



100Gb/s QSFP28 SMF Active Optical Cable

MFS1200-Exxx

Mellanox® MFS1200-Exxx is a QSFP28 single-mode fiber (SMF) active optical cable based on silicon photonics (SiP) and designed for use in 100Gb/s InfiniBand systems.

The MFS1200 AOC offers high port density and configurability, and a much longer reach than passive copper cables in data centers. Since the AOC is hot pluggable, it is easy to install and replace.

MFS1200 has a standard SFF-8665 compliant QSFP28 port on the electrical side towards the host system. It contains four fiber optical transceivers per end, each operating at data rates of up to 26Gb/s.

MFS1200 offers selectable retiming per lane for both its optical transmitters and receivers for the 25-26Gb/s rates, but the AOC also supports lower bit rates without retiming.

The transmitters have programmable input equalizers and input squelch function, while the receivers have programmable output amplitude and pre-emphasis.

Rigorous production testing ensures the best out-of-the-box installation experience, performance and durability.

Table 1 - Absolute Maximum Ratings

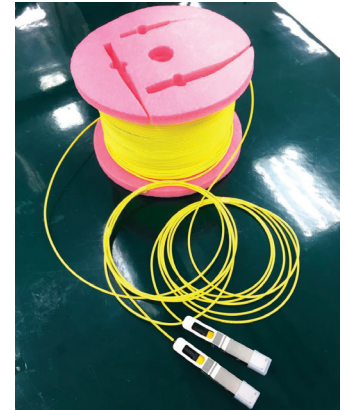
Parameter	Minimum	Maximum	Units
Supply voltage	-0.3	3.465	V
Data input voltage	-0.3	3.465	V
Control input voltage	-0.3	4.0	V

Table 2 - Operational Specifications

Parameter	Minimum	Typical	Maximum	Units
Supply voltage (Vcc)	3.145	3.3	3.465	V
Power dissipation (each end, no retiming)	---	2.5	2.7	W
Power dissipation (each end, retiming on all lanes)	---	3.3	3.5	W
Supply noise tolerance (10Hz-10MHz)	66	---	---	mVpp
Operating case temperature	0	---	70	°C
Operating relative humidity	5	---	85	%

Table 3 - Cable Mechanical Specifications

Parameter	Value	Units
Diameter	3	mm
Minimum bend radius	30	mm
Length tolerance	+1000/-0	mm
Cable color	Yellow	---



HIGHLIGHTS

- Up to 100 Gb/s data rate
- Programmable Rx output amplitude and pre-emphasis
- Programmable Tx input equalizer
- Selectable retiming
- SFF-8665 compliant
- Single 3.3 V power supply
- 3.5 W max power dissipation (each end)
- BER better than 1E-15
- Up to 200 meters length
- Hot pluggable
- RoHS compliant
- I²C management interface
- LSZH (Low Smoke, Zero Halogen) compliant

Mechanical Schematics

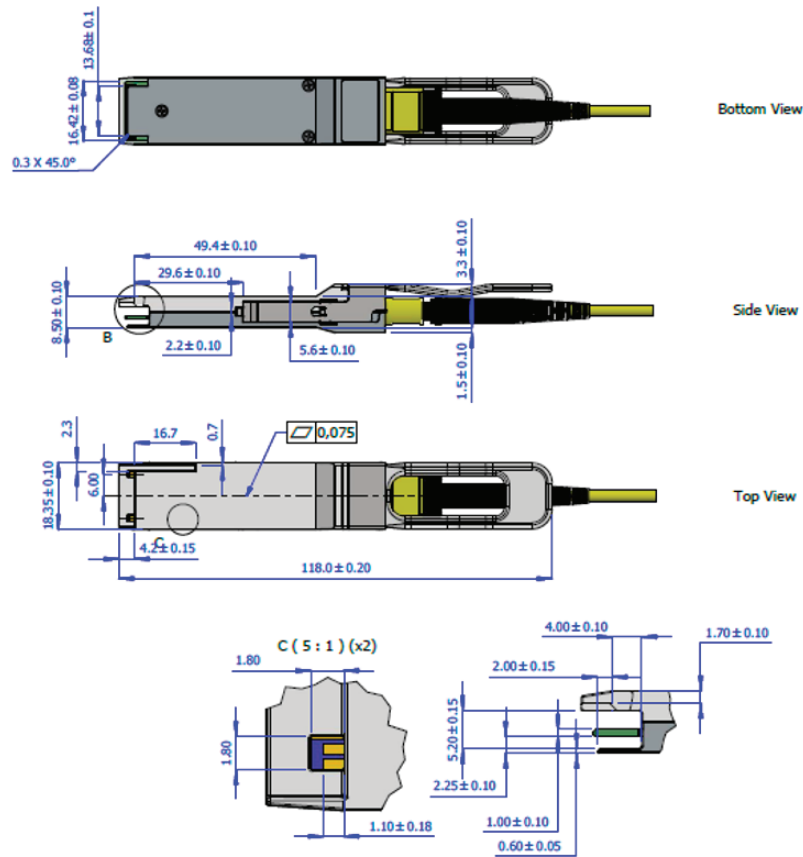


Figure 1. Cable Length

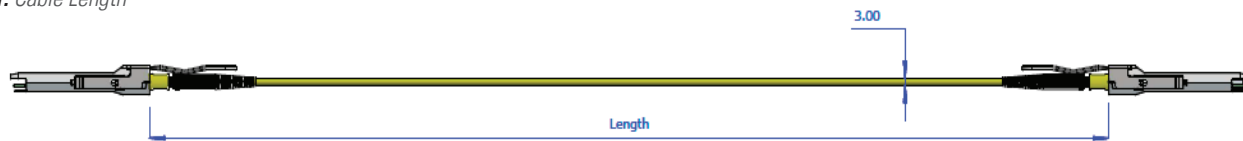


Table 4 - Part Numbers and Descriptions

OPN	Description
MFS1200-E150	Mellanox® active fiber cable, IB EDR, up to 100 Gb/s, QSFP, LSZH, 150m
MFS1200-E200	Mellanox® active fiber cable, IB EDR, up to 100 Gb/s, QSFP, LSZH, 200m

Note 1. See Figure 1 for the cable length definition.

Warranty Information

Mellanox LinkX AOC cables include a 1-year limited hardware warranty, which covers parts repair or replacement.