Features

- Transceiver unit with independent DWDM DFB Laser diode transmitter APD photodiode receiver
- Compliant with DWDM SFP MSA
- Up to 2.7Gbp/s data links
- SFF-8472 with duplex LC receptacle
- Power dissipation < 1.2W
- Metal enclosure for lower EMI
- 3.3V Single power supply
- 100GHz ITU Grid, C Band
- Wavelength controlled within ± 0.1nm over life and temperature
- Digital diagnostic monitoring
- 80 km with 9/125 μm single mode fiber (SMF) of maximum interconnect distances
- Case operating temperature：0°C to +70°C

Applications

- C Band DWDM networks
- SONET/SDH networks
- Fiber channel
- Gigabit Ethernet

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Storage Temperature	Ts	-40		85	ºC	
Storage Ambient Humidity	HA	5		95	%	
Power Supply Voltage	VCC	-0.5		4	V	
Signal Input Voltage		-0.3		Vcc+0.3	V	
Receiver Damage Threshold		+5			dBm	

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70	ºC	
Ambient Humidity	HA	5		70	%	Non-condensing
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC		300	360	mA	
Power Supply Noise Rejection				100	mVp-p	100Hz to 1MHz
Data Rate			2500/2500	2700	Mbps	TX Rate/RX Rate
Transmission Distance				80	KM	
Coupled Fiber	Single mode fiber					9/125um SMF

Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Center Wavelength Spacing			100		GHz	
Center Wavelength	λ	X-100	X	X+100	pm	Note (1)
Average Output Power	POUT	0		4	dBm	
Extinction Ratio	ER	8.2			dB	
Side Mode Suppression Ratio	SMSR	30			dB	
Spectrum Bandwidth(-20dB)	σ			0.3	nm	
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Output Eye Mask	Compliant with ITU recommendation G.957					

Note (1): X = specified ITU center wavelength. (To See "Ordering Information")

Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Optical Wavelength	λIN	1270		1610	nm	APD
Receiver Sensitivity	PIN			-28	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	-10			dBm	
Los Of Signal Assert	PA			-31	dBm	
Los Of Signal De-assert	PD	-40			dBm	Note (2)
LOS Hysteresis	PA-PD	0.5	2	6	dB	

Note (1): Measured with Light source 1550nm, ER=9dB; BER =<10^-12 @PRBS=2^23-1 NRZ
Note (2): When LOS de-asserted, the RX data+/- output is High-level (fixed)

Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Total Supply Current	ICC			A	mA	Note (1)
Transmitter Disable Input-High	VDISH	2		Vcc+0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VDISL	2		Vcc+0.3	V	
Transmitter Fault Input-Low	VTxFH	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	Note (1)
LOSS Output Voltage-High	VLOSH	2		Vcc+0.3	V	LVTTL
LOSS Output Voltage-Low	VLOSL	0		0.8	V	

Note (1): A (TX) + B (RX) = 360mA (Not include termination circuit)

DWDM Wavelength Guide

ITU Channel Product Code	Frequency (THz)	Center Wavelength(nm)	ITU Channel Product Code	Frequency (THz)	Center Wavelength(nm)
17	191.7	1563.86	40	194.0	1545.32
18	191.8	1563.05	41	194.1	1544.53
19	191.9	1562.23	42	194.2	1543.73
20	192.0	1561.42	43	194.3	1542.94
21	192.1	1560.61	44	194.4	1542.14
22	192.2	1559.79	45	194.5	1541.35
23	192.3	1558.98	46	194.6	1540.56
24	192.4	1558.17	47	194.7	1539.77
25	192.5	1557.36	48	194.8	1538.98
26	192.6	1556.55	49	194.9	1538.19
27	192.7	1555.75	50	195.0	1537.40
28	192.8	1554.94	51	195.1	1536.61
29	192.9	1554.13	52	195.2	1535.82
30	193.0	1553.33	53	195.3	1535.04
31	193.1	1552.52	54	195.4	1534.25
32	193.2	1551.72	55	195.5	1533.47
33	193.3	1550.92	56	195.6	1532.68
34	193.4	1550.12	57	195.7	1531.90
35	193.5	1549.32	58	195.8	1531.12
36	193.6	1548.51	59	195.9	1530.33
37	193.7	1547.72	60	196.0	1529.55
38	193.8	1546.92	61	196.1	1528.77
39	193.9	1546.12			

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-2GZXD8D##	Starview DWDM SFP Multi-rate 1.062Gbps to 2.667Gbps Fiber Optic DWDM SM (LC), 100GHz spacing with Digital Diagnostic Monitoring (DDM) ####nm SM (LC), distance up to 80km, where ## denotes *[see DWDM Wavelength Guide]	0 to 4	-28 to -10	28	80	YES