

100Gb/s EDR SR4 QSFP28 MMF Optical Transceiver



MMA1B00-E100

Mellanox® MMA1B00-E100 is a 4-channel, pluggable, QSFP28 optical transceiver designed for use in 100Gb/s EDR InfiniBand systems. This module incorporates Mellanox integrated circuit technology, in order to provide high performance at low power. The transceiver operates over parallel multi-mode (MMF) fiber, using a nominal wavelength of 850nm, and is SFF-8665 compliant.

MMA1B00-E100 has a standard QSFP28 connector on the electrical side towards the host system supporting EDR. The optical interface is composed of four optical channels/fibers in each direction, intended for a parallel MMF cable via a standard MPO connector. Each channel/fiber operates at signaling rates up to 25.78125GBd.

The transceiver has selectable re-timing in both transmit and receive directions as well as it provides digital diagnostic monitoring of supply voltage, temperature, transmit/receive power, and laser bias.

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	3.6	V
Data input voltage	-0.3	3.465	V
Control input voltage	-0.3	4.0	V
Damage threshold	3.4	---	dBm
Storage temperature	-40	85	°C

Table 2 - Operational Information

Parameter	Minimum	Typical	Maximum	Units
Supply voltage	3.135	3.3	3.465	V
Power dissipation (no retiming)	---	1.5	1.8	W
Power dissipation (retiming on all lanes)	---	2.2	2.5	W
Supply noise tolerance (10Hz - 10MHz)	66	---	---	mVpp
Operating case temperature	0	---	70	°C
Operating relative humidity	5	---	85	%RH

HIGHLIGHTS

- Supports IBTA InfiniBand EDR
- Up to 100Gb/s data rate
- Selectable retiming for both Tx & Rx
- Programmable Tx input equalizer
- Programmable Rx output amplitude
- Programmable Rx output emphasis
- SFF-8665 compliant QSFP28
- Single 3.3V supply
- QSFP28 power class 3
- 2.2 W power dissipation (typ, with retiming)
- BER better than 1E-15 with Mellanox systems
- Class 1 laser safety
- Up to 100m on OM4 and 70m on OM3 multimode fiber at 100Gb/s
- Up to 100m on OM3 at 40Gb/s
- SFF-8636 compliant digital diagnostic monitoring (DDM)
- Hot pluggable
- RoHS compliant
- SFF-8636 compliant I²C management interface

Mechanical Schematics

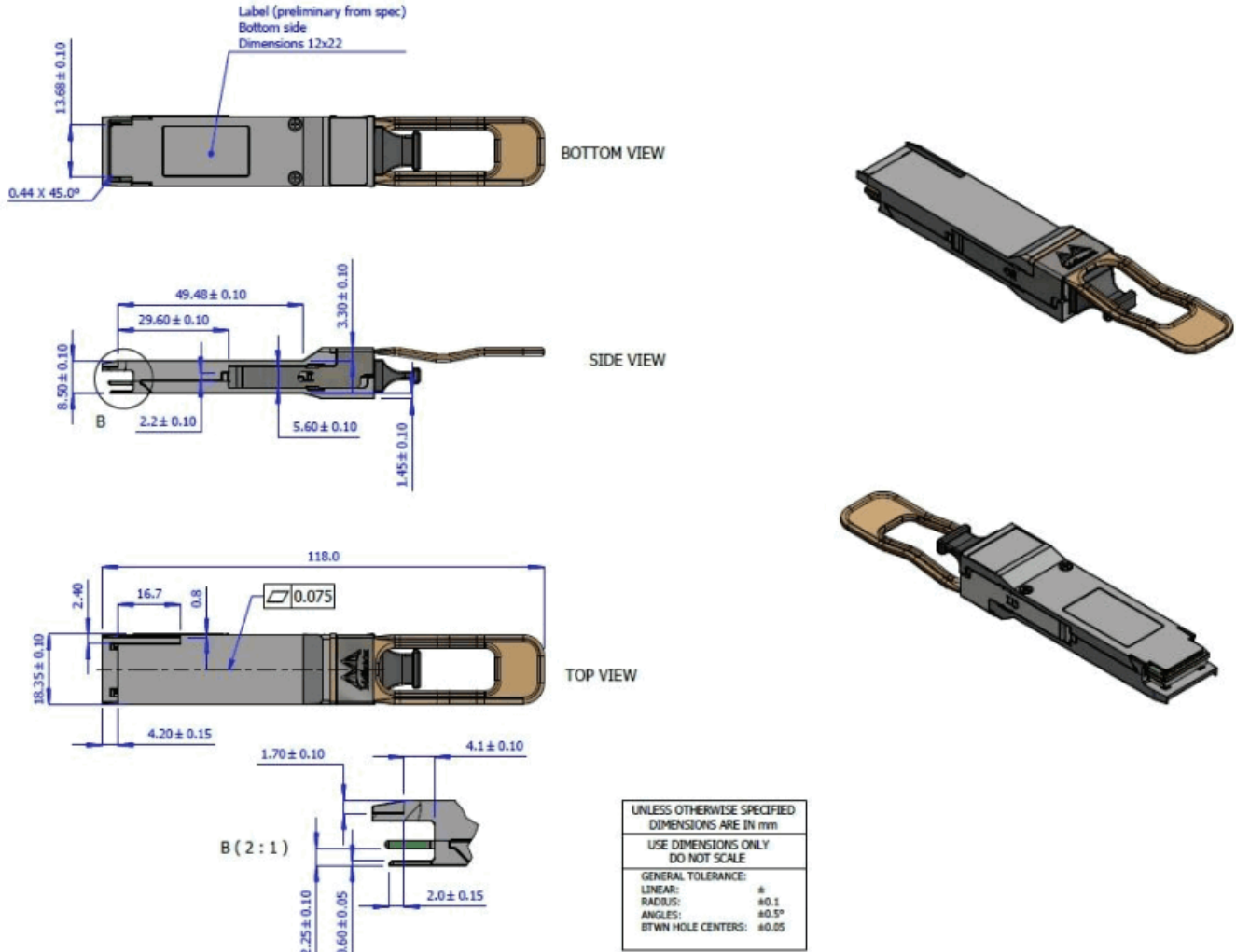


Table 3 - Part Number and Description

OPN	Description
MMA1B00-E100	Mellanox® transceiver, 1B EDR, up to 100Gb/s, QSFP28, MPO, 850nm, SR4, up to 100m

Warranty Information

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