

# SV-SFP28-LRD2H

25Gbps 1310nm SM (LC) with DDM, distance up to 20km



## Features

- Operating Data Rate Support 24.33Gbps and 25.78Gbps with CDR Engaged Mode
- Operating Data Rate Support 9.95Gbps and 10.31Gbps with CDR Bypassed Mode
- 1310nm UnCooled DFB-LD Transmitter
- Distance up to 20km
- Single 3.3V Power Supply
- Duplex LC Connector Interface, Hot Pluggable
- Built-in Dual CDR
- Compliant with MSA SFP+ Specification SFF-8402
- Power Dissipation < 1.2W (Standard)
- Safety Certification: TUV/UL/FDA
- RoHS Compliant

## Applications

- CPRI Option 10
- 25GbE
- 10GbE Optical Link

## Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
<b>SV-SFP28-LRD2H</b>	Starview SFP28 module supporting 25Gbps 1310nm SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 20km, Industrial temperature range	1 to 6	-14.5 to 2.5	15.5	20	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		Vcc+0.3	V	
Rx_LOS Output Voltage – Low		-0.3		0.8	V	

## Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typ	Max.	Unit
9um Core Diameter SMF				20	km
Transmitter					
Center Wavelength	$\lambda_C$	1295	1310	1325	nm
Spectral Width (-20dB)	$\Delta\lambda$			1	nm
Side-mode Suppression Ratio	SMSR	30			dB
Average Output Power@25.78Gbps	Pout	1		6	

				dBm	
Extinction Ratio	ER	4		dB	
Transmitter Dispersion Penalty	TDP		2.8	dB	
Relative Intensity Noise	RIN		-130	dB/Hz	
Transmitter Reflectance			-26	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	$\lambda_C$	1260	1310	1365	nm
Receiver Sensitivity(OMA)*Note5	RxOM A			-14.5	dBm
Receiver Overload*Note6	Pmax	2.5			dBm
Receiver Reflectance				-26	dB
LOS De-Assert	LOSD			-17	dBm
LOS Assert	LOSA	-30			dBm
LOS Hysteresis	HY	0.5			dB

Note5: Measured with data rate at 25.78Gbps, BER less than 5E-5 with PRBS 2<sup>31</sup>-1.

Note6: Targeted for long reach application with high power transmitter. Please ensure at least 3dB optical attenuation for optical loopback test.