

# Dolphin MSFAC Armored Optical Cable Data Sheet



## PCIe 3.0 x4 SFF-8644 Armored Active Optical Cable

The MSFAC is an armored SFF-8644 Optical cable for PCIe 3.0 solutions. The cable ends use the SFF-8644 connector, which supports Dolphin PCIe 3.0 adapters and switches. The cable is available in various lengths up to 100 meters.



### Features

- Cable lengths up to 100 meters.
- Conforms to the SFF-8644 mechanical dimensioning requirements
- Compliant to SFF-8636 Management interface
- Built-in temperature sensors
- RoHS 2.0 compliant

### Part Numbers

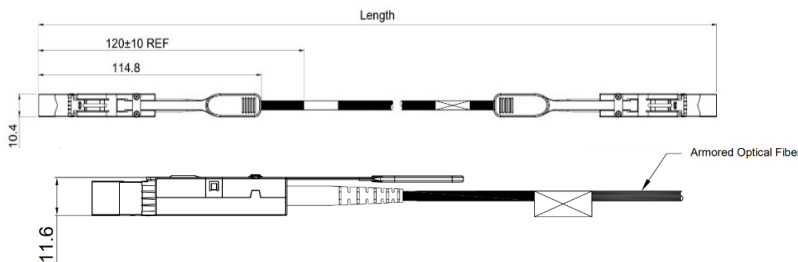
Part	Length	Fiber
MSFAC-010M	10 meters	OM3/LSZH
MSFAC-050M	50 meters	OM3/LSZH
MSFAC-100M	100 meters	OM3/LSZH

Note: Custom lengths available.

### Pin-Out

External PCIe x4 Cable Pin-out									
Row	9	8	7	6	5	4	3	2	1
D	GND	PETr2	PETp2	GND	PETr1	PETp1	GND	MGTPWR	PWR
C	GND	PETr3	PETp3	GND	PETr0	PETp0	GND	CMISDA	CMISCL
B	GND	PERn2	PERp2	GND	PERn1	PERp1	GND	CBLPRSNT#	PWR
A	GND	PERn3	PERp3	GND	PERn0	PERp0	GND	CINT#	CADDR

### Drawing

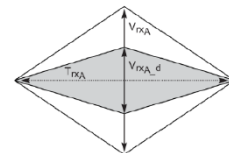


# Technical Specification

Features	MSFAC	MSFC	Unit
Fiber Type	Armored / OM3	Non-Armored / OM3	-
Fiber Color	Black	Aqua	-
Cable Diameter, D	3.2 +/- 0.2	3.0 +/- 0.1	mm
Cable Tensile Force	Long-Term: 80 Short-Term: 150	Long-Term: 80 Short-Term: 150	N
Cable Crush Resistance	Long-Term: 1000 Short-Term: 3000	Long-Term: 100 Short-Term: 500	N/100mm
Min. Bending Radius	Static: 32 Dynamic: 64	Static: 30 Dynamic: 60	mm
Operating Temperature	-40°C~+75°C	-40°C~+75°C	°C
Storage Temperature	-40°C~+85°C	-40°C~+85°C	°C
RoHS 2.0 Compliant	Yes	Yes	-
LSZH	Yes	Yes	-
Minimum cable Bending Radius	static: 32 dynamic: 64	30	mm

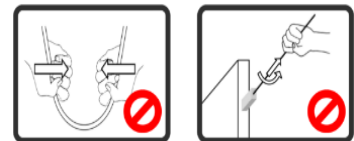
Parameters	Min	Typical	Max	Unit	Note
Power Supply Voltage	3.135	3.3	3.465	V	
<b>Transceiver</b>					
Power Consumption			1	W	
Power-On Initialization Time			2000	ms	1
<b>Transmitter</b>					
Data Rate per Channel		8.0		Gbps	
Maximum input peak-to-peak voltage			1300	mVpp	
Minimum input eye opening (VtxA)	34			mVpp	
Minimum input eye opening (TtxA)	41.2			ps	
<b>Receiver</b>					
Data Rate per Channel		8.0		Gbps	
Maximum output peak-to-peak voltage			1300	mVpp	
Minimum output eye opening (VtxA)	34				2
Minimum output eye opening (TtxA)	41.2			ps	2

1. "Initialization Time" is the time when the supply voltages reach and remain above the minimum "Recommended Operating Conditions" to the time when the module enables TWS access. The module is fully functional at that point.
2. Refer to the 12Gbps active cable eye mask from SAS-3 working draft Rev. 06a



## Handling

Care should be taken to restrict exposure to the conditions defined in the Maximum Ratings above. Place the product on a stable, level surface. If the product falls or drops, it may cause an injury or malfunction. The cable must not be subjected to excessive bending during installation or in operation. If you bend the cable to a radius smaller than its minimum bend radius, it may be damaged. Don't twist or pull the cable ends by force, as this may cause a malfunction.



## Regulatory Marking

The product holds the following regulatory marking:

