10G SFP+ Active Optical Cable 300m

GS-10GAOC-010

Features

- Electrical interface compliant to SFF-8431
- Hot Pluggable
- 850nm VCSEL transmitter,PIN photo-detector receiver
- Up to 300m on OM3 MMF
- Operating case temperature: 0 to 70°C
- All-metal housing for superior EMI performance
- RoHS compliant (lead free)

Applications

- 10 Gigabit Ethernet
- 4G and 8G Fibre Channel Applications
- 1x InfiniBand QDR. DDR, SDR
- High-performance computing clusters
- Servers, switches, storage and host card adapters

Overview

SFP+ Active Optical Cables are direct-attach fiber assemblies with SFP+ connectors. They are suitable for very short distances and offer a cost-effective way to connect within racks and across adjacent racks. GZ-LINK SFP+ Active Optical Cables's length is up to 300 meters on OM3 MMF.

Ordering information

Part Number	Product Description
GS-10GAOC-010	SFP+ 10Gbps, Active Optical Cable, 300m on OM3 MMF, 0ºC ~ +70ºC
XX: 01~300, 1~300 Length in meters. (OM3 fiber is available)	

SFP+ AOC Specifications

Parameter	Description
Module Form Factor	SFP+ (Supports SFF8431/SFF8432/SFF8472)
Protocols Supported	InfiniBand, Ethernet, Fiber Channel
Channel Data Rate	Rate 1 to 10.3125Gbps
BER	$<10^{-12}$
Operating Case Temperature	0 to + 70ºC
Storage Temperature	-20 to + 85ºC
Supply Voltage	3.3V
Supply current	230mA per end typical
Management Interface Serial	I^2C (Supports SFF8472)

Optical characteristics

The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min.	Typical	Max	Unit	Notes
Transmitter						
Center Wavelength	λt	840	850	860	nm	
RMS spectral width	Pm	-	-	Note 1	nm	
Average Optical Power	Pavg	-6.5	-	-1	dBm	2
Extinction Ratio	ER	3.5	-	-	dB	3
Transmitter Dispersion Penalty	TDP	-	-	3.9	dB	
Relative Intensity Noise	Rin	-	-	-128	dB/Hz	12dB reflection
Optical Return Loss Tolerance		-	-	12	dB	
Receiver						
Center Wavelength	λr	840	850	860	nm	
Receiver Sensitivity	Psens	-	-	-11.1	dBm	4
Stressed Sensitivity in OMA		-	-	-7.5	dBm	4
Los function	Los	-30	-	-12	dBm	
Overload	Pin	-	-	-1.0	dBm	4
Receiver Reflectance		-	-	-12	dB	

Note:

1. Trade-offs are available between spectral width, center wavelength and minimum OMA, as shown in table 6.
2. The optical power is launched into MMF
3. Measured with a PRBS 2^{31}-1 test pattern @10.3125Gbps
4. Measured with a PRBS 2^{31}-1 test pattern @10.3125Gbps, BER≤$10^{-12.}$

Mechanical Dimensions

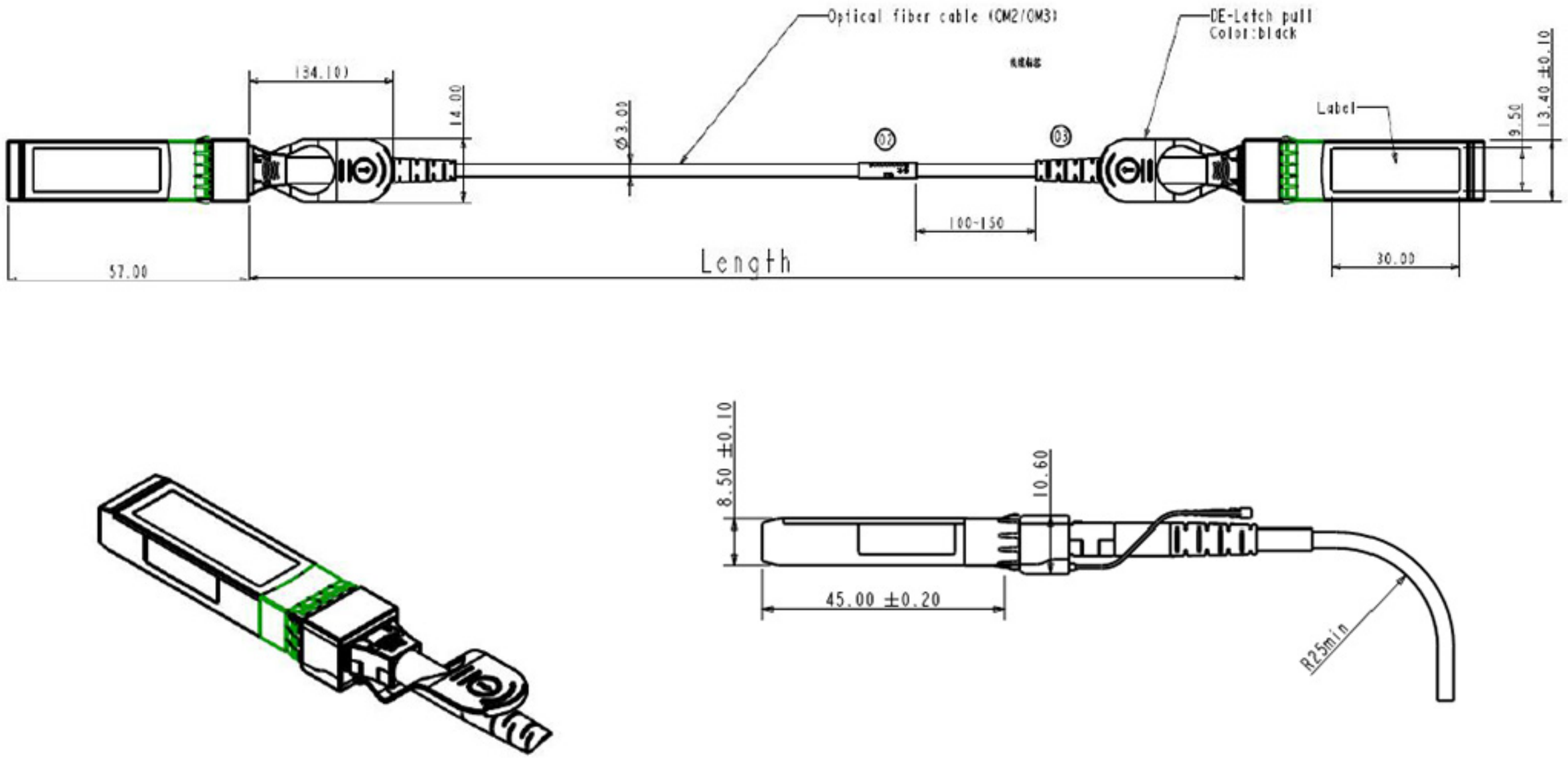

Figure1. Mechanical Specifications

References

1. Electrical interface compliant to SFF-8431
2. 850nm VCSEL transmitter, PIN photo-detector receiver
3. All-metal housing for superior EMI performance