

SFP-10G-AOC-xM

10Gbps SFP+ to SFP+ Active Optical Cables

1M, 1.5M, 2M, 2.5M, 3M, 3.5M, 5M, 7M, 10M, 15M, 20M, 25M, 30M
Reach



Product Features

- ❖ Low power consumption <0.35W per end
- ❖ Electrical interface compliant to SFF-8431
- ❖ Up to 300m on OM3 MMF
- ❖ 850nm VCSEL transmitter, PIN photo-detector receiver
- ❖ Operating case temperature 0 °C to +70°C

- ❖ 3.3V power supply voltage
- ❖ RoHS 6 compliant
- ❖ Hot Pluggable SFP+ form factor
- ❖ Good EMI performance

Applications

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

Description

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

Absolute Maximum Ratings

The operation in excess of any absolute maximum ratings might cause permanent damage to this module.

Parameter	Symbol	Min	Max	Unit	Note
Storage Temperature	TST	-20	85	degC	
Relative Humidity (non-condensing)	RH	0	85	%	
Operating Case Temperature	TOPC	0	70	degC	
Supply Voltage	VCC	-0.3	3.6	V	
Input Voltage	Vin	-0.3	Vcc+0.3	V	

Recommended Operating Conditions & Su

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Operating Case temperature	Tca	0		70	°C
Data Rate Per Lane	fd		25.78125		Gbps
Humidity	Rh	5		85	%
Power Dissipation	Pm			3.5	W
Fiber Bend Radius	Rb	3			cm

Optical Characteristics

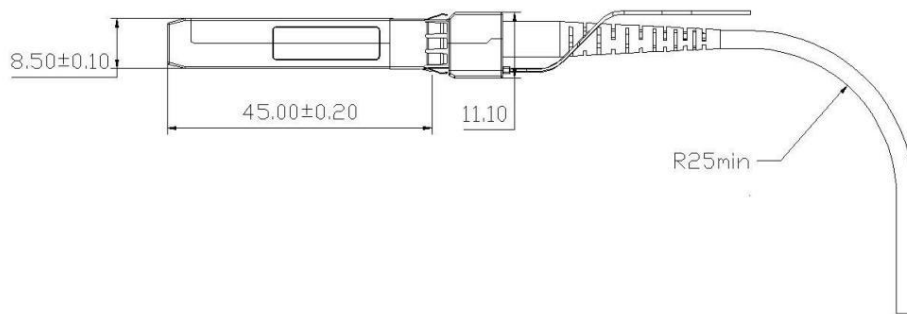
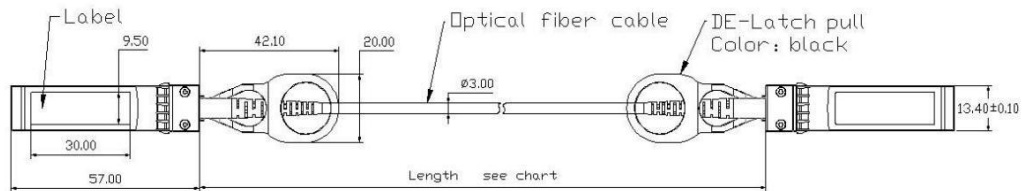
All parameters are specified under the recommended operating conditions with PRBS31 data pattern unless otherwise specified.

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_C	840	850	860	nm	
Average optical Power	PAVG	-6			dBm	
Rise / Fall Time	Tr/Tf			50	ps	
Extinction Ratio	ER	3.5			dB	
Relative Intensity Noise	Rin			-128	dB/Hz	
Optical Return Loss Tolerance	TOL			12	dB	
Transmitter Reflectance	RT			-12	dB	
Receiver						
Center Wavelength	λ_C	840	850	860	nm	
Overload, each lane	OVL	-1			dBm	
Receiver Sensitivity in OMA, each Lane	SEN			-11	dBm	

Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Differential input impedance	Zin	90	100	110	ohm
Differential Output impedance	Zout	90	100	110	ohm
Differential input voltage amplitude	ΔV_{in}	100		1800	mVp-p
Differential output voltage amplitude	ΔV_{out}	400		800	mVp-p
Bit Error Rate	BR			E-12	
Input Logic Level High	V _{IH}	2.0		V _{CC}	V
Input Logic Level Low	V _{IL}	0		0.8	V

Mechanical Dimensions



Ordering Information

Part Number	Product Description
SFP-10G-AOC-1M	10G SFP+ to SFP+ Active Optical Cable, 1m (3ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-1.5M	10G SFP+ to SFP+ Active Optical Cable, 1.5m (5ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-2M	10G SFP+ to SFP+ Active Optical Cable, 2m (7ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-2.5M	10G SFP+ to SFP+ Active Optical Cable, 2.5m (8ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-3M	10G SFP+ to SFP+ Active Optical Cable, 3m (10ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-3.5M	10G SFP+ to SFP+ Active Optical Cable, 3.5m (11ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-5M	10G SFP+ to SFP+ Active Optical Cable, 5m (16ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-7M	10G SFP+ to SFP+ Active Optical Cable, 7m (23ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-10M	10G SFP+ to SFP+ Active Optical Cable, 10m (33ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-15M	10G SFP+ to SFP+ Active Optical Cable, 15m (49ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-20M	10G SFP+ to SFP+ Active Optical Cable, 20m (66ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-25M	10G SFP+ to SFP+ Active Optical Cable, 25m (82ft), 300m on OM3, 0° C ~ +70° C
SFP-10G-AOC-30M	10G SFP+ to SFP+ Active Optical Cable, 30m (98ft), 300m on OM3, 0° C ~ +70° C