



Part of GE Security

Network Transmission Products Small Format Pluggables Transceiver Modules

Overview

The GE Security transceiver module is specifically designed to accommodate high-performance optical fiber, including integrated duplex data link over single mode. Compliant with the SFP Multisource Agreement (MSA), these transceiver modules feature hot-plug capability for easy installation without interrupting host equipment operating online. The SFP transceiver can install into GE Security switch products with 100Base-FX or 1000Base-SX/LX SFP interface.

Standard Features

- SFP multi-source agreement compliant
- Data rate 100Mbps to 1.25Gbps, varies on module
- Class 1 laser safety standard IEC 60825 compliant
- LC duplex receptacle
- Low power dissipation
- Plug-and-play capability for easy installation

Small Format Pluggables Transceiver Modules



Specifications

Absolute Maximum Ratings					
Parameter		Symbol	Min.	Max.	Unit
Storage Temperature		Ts	-40	+85	°C
Supply Voltage		V _{ccT} V _{ccR}	-0.5	4.0	V
Storage Relative Humidity		RH	5	95	%
Data Rate GbE	SFP1000SX-220 SFP1000LX-10km	DR	-	1250	Mbps
Data Rate Fast Ethernet	SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	DR	-	125	Mbps

Recommended Operating Conditions						
Parameter		Symbol	Min.	Type	Max.	Unit
Case Operating Temperature		T _c	0	—	70	°C
Supply Voltage		V _{cc}	3.1	3.3	3.5	V
Supply Current	SFP1000SX-220	I _{TX} + I _{RX}	-	160	300	mA
	SFP1000LX-10km		-	180	300	
	SFP100FX1310-TSC-2Km		-	150	300	
	SFP100FX1310-TSC-20Km		-	150	300	

Transmitter Electro-Optical Interface (over Case Operating Temperature)						
Parameter		Symbol	Min.	Type	Max.	Unit
Transmitter Differential Input Voltage		TD +/-	400		2400	mV
Optical Output Power	SFP1000SX-220	Po	-9.5		-4	dBm
	SFP1000LX-10km		-9.5	-	-3	
	SFP100FX1310-TSC-2Km		-20	-	-14	
	SFP100FX1310-TSC-20Km		-15	-	-8	
Optical Extinction Ratio	SFP1000SX-220	ER	9	-	-	dB
	SFP1000LX-10km		9	-	-	
	SFP100FX1310-TSC-2Km		10	-	-	
	SFP100FX1310-TSC-20Km		8.2	-	-	
Center Wavelength	SFP1000SX-220	λc	830	850	860	nm
	SFP1000LX-10km		1285	1310	1343	
	SFP100FX1310-TSC-2Km		1270	-	1380	
	SFP100FX1310-TSC-20Km		1261	-	1360	
Spectral Width (RMS)	SFP1000SX-220	Δλ	-	-	0.85	nm
	SFP1000LX-10km		-	-	2.8	
	SFP100FX1310-TSC-2Km		-	-	7.7	
	SFP100FX1310-TSC-20Km		-	-	4	
Optical Rise/Fall Time	SFP1000SX-220	tr / tf	-	-	260	ns
	SFP1000LX-10km		-	-	260	
	SFP100FX1310-TSC-2Km		0.6	-	3.0	
	SFP100FX1310-TSC-20Km		-	-	2	
Total Jitter	SFP1000SX-220	TJ	-	-	227	ps
	SFP1000LX-10km		-	-	227	
Random Jitter	SFP1000SX-220	RJ			0.76	ns
	SFP1000LX-10km				0.76	

Transmitter Electro-Optical Interface (over Case Operating Temperature)					
Parameter	Symbol	Min.	Type	Max.	Unit
Transmitter Differential Input Voltage					
Tx_Fault - High	V _{Fault_H}	400	-	2400	mV
Tx_Fault - Low	V _{Fault_L}	2	-	V _{CC}	V
Tx_Disable - High	SFP1000SX-220	V _{ee}	-	V _{ee} +0.8	V
	SFP1000LX-10km	V _{ee}	-	V _{ee} +0.5	
	SFP100FX1310-TSC-2Km	V _{ee}	-	V _{ee} +0.8	
	SFP100FX1310-TSC-20Km	V _{ee}	-	V _{ee} +0.8	
Tx_Disable - Low	V _{Disable_H}	2	-	V _{CC}	V
Tx_Disable - Low	V _{Disable_L}	V _{ee}	-	V _{ee} +0.8	V
Receiver Differential Output Voltage					
Receiver Overload (Maximum)	SFP1000SX-220	-3	-	-	dBm
	SFP1000LX-10km	-3	-	-	
	SFP100FX1310-TSC-2Km	-8	-	-	
	SFP100FX1310-TSC-20Km	-5	-	-	
Receiver Sensitivity (Minimum)	SFP1000SX-220	-	-	-17	dBm
	SFP1000LX-10km	-	-	-20	
	SFP100FX1310-TSC-2Km	-	-	-32	
	SFP100FX1310-TSC-20Km	-	-	-34	
Operating Center Wavelength	SFP1000SX-220	770	-	860	nm
	SFP1000LX-10km	1260	-	1620	
	SFP100FX1310-TSC-2Km	1270	-	1380	
	SFP100FX1310-TSC-20Km	1260	-	1620	
Receiver Loss of Signal - TTL Low (Assert)	SFP1000SX-220	-	-	-17.5	dBm
	SFP1000LX-10km	-	-	-22	
	SFP100FX1310-TSC-2Km	-	-	-32	
	SFP100FX1310-TSC-20Km	-	-	-34	
Receiver Loss of Signal - TTL High (De-assert)	SFP1000SX-220	-35	-	-	dBm
	SFP1000LX-10km	-35	-	-	
	SFP100FX1310-TSC-2Km	-45	-	-	
	SFP100FX1310-TSC-20Km	-45	-	-	
Receiver Loss of Signal Hysteresis	SFP1000SX-220	0.5	-	-	dB
	SFP1000LX-10km	0.5	-	-	
	SFP100FX1310-TSC-2Km	1.5	-	-	
	SFP100FX1310-TSC-20Km	1	-	-	

Environmental Specifications	
Operating	
Temperature	0~70°C
Relative Humidity	5%~95% (non-condensing)
Storage	
Temperature	-40~85°C
Relative Humidity	5%~95% (non-condensing)

Electrical Specification	
Input Voltage: 3.3V DC	
AS/NZS CISPR 22 : 2006	

Reliability	
MTBF > 50,000 hrs @ 25°C	

Note: Vcc=3.1 V to 3.5 V to 3.5 V, TBAB=0P P°C to 70P P°C



Part of GE Security

North America
T 888-GE-SECURITY
888-437-3287
F 503-691-7566
E sales@ifs.com

Asia
T 852-2907-8108
F 852-2142-5063

Australia and New Zealand
T 613-9239-1200
F 613-9239-1299

Europe
T 44-113-238-1668
F 44-113-253-8121

Latin America
T 305-593-4301
F 305-593-4300

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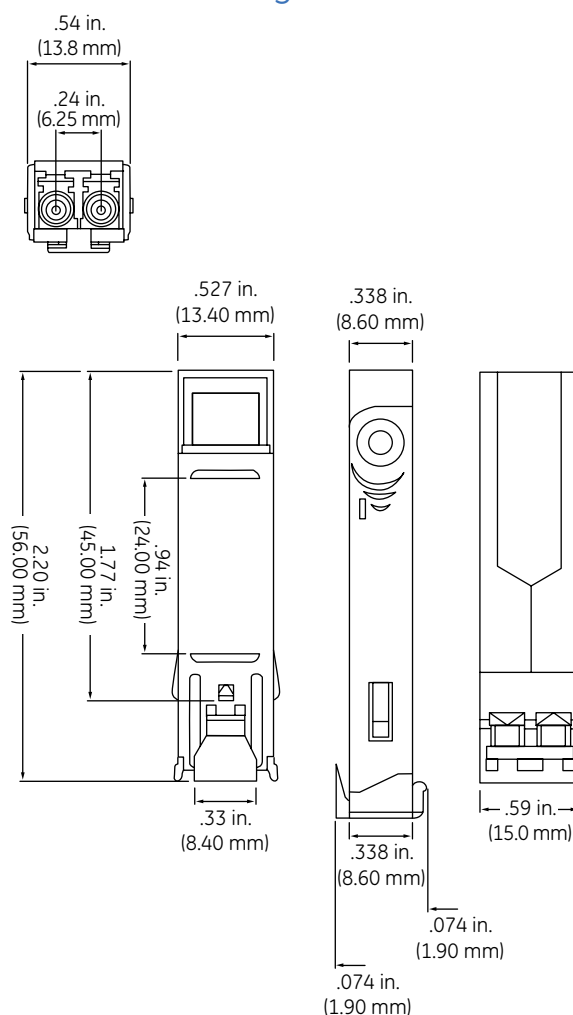
Specifications subject to
change without notice.

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Ordering Information

SFP1000SX-220	1000 Base-SX SFP Module - 220m
SFP1000LX-10km	1000 Base-LX SFP Module - 10km
SFP100FX1310-TSC-2km	100 Base-FX SFP Module - 2km
SFP100FX1310-TSC-20km	100 Base-FX SFP Module - 20km

Dimensional Diagrams



imagination at work