

Small Form-Factor Pluggable Modules - SM Series

- Supports up to 1.25 Gbps bit rates
- Hot-pluggable SFP footprint
- Single +3.3V power supply
- Real Time Digital Diagnostic Monitoring
- Digital Diagnostic SFF-8472 compliant



		Single Mode	Multi Mode	Bi-Directional
		SM012022	SM022011	SM031032
Absolute Max. Ratings	Storage Temp.	-40 - 185 °F (-40 - 85 °C)		
	Supply Voltage	-0.5 - 4.5 V	0 - 3.6 V	-0.5 - 4.5 V
	Operating Relative Humidity	5 - 85 %	5 - 95 %	5 - 85 %
Operating Environment	Supply Voltage	3.13 - 3.47 V	3.15 - 3.45 V	3.135 - 3.465 V
	Operating Case Temp.	32 - 158 °F (0 - 70 °C)		
	Power Dissipation	N/A	1 W	N/A
	Data Rate	1.25 Gbps		
Optical Characteristics (Transceiver)	Center Wavelength	1310nm	850nm	1310nm/1490nm
	Average Output Power	-9 -3 dBm	-9- 3 dBm	-0- 0 dBm
	Extinction Ratio	9 dB	8 dB	9 dB
	Rise/Fall Time (20%-80%)	.26 ns	150 ps	N/A
	Total Jitter	N/A	.43 UI	N/A
	Optical Eye Diagram	N/A	IEEE 802.1z and ANSI Fibre Channel Compatible	N/A
Optical Characteristics (Receiver)	Center Wavelength	1260 - 1580nm	830 - 860nm	1490nm/1310nm
	Receiver Sensitivity	-23 dBm	-19 dBm	-23 dBm
	Receiver Overload	-3 dBm	-3 dBm	-1 dBm
	Return Loss	N/A	12 dB	N/A
	LOS Assert	-35 dBm	-36 dBm	-38 dBm
	LOS De-Assert	-24 dBm	-20 dBm	-24 dBm
	LOS Hysteresis	1 - 4 dB	0.5 - 5 dBm	0.5 - 4 dBm
Diagnostics	Temperature	32 - 158 °F (0 - 70 °C)		
	Voltage	3.0 - 3.6 V	3.15-3.45 V	3.0 - 3.6 V
	Bias Current	0 to 100 mA	2- 15 mA	0-100 mA
	Tx Power	-9- -3 ±3 dBm	-9- -2 ±2 dBm	-9- 0 ±3 dB
	Rx Power	-23- 0 ±3 dBm	-26- -3 ±3 dBm	-23- -1 ±3 dB

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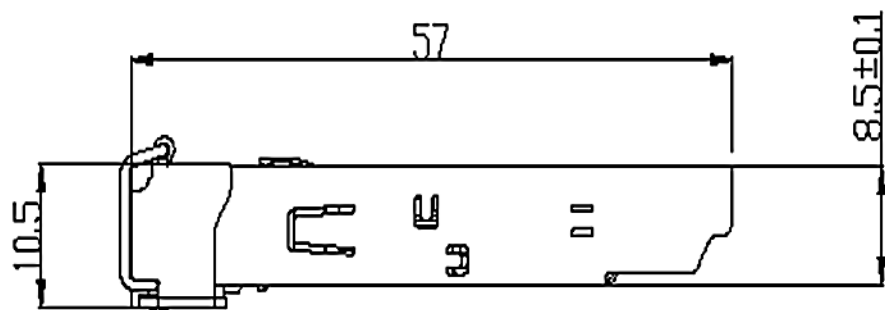
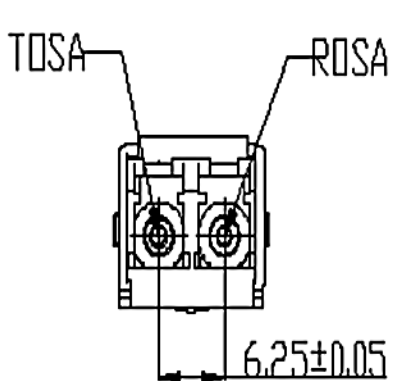
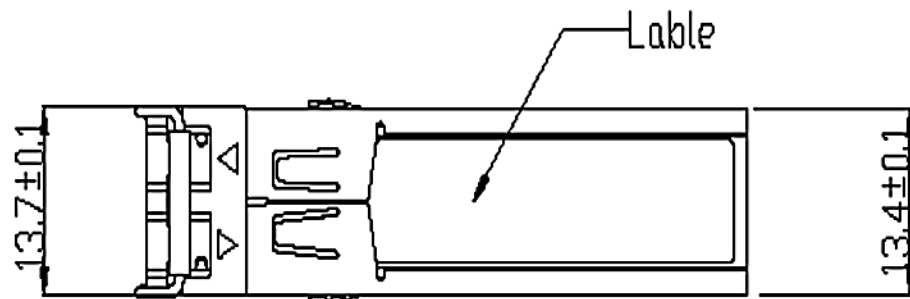
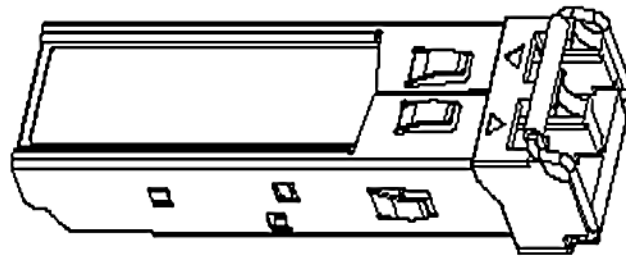
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Electrical Characteristics (Transmitter)	Input Diff. Impedence		100 Ohm		
	Data Input Swing Differential		400-1800mV	500-2400 mV	180-1200 mV
	TX Disable	Disable	2.0 V		
		Enable	0-0.8 V		
	TX Fault	Disable	2.0 V		
		Enable	0-0.8 V		
Electrical Characteristics (Receiver)	Input Diff. Impedence		100 Ohm		
	Data Input Swing Differential		400-1800mV	500-2400 mV	600-1000 mV
	Rx_LOS	Assert	2.0 V		
		De-Assert	0-0.8 V		
Certifications	Laser Safety		CDRH 21 CFR 1040 and Laser Notice No.50	IEC-60825 Compliant	N/A
	Product Safety		EN 60825-1 : 2007 EN 60825-2 : 2004 EN 60950-1 : 2006	N/A	
	Environmental Protection		RoHS Directive 2002/95/EC	N/A	
	EMC		EN 55022 : 2006+A1 : 2007 EN 55024 : 1998+A1 : 2001+A2 : 2003	N/A	
Notes	Specifications subject to change without notice.				

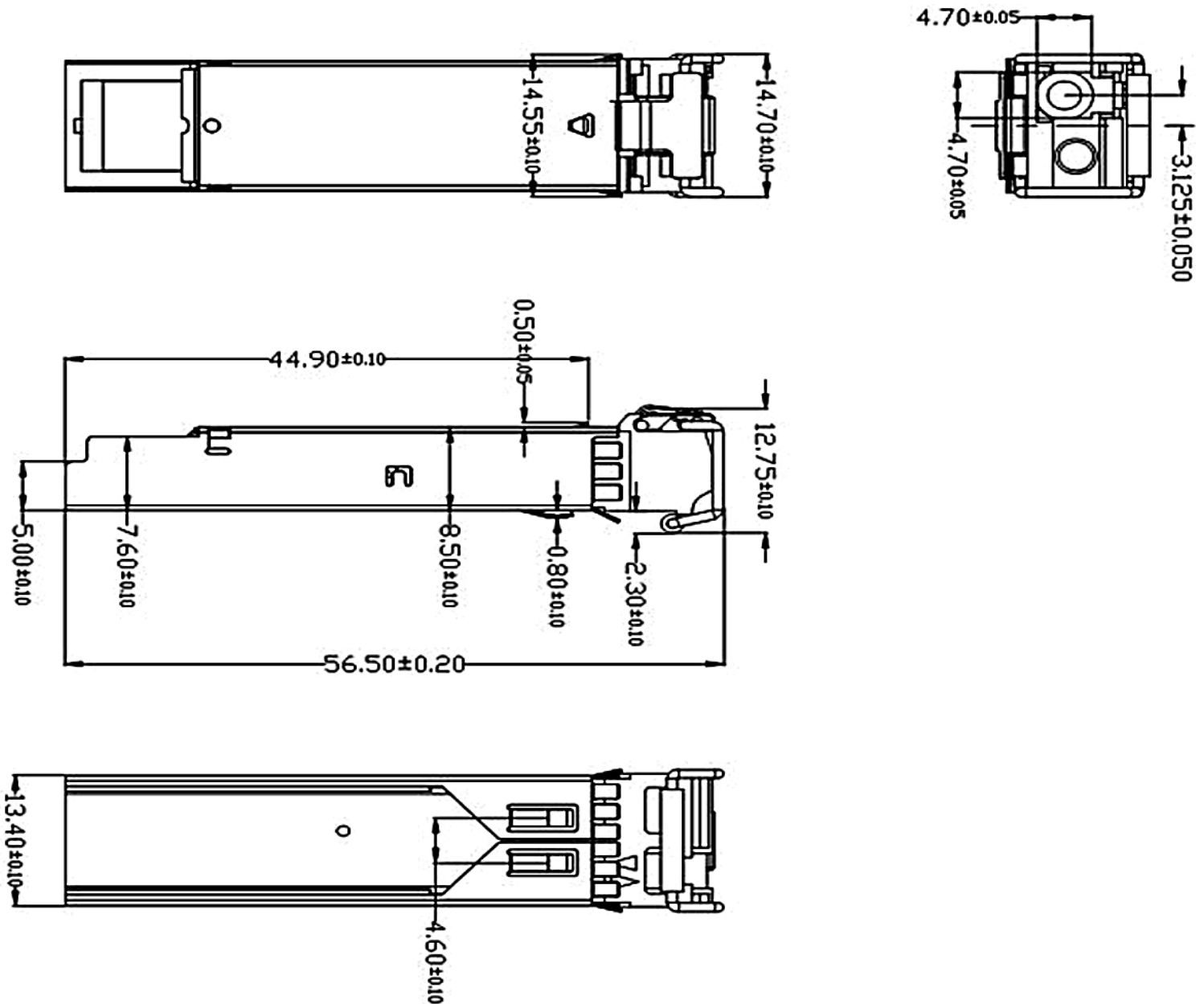
SM012022

Dimensions are in mm



SM022011

Dimensions are in mm



SM031032

Dimensions are in mm

