SFP-100FX-31-SM

100BASE-LX SFP 1310NM 10KM DOM DUPLEX LC SMF TRANSCEIVER

FEATURES

- Date rate 155Mbps 1310nm FP laser
- and PIN photodetector for 15km transmission
- Digital diagnostic monitor interface compliant with SFF-8472
- SFP MSA package with duplex LC connector
- +3.3V single power supply
- Power consumption less than 1W
- Operating case temperature Standard temp:-5~+70°C
  Industrial temp:-40~+85°C
- RoHS compliant

PRODUCT SPECIFICATIONS

I. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Storage Temperature Range	T_S	-40	-	+85	°C	
Supply Voltage	VCC	-0.5	-	+3.6	V	
Operating Relative Humidity	RH	+5	-	95	%	

II. Regulatory Compliance

Feature	Standard	Performance
Electrostatic Discharge(ESD) to the Electrical Pins	MIL-STD-883E Method3015.7	Class1
Electrostatic Discharge (ESD) to the Duplex LC Receptacle	IEC61000-4-2	Compliant with standard
Electromagnetic Interference(EMI)	FCC Part15 Class B	Compliant with standard
Laser Eye Safety	FDA 21CFR 1040.10 and 1040.11 EN(IEC)60825-1,2	Compliant with Class I laser product
RoHS	2011/65/EU	Compliant with RoHS

III. Recommended Operating Conditions

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Operating Case Temperature	Standard	TC	-5	-	+70	℃	
	Industrial		-40	-	+85	℃	
Power Supply Voltage		VCC	3.13	3.3	3.47	V	
Power Supply Current		ICC	-	-	300	mA	
Power Dissipation		P_D	-	-	1	W	
Data Rate				155		Mbps	

IV. Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Centre Wavelength	λC	1261		1360	nm	
Average Output Power	P_{OUT}	-15		-8	dBm	1
Spectral Width(RMS)	Δλ			7.7	nm	
Extinction Ratio	EX	8.2			dB	
Jitter Generation(RMS)				0.01	UI	
Jitter Generation(pk-pk)				0.1	UI	
Receiver						
Centre Wavelength	λC	1260		1580	nm	
Receiver Sensitivity	P_{IN}			-28	dBm	3
Receiver Overload	P_{IN}	-8			dBm	3
Optical Path Penalty		8.2		1	dB	4
LOS Assert	LOSA	-45			dBm	
LOS Deassert	LOSD			-31	dBm	
LOS Hysteresis		0.5		4	dB	

Note:
1.The optical power is launched into SMF.
2.Measured with a PRBS 223-1 test pattern @155Mbps.
3.Measured with a PRBS 223-1 test pattern @155Mbps, BER ≤1×10-12.
4.Measured with a PRBS 223-1 test pattern @155Mbps, over 15km G.652 SMF, BER ≤ 10^{-12}.

V. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
DataInputSwingDifferential	VIN	500		2400	mV	1
InputDifferentialImpedance	ZIN	90	100	110	Ω	
	V	2.0		Vcc	V	

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Receiver						
Centre Wavelength	λC	1260		1580	nm	
Receiver Sensitivity	P_{IN}			-28	dBm	3
Receiver Overload	P_{IN}	-8			dBm	3
Optical Path Penalty		8.2		1	dB	4
LOS Assert	LOSA	-45			dBm	
LOS Deassert	LOSD			-31	dBm	
LOS Hysteresis		0.5		4	dB	

MECHANICAL DIAGRAM

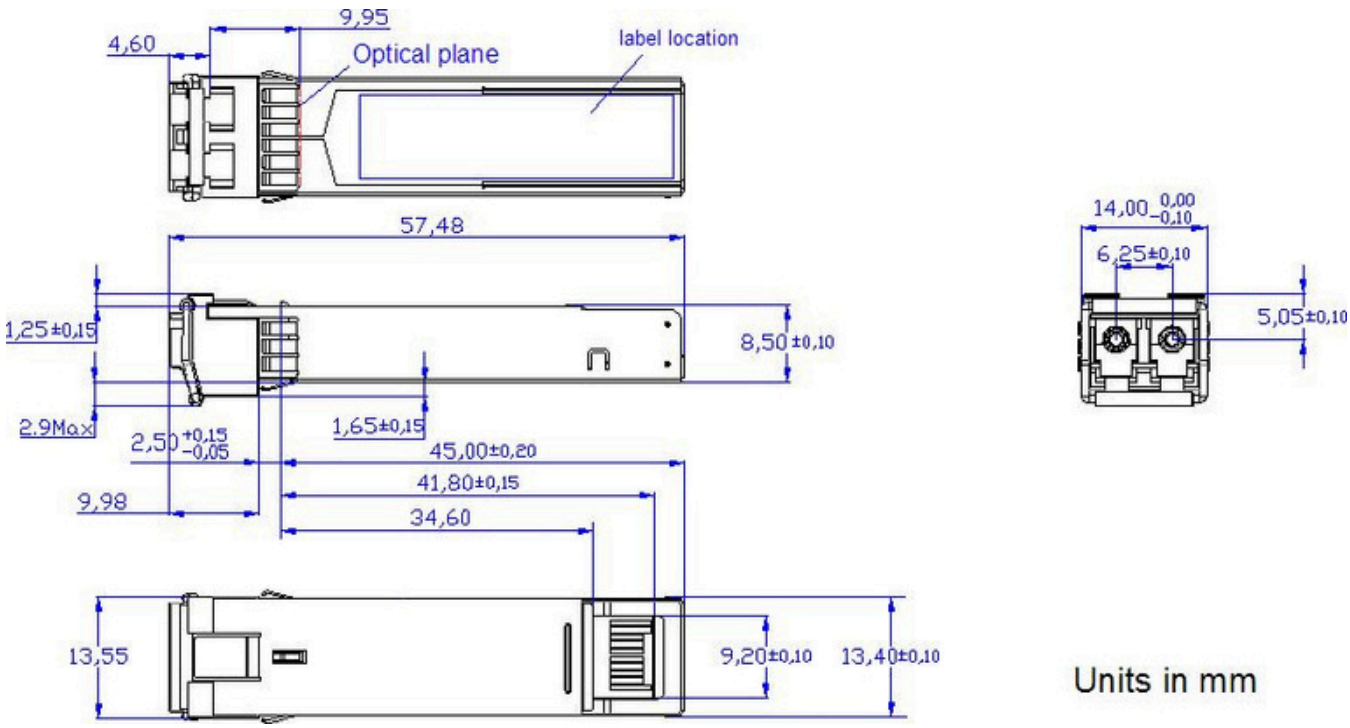

Figure 5, Mechanical Design Diagram of the SFP