



CWDM-SFP-80-I-XX

1GBASE, SFP, ZX, CWDM, SMF TRANSCEIVER
1270nm - 1610nm, 80km REACH, DUPLEX LC CONNECTOR

Features

- Up to 1.25Gb/s data links
- DFB laser transmitter and PIN photo detector
- Up to 80km on 9/125μm SMF
- Hot-pluggable SFP footprint
- Duplex LC/UPC type pluggable optical interface
- Low power dissipation
- Metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Single +3.3V power supply
- Support Digital Diagnostic Monitoring interface
- Compliant with SFF-8472
- Commercial Case operating temperature -40°C to +85°C

Applications

- Switch to Switch Interface
- Gigabit Ethernet
- Switched Backplane Applications
- Router/Server Interface
- Other Optical Links

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Storage Temperature	Ts	-40		85	°C
Relative Humidity	RH	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	Minimum	Typical	Maximum	Unit	Notes
Case Operating Temperature	Tcase	-40		85	°C	Industrial
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	
Power Supply Current	Icc			300	mA	
Data Rate			1250/1250		Mbps	TX Rate/RX Rate
Transmission Distance				80	KM	
Coupled Fiber		9/125um SMF				

Optical Specifications						
Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Transmitter						
Average Output Power	POUT	0		5	dBm	Note (1)
Extinction Ratio	ER	9			dB	
Center Wavelength	λ_C	(1XX0)-10	1XX0	(1XX0)+10	nm	DFB Laser Note (2)
Side Mode Suppression Ratio	SMSR	30			dB	
Spectrum Bandwidth (-20dB)	σ			1	nm	
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Output Eye Mask	Compliant with IEEE802.3 z (class 1 laser safety)					
Receiver						
Input Optical Wavelength	λ_{IN}	1270		1610	nm	PIN-TIA
Receiver Sensitivity	PIN			-26	dBm	Note (3)
Input Saturation Power (Overload)	PSAT	-3			dBm	
LOS De-assert	LOSD			-27	dBm	
LOS Assert	LOSA	-38			dBm	Note (4)
LOS Hysteresis		0.5	2	6	dB	

Notes:

1. Measure at 2⁷ 1 NRZ PRBS pattern.
2. "XX" is: 47, 49, 51, 53, 55, 57, 59 and 61.
3. Measured with light source 1XX0 nm, ER=9dB; BER =<10⁻¹² @PRBS=2⁷ 1 NRZ "XX" is: 47, 49, 51, 53, 55, 57, 59 and 61.
4. When LOS de-asserted, the RX data+/- output is high level (fixed).

Electrical Interface Characteristics						
Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
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	VTxFH	2		Vcc+0.3	V	
Transmitter Fault Input-Low	VTxFL	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	Note (1)
LOSS Output Voltage- High	VLOSH	2		Vcc+0.3	V	LVTTL

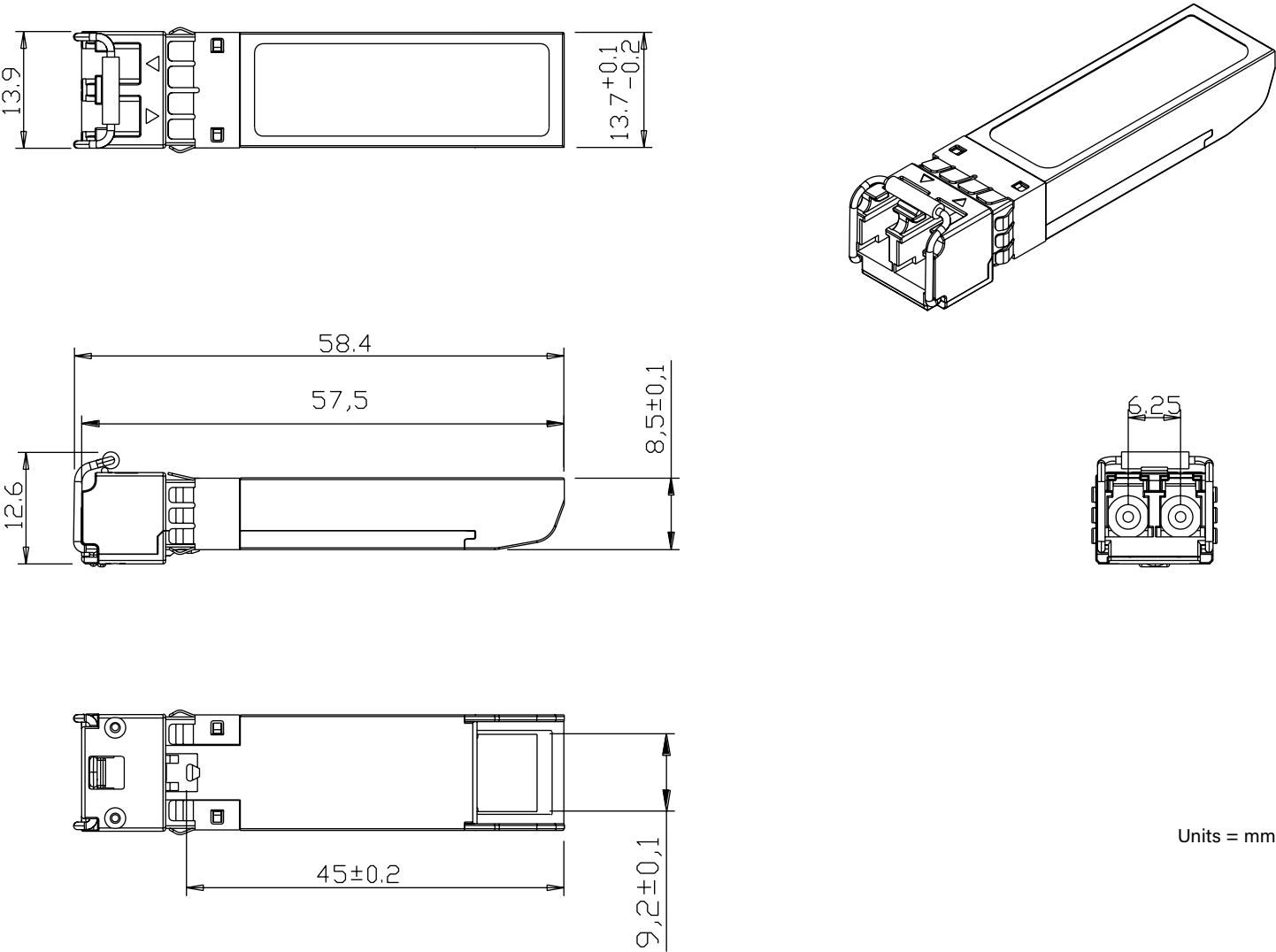
Electrical Interface Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
LOSS Output Voltage- Low	VLOSL	0		0.8	V	

Notes:

1. A (TX) + B (RX) = 300mA (Does not include termination circuit).

Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

Ordering Information			
OEM	Part Number	OEM	Part Number
Adtran	1442442F1-80-A	Cisco	10GS-B55-80I-CSC
Alcatel	3HE05037AB-80-A	Dell	407-BBOP-54-80-A
Arista	SFP-10G-BX80D-AN-A	Enterasys	10GB-BX80-D-A
Arista	SFP-10G-BX80D-AN-C1	Extreme	10302-BXD-80-A
Brocade	10G-SFPP-BXD-80-A	Juniper	EX-SFP-10GE-BXD-80-A
Calix	100-02151-80KM-A	Juniper	JNP-SFP-10GE-BX80D-A
Ciena	XCVR-S80U55-A	Juniper	SFP-10GE-BXD-80-A
Ciena	XCVR-S80U55-C1	Juniper	JNP-SFP-10GE-BX80D-C1
Cisco	SFP-10G-BX80D-I-A	MSA Champion ONE	10GSFP+E55B80L-H
Cisco	10GS-B55-80-CSC	MSA Champion ONE	10GSFP+E55B80L
Cisco	SFP-10G-BX80D-C-C1	MSA Generic	AN-SFP10G-BXD-80-I

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