


## 10G SFP+ Active Optical Cables SFP-10G-xxAOC

### 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

### Description

The 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. ROBOfiber SFP+ Active Optical Cables's length can reach up to 300 meters on OM3 MMF.

### 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 + 70°C
Storage Temperature	-20 to + 85°C
Supply Voltage	3.3V
Supply current	230mA per end typical
Management Interface Serial	I <sup>2</sup> C (Supports SFF8472)

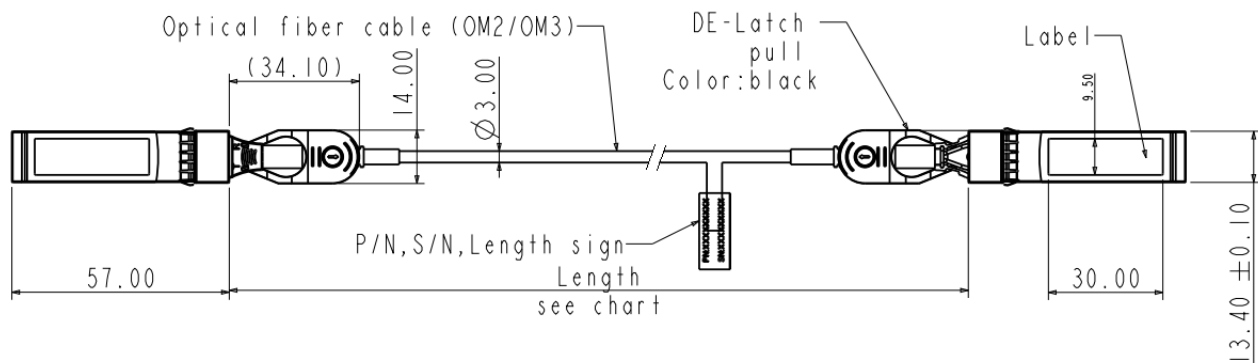
## Optical characteristics

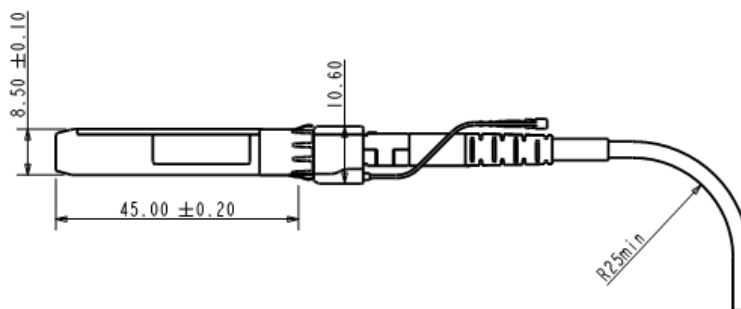
The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min.	Typical	Max	Unit	Notes
<b>Transmitter</b>						
Center Wavelength	$\lambda_t$	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	
<b>Receiver</b>						
Center Wavelength	$\lambda_r$	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  $\leq 10^{-12}$ .





**Figure1. Mechanical Specifications**

### Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by ROBOfiber before they become applicable to any particular order or contract. In accordance with the ROBOfiber policy of continuous improvement specifications may change without notice. Further details are available from any ROBOfiber sales representative.

### Ordering information

Part Number	Product Description
SFP-10G-10AOC	10 meter SFP+ Active Optical Cable
SFP-10G-XXXAOC	10G SFP+ Active Optical Cable custom made on OM3 MMF
xxx :001~300 length in meters for custom made optical cables (OM3 fiber is available)	

[sales@robofiber.com](mailto:sales@robofiber.com)