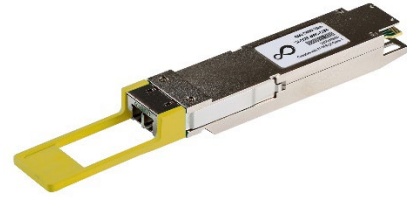


# SV-OSFP-400G-CLR4

Starview OSFP 400G-LR4 aggregating 4 x 100Gbps CWDM SM (LC) with DDM, distance up to 10km



## Features

- Supports 425Gbps
- Single 3.3V Power Supply
- Power dissipation < 10W
- Up to 10km over SMF
- OSFP MSA Compliant
- 8x53.125GBd(PAM4) electrical interface
- Data Rate 106.25Gbps (PAM4) optical channel
- Duplex LC connector
- Commercial case temperature range of 0°C to 70°C
- PIN and TIA array on the receiver side
- I2C interface with integrated Digital Diagnostic Monitoring
- Safety Certification: TUV/UL/FDA

## Applications

- 4 x 100G-LR4 applications
- Data center

Part number	Description
<b>SV-OSFP-400G-CLR4</b>	Starview OSFP 400Gbps module 400G-LR4 aggregating 4 x 100Gbps CWDM (1271/1291/1311/1331nm) SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 10km

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Ts	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Damage threshold	Rxdmg	4.5		dBm

## Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	Tc	0		70	°C
Power Supply Voltage	Vcc	3.135	3.3	3.465	V
Operating Relative Humidity	RH	5		85	%
Power Dissipation	P <sub>D</sub>			10	W

\* Power Supply specifications, Instantaneous, sustained and steady state current compliant with OSFP MSA Power Classification.

## Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
Differential data input swing per lane		900			mV <sub>p-p</sub>	
Differential input impedance	Z <sub>in</sub>	90	100	110	ohm	
Stressed input parameters						
Eye width		0.265			UI	@TP4, all 3 PAM4 eyes, 1E-5
DC common mode voltage		-350		2850	mV	
Receiver						
Differential output amplitude				900	mV <sub>p-p</sub>	
Differential output impedance	Z <sub>out</sub>	90	100	110	ohm	
Output Rise/Fall Time	t <sub>r</sub> /t <sub>f</sub>	9.5			ps	20%~80%
Eye width		0.265			UI	
Eye height differential		70			mV	@TP4, all 3 PAM4 eyes, 1E-5

## Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter					
Signaling speed per lane			106.25		Gbps
Modulation format			PAM4		

Lane_0 Center Wavelength	$\lambda_{C0}$	1264.5	1271	1277.5	nm
Lane_1 Center Wavelength	$\lambda_{C1}$	1284.5	1291	1297.5	nm
Lane_2 Center Wavelength	$\lambda_{C2}$	1304.5	1311	1317.5	nm
Lane_3 Center Wavelength	$\lambda_{C3}$	1324.5	1331	1337.5	nm
Side-mode Suppression Ratio	SMSR	30			dB
Extinction Ratio	ER	3.5			dB
Total average launch power				11.6	dBm
Transmit OMA each lane	TxOMA	0.2		4.4	dBm
Transmit average each lane	TxAVG	-2.8		5.6	dBm
Difference in launch power between any two lanes (OMA <sub>outer</sub> )				4	dB
Launch Power in OMA <sub>outer</sub> minus TDECQ, each Lane *(note4)		-1.2			dBm
Launch Power in OMA <sub>outer</sub> minus TDECQ, each Lane *(note5)		-1.1			dBm
Transmitter and dispersion eye closure, each lane	TDECQ			3.9	dB
Optical return loss tolerance*(note6)				15.6	dB
<b>Receiver</b>					
Signaling speed per lane			106.25		Gbps
Lane_0 Center Wavelength	$\lambda_{C0}$	1264.5	1271	1277.5	nm
Lane_1 Center Wavelength	$\lambda_{C1}$	1284.5	1291	1297.5	nm
Lane_2 Center Wavelength	$\lambda_{C2}$	1304.5	1311	1317.5	nm
Lane_3 Center Wavelength	$\lambda_{C3}$	1324.5	1331	1337.5	nm
Damage threshold each lane		6.6			dBm
Receive Power (OMA) each lane	RxOMA	-		4.4	dBm
Average receive power each lane	RxAVG	-9.1		5.6	dBm
Receiver sensitivity (OMA <sub>outer</sub> ), each lane	SenOMA	Max(-6.8, SECQ-8.2)			dBm
Receiver reflectance				-26	dB
LOS Assert	LOSA	-30			dBm
LOS De-Assert	LOSD			-12	dBm
LOS Hysteresis		0.5			dB

Note4: For ER $\geq$ 4.5dB

Note5: For ER < 4.5dB

Note6: Transmitter reflectance is defined looking into the transmitter.