

## MPO/MTP

The number of network connections in data centers is on the rise. Data centers have to achieve ultra-high density in cabling to accommodate all this cabling in the first place. Multimode fiber optics is the medium of the future for satisfying the growing need for transmission speed and data volume over short distances. New multi-fiber connectors bring together 12 or 24 fibers in a single interface just as compact as an RJ45 connector. The multi-fiber push-on (MPO) technology and especially the MTP® connectors (US Conec) in connection with Elite ferrules have proven to be a practical solution. The MPO connector is a multi-fiber connector, due to its modularity, offers installers and operators reduced time & effort for installations, modification and maintenance of a structured communication cabling for today's and future demands of data centers.

### Features:

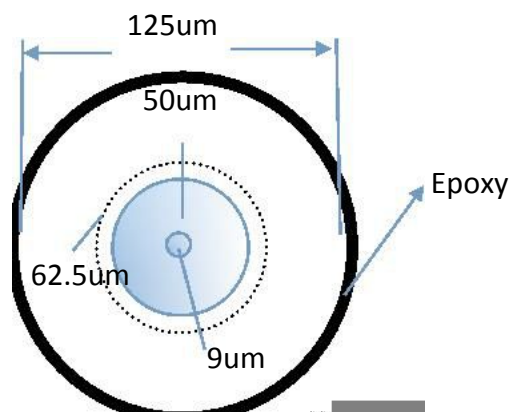
- ◆ Specified and standardized in IEC61754-7 and GR-1435-CORE
- ◆ Easy Moves, Adds and Changes due to scalability and modularity of the product design
- ◆ 8/12/24 cores for single MTP/MPO connector, 96 LC points contained by 1U rack to save layout space, reduced down-times and faster installation
- ◆ Variety choice for fiber type and cable type to ensure customized requirements
- ◆ The push-pull interlock with sliding sleeve and two alignment pins are meant to position the MPO connector exactly for more than 1000 insertion cycles
- ◆ Be the first choice for ITS (Information Telecommunication System) in high speed commercial buildings and data center
- ◆ Used for parallel optics applications such as Infiniband with data rates up to 120 Gb/s and for the upcoming 40 Gb/s and 100 Gb/s Ethernet protocols via Multimode OM3, OM4 and OS2 fiber

### Type:

	male (with Pin) , female (without Pin)
Ferrule type	SM, SM low loss; MM, MM low loss。
Fiber core	4ch, 8ch, 12ch, 24ch
Housing color	Green (SM),Beige (MM) , Yellow (SM low loss) , Aqua( OM3 50/125 )
Polishing type	PC,APC
Cable type	Ribbon Cable,Ribbon fiber, 3.0mm round cable (250um12F,24F),0.9mm cable

## Product requirements:

### 1. End-face:



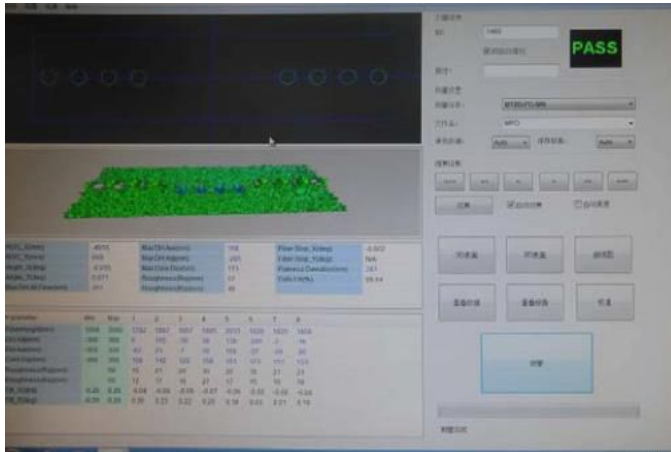
Zone	Description	Zone Size	Allowable Defects	Allowable scratch
1a	Fiber core & around (SM)	< 25um	NONE	NONE
	Fiber core & around (MM)	< 66um	NONE	NONE
1b	Coating (SM)	25um to 120um	Non-removed contamination: < 5um allowed, >5 & <10um less than 3 allowed	Scratch: < 2um allowed,, >2um&<5um less than 3 allowed
	Coating (MM)	66um to 115um	Non-removed contamination: < 5um allowed, >5 & <10um 3 allowed	Scratch: < 2um allowed,, >2um&<5um less than 3 allowed

### 2. Parameters:

MPO/MTP		SM standard	SM low loss	MM standard	MM low loss
Insertion loss	Typical	0.35dB	0.20dB	0.35dB	0.20dB
	Max	0.70dB	0.35dB	0.70dB	0.35dB
Return loss		APC ≥ 50dB		≥ 25dB	≥ 35dB
		PC ≥ 40dB			
Repeatability		≤ 0.30dB(plugging over 500 times) ≤ 0.30dB(plugging over 1000 times)			
Interchangeability		≤ 0.30dB( matching with any connector)			
Extension		≤ 0.30dB (maximum tension 66N)			
Vibration		≤ 0.30dB (10~55HZ)			
Temperature range		-40℃ ~ +75℃			

### 3. Geometry Parameters:

MPO/MTP parameters	Measurement
Radius of Curvature	$X \geq 2000\text{mm}$ , $Y \geq 50\text{mm}$
Fiber Height	1000~4000 nm
End-face Angle	$X \pm 0.3^\circ$ , $Y \pm 0.3^\circ$
Core Dip	$\pm 300\text{nm}$



8CH Geometry



12CH Geometry

### 4. Length Tolerance:

Length L(M)	Tolerance
$\leq 10$	+ 10CM
$10 < L \leq 30$	+ 15CM
$> 30$	+ 10%

### Product Range:

#### ●MPO Patch cords



MPO-MPO SM 12F Mini Round



MPO-MPO OM3 12F Jacket AOC patch cord



MPO-MPO OM3 12F Mini Round Cable

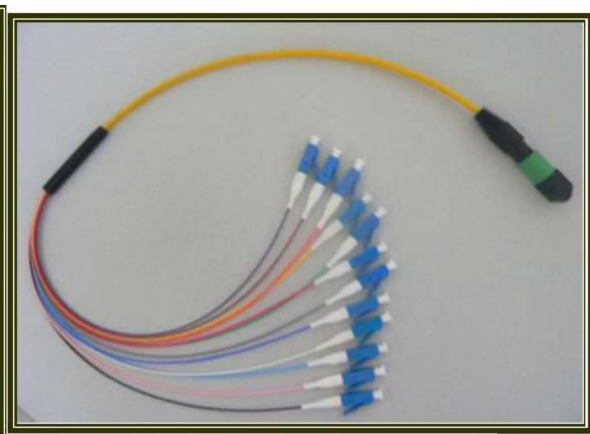


MPO-MPO OM3 12F Jacket Ribbon

●MPO Harness:

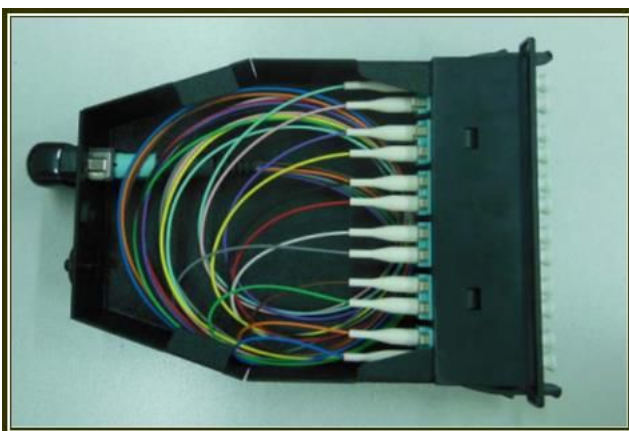


MPO-LC OM3 12F 0.9mm Harness

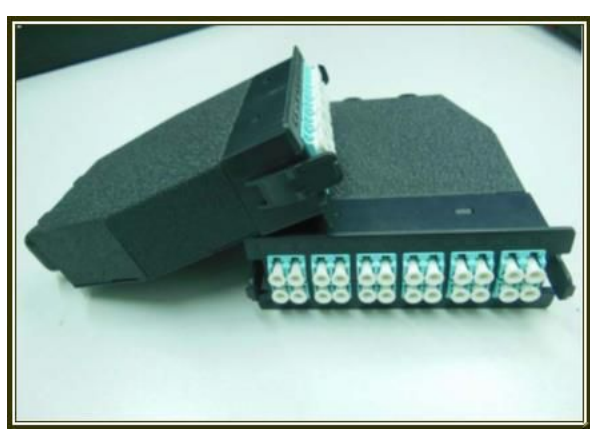


MPO/APC-LC SM Ribbon Fan-out 0.9mm

●MPO Fan-out Module



MPO-LC 1U BOX



MPO-LC 24F 1U Box

●MPO 19" Rack:

