



DESCRIPTION

Multi-fiber technology has exploded as a result of today's high fiber counts and limited space requirements which Data Centers demand. LightWave is today's leader in the manufacturing of MTP cables and MTP Cassettes. LightWave engineers unique MTP solutions utilizing 12, 24, 48 and even 72 fiber MTP ferrules.

FEATURES & BENEFITS

MTP brand cassettes and cable assemblies take their name from the MTP brand MPO connector, designed and introduced as a performance version of MPO connectors. MTP brand fiber systems are truly an innovative group of products. Each MTP brand connector contains 12 fibers or 6 duplex channels in a connector that is smaller than most duplex connections in use today. A 72-fiber trunk cable can be terminated with six MTP brand connectors and MTP brand connectors are manufactured specifically for multifiber loose tube or ribbon cable.

MTP brand connectors allow high-density connections between network equipment in telecommunication rooms. They use a simple push-pull latching mechanism for easy and intuitive insertion and removal. The ends of MTP brand connectors may be polished flat or at an 8° angle. An MTP brand connector is about the same size as a SC connector however it can accommodate 12 fibers, which provides up to 12 times the density, thereby requiring much less card and rack space.

A standard MTP brand cassette has one port in the back with a MTP brand coupler awaiting connection of an MTP brand cable assembly that has 12 fibers in the connector. The MTP brand cable plugs into the back and through the adaptor. The cable connects to another MTP brand assembly inside the cassette that "fans out" to 12 SC or LC connections. One MTP brand cable can connect up to 12 different ports. From there you simply plug in your patch cables.



APPLICATIONS

- Suitable for high-density switch to patching and distribution in Data Center Applications (based on 72 fiber MTP ferrule)
- Used in optical transmitters and receivers, MTP brand connectors offer up to 36 times the density of standard connectors, providing significant space and cost savings.
- Compact design addresses high fiber count applications, with small and lightweight cables ideal for use with installation space limitations.
- MTP brand cable trunks offer flexibility in changing the connector style in the patch panels. New cassettes can be installed with the new connector style on the cross-connect side of the patch panel without having to change the connector on the cable trunk.
- The MTP brand connector is the standard for delivery of 40G (in its 12 fiber version) and 100G (in either a duplexed 12 fiber cable or 24 fiber ferruled cable) using QSFP transceivers.

REAL ESTATE

Multi-fiber technology will eventually replace the standards for fiber optics as we know it. Even now people are tearing out their existing infrastructure and placing MTP brand cassettes in their patch panels to route data for thousands of network electronics. MTP brand cassettes, cables, connectors and adapters are essential to backbone infrastructure. The high fiber count in one connector creates endless possibilities. Imagine a 1U rack mount patch panel that can supply data to run an entire 288-port switch. With today's increasing demand for higher through-put, ST, SC, MTRJ, LC, FC, etc, will all be a thing of the past.



MTP INTERCONNECTS

MTP brand cable assemblies are multi-fiber patch cords suitable for high-density back plane and PCB solutions. MTP brand patch cords offer up to 36 times the density (based on a 72 fiber ferrule) of traditional patch cords, providing significant space and cost savings. There are several configurations for MTP brand cable assemblies. The most popular is a MTP brand connector to MTP brand connector patch or trunk cable that connects an MTP brand cassette to another MTP brand cassette. If an MTP brand adapter panel is installed in a patch panel, then an MTP brand cable to MTP brand can be used as well.

Another configuration is MTP brand connectors to LC or SC fiber connector. These can be used in different applications for both back end and front end adapter panels, for instance, plug one MTP brand connector into the back and plug an MTP brand cable to LC cable into the front and have the 12 LC connections go to other equipment. If there is an MTP brand cassette that needs to be lit up by using a 12-fiber LC adapter panel, plug each of the 12 LC connections in the LC adapter panel. The MTP brand side then plugs into the back of the cassette. Increase the transfer speed with 10 Gig 50 Micron multimode cable or increase the distance the signal can travel using singlemode. Cables may be constructed of ribbon fiber, small form factor loose tube assembly cable, or subgrouped trunking cable. The options are only limited by the application.

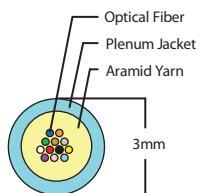


Fiber Type (ISO nomenclature if applicable)	Core / Cladding Size (µm)	Maximum Attenuation (dB/km)			Overfill Launch Min Bandwidth (MHz-km)		1G Ethernet Distance (m)		10G Ethernet Distance (m)	
		850nm	1300nm	1500nm	850nm	1300nm	850nm	1300nm	850nm	1300nm
OM1	62.5/125	3.5	1.2	x	200	600	300	550	32	x
OM2	50/125	3.5	1.5	x	500	500	600	600	82	x
OM3	50/125	3.0	1.2	x	1500	500	1000	550	300	x
OM4	50/125	3.0	1.2	x	3500	550	1040	550	550	x
OS1	9/125	x	0.5	0.5	x	x	x	5000	x	10000
SM Bend Insensitive	9/125	x	0.5	0.5	x	x	x	5000	x	10000

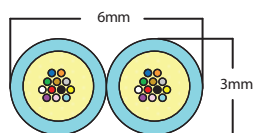
Connector Specifications

CONNECTOR	TYPICAL INSERTION LOSS	MAX. INSERTION LOSS	RETURN LOSS
Multimode MTP (Standard)	≤ 0.20 dB (All Fibers)	≤ 0.60 dB (Single Fiber)	≥ 20 dB
Singlemode MTP (Standard)	≤ 0.25 dB (All Fibers)	≤ 0.75 dB (Single Fiber)	≥ 60 dB (8° Angle Polish)
Multimode MTP (Elite)	≤ 0.10 dB (All Fibers)	≤ 0.35 dB (Single Fiber)	≥ 20 dB
Singlemode MTP (Elite)	≤ 0.10 dB (All Fibers)	≤ 0.35 dB (Single Fiber)	≥ 60 dB (8° Angle Polish)
Multimode ST / SC / FC / LC (PC)	≤ 0.20 dB	≤ 0.30 dB	≥ 25 dB
Singlemode ST / SC / FC (UPC)	≤ 0.15 dB	≤ 0.30 dB	≥ 50 dB
Singlemode LC (UPC)	≤ 0.15 dB	≤ 0.30 dB	≥ 55 dB
Singlemode ST / SC / FC (APC)	≤ 0.15 dB	≤ 0.30 dB	≥ 65 dB
Singlemode LC (APC)	≤ 0.15 dB	≤ 0.30 dB	≥ 65 dB

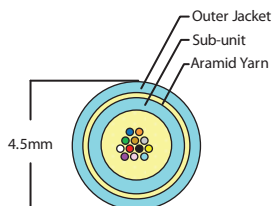
INTERCONNECTS



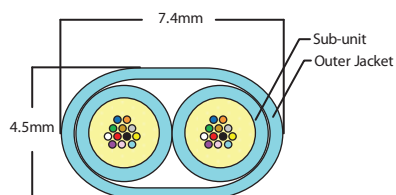
12 Fiber Simplex Interconnect



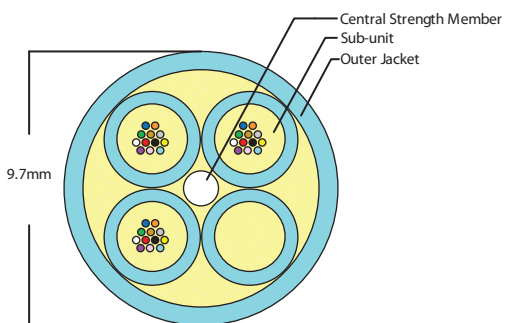
24 Fiber Zipcord Style Interconnect



12 Fiber Dual Jacket

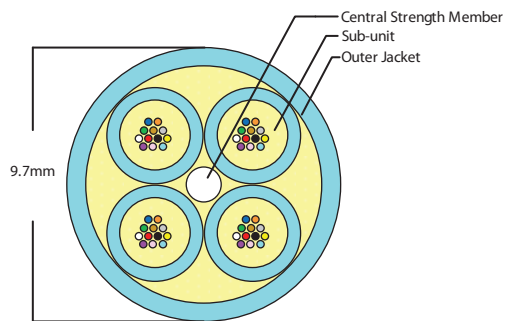


24 Fiber Dual Jacket

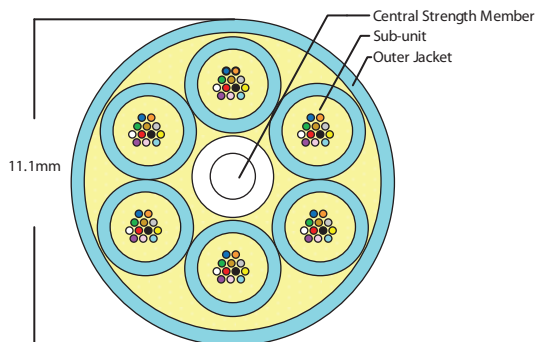


36 Fiber Trunk

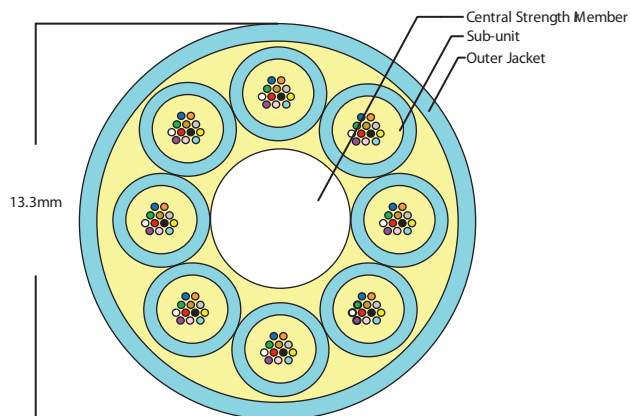
TRUNKS



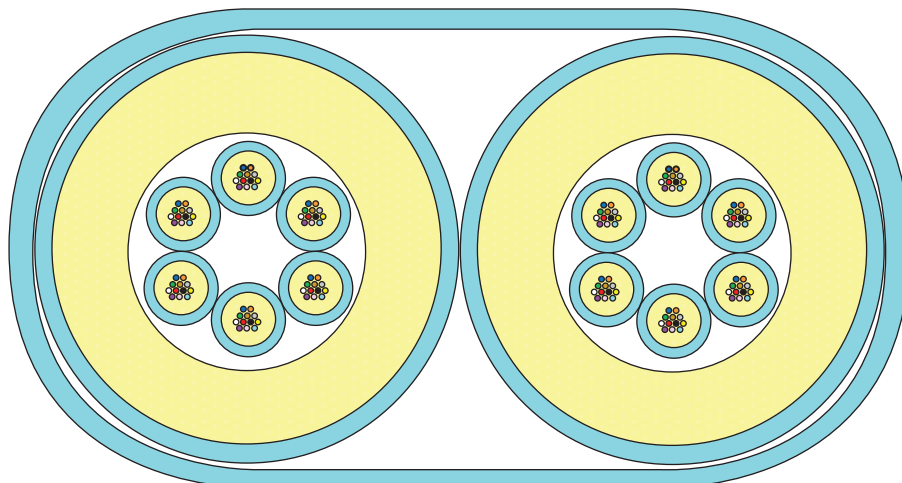
48 Fiber Trunk



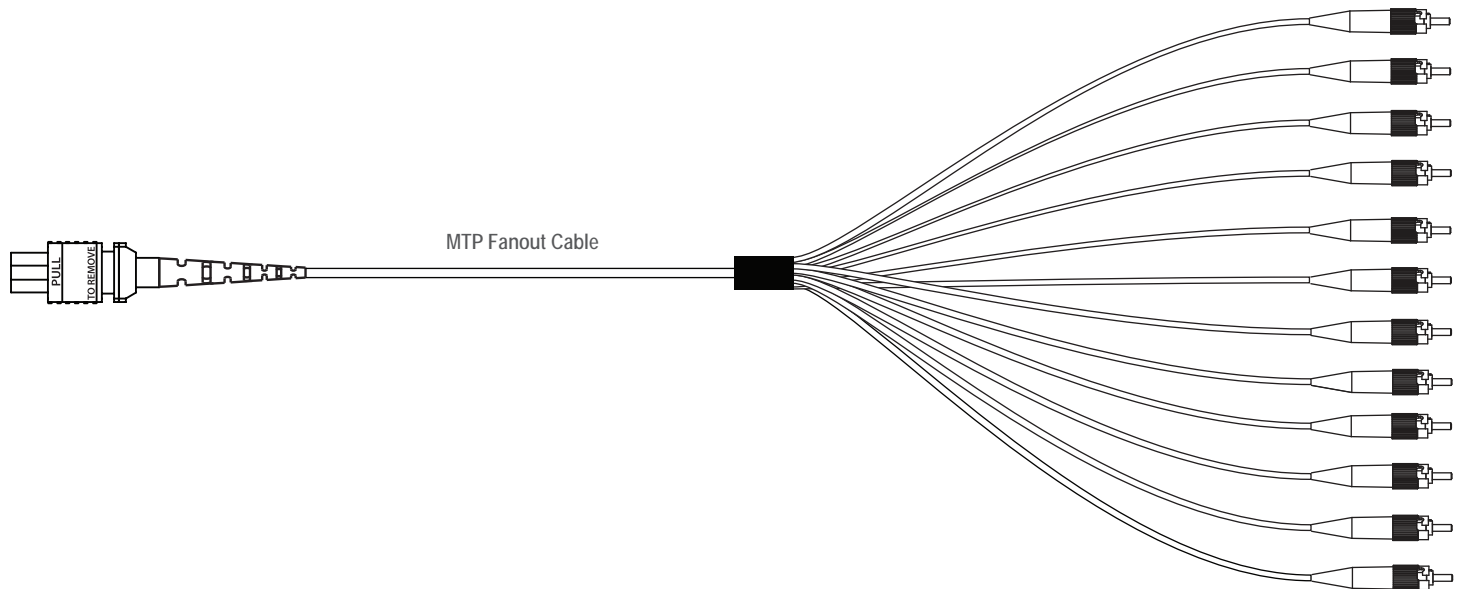
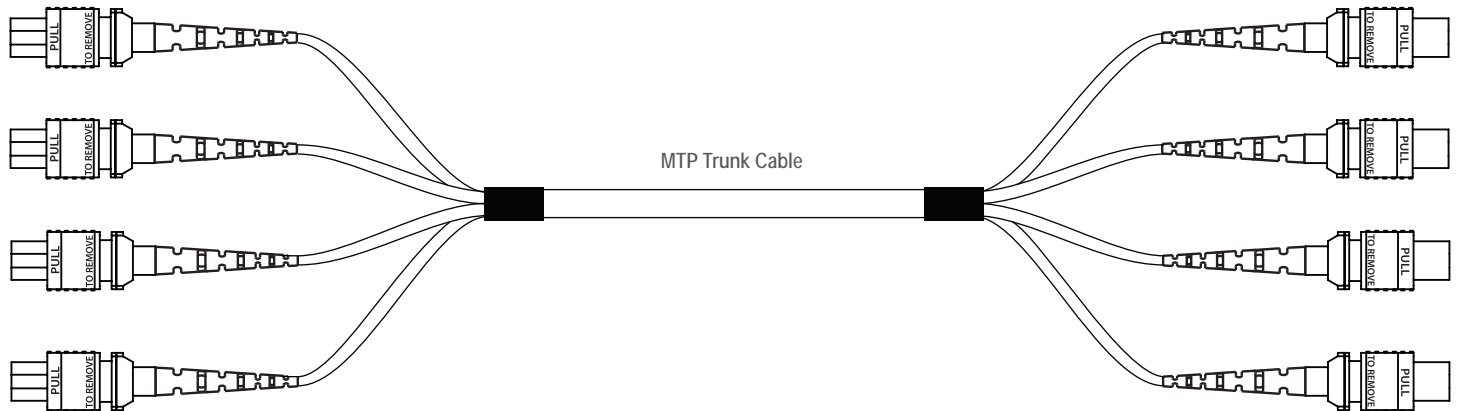
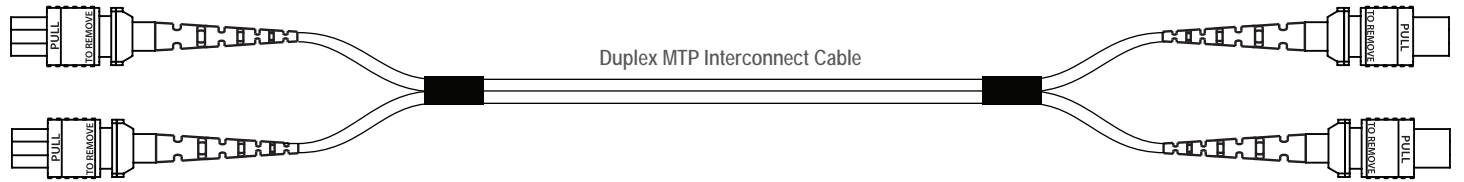
72 Fiber Trunk

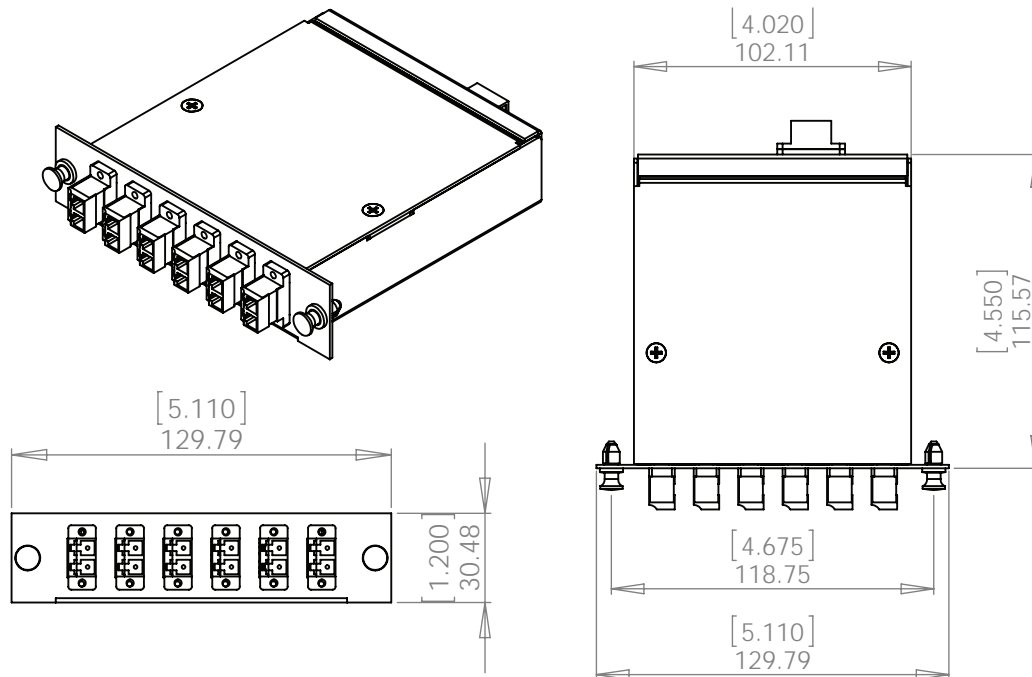


96 Fiber Trunk



144 Fiber Trunk





Cassette Specifications

(Special order configurations and keyed connector option are also available)

Cassette Configuration	OS1 9/125	OM1 62.5/125	OM2 50/125	OM3 50/125	OM4 50/125
12 Fiber, (1) MTP - (12) SC	CAQM-VC81CB	CAQM-VC8G0B	CAQM-VC820B	CAQM-VC8C0B	CAQM-VC840B
12 Fiber, (1) MTP - (12) LC	CAQM-V681CB	CAQM-V68G0B	CAQM-V6820B	CAQM-V68C0B	CAQM-V6840B
12 Fiber, (1) MTP - (12) ST	CAQM-VA81CB	CAQM-VA810B	CAQM-VA820B	CAQM-VA8C0B	CAQM-VA840B
12 Fiber, (1) MTP - (6) MTRJ	-	CAQM-V68GBC	CAQM-V682BC	CAQM-V48CZBC	CAQM-V684BC
24 Fiber, (2) MTP - (12) MTRJ	-	CAQM-V68GBF	CAQM-V682BF	CAQM-V48CZBF	CAQM-V684BF
24 Fiber, (2) MTP - (24) LC	CAQM-V681CF	CAQM-V68G0F	CAQM-V6820F	CAQM-V68C0F	CAQM-V6840F
24 Fiber, (2) MTP - (24) LC	CAQM-V682CFS24	CAQM-V6860FS24	CAQM-V6820FS24	CAQM-V68C0FS24	CAQM-V6840FS24

MTP CASSETTES

MTP brand cassettes come in a variety of connector styles and modes. From Multimode to Singlemode, from SC to LC, MTP brand solutions can be the solution to save space, time, and energy.

The cassette itself is comprised of four parts:

- MTP brand adaptor(s) in back
- MTP brand connectors to SC/LC fan out assembly inside the cassette
- SC, ST, MTRJ (including keyed MTRJ), and LC (including keyed LCs) adaptors in the front
- The cassette module body can be configured to multiple manufacturers form and fit factor.

By plugging an MTP brand cable into the back, 12 or 24 (with quad LC) connections are being lit up. For the 24-fiber application, either one 24-fiber MTP brand cable or two 12-fiber MTP brand cables can be used. The cassette can be snapped into any standard fiber optic patch panel including both rack mount and wall mount. A RAC-1X holds three of these cassettes which could potentially contain 72 active LC connections using only three (or six) MTP brand cables. Clean up the clutter and increase your possibilities using MTP brand cassettes.

