.8	V	

Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmission Distance@9um Core Diameter SMF				40	km
Transmitter					
Center Wavelength	λ_C	1295		1320	nm
Spectral Width (-20dB)	$\Delta\lambda$			1	nm
Side-mode Suppression Ratio	SMSR	30			

Average Output Power@25.78Gb/s	Pout	-1.0	+6.0	dBm
Optical Modulation Amplitude(OMA)	POMA	0	6	dBm
Extinction Ratio	ER	4.0		dB
Transmitter Dispersion Penalty	TDP		2.7	dB
OMA minus TDP		-1		dBm
Relative Intensity Noise	RIN		-130	dB/Hz
Transmitter Reflectance			-26	dB
Return Loss tolerance			20	dB
Transmitter Eye Mask Definition {X1, X2, X3, Y1, Y2, Y3}		{0.31,0.40,0.45,0.34,	0.38,0.4}	
Hit ratio 5E-5 hits per sample				
Receiver				
Center Wavelength	λ_C	1295	1325	nm
Average Receive Power	Rpow	-21	-4	dBm
Stressed Receiver Sensitivity*Note6	RxSRS		-16.5	dBm
Receiver Overload*Note7	Pmax	-4		dBm
Damage threshold		-3		dBm
Receiver Reflectance			-26	dB
LOS De-Assert	LOSD		-21	dBm
LOS Assert	LOSA	-35		dBm
LOS Hysteresis	HY	0.5		dB

Note6: Measured with data rate at 25.78Gb/s, BER less than 5E-5 with PRBS 231-1. Link attenuation needs to be less than the worst case specified for IEC 60793-2-50 type B1.1, type B1.3, or type B6_a single-mode fiber.

Note7: Targeted for long reach application with high power transmitter. Please ensure at least 10dB optical attenuation for optical loopback test.