

SV-SFP28-LRD4CXX

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



Features

- Up to 25.78Gbps Data Links
- Up to 40km transmission on SMF
- CWDM DFB Laser and APD receiver
- Metal enclosure, for lower EMI
- Hot-pluggable SFP28 footprint
- Specifications compliant with SFF 8472
- Build-in dual CDR with bypass function
- Compliant with SFF-8402 with LC connector
- 2-wire interface with integrated Digital Diagnostic monitoring
- Single 3.3V power supply
- Power dissipation < 2.0W
- Case operating temperature :
 Commercial: 0°C to +70°C
 Extended: -10°C to +85°C

Applications

- High speed storage area networks
- 25G Ethernet
- CPRI

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP28-LRD4CXX	Starview SFP28 module supporting 25Gbps CWDM SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km.	0 to 6	-19 to -3	19	40	Yes
SV-SFP28-LRD4CXXH	Starview SFP28 module supporting 25Gbps CWDM SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 10km, Industrial temperature range	0 to 6	-19 to -3	19	40	Yes

xx refers to CWDM Wavelength range 1271nm to 1311nm, xx = 27, 29...31

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Storage Temperature	TS	-40	-	85	°C	
Relative Humidity(Non-condensing)	RH	0	-	85	%	
Power Supply Voltage	VCC	-0.3	-	4	V	
Signal Input Voltage	VSI	Vcc-0.3	-	Vcc+0.3	V	

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	-10		85	°C	
		0		70	°C	
Power Supply Voltage	VCC	3.14	3.3	3.47	V	
Power Supply Current	ICC	-		550	mA	
				600	mA	
Data Rate	BR		25.78		Gbps	TX Rate/RX Rate
Transmission Distance	TD		40		km	
Coupled fiber			Single mode fiber			9/125um SMF

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Average Launched Power	PO	0		+6.0	dBm	
Center Wavelength Range	λ_C	$\lambda-65$	-	$\lambda+65$	nm	Note(1)
Spectrum Bandwidth(-20dB)	$\Delta\lambda$	-	-	1	nm	
Side-Mode Suppression Ratio	SMSR	30	-	-	dB	
Extinction Ratio	ER	3.5		-	dB	Note (2)
Relative Intensity Noise	RIN 20OMA			-130	dB/Hz	
Average Launched Power(Laser Off)	Poff	-	-	-30		
Optical return loss tolerance				20	dB	
Transmitter reflectance				-12	dB	
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3} Hit ratio 5x10 -5 hits persample			{0.31, 0.4, 0.45, 0.34, 0.38, 0.4}			Note (3)
Receiver						
Input Optical Wavelength	λ_{IN}	1270	-	1610	nm	

Damage threshold		-3			dBm	
Receiver Sensitivity	Psen1	-	-	-19	dBm	Note (4)
Input Saturation Power (Overload)	P _{SAT}	-6	-	-	dBm	Note (4)
Los Of Signal Assert	PA	-35	-	-	dBm	
Los Of Signal De-assert	PD	-	-	-20	dBm	
LOS -Hysteresis	PHys	0.5		6	dB	

Note:

Note (1): λis: 1271~1311 (nm), please refer to 'product selection'

Note (2): Measured with a PRBS 231-1 test pattern, @25.78Gb/s.

Note (3): Transmitter eye mask definition, Compliant with IEEE 802.3cc.

Note (4): Measured with Light source 1310nm, ER=3.5dB; BER =<5X10⁻⁵ @PRBS=231-1 NRZ.

Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Input differential impedance	Rin		100		Ω	1
Single ended data input swing	Vin,pp	180		700	mV	
Transmitter Fault Output-High	VFaultH	2	-	Vcc+0.3	V	
Transmitter Fault Output-Low	VFaultL	0	-	0.8	V	
Transmitter Disable Voltage-High	VDisH	2	-	Vcc+0.3	V	
Transmitter Disable Voltage- low	VDisL	0	-	0.8	V	
Receiver						
Differential data output swing	Vout,pp	300		850	mV	2
LOS Output Voltage-High	VLOSH	2	-	Vcc+0.3	V	
LOS Output Voltage-Low	VLOSL	0	-	0.8	V	

Notes:

1. Connected directly to TX data input pins. AC coupled thereafter.
2. Into 100 ohms differential termination.

λC Wavelength Guide

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