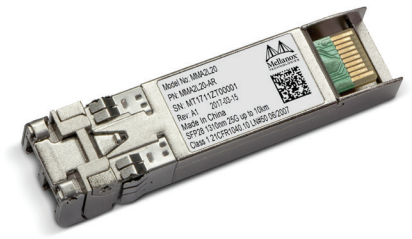
INTERCONNECT
PRODUCT BRIEF



25GbE SFP28 LR Optical Transceiver

LinkX †

MMA2L20-AR

Mellanox® 25Gb/s transceiver module is designed for optical communication applications and is compliant to 25GBASE-LR of the IEEE 802.3cc standard. The central wavelength is 1310nm. The high performance transmitter and high sensitivity PIN receiver provide superior performance for 25 Gigabit Ethernet applications with up to 10km links and compliant to optical interface with IEEE802.3cc.

The product is designed with a form factor, optical/electrical connection and digital diagnostic interface according to the SFP28 Multi-Source Agreement (MSA).

Table 1 - Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	T_S	-40	85	°C
Operating Case Temperature	T_{OP}	0	70	°C
Power Supply Voltage	V_{CCRx}, V_{CC1}, V_{CCTx}	0	3.6	V
Relative Humidity (non-condensation)	RH	5	85	%
Damage Threshold	TH_D	3.5	---	dBm

Table 2 - Operational Conditions and Power Supply Requirements

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Case Temperature	T_{OP}	0	---	70	C
Power Supply Voltage	V_{CCRx}, V_{CC1}, V_{CCTx}	3.135	3.3	3.465	V
Data Rate	---	-100ppm	25.78125	+100ppm	Gbps
Control Input Voltage High	V_{CTLH}	2.0	---	Vcc	V
Control Input Voltage Low	V_{CTLL}	0.0	---	0.8	V
Link Distance with ITU-T G.652.D rated fiber	D	0.002	---	10	km

HIGHLIGHTS

- Hot pluggable SFP28 MSA form factor
- Compliant to IEEE 802.3cc 25GBASE-LR
- SFF-8402 compliant
- Up to 10km reach for G.652 SMF
- Single +3.3V power supply
- Operating case temperature of 0-70°C
- Transmitter: 25Gb/s DFB (1310nm)
- Receiver: 25Gb/s PIN
- 28G electrical serial interface (CEI-28G-VSR)
- Maximum power consumption 1.0W
- Duplex LC receptacle
- RoHS compliant
- SFF-8472 compliant DDM functions

Applications

- 25GBASE-LR Ethernet links
- Client-side 25G telecom connections

† For illustration only. Actual products may vary.

Table 3 - Electrical Module Specifications

Parameter	Symbol	Minimum	Typical	Maximum	Units	Notes
Power Consumption	---	---	---	1.0	W	
Transmitter						
Differential Input Voltage Swing	$V_{IN,PP}$	200	---	800	mVpp	
Differential Input Impedance	Z_{IN}	---	100	---	Ohm	
Receiver						
Differential Output Voltage Swing	$V_{OUT,PP}$	200	---	900	mVpp	2
Differential Output Impedance	Z_{OUT}	---	100	---	Ohm	

Notes:
1. Power-on Initialization Time is the time from when the supply voltages reach and remain above the minimum specified operating supply voltages to the time when the module is fully functional.
2. IEEE 802.3bm 83E.3.4.1; requires optimization of the input equalizer.

Mechanical Schematics

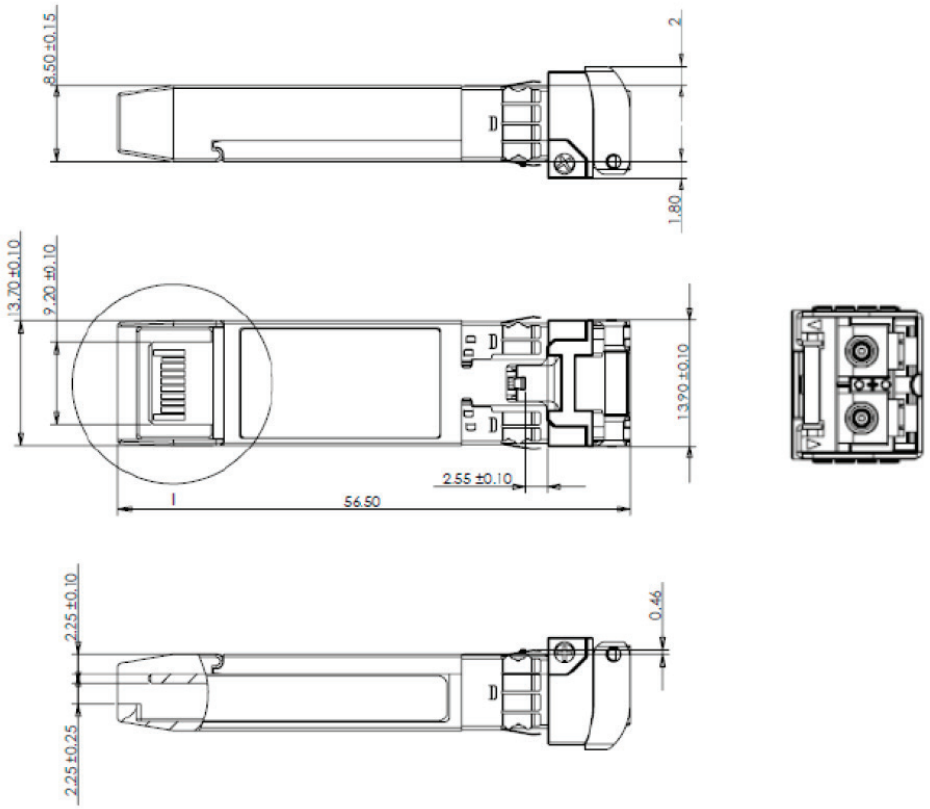


Table 4 - Part Number and Description

OPN	Description
MMA2L20-AR	Mellanox® optical transceiver, 25GbE, 25Gb/s , SFP28, LC-LC, 1310nm, LR up to 10km

Warranty Information

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

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