

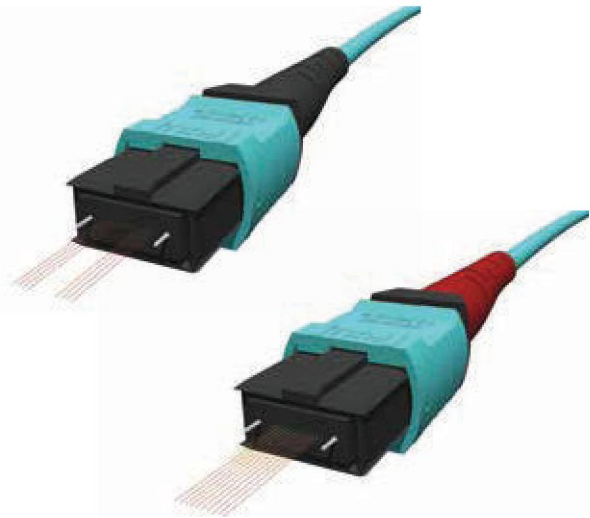
# MPO ASSEMBLIES FOR 40G/100G

MPO Assemblies that specially designed for laser optimized 40G/100G structured cabling system that employs parallel optics transmission.

For 40G Ethernet, 4 Tx and 4 Rx fibers are transmitted at 10G for an aggregate of 40G by utilizing a 12-Fiber MPO connector.

Likewise, a 100G Ethernet is to use 10 Tx and 10 Rx fibers that are transmitted at 10G for an aggregate of 100G by using a 24-Fiber MPO connector.

Alternatively, 100G can use 2pcs of 12-Fiber MPO Connectors. However, the single port 24-Fiber connector is the preferred approach.



## KEY FEATURES :

- Most cost effective solution for getting 40G/100G transmissions for short reach systems
- Pre-terminated 12-Fiber or 24-Fiber MPO solutions offered in customized configurations
- Specifically terminated with unique fiber channeling to cater for 40G/100G Ethernet
- High Density solution within tiniest physical space
- To support high bandwidth applications

## Specifications

<b>Unique Fiber Channeling for 40G/100G Ethernet</b>	40G on 12-Fiber MPO connector
	Channel #1~4 for Rx
	Channel #9~12 for Tx
	Channel #5~8 unused
	100G on 24-Fiber MPO connector
	Channel #2~11 for Tx
	Channel #14~23 for Rx
	Channel #1, 12, 13, 24 unused
	100G on 2pcs of 12-Fiber MPO connector
	Channel #2~11 for Tx to the first connector
	Channel #2~11 for Rx to the second connector
	Channel #1 & #12 unused for both connectors
<b>Cable Structure</b>	Mini-core Cable
<b>Cable Jacket Colors</b>	Aqua - Multimode (OM3)
	Heather Violet - Multimode (OM4)
<b>Connector Type Options</b>	Pinned MPO (Male)
	Non-pinned MPO (Female)
<b>Available Fiber Mode Options</b>	Multimode (OM3, OM4)
<b>Jacket Material Options</b>	Riser (OFNR)
	Low Smoke Zero Halogen (LSZH)
	Plenum (OFNP)

# MPO ASSEMBLIES FOR 40G/100G

## Optical Performance

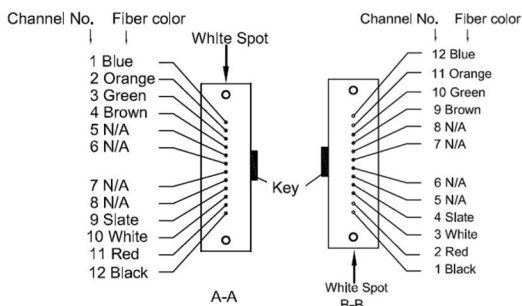
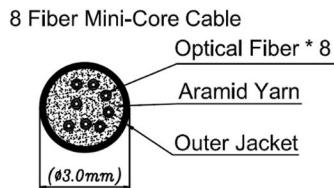
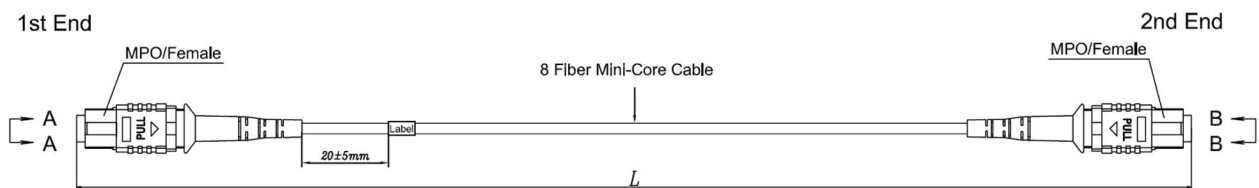
Type	Standard MPO	Low Loss MPO
<b>Fiber Mode</b>	Multimode	Multimode
	@850nm	@850nm
<b>Insertion Loss</b>	≤ 0.6dB	≤ 0.35dB
	Typical 0.25 dB	Typical 0.10 dB
<b>Return Loss</b>	≥ 20dB	≥ 20dB

\* Customized optical performance is available upon request, please contact Olabs team for details.

## 40G MPO ASSEMBLIES

40G on 12-Fiber MPO connector

Channels #1~4 for Rx  
 Channels #9~12 for Tx  
 Channels #5~8 unused



40G: 1 x 12F MPO Fiber Chart

Fiber colour	MPO	MPO
Blue	Rx	Tx
Orange	Rx	Tx
Green	Rx	Tx
Brown	Rx	Tx
Not used	N/A	N/A
Not used	N/A	N/A
Not used	N/A	N/A
Not used	N/A	N/A
Slate	Tx	Rx
White	Tx	Rx
Red	Tx	Rx
Black	Tx	Rx

40G 12-Fiber MPO connector - Channel 1-4 are Receive (Rx)  
 - Channel 9-12 are Transmit (Tx)  
 - Channel 5-8 are not used

**Item Description:**

40G MPO Assembly, 12F MPO-Female to 12F MPO-Female, 8-F Mini-Core Cable, OM3, T1 Channeling, Riser, No Pulling Eye, Standard Loss, Length 10 Meters

**Made-to-Order Part No:**

MLG1G108M3T1R4-M010D

**!** PLEASE TURN TO THE LAST PAGE FOR THE "Made-to-Order Part Numbering Chart".

# MPO ASSEMBLIES FOR 40G/100G

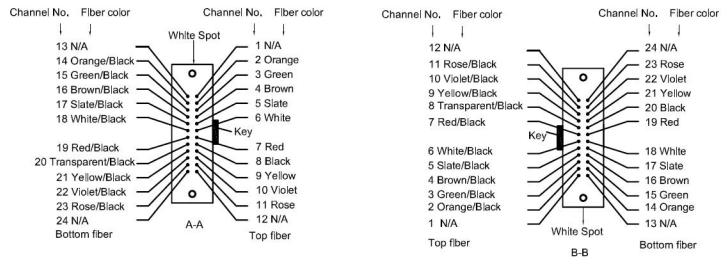
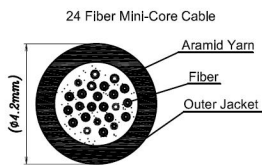
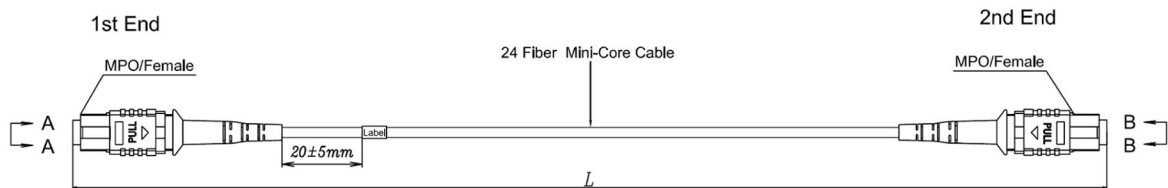
## 100G MPO ASSEMBLIES

100G on 24-Fiber MPO connector

Channel #2~11 for Tx

Channel #14~23 for Rx

Channel #1, 12, 13, 24 unused



100G: 1 x 24F MPO Fiber Chart

Fiber colour	MPO Top Row	MPO Bottom Row
Not used	N/A	N/A
Orange	Tx	Rx
Green	Tx	Rx
Brown	Tx	Rx
Grey	Tx	Rx
White	Tx	Rx
Red	Tx	Rx
Black	Tx	Rx
Yellow	Tx	Rx
Violet	Tx	Rx
Rose	Tx	Rx
Not used	N/A	N/A

100G 1 x 24-Fiber MPO connector - Channel 2 to 11 are Transmit (Tx) for the top row  
 - Channel 14 to 23 are Receive (Rx) for the bottom row  
 - Channel 1, 12, 23 & 24 are not used

**Item Description:**

100G MPO Assembly, 24F MPO-Female to 24F MPO-Female, 24-F Mini-Core Cable, OM3, T2 Channeling, Riser, No Pulling Eye, Standard Loss, Length 20 Meters

**Made-to-Order Part No:**

MLG5G524M3T2R4-M020D



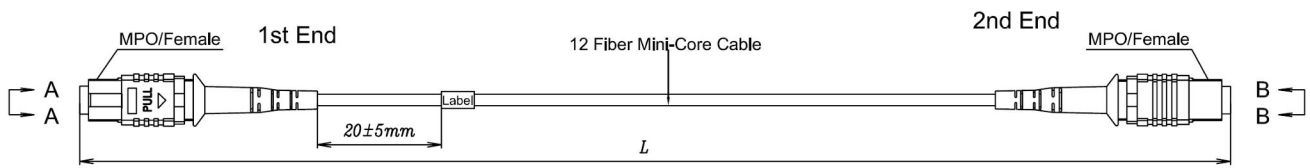
PLEASE TURN TO THE LAST PAGE FOR THE "Made-to-Order Part Numbering Chart".

# MPO ASSEMBLIES FOR 40G/100G

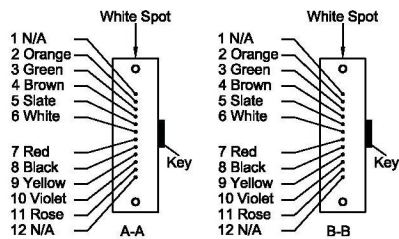
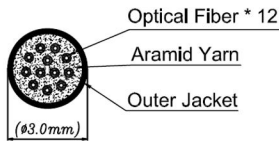
## 100G MPO ASSEMBLIES

100G on 2pcs of 12-Fiber MPO connector, 2pcs of 12-Fiber MPO Trunk Assemblies with same specifications are used

Channel #2~11 for Tx to the first connector  
 Channel #2~11 for Rx to the second connector  
 Channel #1 & #12 unused for both connectors



12 Fiber Mini-Core Cable



100G: 2 x 12F MPO Fiber Chart

Fiber colour	MPO	MPO
Not used	N/A	N/A
Orange	Tx	Rx
Green	Tx	Rx
Brown	Tx	Rx
Grey	Tx	Rx
White	Tx	Rx
Red	Tx	Rx
Black	Tx	Rx
Yellow	Tx	Rx
Violet	Tx	Rx
Rose	Tx	Rx
Not used	N/A	N/A

100G 2x12-Fiber MPO connector - Channel 2 to 11 are Transmit (Tx) to the first connector  
 - Channel 2 to 11 are Receive (Rx) to the second connector  
 - Channel 1 & 12 are not used for both connectors

**Item Description:**

MPO Assembly, 12F MPO Female to 12F MPO-Male, 12-F Mini-Core Cable, OM3, Polarity A, Riser, No Pulling Eye, Standard Loss, Length 20 Meters

**Made-to-Order Part No:**

MAP1P1012M3AR4-M020D

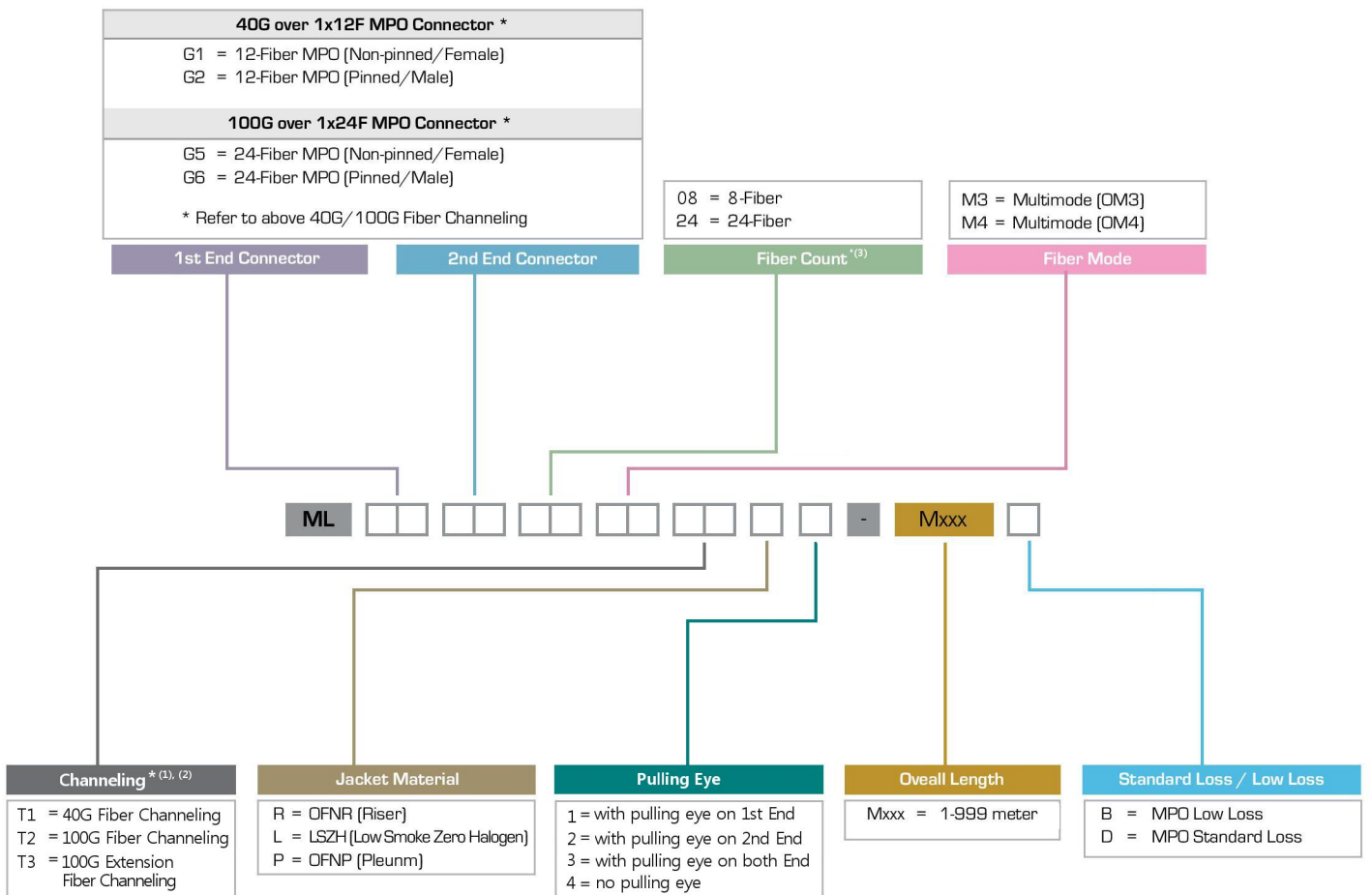


PLEASE REFER TO THE "MPO TRUNK ASSEMBLIES" FOR THE "Made-to-Order Part Numbering Chart".

# MPO ASSEMBLIES FOR 40G/100G

## 40G/100G MPO ASSEMBLIES

### Made-To-Order Part Numbering Chart



(1) The fiber channeling of our 40G/100G solution will be illustrated in Olabs' drawings, please contact us for more details.  
 (2) The MPO trunk assemblies in our 40G/100G solution are connected via key-up to key-up MPO adapter (Type-B), please contact us if different adapter orientation is required.  
 (3) Please refer to the "MPO Trunk Assemblies" leaflet if MPO assemblies with 12-Fiber cables or other fiber counts are needed.