

## MPO/MTP Harnesses Cables Specification



### Application

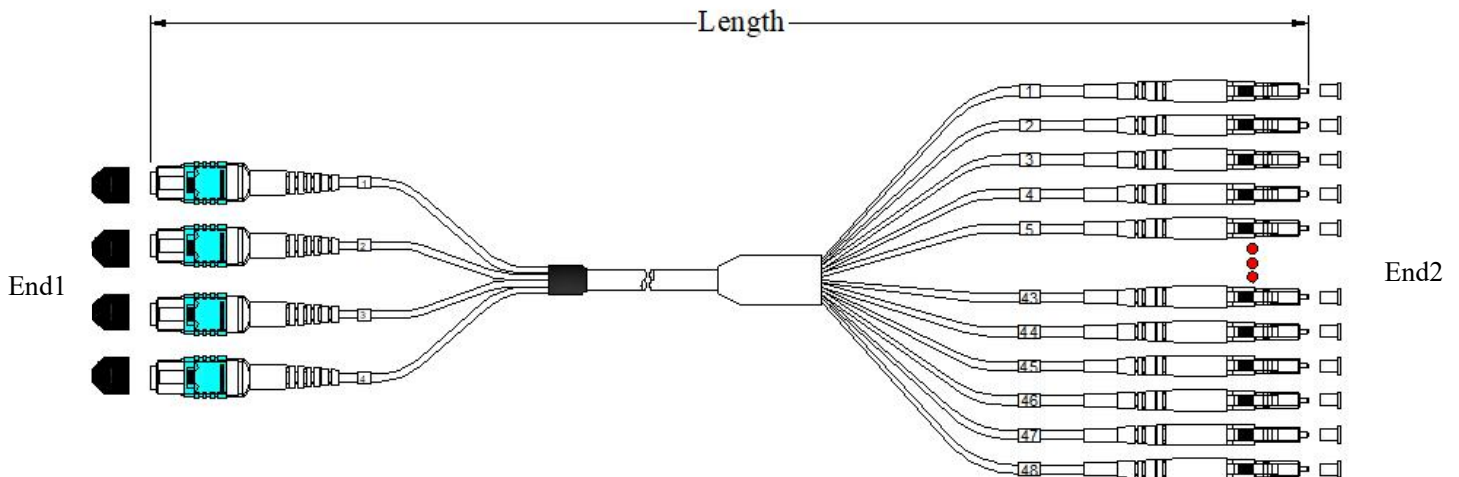
- 1.Data communication network.
- 2.Optical System Access network.
- 3.Storage area networking fiber channel.
- 4.High density architectures.

### Features

- 1.100% pre-terminated and tested in factory to ensure transfer performance.
- 2.Rapid configuration and networking, reduce installation time.
- 3.Supports 40G and 100G network applications.
- 4.Cable Jacket material: LSZH, OFNR, OFNP available.
- 5.Supports up to 12F, 24F, 48F, 72F, 96F, 144F, customized products are available.

### Dimensional Diagrams

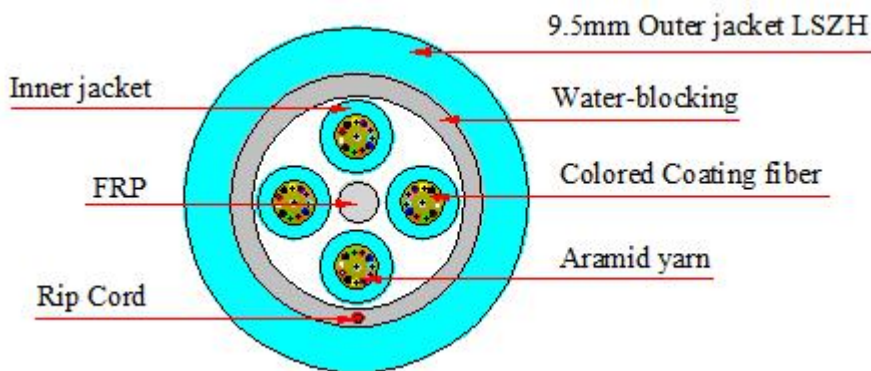
1. MPO/MTP Harnesses Cables



### Patch cord versions

Jumper tolerance requirement	
Overall length (L) (M)	length of tolerance (CM)
0<L≤20	+10/-0
20<L≤40	+15/-0
L>40	+0.5%L/-0

### Cable Structure



### Cable Parameters

Fiber account	OD(mm)	Nominal Weight (kg/km)	Max.tensile Strength(N)		Max.Crush Resistance (N/100mm)		Min.Bending Radius(mm)	
			Short-term	Long-term	Short-term	Long-term	Dynamic	Static
48	9.5±0.3	79	500	180	1000	300	20D	10D

### MPO&MTP Optical Characteristics

Item	Parameter				Reference
	Single mode		Multimode		
	Standard	Elite	Standard	Elite	
Insertion loss	Typical≤0.30dB Max≤0.75dB	Typical≤0.15dB Max≤0.35dB	Typical≤0.50dB Max≤0.25dB	Typical≤0.10dB Max≤0.35dB	IEC 61300-3-34
Return loss	≥ 50dB (PC) ≥ 60dB (APC)	≥ 55dB (PC) ≥ 65dB (APC)	≥30dB(PC)	≥30dB(PC)	IEC 61300-3-6

### LC/SC/FC/ST Optical Characteristics

Item	Parameter		Reference
	Single mode	Multimode	
Insertion loss	Typical value $\leq$ 0.15dB;Maximum $\leq$ 0.30	Typical value $\leq$ 0.15dB;Maximum $\leq$ 0.30	IEC 61300-3-34
Return loss	$\geq$ 60dB (APC); $\geq$ 50dB (UPC)	$\geq$ 30dB (UPC)	IEC 61300-3-6

### End-Face Geometry

Item	UPC (Ref: IEC 61755-3-1)	APC (Ref: IEC 61755-3-2)
Radius of curvature (mm)	10 to 25	5 to 12
Fiber height (nm)	-100 to 100	-100 to 100
Apex offset ( $\mu$ m)	0 to 50	0 to 50
APC angle ( $^{\circ}$ )	/	$8^{\circ} \pm 0.2^{\circ}$
Key error ( $^{\circ}$ )	/	$0.2^{\circ}$ max

### End-Face Geometry

Ferrule parameter		IEC-61300-3-30	
		Minimum	Maximum
ROC	ROC-X:	2000mm	$\infty$
	ROC-Y:	50mm	$\infty$
Angle	Angle-X:	$-0.2^{\circ}$	$0.2^{\circ}$
	Angle-Y:	PC	$-0.2^{\circ}$
		APC	$7.85^{\circ}$
Fiber Hight:		1000nm	3500nm
Max.DH.All:		-300nm	300nm
DH.Adj:		-300nm	300nm
DH.Ave Fiber:		-300nm	300nm
Core Dip:	MM	-200nm	300nm
	SM	N/A	N/A
Ferrule height		7.9mm	8.05mm

### End-Face Quality (SM)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 25	None	None	IEC 61300-3-35:2015
B: Cladding	25 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

### End-Face Quality (MM)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 65	None	None	IEC 61300-3-35:2015
B: Cladding	65 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

### Mechanical Characteristics

Test	Conditions	Reference
Endurance	500 matings	IEC 61300-2-2
Vibration	Frequency: 10 to 55Hz, Amplitude: 0.75mm	IEC 61300-2-1
Cable retention	400N (main cable); 50N (connector part)	IEC 61300-2-4
Strength of coupling mechanism	80N for 2 to 3mm cable	IEC 61300-2-6
Cable torsion	15N for 2 to 3mm cable	IEC 61300-2-5
Fall	10 drops, 1m drop height	IEC 61300-2-12
Static lateral load	1N for 1h (main cable); 0.2N for 5min (ranch part)	IEC 61300-2-42
Cold	-25°C, 96h duration	IEC 61300-2-17
Dry heat	+70°C, 96h duration	IEC 61300-2-18
Change of temperature	-25°C to +70°C, 12 cycles	IEC 61300-2-22
Humidity	+40°C at 93%, 96h duration	IEC 61300-2-19