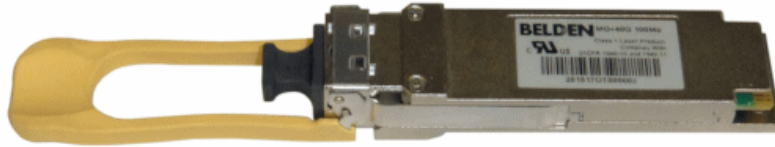


MQ+40G100MS Cable Assemblies - 40G QSFP+ SR4 OPTICAL TRANSCEIVER

For more Information
please call
1-800-Belden1



Description

40G QSFP+ SR4 OPTICAL TRANSCEIVER 850nm, MPO MALE RECEPTACLE, REACH 100M (OM3), 150M (OM4)

Usage (Overall):

Suitable Applications	Data Centers, Main Equipment Rooms, Telecommunications Rooms, Work Area, 40G Fiber Channel over Ethernet, Infiniband QDR, Storage Area Networks (SAN), Network Attached Storage (NAS) and High Performance Computing.
Related Parts	Fiber Patch Cord MPO-12 (Female)

Physical Characteristics (Connectivity):

Fiber Type: Fiber Type	MM
Wiring Scheme: Wiring Scheme	SFF-8436 and WSFP Multi-Source Agreement (MSA)
Weight: Weight:	0.084 lbs.
Packaging: Packaging	Packaged in a clear plastic tray (available in 1 unit bag and 10 units tray).

Mechanical Characteristics (Connectivity):

Storage Temperature Range	-40°C To +85°C
Installation Temperature Range	0°C To +70°C
Operating Temperature Range	0°C To +70°C

Applicable Specifications and Agency Compliance (Overall):

Applicable Standards & Environmental Programs:	
EU Directive 2002/95/EC (RoHS)	Yes
EU RoHS Compliance Date (mm/dd/yyyy)	01/01/2006
MII Order #39 (China RoHS)	EUP 50
Safety Listing	Bi-national Standard Listed
Suitability: Suitability - Indoor	Yes

Transmission Characteristics (Connectivity):

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Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
TRANSMETER	-	-	-	-	-	-
OMA output power	OMAtx	-4.000	-	3.000	dBm	-
Output optical power	-	-4.000	-	2.400	dBm	-
Laser off power	-	-	-	-30	dBm	-
Extinction ratio	-	3	-	-	dB	-
Transmitter dispersion penalty	TDP	-	-	3.900	dB	-
Center Wavelength	-	840	850	860	nm	-
RMS spectral width	-	-	-	0.650	nm	-
Relative intensity noise	RIN	-	-	-128	dB/Hz	-
Optical Return Loss Tolerance	-	-	-	12	dB	-
Encircled Flux	-	-	-	-	-	Compliant with TIA 492AAAC
Transmitter output Eye Mask	-	-	-	-	-	Compliant with IEEE 802.3ba-2010
RECEIVER	-	-	-	-	-	-
Receiver sensitivity (OMA)	-	-	-	-11.100	dBm	-
Stressed sensitivity (OMA)	-	-	-	-7.500	dBm	-
Receiver power overload	-	-1	-	-	dBm	-
TX-Fault output voltage-high	-	2.000	-	Vcc	V	-
Reflectance	-	-	-	-12	dB	-
Center Wavelength	-	840	-	860	nm	-
LOS De-Assert Power	LOS_PA	-	-	-12	dBm	-
LOS Assert Power	LOS_PD	-30	-	-	dBm	-
LOS Hysteresis	HYS_LOS	0.500	-	-	dB	-
Vertical eye closure penalty	VECP	3.500	-	-	dB	-

Electrical Characteristics (Overall):

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Data rate	-	1.000	10.313	10.520	Gb/s	per Lane
Power supply voltage	Vcc	3.135	3.300	3.465	V	-
Power supply current	Icc	-	220	330	mA	TX+RX
Power consumption	-	-	700	1000	mW	TX+RX
Output rise time (20%-80%)	-	24	28	-	ps	-
Output fall time (20%-80%)	-	24	28	-	ps	-
Bit error rate	BER	-	-	1E-15	-	-
Differential data input voltage	-	300	-	800	mVpp	Internal AC coupled
Differential input impedance	-	90	100	110	Ohm	-
TX-Disable input voltage-low	-	0	-	0.800	V	-
TX-Disable input voltage-high	-	2.000	-	Vcc	V	-
TX-Fault output voltage-low	-	0	-	0.800	V	-
TX-Fault output voltage-high	-	2.000	-	Vcc	V	-
Differential data output voltage	-	300	-	800	mV	Internal AC coupled
Differential output impedance	-	90	100	110	Ohm	-
LOS-asserted output voltage-low	-	0	-	0.800	V	-
LOS-deasserted output voltage-high	-	2.000	-	Vcc	V	-
TX Input differential S-parameter	SDD11	-	-	-	-	Compliant IEEE 802.3ba-2010
RX Output differential S-parameter	SDD22	-	-	-	-	Compliant IEEE 802.3ba-2010
TX J2 jitter tolerance	-	0.170	-	-	Unit Interval (UI)	TP1a Compliant IEEE 802.3ba-2010
TX J9 jitter tolerance	-	0.290	-	-	Unit Interval (UI)	TP1a Compliant IEEE 802.3ba-2010
TX eye Mask Coordinates X1, X2	-	-	0.11, 0.31	-	Unit Interval (UI)	TP1a
TX eye Mask Coordinates Y1, Y2	-	-	95, 350	-	mV	TP1a Hit Ratio = 5E-5
RX J2 jitter Output	-	-	-	0.420	Unit Interval (UI)	TP4 Compliant IEEE 802.3ba-2010
RX J9 jitter Output	-	-	-	0.650	Unit Interval (UI)	TP4 Compliant IEEE 802.3ba-2010
RX eye Mask Coordinates X1, X2	-	-	0.29, 0.5	-	Unit Interval (UI)	TP4
RX eye Mask Coordinates Y1, Y2	-	-	150, 425	-	mV	TP4 Hit Ratio = 5E-5

Notes (Overall):

Notes Conformance: SFF-8436, IEEE 802.3ba-2010.

Notes (Cont'd.) Class 1 eye safety per requirements of IEC 60825-1 / CDRH

Product Family:

Product List

Belden P/N	Description
MQ+40G100MS-S1	QSFP+ SR4 Optical Transceiver (1 unit per bag)
MQ+40G100MS-B10	QSFP+ SR4 Optical Transceiver (10 units per tray)

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