

## Features

- Up to 11.1Gbps Data Links
- Up to 10km transmission on SMF
- Power dissipation < 1.5W  
1270nm DFB laser and PIN receiver for SV-SFPP-10GLRD11  
1330nm DFB laser and PIN receiver for SV-SFPP-10GLRD12
- 2-wire interface with integrated Digital Diagnostic monitoring
- EEPROM with Serial ID Functionality
- Hot-pluggable SFP+ footprint
- Compliant with SFP+ MSA with LC connector
- Single + 3.3V Power Supply
- Case operating temperature: 0°C ~ +70°C



## Applications

- 10GBASE-BX
- Compliant with SFF-8472
- Compliant to SFF-8431
- Compliant to 802.3ae 10GBASE-LR/LW
- RoHS Compliant

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Storage Temperature	Ts	-40	-	85	°C	
Storage Ambient Humidity	HA	5	-	95	%	
Operating Relative Humidity	RH	-	-	85	%	
Power Supply Voltage	VCC	-0.3	-	4	V	
Signal Input Voltage		Vcc-0.3	-	Vcc+0.3	V	

## Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0	-	70	°C	Without air flow
Power Supply Voltage	VCC	3.14	3.3	3.47	V	
Power Supply Current	ICC	-		350	mA	
Data Rate	BR		10.3125		Gbps	
Transmission Distance	TD		-	10	km	
Coupled fiber	Single mode fiber					9/125um SMF

**Optical Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
<b>Transmitter</b>						
Average Launched Power	P <sub>Out</sub>	-6	-	-1	dBm	
Average Launched Power(Laser Off)	P <sub>off</sub>	-	-	-30	dBm	Note (1)
Center Wavelength Range	$\lambda_C$	1260	1270	1280	nm	SV-SFPP-10GLRD11
		1320	1330	1340	nm	SV-SFPP-10GLRD12
Side mode suppression ratio	SMSR	30	-	-	dB	
Spectrum Bandwidth(-20dB)	$\sigma$	-	-	1	nm	
Extinction Ratio	ER	3.5		-	dB	Note (2)
Output Eye Mask	Compliant with IEEE 802.3ae					Note (2)
<b>Receiver</b>						
Input Optical Wavelength	$\lambda_{IN}$	1320	1330	1340	nm	SV-SFPP-10GLRD11
		1260	1270	1280	nm	SV-SFPP-10GLRD12
Receiver Sensitivity	P <sub>sen</sub>	-	-	-14.4	dBm	Note (3)
Input Saturation Power (Overload)	P <sub>SAT</sub>	0.5	-	-	dBm	Note (3)
LOS -Assert Power	PA	-30	-	-	dBm	
LOS -Deassert Power	PD	-	-	-17	dBm	
LOS -Hysteresis	P <sub>Phys</sub>	0.5	-	5	dB	

Note:

1. The optical power is launched into SMF
2. Measured with RPBS 2<sup>31</sup>-1 test pattern @10.3125Gbs
3. Measured with RPBS 2<sup>31</sup>-1 test pattern @10.3125Gbs BER=<10<sup>-12</sup>

### Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Total power supply current	Icc	-		350	mA	
<b>Transmitter</b>						
Differential Data Input Voltage	VDT	180	-	700	mVp-p	
Differential line input Impedance	RIN	85	100	115	Ohm	
Transmitter Fault Output-High	VFaultH	2.4	-	Vcc	V	
Transmitter Fault Output-Low	VFaultL	-0.3	-	0.8	V	
Transmitter Disable Voltage- High	VDisH	2	-	Vcc+0.3	V	
Transmitter Disable Voltage- low	VDisL	-0.3	-	0.8	V	
<b>Receiver</b>						
Differential Data Output Voltage	VDR	300	-	850	mVp-p	
Differential line Output Impedance	ROUT	80	100	120	Ohm	
Receiver LOS Pull up Resistor	RLOS	4.7	-	10	KOhm	
Data Output Rise/Fall time	tr/tf		-	38	ps	
LOS Output Voltage-High	VLOSH	2	-	Vcc	V	
LOS Output Voltage-Low	VLOSL	-0.3	-	0.4	V	

### Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
<b>SV-SFPP-10GLRD11</b>	Starview Single Fiber Bi-Directional SFP+ module with Digital Diagnostic Monitoring (DDM), 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1270nm TX/1330nm RX single fiber SM (LC), distance up to 10km	-6 to -1	-14.4 to 0.5	8.4	10	YES
<b>SV-SFPP-10GLRD12</b>	Starview Single Fiber Bi-Directional SFP+ module with Digital Diagnostic Monitoring (DDM), 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1330nm TX/1270nm RX single fiber SM (LC), distance up to 10km	-6 to -1	-14.4 to 0.5	8.4	10	YES