araknis® NETWORKS

Araknis Networks Transceiver Modules
10G SFP+ 1310nm, 20km Transceiver

AN-SFP-10-F-20K

This Araknis Networks Accessory Small Form Plug Plus (SFP+) Transceiver Module is designed for use cases requiring high-speed data transfer over extremely long distances. It supports data transfer speeds of 10Gbps up to 20-kilometer range using 1310nm single-mode fiber optic cable with LC connectors. It is best suited for Araknis Network switches supporting SFP+ ports and up to 10Gbps data speed capabilities. This transceiver is a great addition to larger commercial projects where high-speed data transfer capabilities over long distances is necessary.

Product Features

- Supports up to 10.7Gbps bit rates
- Hot-swappable SFP+ footprint
- 1310nm DFB laser and PIN photodiode, Up to 20km for SMF transmission
- Compliant with SFP+ MSA and SFF-872 with duplex LC receptacle
- RoHS Compliant
- Operating case temperature: Standard (0 to +70°C)

Best Used with Araknis Networks

This SFP+ transceiver module pairs best with Araknis Network switches that feature 10Gbps SFP+ ports.

Designed for Fiber Optic Cables

This SFP+ transceiver module supports 1310nm fiber optic cables with LC connectors and single-mode capabilities.

High-speed Data Transfer

This transceiver module is designed primarily for extremely large commercial projects that require high-speed data transfer capabilities up to 20km.

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Absolute Maximum Ratings

Parameter	Min	Typ	Max	Notes/Conditions
Supply Voltage	–0.5V		+4.5V	
Storage Temperature	–40°C		+85°C	
Operating Humidity	+5%		+85%	

Recommended Operating Conditions

Parameter		Min	Typ	Max	Notes/Conditions
Operating Case Temperature	Standard	0°C		+70°C	
	Extended	–20°C		+80°C	
	Industrial	–40°C		+85°C	
Power Supply Voltage		3.135V	3.30V	3.465V	
Power Supply Current				350mA	
Data Rate		1.0Gbps	10.3Gbps	10.7Gbps	

Optical and Electrical Characteristics

Parameter		Min	Typ	Max	Notes/Conditions
Transmitter					
Centre Wavelength		1270nm	1310nm	1350nm	
Spectral Width (–20dB)				1nm	
Side-Mode Suppression Ratio		30dB	-		
Average Output Power		–3.0dBm		+2.0dBm	Note 1 (next page)
Extinction Ratio		3.5dB			
Data Input Swing Differential		180mV		850mV	Note 2 (next page)
Input Differential Impendance		90Ω	100Ω	110Ω	
TX Disable	Disable	2.0V		VccV	
	Enable	0V		0.8V	
TX Fault	Fault	2.0V		VccV	
	Normal	0V		0.8V	
Receiver					
Centre Wavelength		1260nm		1600nm	
Receiver Sensitivity				-15dBm	Note 3 (next page)
Receiver Overload		+0.5dBm			Note 3 (next page)
LOS De-Assert				–16dBm	
LOS Assert		–30dBm			
LOS Hysteresis		0.5dB			
Data Output Swing Differential		300mV		900mV	Note 4 (next page)
LOS	High	2.0V		VccV	
	Low			0.8V	

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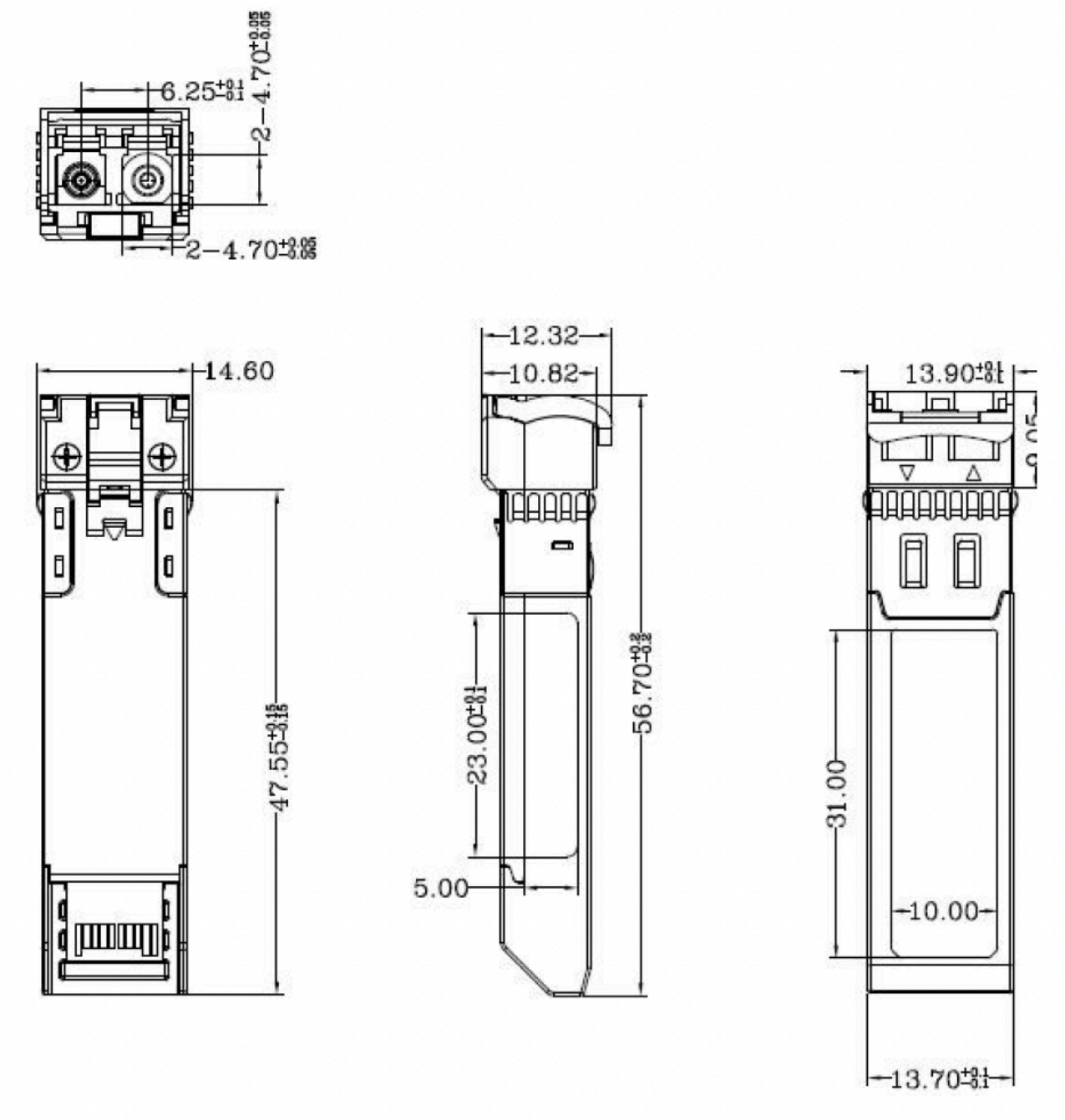
Notes:

1. The optical power is launched into SMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 27-1 test pattern @1250Mbps, BER ≤1×10-12.
4. Internally AC-coupled.

Mechanical Specifications



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