

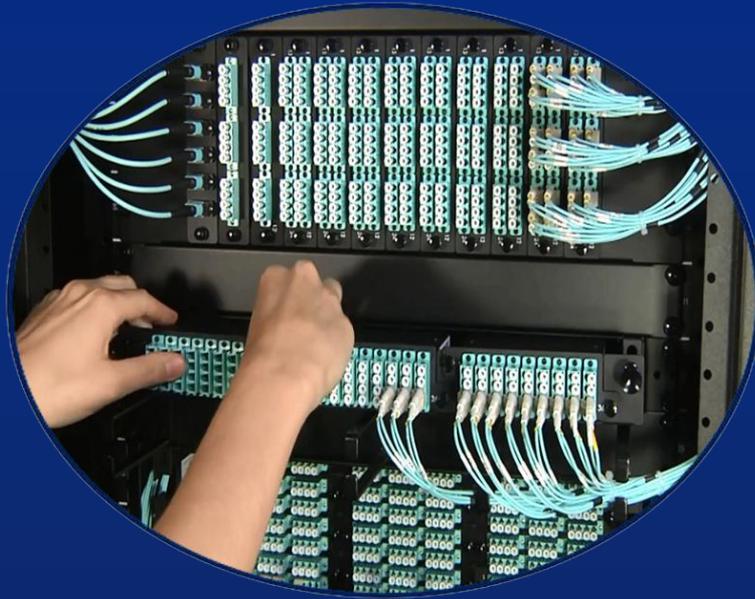
Your Trusted Multiple Fibers Solutions Partner Here

RELATIVE MTP® MPO Assemblies Guide

Easy "Plug & Paly" Installations

MTP® Cabling System ■ For 40G/100G Data Center Installation

FAST / SAFE / STABLE



MTP® is a registered trademark of US Conec, Ltd

MTP® Assemblies For 40G/100G

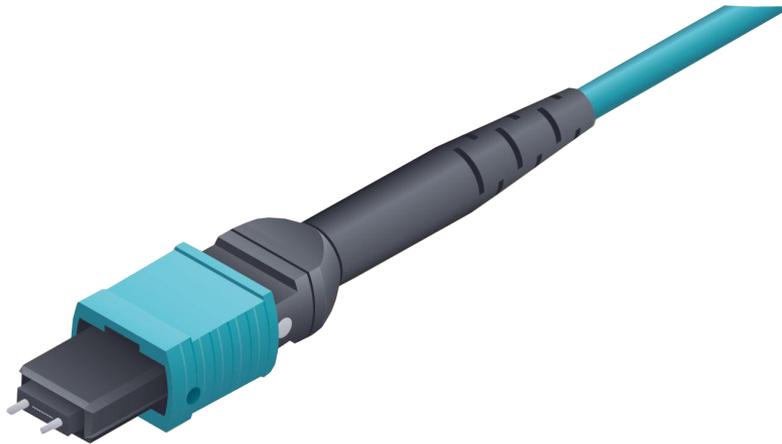
PUNO MTP® Assemblies that specially designed for laser optimized 40G/100G structured cabling system that employs parallel optics transmission. For 40G Ethernet, 4Tx and 4 Rx fibers are transmitted at 10G for an aggregate of 40G by utilizing a 12-fiber MTP® connector.

Likewise, a 100G Ethernet is to use 10 Tx and 10 Rx fibers that are transmitted at 10G for an aggregated of 100G by using a 24-fiber MTP® connector.

Alternatively, 100G can use 2pcs of 12-fiber MTP® connector. However, the single port 24-fiber connector is the preferred approach.

Keyed Characteristic:

- ▶ Most cost effective solution for getting 40G/100G transmissions for short reach systems.
- ▶ Pre-terminated 12-fiber or 24-fiber MTP® 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.



Specification

| | |
|---|--|
| Unique Fiber Channeling for 40G/100G Ethernet | 40G on 12-fiber MTP® Connector Channel #1~4 for Rx Channel #9~12 for Tx Channel #5~8 unused |
| | 100G on 24-fiber MTP® Connector Channel #2~11 for Rx Channel #14~23 for Tx Channel #1,12,13,24 unused |
| | 100G on 2pcs of 12-fiber MTP® Connector Channel #2~11 for Tx to the firstly connector Channel #2~11 for Rx to the second connector Channel #1 & #12 unused for both end connector |
| Cable Structure | 12 or 24 Mini-fibers Cable |
| Cable Jacket Colors | Aqua - Multimode (OM3) |
| | Heather Voilet - Multimode (OM4) |
| Coonector Type Option | Pinned MTP® (Male Type) Non-pinned MTP® (Female Type) |
| Available Fiber Mode Options | Multimode (OM3 & OM4) |
| Jacket Material Options | Riser (OFNR) Low Smoke Zero Halogen (LSZH) Plenum (OFNP) |

Optical Performance

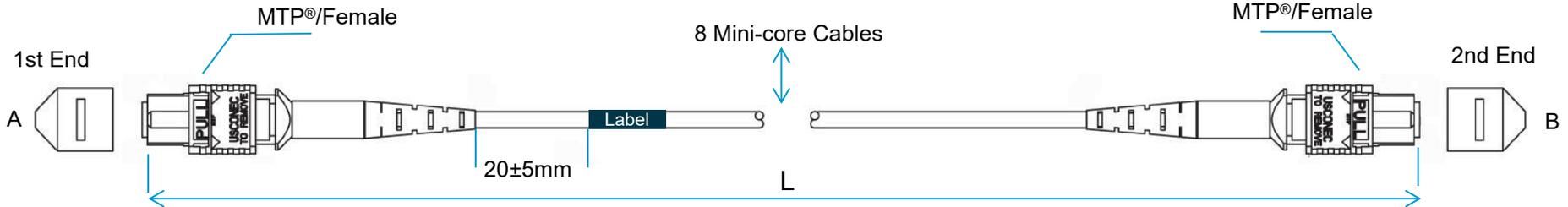
| Type | Standard MTP® Connector | Low Loss MTP® Connector |
|----------------|-------------------------|-------------------------|
| Fiber Mode | Multimode | Multimode |
| | @850nm | @850nm |
| Insertion Loss | ≤0.60dB | ≤0.35dB |
| | Typical 0.25dB | Typical 0.10dB |
| Return Loss | ≥20dB | ≥20dB |

※ Customized optical performance is available upon request, please contact **PUNO** team for more details.

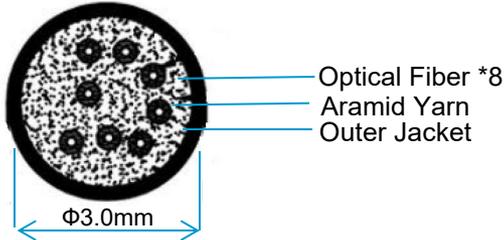
40G MTP® Assemblies

40G on 12-fiber MTP® Connector

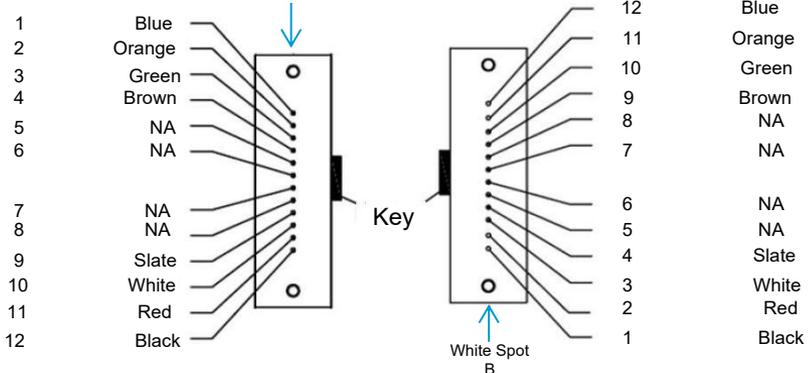
Channels #1~4 for Rx
 Channels #9~12 for Tx
 Channels #5~8 unused



8-Fiber Mini-core Cables



Channel No. Fiber Color



40G: 1X12F MTP Fiber Chart

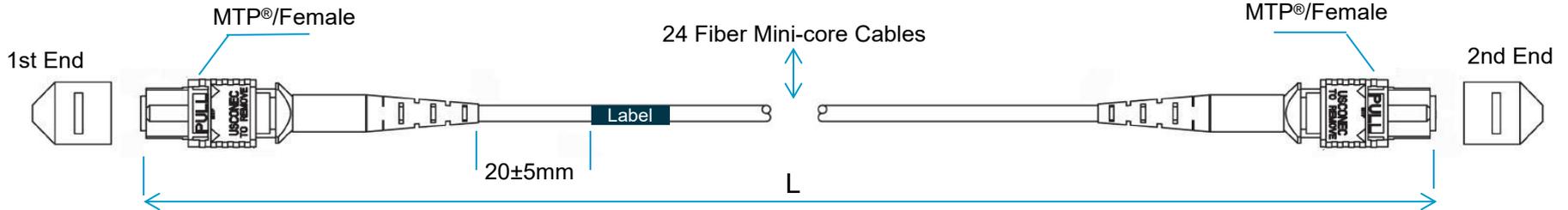
| Fiber Color | MTP® | | MTP® |
|-------------|------|-------|------|
| Blue | Rx | ← | Tx |
| Orange | Rx | ← | Tx |
| Green | Rx | ← | Tx |
| Brown | Rx | ← | Tx |
| Not Used | NA | | NA |
| Not Used | NA | | NA |
| Not Used | NA | | NA |
| Not Used | NA | | NA |
| Slate | Tx | → | Rx |
| White | Tx | → | Rx |
| Red | Tx | → | Rx |
| Black | Tx | → | Rx |

40G 12-Fiber MTP Connector: - Channel 1-4 are Receive (Rx)
 - Channel 9-12 are Transmit (Tx)
 - Channel 5-8 are Not Used

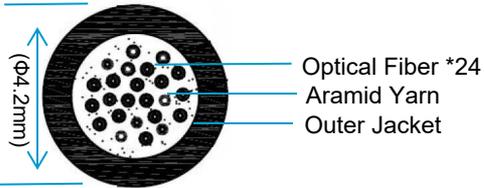
100G MTP® Assemblies

100G on 24-fiber MTP® Connector

Channels #2~11 for Rx
 Channels #14~23 for Tx
 Channels #1,12,13,24 unused

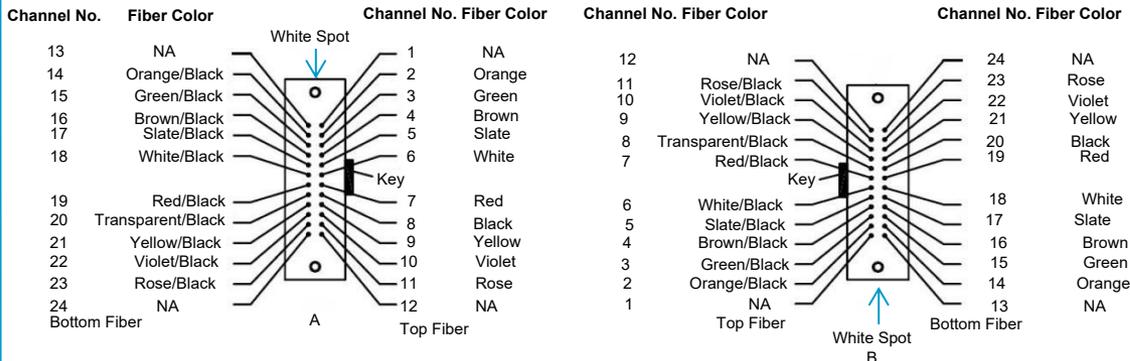


24-Fiber Mini-core Cables



| 100G: 1X24F MTP Fiber Chart | | | |
|-----------------------------|-------------|-------|----------------|
| Fiber Color | MTP Top Row | | MTP Bottom Row |
| Not Used | NA | | NA |
| 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 | NA | | NA |

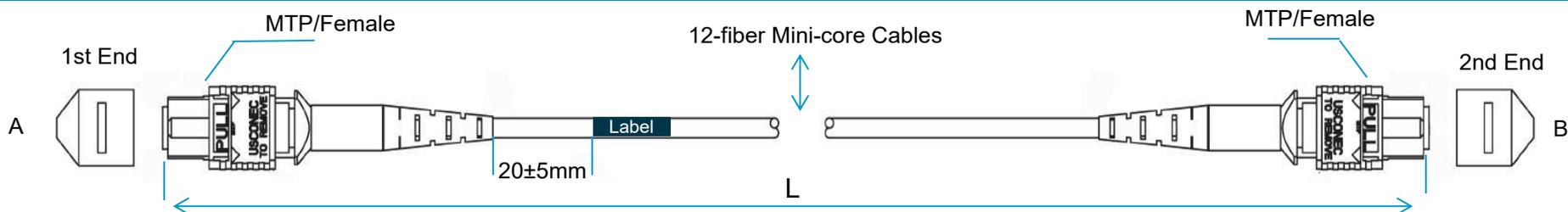
100G 24-Fiber MTP Connector: -Channel 2-11 are Transmit (Tx) For The Top Row
 -Channel 14-23 are Receive(Rx) For The Bottom Row
 -Channel 1,13,23&24 are Not Used



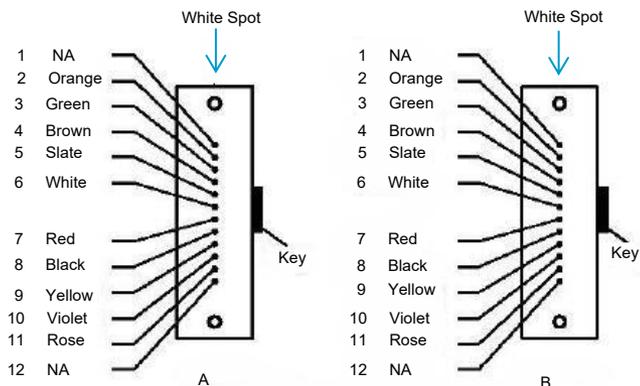
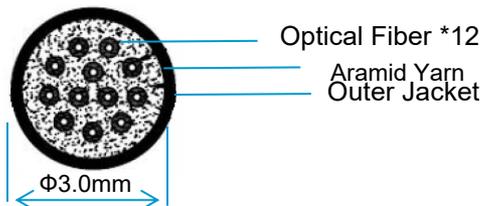
100G MTP® Assemblies

100G on 2pcs of 12-fiber MTP® Connector, 2pcs of 12-fiber MTP® Trunk Assemblies with same specifications are used

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



12-Fiber Mini-core Cables



100G: 2X12F MTP Fiber Chart

| Fiber Color | MTP Top Row | | MTP Bottom Row |
|-------------|-------------|-------|----------------|
| Not Used | NA | | NA |
| 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 | NA | | NA |

100G 2X12-Fiber MTP Connector: -Channel 2-11 are Transmit (Tx) For The First Connector
 -Channel 2-11 are Receive(Rx) For The Second Connector
 -Channel 1&12 are Not Used for both connectors

MTP® Assemblies For 40G/100G

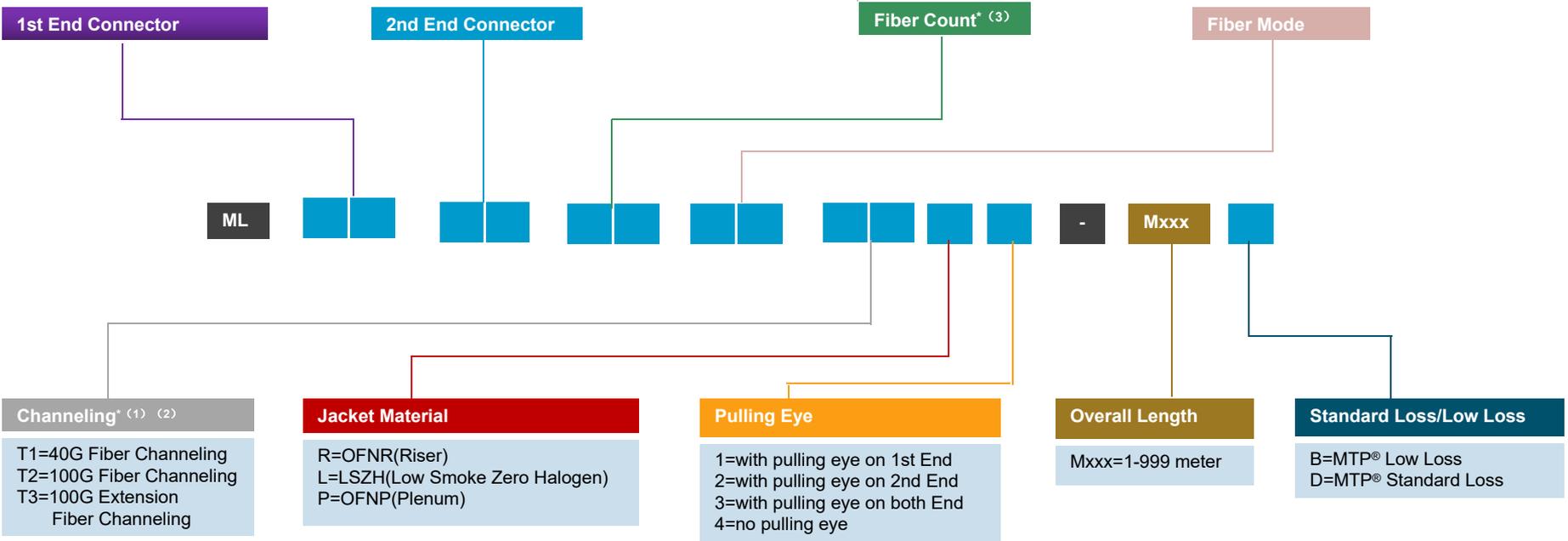
Made-to-Order Part Numbering

| |
|---|
| 40G over 1x12F MTP® Connector* |
| G1=12-Fiber MTP®(Non-pinned/Female) G2=12-Fiber MTP®(Pinned/Male) |
| 100G over 1x24F MTP Connector* |
| G5=24-Fiber MTP®(Non-pinned/Female) G6=24-Fiber MTP®(Pinned/Male) *Refer to above 40G/100G Fiber Channeling |

| | |
|--|---|
| Item Description: MTP® Assembly, 12F MTP® Female to 12F MTP®-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 |
|--|---|

08=8-Fiber
24=24-Fiber

M3=Multimode(OM3)
M4=Multimode(OM4)



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

Technical Information

MTP® Connector

| Connector Type | IL Average | IL Maximum | Return Loss |
|-----------------|------------|------------|-------------|
| MTP® Elite (MM) | 0.25db | 0.35db | > 20db |
| MTP® (MM) | 0.35db | 0.65db | > 20db |
| MTP®Elite (SM) | 0.25db | 0.35db | > 55db |
| MTP® (SM) | 0.35db | 0.75db | > 55db |

Generic Connector

| Fiber Type | Singlemode | | Multimode |
|------------------------|---------------|-------|-----------|
| Parameter | UPC | APC | UPC |
| Insertion Loss Maximum | <0.30dB | | |
| Return Loss | >55dB | >60dB | >20dB |
| Durability | 1000 Matings | | |
| Operating Temperature | -40°C to 80°C | | |
| Test Wavelength | 1310nm | | 850nm |

Recommended Buffer Fiber and Color-coded Connectors

| Cable Type | Single-mode MTP® Elite® Connector | Single-mode MTP® Standard Connector | Multimode MTP® Elite® Connector | Multimode MTP® Standard Connector |
|---------------------|---|--|---|---|
| Bare Ribbon |  |  |  |  |
| Flat ribbon Cordage | | | | |
| Cable Ø 3.0mm | | | | |
| Cable Ø 4.5mm | | | | |
| Cable Ø 5.0mm | <u>Mustard Color</u> | <u>Blue Color</u> | <u>Aqua Color</u> | <u>Beige Color</u> |

Notes:

Information, specifications and product offerings in this catalogue are subject to change without notice. Product photos and drawings are provided for the convenience of our customers and for reference only.

MTP® Trunk Cable

Products Overviews:

Pre-connector MTP® Trunk Cable Assemblies are made up of 12, 24, 48 fiber LSZH jacketed micro cables terminated at both ends with MTP® Connectors (without pins). These are used as backbone or horizontal cable interconnections. These plug and play solutions with micro core cable maximize bend radius and minimize cable weight and size. MTP® Trunk Cable are factory pre-terminated, tested and packed along with the test reports. These assemblies are available in OM3, OM4 and SM fiber. Standard lengths of 5, 10, 25 meters are available. Custom lengths are also available on request. The MTP® Trunk cables are packed as coils in lengths up to 50m long and on reels. OM3 and OM4 cables are available in aqua and SM cables are in yellow color.

Keyed Characteristics:

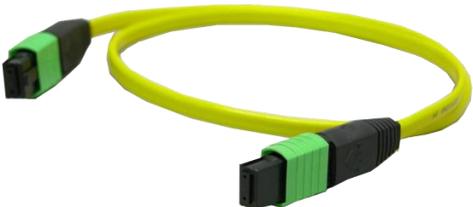
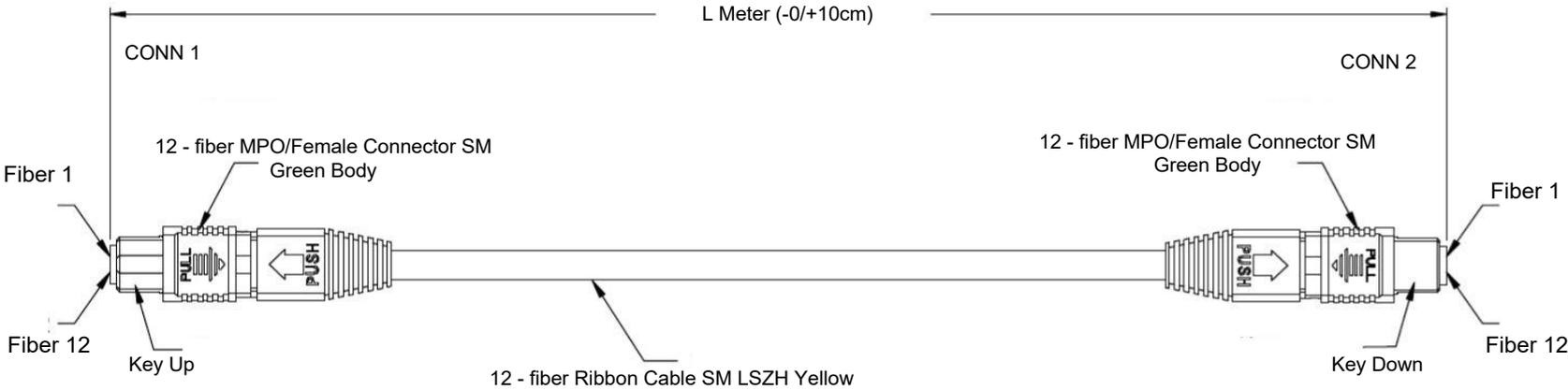
- High Performance in IL & RL;
- Available in 8, 12 and 24 fiber;
- Precise dimension;
- 100% in-house tested;
- Customized furcation length to cater for different installation situations;
- Single-fiber connector interface available in SC & LC in forms of Simplex or Duplex channel;
- Support higher speed Ethernet and Fibre Channel applications (OM3, OM4 and SM fibers).

Use / Application:

- Data Centre Infrastructure;
- Storage Area Network-Fiber Channel;
- Emerging 40 & 100Gps Protocols.



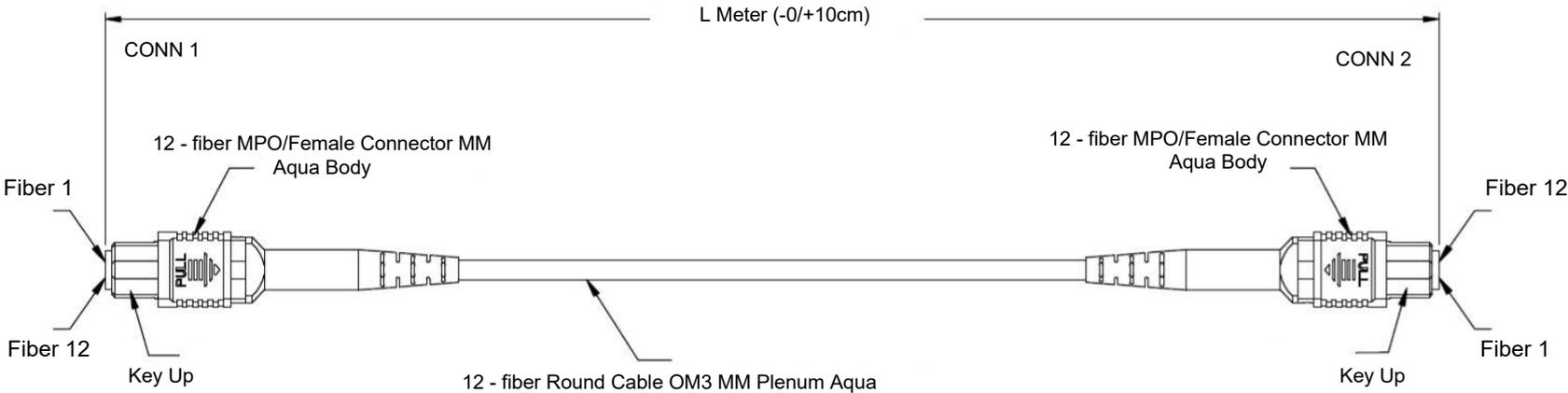
Assembly Structure Illustration



| CONN 1 Fiber Number | Buffer Color | CONN 2 Fiber Number |
|---------------------------|-----------------|---------------------------|
| Fiber 1 | Blue | Fiber 1 |
| Fiber 2 | Orange | Fiber 2 |
| Fiber 3 | Green | Fiber 3 |
| Fiber 4 | Brown | Fiber 4 |
| Fiber 5 | Grey | Fiber 5 |
| Fiber 6 | White | Fiber 6 |
| Fiber 7 | Red | Fiber 7 |
| Fiber 8 | Black | Fiber 8 |
| Fiber 9 | Yellow | Fiber 9 |
| Fiber 10 | Violet | Fiber 10 |
| Fiber 11 | Rose | Fiber 11 |
| Fiber 12 | Aqua | Fiber 12 |

| | | |
|-----------------|-----------|--|
| | | PUNO OPTIC TECHNOLOGY |
| REV. | A | |
| MATERIAL | | PRODUCTS NAME 12 - fiber MPO/F-MPO/F SM Ribbon Cable LSZH Yellow L Meter(Up - Down) |
| SCALE | - | |
| DRAWN | JERRY LEE | DRAWING TITLE MPO Ribbon |
| APPROVED | C.J.CHEN | DRAWING NO. 1783-01 |

Assembly Structure Illustration

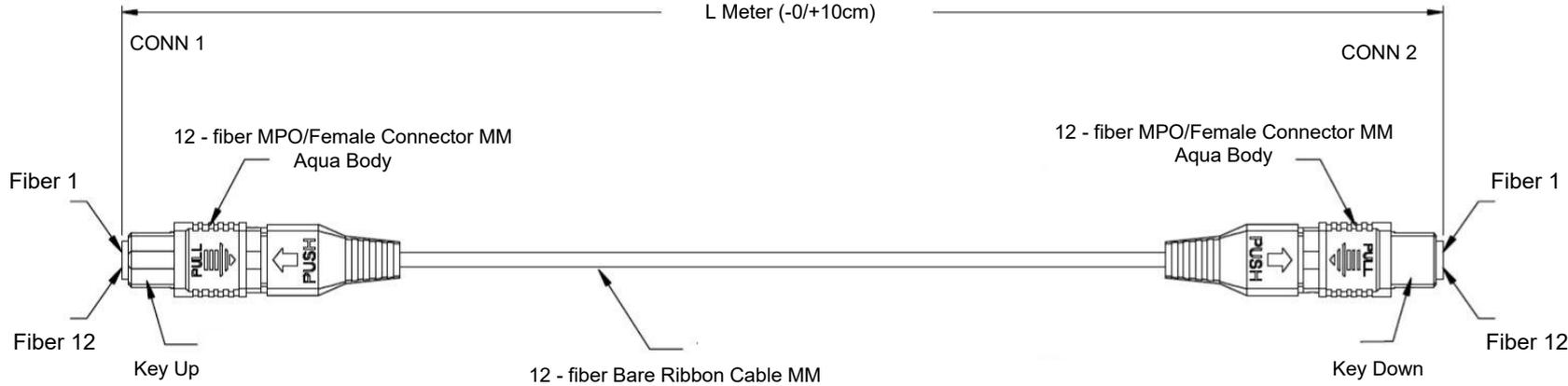


| CONN 1 Fiber Number | Buffer Color | CONN 2 Fiber Number |
|---------------------------|-----------------|---------------------------|
| Fiber 1 | Blue | Fiber 12 |
| Fiber 2 | Orange | Fiber 11 |
| Fiber 3 | Green | Fiber 10 |
| Fiber 4 | Brown | Fiber 9 |
| Fiber 5 | Grey | Fiber 8 |
| Fiber 6 | White | Fiber 7 |
| Fiber 7 | Red | Fiber 6 |
| Fiber 8 | Black | Fiber 5 |
| Fiber 9 | Yellow | Fiber 4 |
| Fiber 10 | Violet | Fiber 3 |
| Fiber 11 | Rose | Fiber 2 |
| Fiber 12 | Aqua | Fiber 1 |



| | | |
|-----------------|-----------|---|
| | | PUNO OPTIC TECHNOLOGY |
| REV. | A | |
| MATERIAL | | PRODUCTS NAME 12 - fiber MPO/F-MPO/F MM Round Cable OFNP Aqua L Meter(Up - Up) |
| SCALE | - | |
| DRAWN | JERRY LEE | DRAWING TITLE MPO Round |
| APPROVED | C.J.CHEN | DRAWING NO. 1783-04 |

Assembly Structure Illustration



| CONN 1 Fiber Number | Buffer Color | CONN 2 Fiber Number |
|---------------------------|-----------------|---------------------------|
| Fiber 1 | Blue | Fiber 1 |
| Fiber 2 | Orange | Fiber 2 |
| Fiber 3 | Green | Fiber 3 |
| Fiber 4 | Brown | Fiber 4 |
| Fiber 5 | Grey | Fiber 5 |
| Fiber 6 | White | Fiber 6 |
| Fiber 7 | Red | Fiber 7 |
| Fiber 8 | Black | Fiber 8 |
| Fiber 9 | Yellow | Fiber 9 |
| Fiber 10 | Violet | Fiber 10 |
| Fiber 11 | Rose | Fiber 11 |
| Fiber 12 | Aqua | Fiber 12 |

| | | |
|----------|-----------|--|
| | | PUNO OPTIC TECHNOLOGY |
| REV. | A | |
| MATERIAL | | PRODUCTS NAME 12 - fiber MPO/F-MPO/F MM Bare Ribbon Cable L Meter(Up - Down) |
| SCALE | - | |
| DRAWN | JERRY LEE | DRAWING TITLE MPO Bare Ribbon |
| APPROVED | C.J.CHEN | DRAWING NO. 1763-04 |

MTP® Fan-out Hydra Cable

Products Overview:

Pre-connector MTP® Fan-Out Hydra Cable Assemblies are designed for high density applications which require high performance and speedy installation without onsite termination. MTP® Fan-Out Hydra Cable Assembly is made up of 12 LSZH jacketed cable terminated at one end in MTP® connectors, through a bifurcation unit, to SC or LC connectors terminated on 2mm OD simplex cables. These are used to connect equipment in racks to MTP® terminated backbone cables. MTP® fan-out cables are numbered for full traceability. Available in 12 core configuration, these space saving assemblies comes with either MTP® Male or MTP® Female Connectors on one end and LC or SC Connectors on the other end. They are available in OM3, OM4 or SM fiber in lengths of 5, 10, 25 meters, custom lengths are available on request.

Keyed Characteristics:

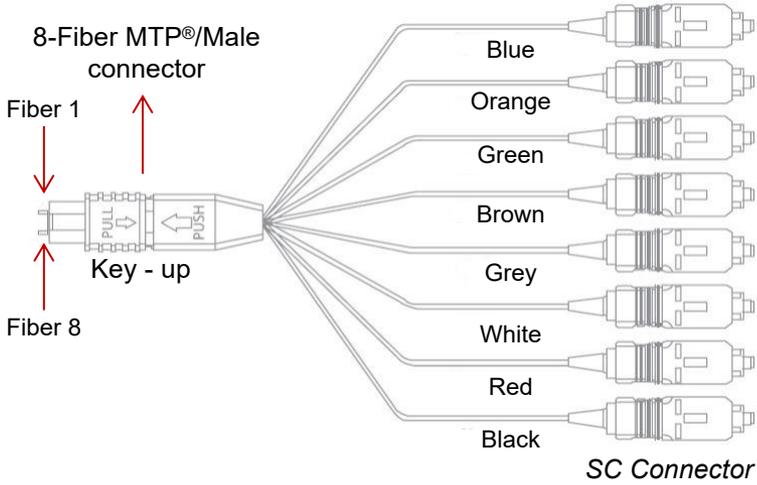
- High Performance in IL & RL;
- 8, 12 and 24 fiber connector terminations and assemblies;
- Ruggedized round cable, oval cable and bare ribbon options available;
- Economical solution for mass-termination of fiber;
- Color coded housings available to differentiate fiber type, polish type and/or connector grade;
- 100 % house tested;
- Support higher speed ethernet and fibre channel applications for OM3 ,OM4 & SM fibers.

Use / Application:

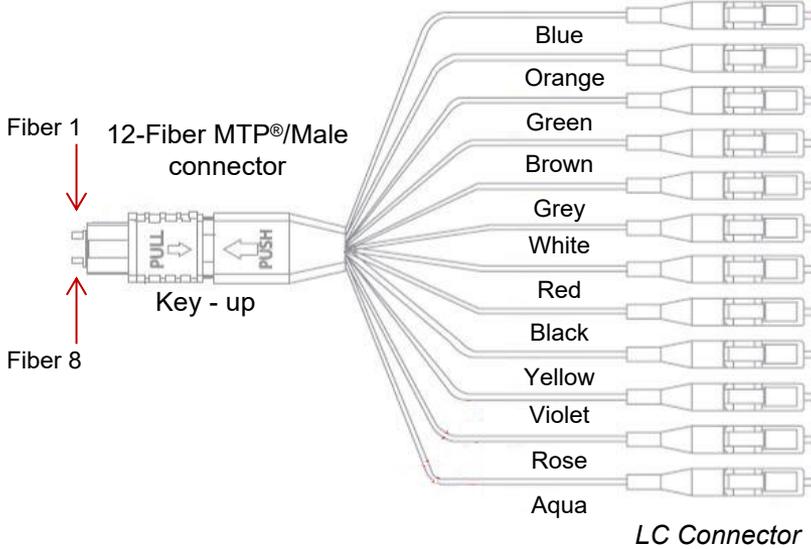
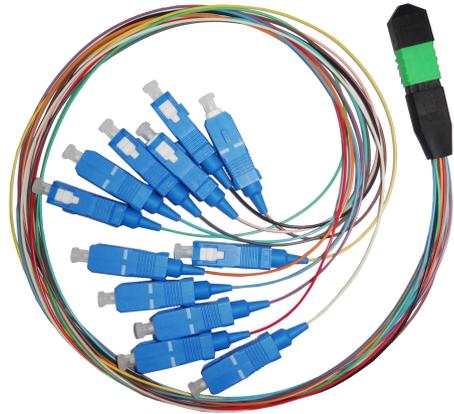
- Optical switching inter frame connections;
- High fiber density card edge access;
- Array trunk cables;
- Data center cabling.



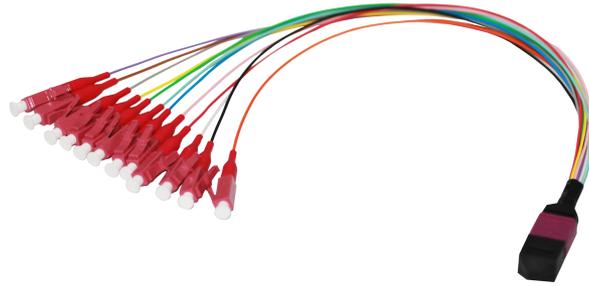
Assembly Structure Illustration



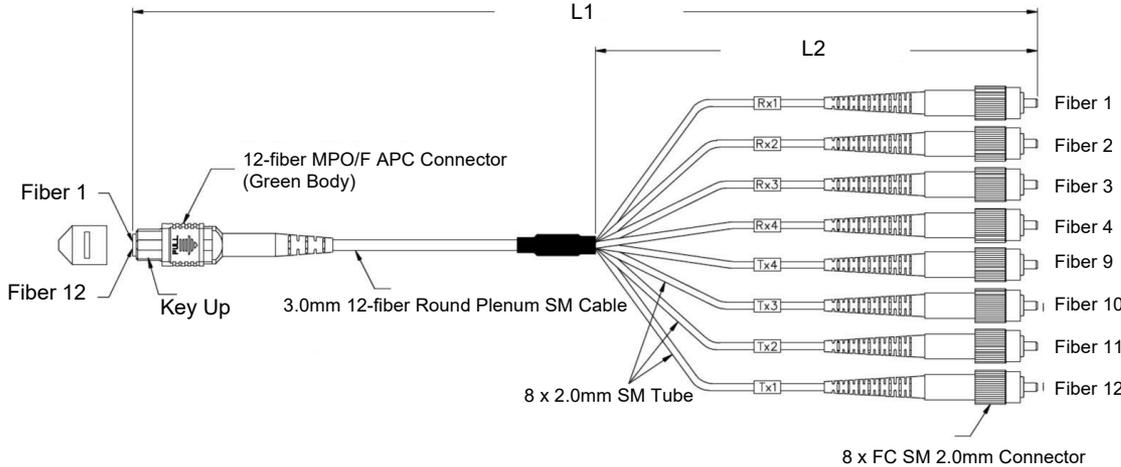
8*SC Connector 0.9mm



12*LC Connector 0.9mm



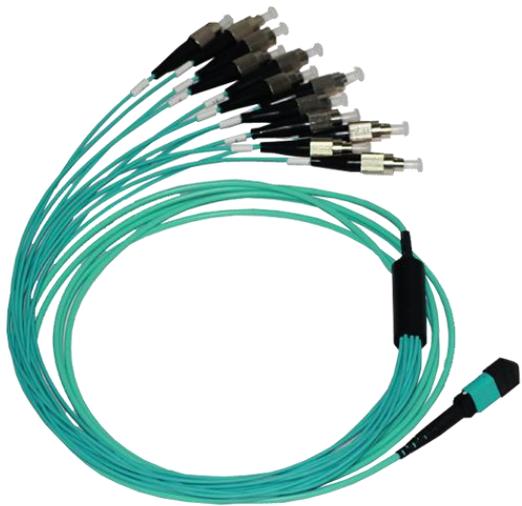
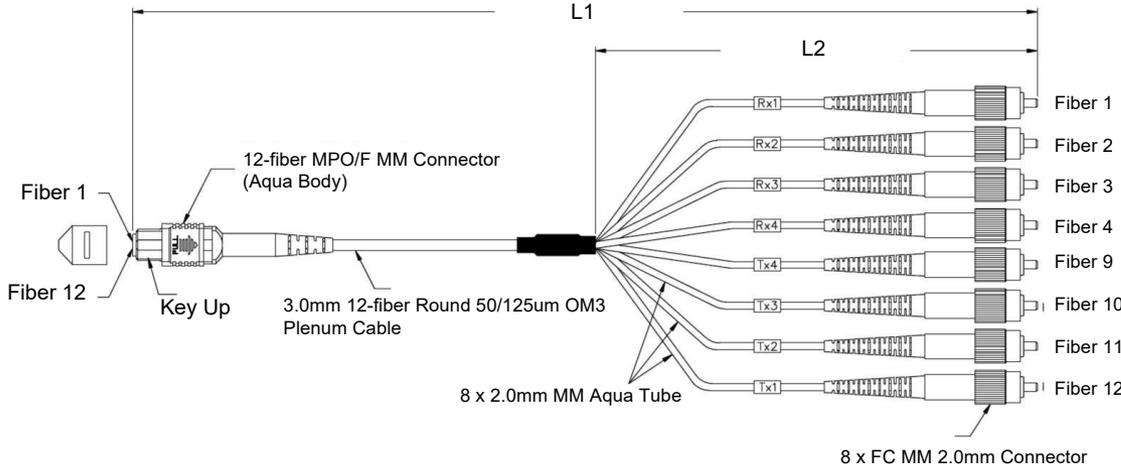
Assembly Structure Illustration



| Fiber Number | Buffer Color |
|--------------|--------------|
| Fiber 1 | Blue |
| Fiber 2 | Orange |
| Fiber 3 | Green |
| Fiber 4 | Brown |
| Fiber 5 | Unused |
| Fiber 6 | Unused |
| Fiber 7 | Unused |
| Fiber 8 | Unused |
| Fiber 9 | Yellow |
| Fiber 10 | Violet |
| Fiber 11 | Rose |
| Fiber 12 | Aqua |

| REV. | | A | PUNO OPTIC TECHNOLOGY |
|----------|-----------|---|-----------------------------------|
| MATERIAL | | | |
| SCALE | | - | DRAWING TITLE Round Cable Fan-out |
| DRAWN | JERRY LEE | | DRAWING NO. 1783-9 |
| APPROVED | C.J.CHEN | | |

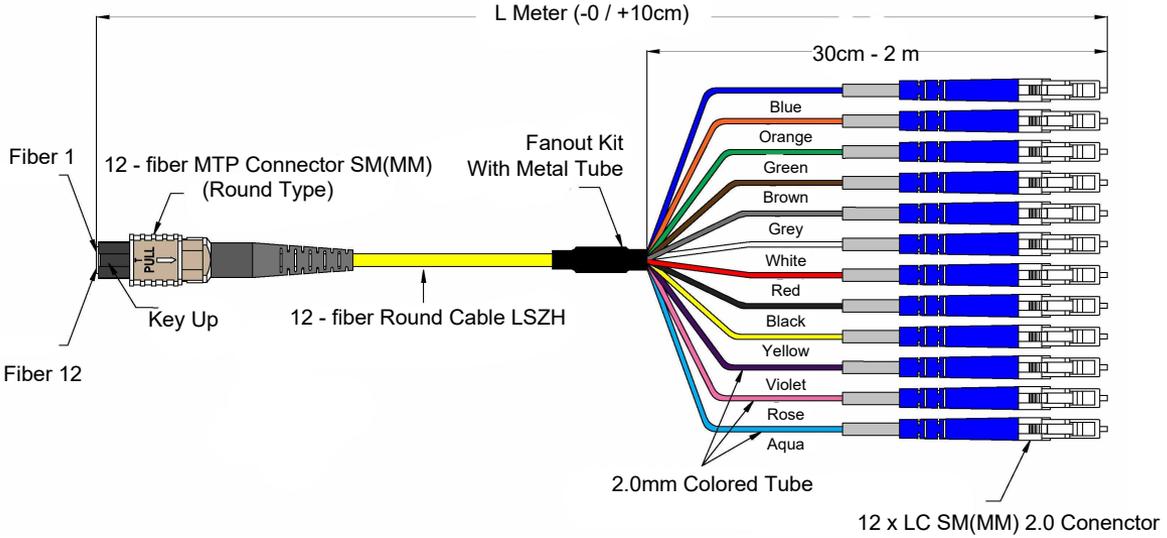
Assembly Structure Illustration



| Fiber Number | Buffer Color |
|--------------|--------------|
| Fiber 1 | Blue |
| Fiber 2 | Orange |
| Fiber 3 | Green |
| Fiber 4 | Brown |
| Fiber 5 | Unused |
| Fiber 6 | Unused |
| Fiber 7 | Unused |
| Fiber 8 | Unused |
| Fiber 9 | Yellow |
| Fiber 10 | Violet |
| Fiber 11 | Rose |
| Fiber 12 | Aqua |

| REV. | | A | PUNO OPTIC TECHNOLOGY |
|----------|--|-----------|-----------------------------------|
| MATERIAL | | | |
| SCALE | | - | DRAWING TITLE Round Cable Fan-out |
| DRAWN | | JERRY LEE | DRAWING NO. 1783-8 |
| APPROVED | | C.J.CHEN | |

Assembly Structure Illustration



| CONN 1 Fiber Number | Buffer Color | CONN 2 Fiber Number |
|------------------------|-----------------|------------------------|
| Fiber 1 | Blue | Fiber 1 |
| Fiber 2 | Orange | Fiber 2 |
| Fiber 3 | Green | Fiber 3 |
| Fiber 4 | Brown | Fiber 4 |
| Fiber 5 | Grey | Fiber 5 |
| Fiber 6 | White | Fiber 6 |
| Fiber 7 | Red | Fiber 7 |
| Fiber 8 | Black | Fiber 8 |
| Fiber 9 | Yellow | Fiber 9 |
| Fiber 10 | Violet | Fiber 10 |
| Fiber 11 | Rose | Fiber 11 |
| Fiber 12 | Aqua | Fiber 12 |

| | | |
|----------|-----------|--|
| | | PUNO OPTIC TECHNOLOGY |
| REV. | A | |
| MATERIAL | | PRODUCTS NAME 12 - fiber MPO/F-LC MM Round Cable LSZH Aqua Cable |
| SCALE | - | |
| DRAWN | JERRY LEE | DRAWING TITLE Round Cable Fan-out |
| APPROVED | C.J.CHEN | DRAWING NO. 1783-8 |

High Density Fiber Optic Patch Panel

Products Overview:

MTP® Patch Panels are scalable modular which are designed for high density Gigabit Ethernet Applications. They are used for terminating backbone cables at the Main Distribution Area (MDA) and Horizontal Distribution Area (HDA). MTP® Patch Panels are available with 1U and 4U, suitable for standard 19" racks. 1U MTP® Patch Panel can accommodate up to three MTP® Cassettes, giving a high connectivity of 72 LC fiber terminations in it. 4U MTP® Patch Panel can accommodate up to 12 MTP® Cassettes, resulting in a maximum of 288 LC terminations per panel.

Keyed Characteristics:

- Up to 12 x 24 fiber MTP® Cassettes;
- Multiple adaptor options available;
- Ruggedized round cable, oval cable and bare ribbon options available;
- Suitable for loose tube, distribution cable and MTP® Trunk Cable;
- Fits standard 19" rack.

Use / Application:

- Data Center Infrastructure;
- Ethernet, fiber channel, ATM, LAN, MAN and WAN.



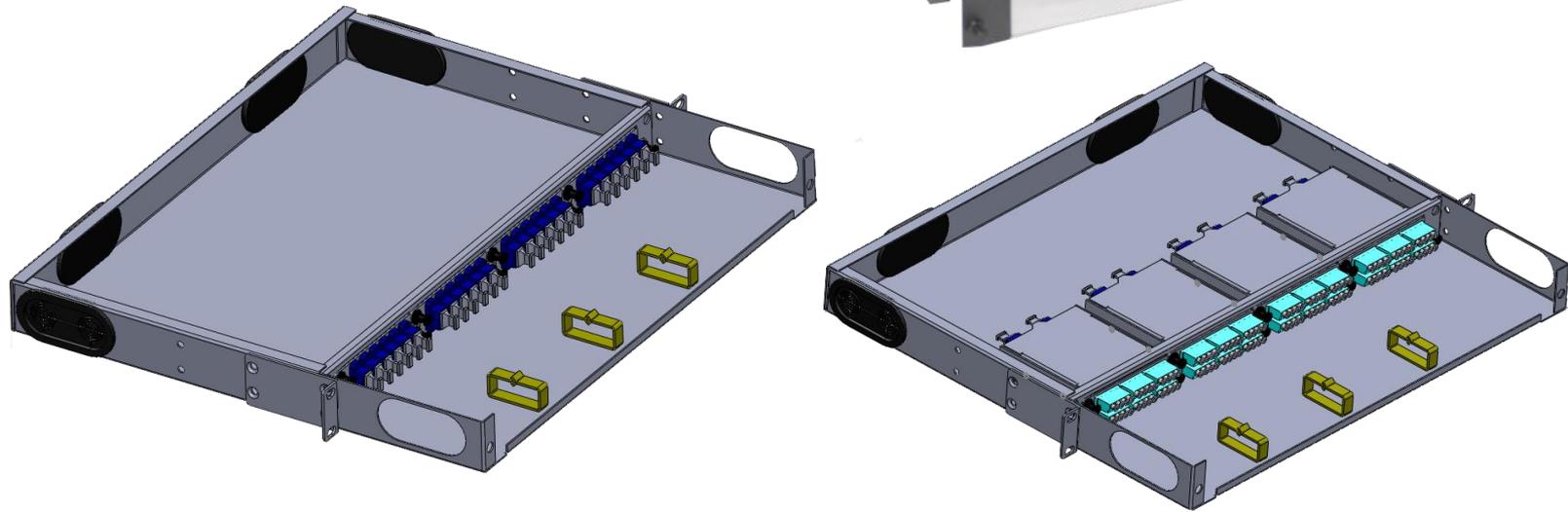
1U Pre-terminated Fiber Optic Patch Panel

General Specification:

| | |
|--------------------|---------------------------------------|
| Part No. | PN-987-0 |
| Color | Black |
| Material | Cold-rolled steel |
| Material Thickness | 1.2mm |
| Material Coating | Powder coating |
| Dimension(H*W*D) | 482(Including side bracket)*400*44.45 |
| Max Capacity | 4 x 6 Port MTP |



Structure Illustration:



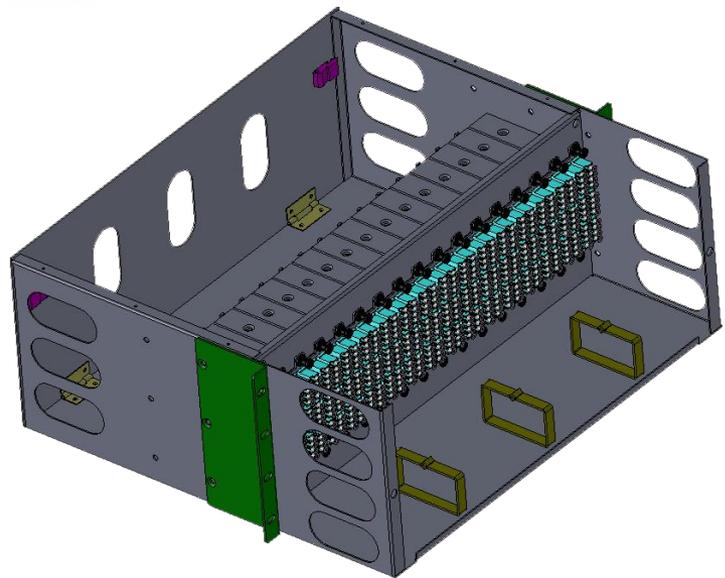
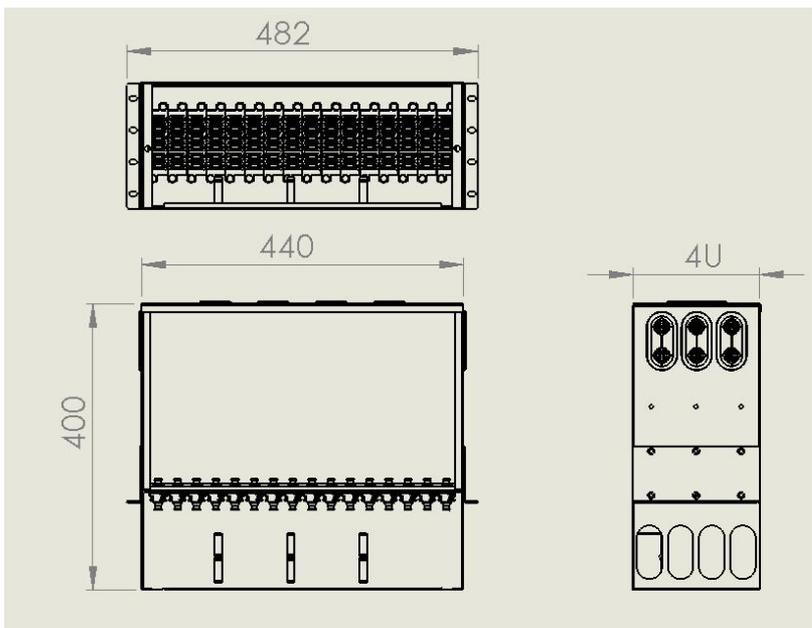
4U Pre-terminated Fiber Optic Patch Panel

General Specification:

| | |
|--------------------|---------------------------------------|
| Part No. | PN-988-0 |
| Color | Black |
| Material | Cold-rolled steel |
| Material Thickness | 1.2mm |
| Material Coating | Powder coating |
| Dimension(H*W*D) | 482(Including side bracket)*400*175.1 |
| Max Capacity | 16 x 6 - Port MTP |



Structure Illustration:



MTP® / MPO Plug-N-Play Cassette

Products Overview:

MTP® and SC to MTP® Fiber modules provide a quick and efficient way to deploy up to 24 LC or 12 SC fiber ports in a single module. These factory terminated and tested ports are protected within the housing for reliably high performance and simply connected via 12-strand MTP® ports. Modules are available in OM3 ,OM4 & SM fibre. Modular fiber cassettes are enclosed units that contain 12 or 24-fiber factory terminated fan-outs inside. These cassettes serve to “transition” small diameter ribbon cables terminated with a MTP® connector to the more common LC or SC interface used on the transceiver terminal equipment. The fan-outs typically incorporate SC, LC connectors plugged into adapters on the front side of the cassette and a MTP® connector plugged into a MTP® adapter mounted at the rear of the cassette. One or more MTP® fan-out assemblies may be installed inside the cassette to connect up to two 12-fiber ribbon cables for a total of 24 fibers. Alignment pins are pre-installed in the MTP® connector located inside the cassette.

Keyed Characteristics:

- Easy and fast installation;
- High-density and small design;
- Metallic shell with high strength protect the inner fibers effectively;
- Factory-terminated and tested cable and apparatus for instant field connections with guaranteed quality and performance;
- 12-fiber MTP® connector-based modular design enables simple connections;
- Support easy reconfiguration for moves, adds, and changes;
- Dimension: Height x Width x Depth(mm) : 30 x 130 x 140.

Use / Application:

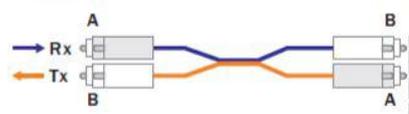
- Data Centre Infrastructure;
- Storage Area Network;
- Fibre Channel.



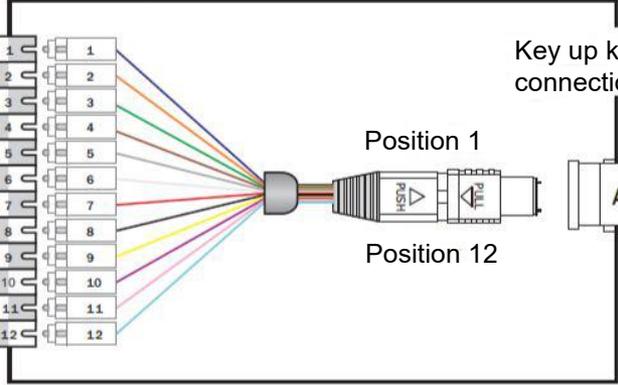
Module Cassette Polarity

Polarity A

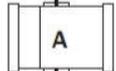
Key up mated connection to transceiver



Key up key up mated connection



Key up key down mated connection



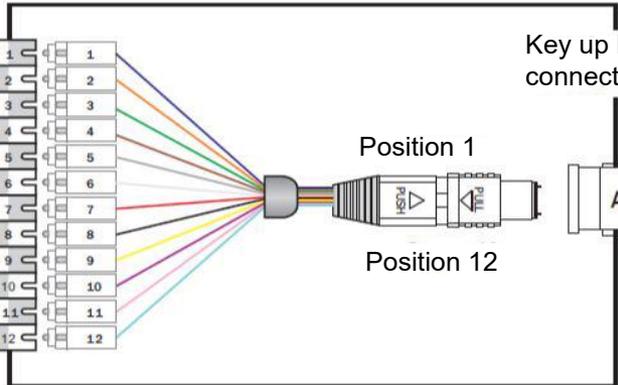
Position 1

Position 12

Key up mated connection to transceiver



Key up key up mated connection

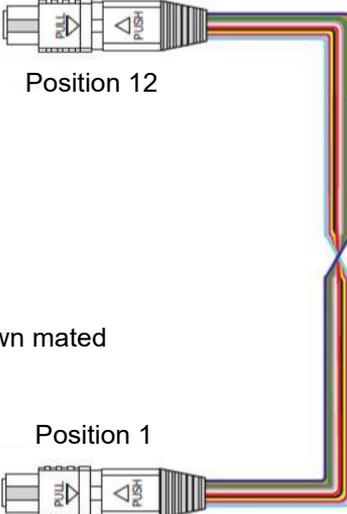


Key up key down mated connection



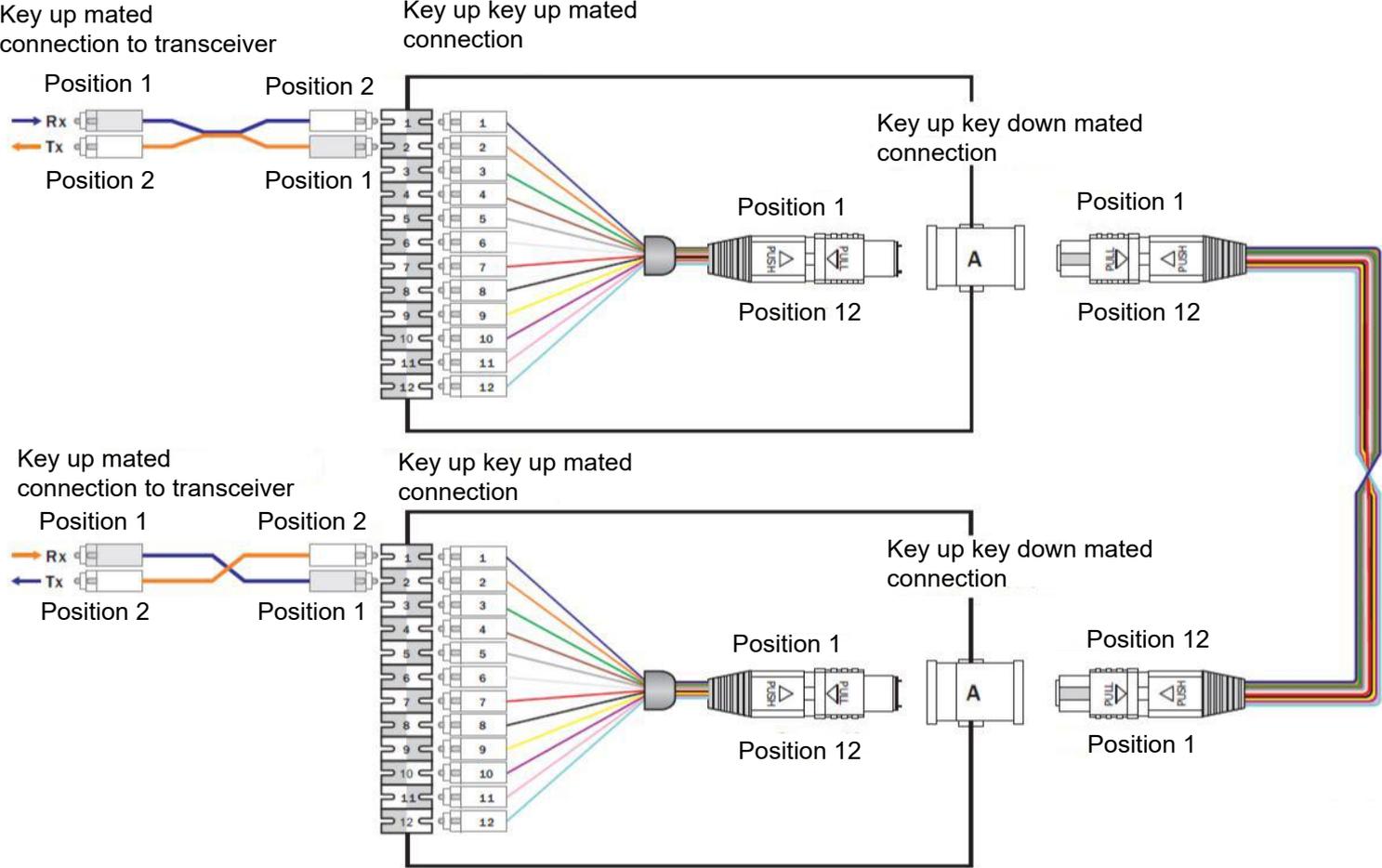
Position 1

Position 12



Module Cassette Polarity

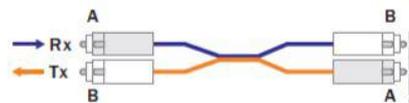
Polarity B



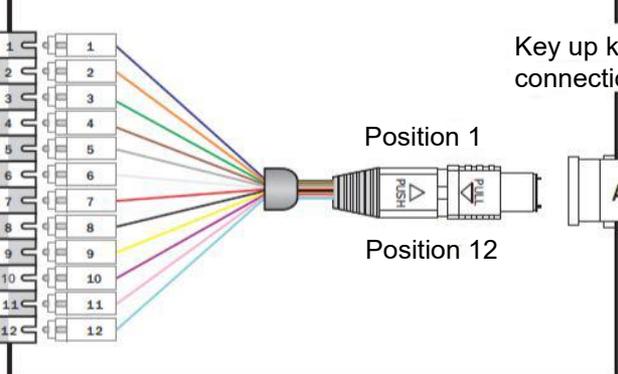
Module Cassette Polarity

Polarity C

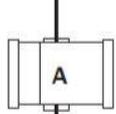
Key up mated connection to transceiver



Key up key up mated connection

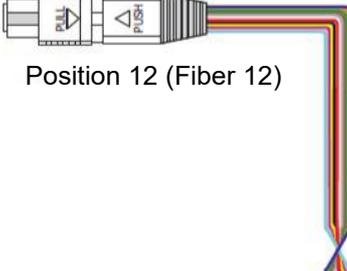


Key up key down mated connection



Position 1 (Fiber 1)

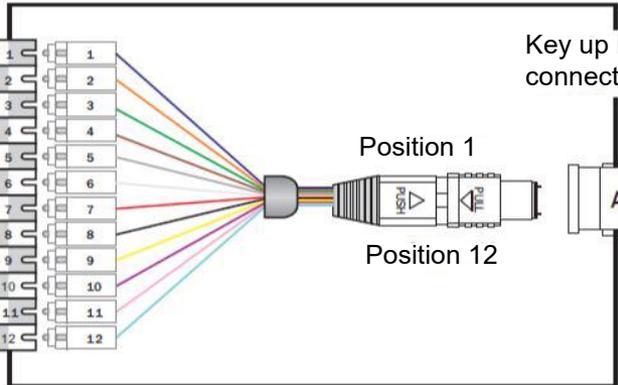
Position 12 (Fiber 12)



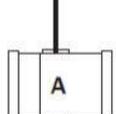
Key up mated connection to transceiver



Key up key up mated connection

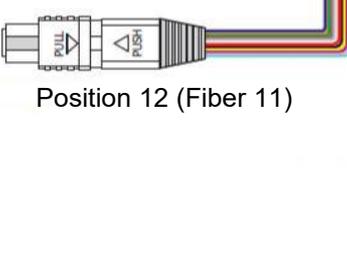


Key up key down mated connection



Position 1 (Fiber 2)

Position 12 (Fiber 11)



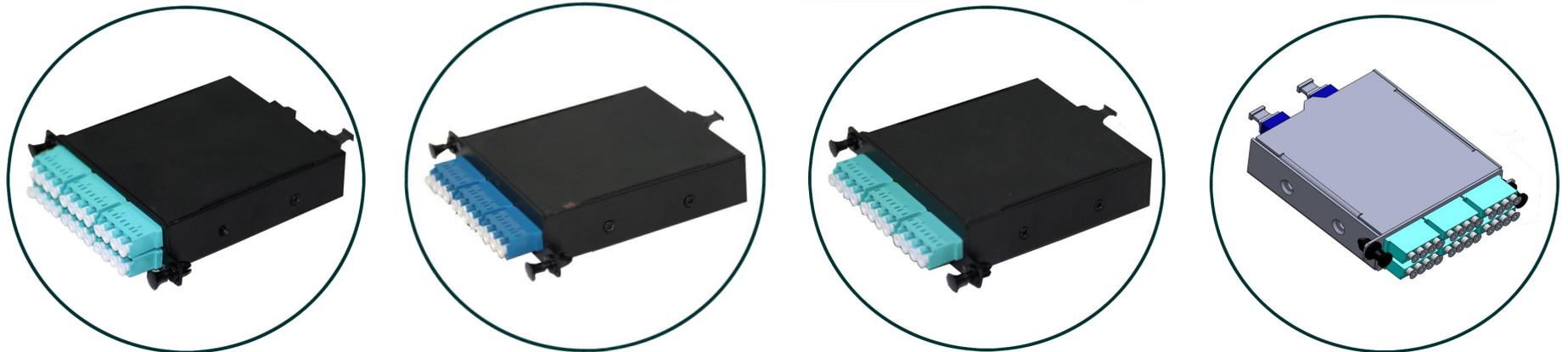
MPO / MTP® - LC LGX Module Cassette

General Specification:

| | |
|----------------------|--|
| Part No. | PN-1207-0 |
| Color | Black |
| Material | SPCC(cold rolled steel sheet) |
| (Front)Adapter Type | LC Quad (MM & SM) |
| (Front)Adapter Color | Aqua: OM3/OM4 ; Beige: OM1/OM2 Blue: SM/UPC ; Green: SM/APC |
| (Rear)Adapter Type | MPO / MTP® (Full flange / Opposed) |
| Connector A | SM: LC/UPC,0.9mm or LC/APC,0.9mm MM: LC/UPC,0.9mm |
| Connector B | SM : MPO/MTP(male)-APC MM: MPO/MTP(male)-PC |
| Patch cord polarity | Type A |
| Weight | 0.22kg |
| Dimension H*W*D(mm) | 26*110*100 |



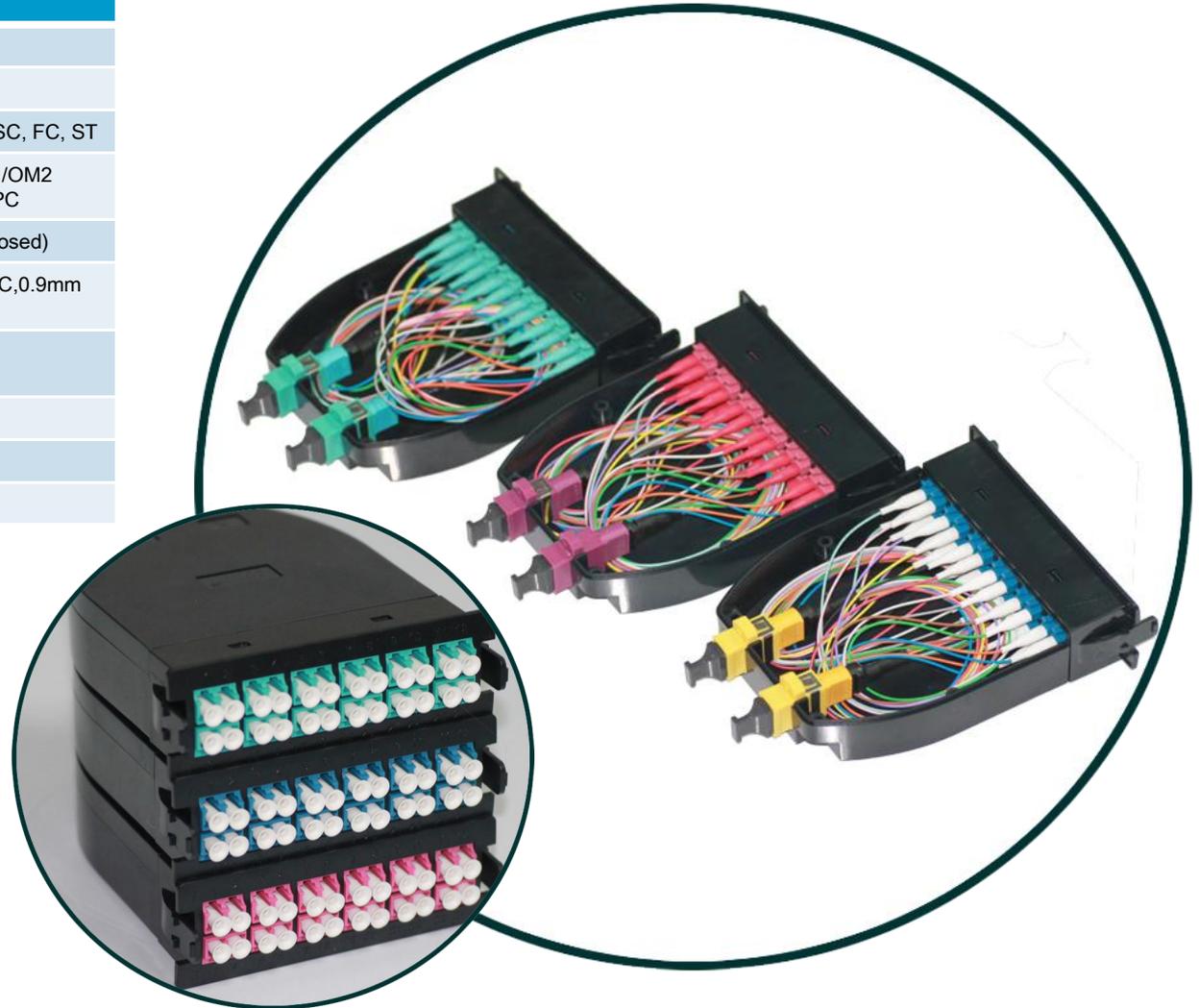
LGX Cassette Family:



MPO / MTP® - LC Classic Module Cassette

General Specification:

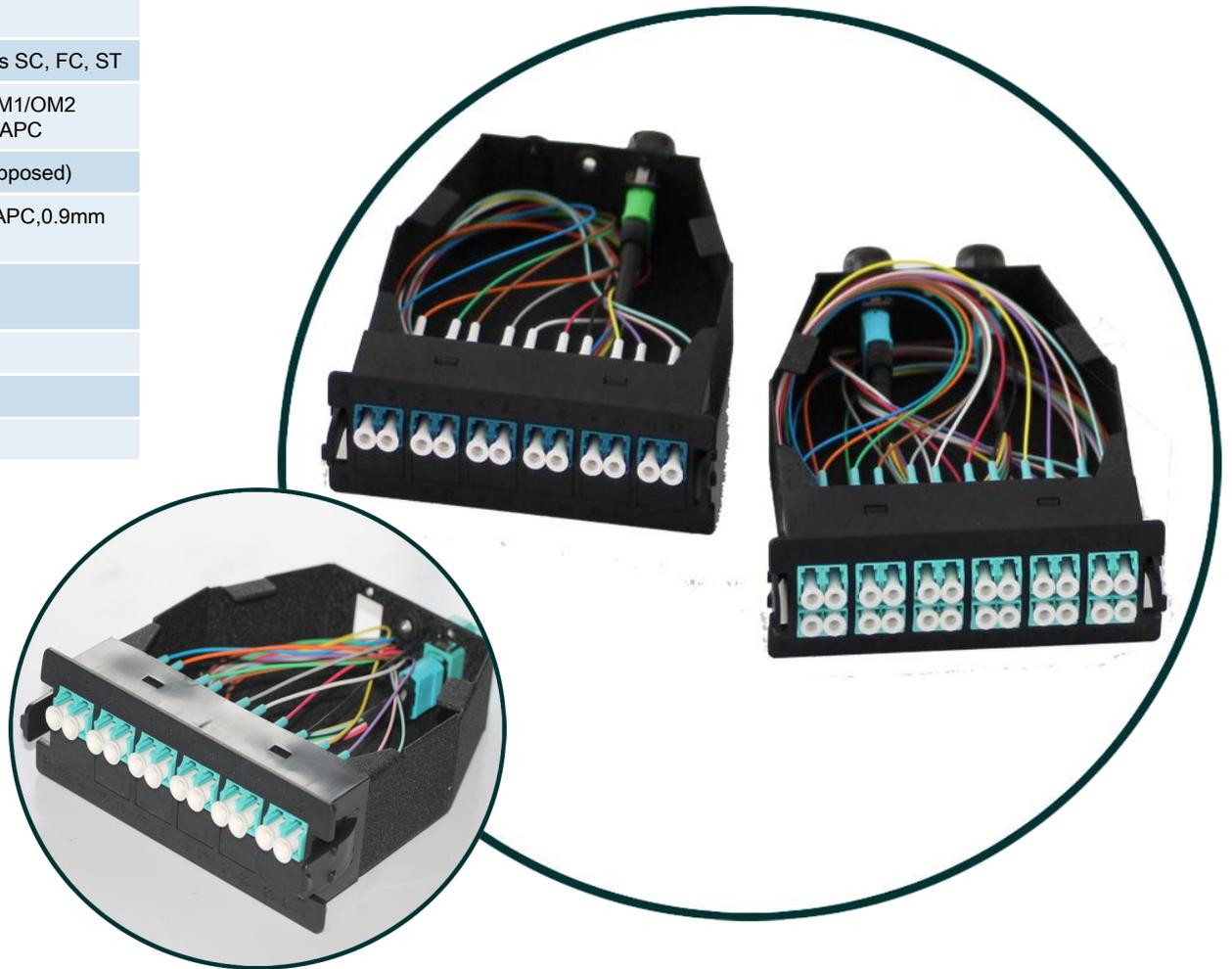
| | |
|----------------------|--|
| Part No. | PN-1208-0 |
| Color | Black |
| Material | Plastic |
| (Front)Adapter Type | LC Duplex or Changeable as SC, FC, ST |
| (Front)Adapter Color | Aqua: OM3/OM4 ; Beige: OM1/OM2 Blue: SM/UPC ; Green: SM/APC |
| (Rear)Adapter Type | MPO / MTP®(Full flange / Opposed) |
| Connector A | SM: LC/UPC,0.9mm or LC/APC,0.9mm MM: LC/UPC,0.9mm |
| Connector B | SM : MPO/MTP(male)-APC MM: MPO/MTP(male)-PC |
| Patch cord polarity | Type A |
| Weight | 0.11kg |
| Dimension H*W*D(mm) | 117.6*100*27.8 |



MPO / MTP® - LC Classic Module Cassette

General Specification:

| | |
|----------------------|--|
| Part No. | PN-1209-0 |
| Color | Black |
| Material | Plastic |
| (Front)Adapter Type | LC Duplex or Changeable as SC, FC, ST |
| (Front)Adapter Color | Aqua: OM3/OM4 ; Beige: OM1/OM2 Blue: SM/UPC ; Green: SM/APC |
| (Rear)Adapter Type | MPO / MTP®(Full flange / Opposed) |
| Connector A | SM: LC/UPC,0.9mm or LC/APC,0.9mm MM: LC/UPC,0.9mm |
| Connector B | SM : MPO/MTP(male)-APC MM: MPO/MTP(male)-PC |
| Patch cord polarity | Type A |
| Weight | 0.11kg |
| Dimension H*W*D(mm) | 117.6*100*27.8 |



MPO / MTP® - Adapter

Products Overview:

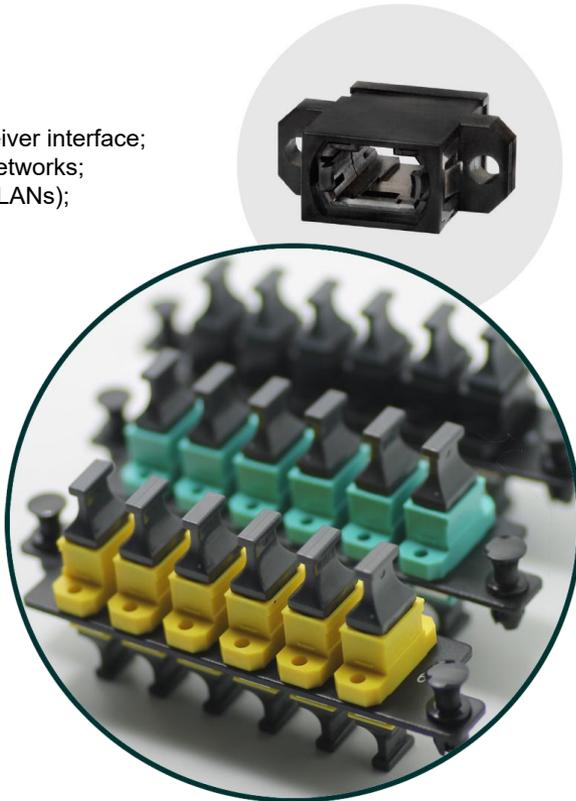
The Singlemode or Multimode MPO / MTP® products available from **PUNO** are multi fibers connections used in high-density backplanes and Printed Circuit Board (PCB) applications in data and telecommunications systems. They provide up to 12 times the density of standard connectors, offering significant space and cost savings. The MPO / MTP® Adapter comes standard in black, with additional colors available upon request

Keyed Characteristics:

- ① Compact design, accommodating 4,8 or 12 fiber ribbons;
- ② High precision alignment;
- ③ Low insertion and return loss and back reflection.

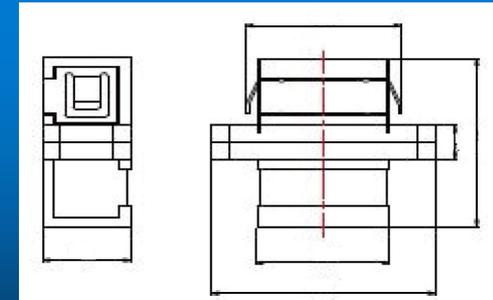
Use / Application:

- ① Gigabit ethernet;
- ② CATV;
- ③ Active device/Transceiver interface;
- ④ Telecommunication networks;
- ⑤ Local Area Networks(LANs);
- ⑥ Premise installations;
- ⑦ Industrial, Military;
- ⑧ Multimedia.

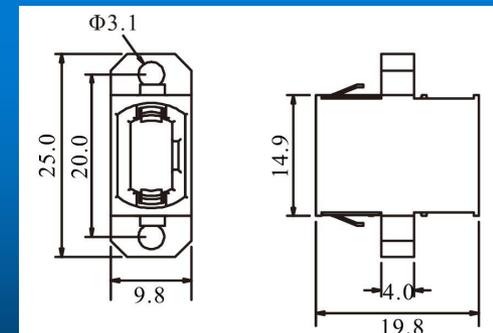


Appearance & Dimension:

MPO Adapter
MPO适配器



MTP Adapter
MTP适配器



High Density LC Uniboot Patchcord

Products Overview:

PUNO's this of LC Duplex Switchable connector's unique design allows the use of round style 2mm or 3mm jacketed cable instead of the traditional zipcord duplex cable for a more compact design.

Keyed Characteristics:

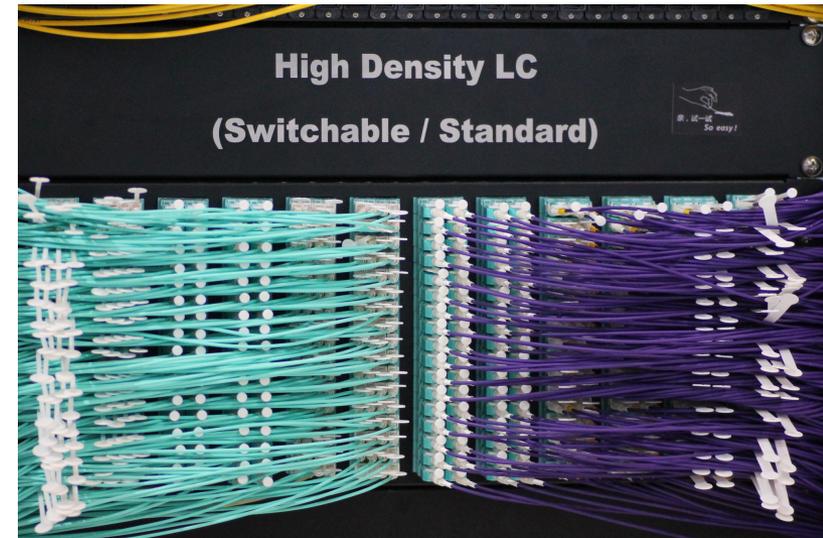
- Uniboot connector aids cable management;
- Switchable Connector to change polarity;
- NEW- Latch Lock Ready;
- MINI Boot ready;
- Right Angle Clip for better panel management;
- Flex angle boot ready;
- Red / Black color indication for easy Polarity Check.

Use / Application:

- Data Centre Infrastructure;
- Storage Area Network;
- Fibre Channel.



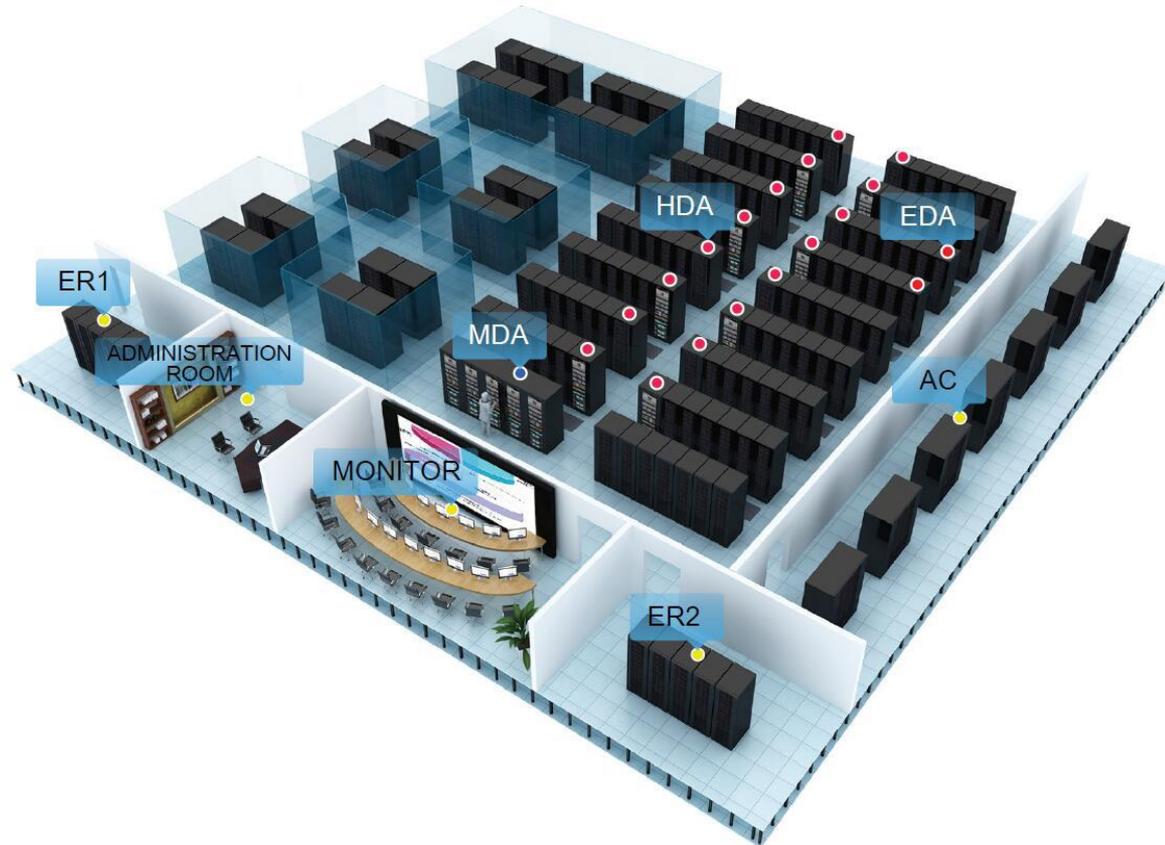
LC Uniboot Cable



Data Center Solutions

Summary:

PUNO has more than 7 years of experience in data center cabling, with the principles of innovation, reliability and specialization, with our MTP®/ MPO products fiber technology as the core, specifically for data center wiring, cloud computing High-end applications. The use of structured and user-friendly design concept, making the professional data center network cabling installation and maintenance becomes simple and convenient; modular product structure, making the product more reliable, easier expansion; high-density product design saves valuable space; Dedicated cabling management reduces data center energy consumption. Customization of the overall service process to solve the user to worry about. Rosenberg's data center cabling solutions are used in data centers in the domestic financial, Internet, government, airport, and university industries. **PUNO** data center cabling solutions are leading the data center cabling industry.



12 Fibers & 24 Fibers Comparing



12 Fibers Installation

24 Fibers Installation

50% Less Cable Volume

Lower Containment Costs

50% Fewer Connectors to Install

Reduced Installation Time

50% Less Administration

Fewer Errors



MTP®/MPO Products Data Centre Solutions Brochure

