

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 ² C (Supports SFF8472) |

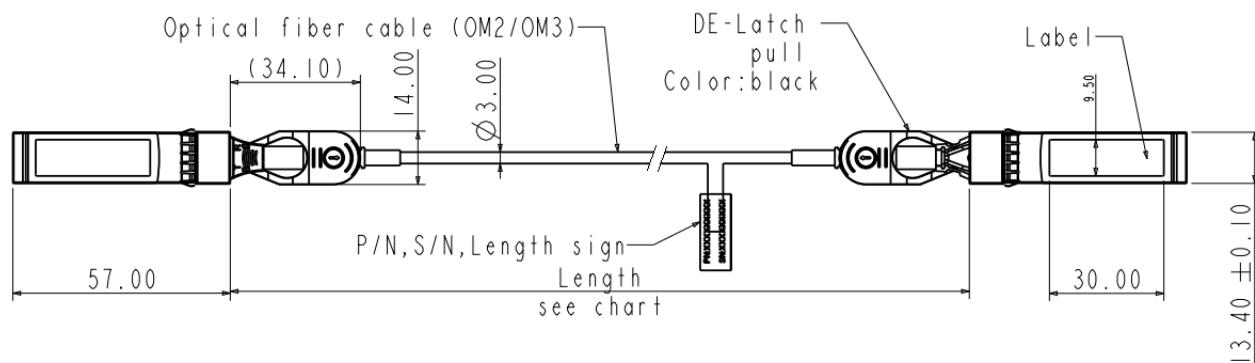
Optical characteristics

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

| Parameter | Symbol | Min. | Typical | Max | Unit | Notes |
|--------------------------------|-------------|------|---------|--------|-------|-----------------|
| Transmitter | | | | | | |
| Center Wavelength | λ_t | 840 | 850 | 860 | nm | |
| RMS spectral width | P_m | - | - | Note 1 | nm | |
| Average Optical Power | P_{avg} | -6.5 | - | -1 | dBm | 2 |
| Extinction Ratio | ER | 3.5 | - | - | dB | 3 |
| Transmitter Dispersion Penalty | TDP | - | - | 3.9 | dB | |
| Relative Intensity Noise | R_{in} | - | - | -128 | dB/Hz | 12dB reflection |
| Optical Return Loss Tolerance | | - | - | 12 | dB | |
| Receiver | | | | | | |
| Center Wavelength | λ_r | 840 | 850 | 860 | nm | |
| Receiver Sensitivity | P_{sens} | - | - | -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, $BER \leq 10^{-12}$.



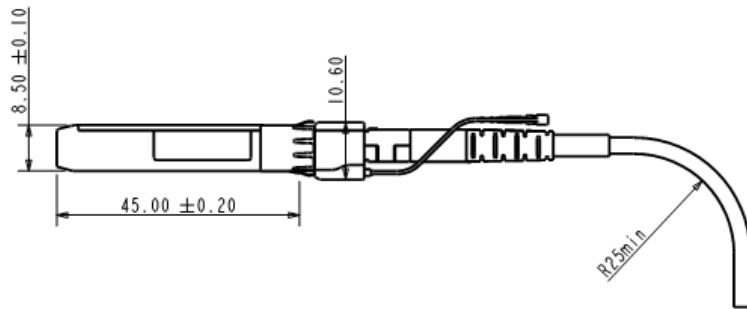


Figure1. Mechanical Specifications

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) | |

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