

## Features

- Operating Data Rate up to 155Mbps
- 1310nm FP laser transmitter
- 40km with 9/125  $\mu$ m SMF
- Single 3.3V Power Supply
- Hot-Pluggable SFP Footprint Duplex LC Connector Interface
- Class 1 FDA and IEC60825-1 Laser Safety Compliant
- Operating Temperature:  
Standard: 0°~+70° Industrial:-40°~+85°
- Compliant with MSA SFP Specification
- Compliant with SFF-8472



## Applications

- SDH STM-1, I-1.1
- SONET OC-3 SR1
- Fast Ethernet
- Other Optical Links

## 1. Absolute Maximum Ratings

\*Exceeding any one of these values may destroy the device immediately.

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	+85	°C
Maximum Supply Voltage	VCC	-0.5	3.6	V
Operating Relative Humidity	RH	5	85	%

## 2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Case Temperature	TC	0		70	°C
		-40		+85	

Power Supply Voltage	Vcc	3.15	3.3	3.45	V
Power Supply Current	Icc			300	mA
Data Rate			100/155		Mbps

### 3. Performance Specifications - Electrical

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
<b>Transmitter</b>						
LVPECL Inputs(Differential)	Vin	400		2000	mVpp	AC coupled inputs <sup>1</sup>
Input Impedance (Differential)	Zin	85	100	120	ohms	Rin > 100 kohms @ DC
TX_Dis	Disable	2		Vcc	V	
	Enable	0		0.8		
TX_FAULT	Fault				V	
	Normal					
<b>Receiver</b>						
LVPECL Outputs (Differential)	Vout	400		2000	mVpp	AC coupled outputs <sup>1</sup>
Output Impedance (Differential)	Zout	85	100	120	ohms	
TX_Disable Assert Time	t_off			10	us	
LOS						
RX_LOS	LOS	2		Vcc+0.3	V	
	Normal	0		0.8		
MOD_DEF(0.2)	VoH	2.5			V	With Serial ID
	VoL	0		0.8		

### 4. Optical and Electrical Characteristics

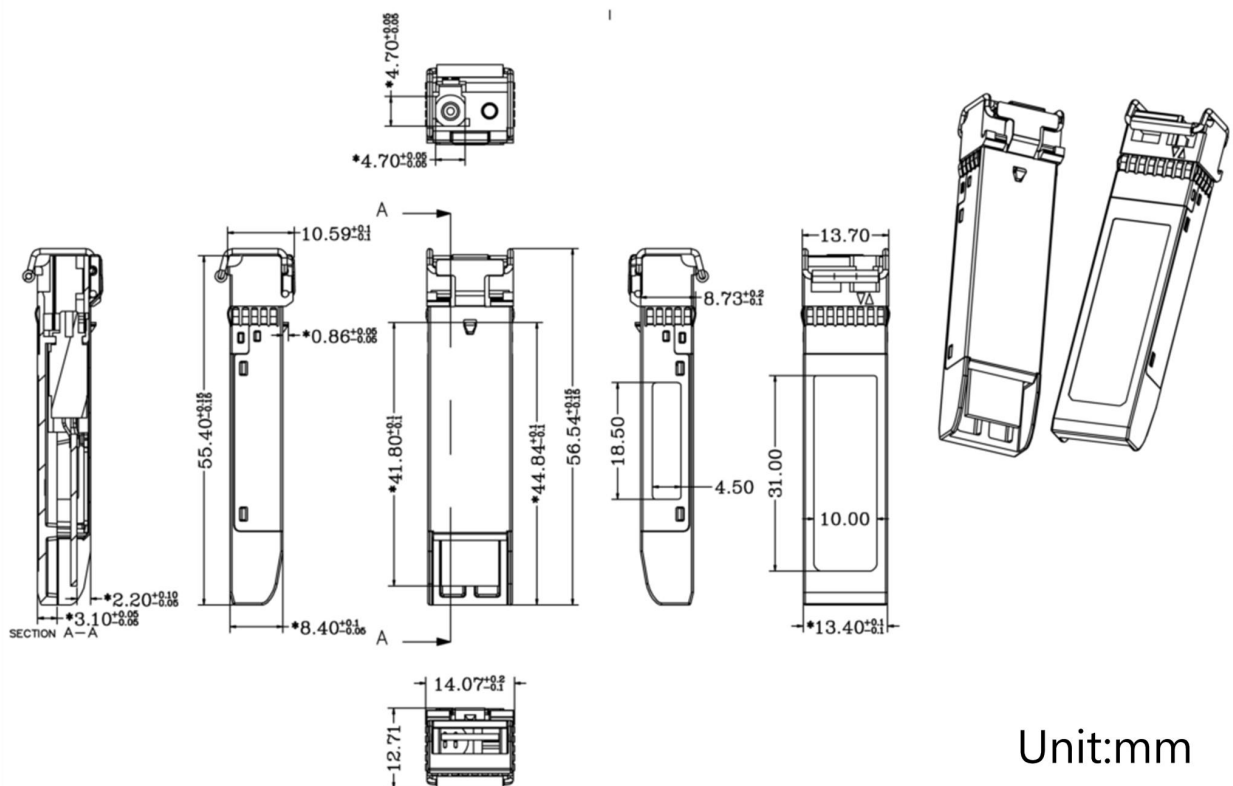
Parameter	Symbol	Min.	Typ.	Max.	Unit
9µm Core Diameter SMF	L		40		km
Data Rate			100/155		Mbps
<b>Transmitter</b>					
Center Wavelength	λC	1260	1310	1360	nm
Spectral Width (RMS)	Δλ			3	nm
Average Output Power <sup>2</sup>	Pout	-5		0	dBm

Extinction Ratio <sup>3</sup>	ER	10			dB
Rise/Fall Time(20% ~ 80%)	tr/tf			2	ns
Pout@TX Disable Asserted	Pout			-45	dBm
Output Optical Eye		IUT-T G.957 Compliant			
<b>Receiver</b>					
Center Wavelength	$\lambda$ C	1260		1600	nm
Receiver Sensitivity <sup>4</sup>	Pmin			-34	dBm
Receiver Overload	Pmax	-10			dBm
LOS De-Assert	LOSD			-35	dBm
LOS Assert	LOSA	-45			dBm
LOS Hysteresis		1			dB

**Notes:**

1. LVPECL logic, internally AC coupled
2. Output power is measured by coupling into a 50/125 mm multi-mode fiber. Note3: Filtered, measured with a PRBS 2<sup>23</sup>-1 test pattern @155Mbps.
3. Minimum average optical power is measured at BER less than 1E-12,with 2<sup>23</sup>-1 PRBS and ER=9 dB

**5. Mechanical Specifications**



Unit:mm

## 6. Ordering Information

OEM	Part Number	OEM	Part Number
MSA Generic	AN-SFP-FE-100FX-EX		

## 7. Contact Information

Tel: 800.590.9535

Web: <http://www.approvednetworks.com>