

# SV-SFP28-LRD1CXX

25Gbps CWDM SM (LC) with DDM, distance up to 10km



## Features

- Operating data rate support 24.33G and 25.78Gbps
- 4-Wavelength from 1271nm to 1331nm, with step 20nm
- Up to 10km over SMF
- Single 3.3V Power supply
- Power Dissipation < 1.5W(Industrial)
- Duplex LC Connector Interface, Hot Pluggable
- Built-in dual CDR
- Compliant with Specification SFF-8402
- Build-in digital diagnostic functions
- Operating Case Temperature:
- Industrial: -40°C~+85°C
- Safety Certification: TUV/UL/FDA

## Applications

- CPRI Option 10
- 25GbE

## Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
<b>SV-SFP28-LRD1CXX</b>	Starview SFP28 module supporting 25Gbps CWDM SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 10km.	-6.5 to 6	-14 to 2.5	7.5	10	Yes
<b>SV-SFP28-LRD1CXXH</b>	Starview SFP28 module supporting 25Gbps CWDM SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 10km, Industrial temperature range	-6.5 to 6	-14 to 2.5	7.5	10	Yes

xx refers to CWDM Wavelength range 1270nm to 1330nm, xx = 27, 29...33

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-45	+85	°C
Supply Voltage	VCC	-0.5	+4.0	V
Operating Relative Humidity	RH	5	95	%

## Recommended Operating Conditions

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

## Performance Specifications – Electrical

Parameter	Symbol	Min.	Typical	Max	Unit	Notes
Transmitter						
CML Inputs (Differetial)	Vin			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		500	900	mVpp	AC coupled outputs
Rx_LOS Output Voltage – High		2.4		Vcc+0.3	V	
Rx_LOS Output Voltage – Low		-0.3		0.4	V	

## Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
9um Core Diameter SMF				10	Km
Data Rate				25.78	Gbps
CDR Data Rate		24.33	25.78		Gbps
Transmitter					
Optical Center Wavelength	$\lambda$	$\lambda_c-6.5$	$\lambda_c$	$\lambda_c+6.5$	nm
Spectral Width (-20dB)	$\Delta\lambda$			1	nm
Average Output Power@25.78Gb/s	Pavg	-6.5		6	dBm

OMA Output Power@25.78Gb/s	POMA	-3	6	dBm
OMA minus TDP@25.78Gb/s		-3		dBm
Extinction Ratio	ER	3.5		dB
Transmitter Dispersion Penalty	TDP		3.0	dB
Side Mode Suppression Ratio	SMSR	30		dB
Average Launch Power of OFF Transmitter	POFF		-30	dBm
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3} W/I hit ratio 5e-5			{0.31, 0.4, 0.45, 0.34, 0.38, 0.4}	
Receiver				
Receiver Sensitivity(OMA) <sup>*Note6</sup>	Pmin		-14	dBm
Receiver Overload	Pmin	2.5		dBm
LOS De-Assert	LOSD		-17	dBm
LOS Assert	LOSA	-30		dBm
LOS Hysteresis		0.5		dB

Note6: Measured with data rate at 25.78Gb/s, BER less than 5E-5 and PRBS 231-1.

## λC Wavelength Guide

Wavelength(nm)	Code
1270 nm	27
1290 nm	29
1310 nm	31
1330 nm	33