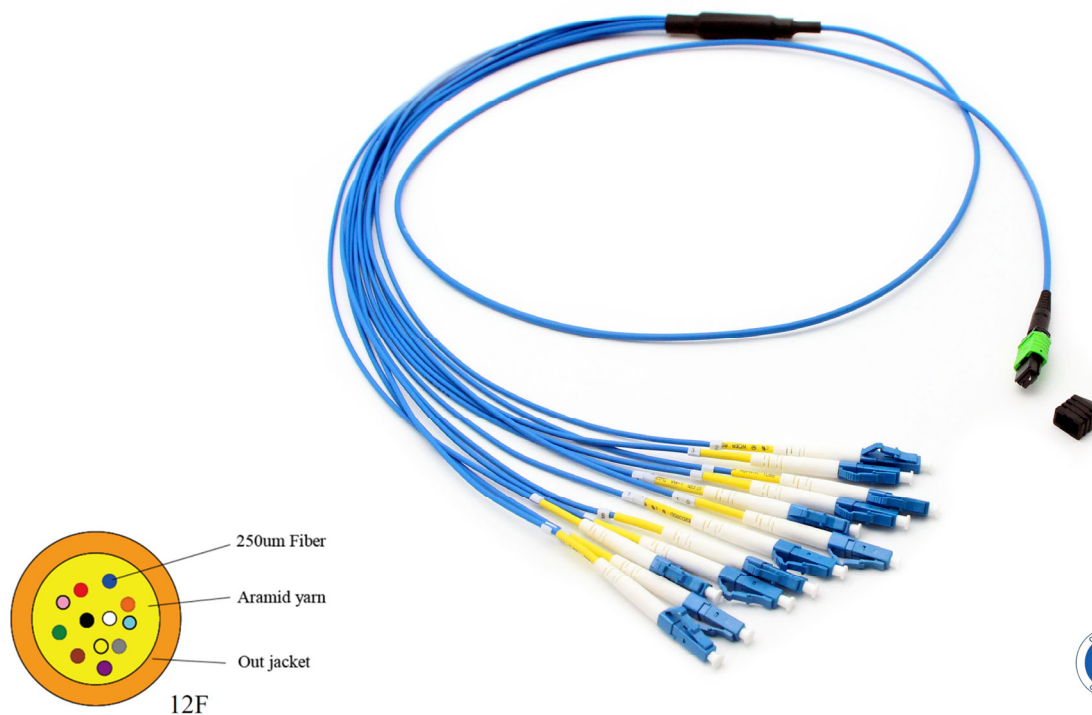


DATASHEET

12F MPO-LC Straight harness Cables

Ideal for Data Center High Density Cabling System



RoHS



OMC INDUSTRY CO.LIMITED

2018|En version1.0



12F MPO-LC Straight harness Cables

Description

12 cores MPO to 6 LC Duplex(6xLC uniboot;12 LC Simplex) Straight harness Cables assemblies.

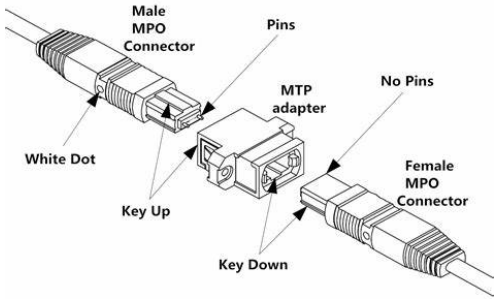
MPO- LC/SC/FC/ST Straight harness Cables are terminated with MPO and LC/SC/FC/ST connector on both ends. The 12pcs(6pcs for LC uniboot;12 LC Simplex) fanout cables are optimized for 40G QSFP+ PLR4 to 10G SFP+ LR optics direct connection and high-density data center applications. have same length . It's specifically designed for high-density fiber patching in data centers which need space saving and reduce cable management troubles.

12F MPO- LC/SC/FC/ST Straight harness Cables designed for 40G LR4 PSM, 40GBASE-SR4, 40G QSFP+ PLR4 and high-density data center. It is optimized for 10/40/100G high-density data center applications.

Products Materials

Connector	Reference	Housing Details
MPO Singlemode	IEC 61754-7	SM APC: Green connector+black boot (Standard Loss MPO) SM APC: Yellow connector+black boot (Super low loss MPO)
MPO Multimode	IEC 61754-7	OM1&OM2 PC: Beige connector+black boot (Standard Loss MPO) OM3&OM4 PC: Aqua connector+black boot (Standard&Super low loss MPO) OM3&OM4 PC: Heather Violet connector+black boot (Standard loss MPO)

IEC Straight IEC-61754-7; IEC61755, Telcordia GR-1435-CORE, JIS C5982; TIA-604-5(FOCIS5) compliant
Structured cabling per TIA-568-C
10G Fiber Channel Compliant
40G and 100G IEEE 802.3

Connector	Fiber Channel
 MPO (Male) - Pins MPO (Female) - No Pins	
MPO Connectors	12 Fibers
Note: Female connector need to connect with male connector type. 	

Other connectors' Industrial Standard:

SC: TIA/EIA, FOCIS3, GR-326.NTT-SC IEC61754-4 and JIS C5973.

LC: TIA/EIA, FOCIS10, GR-326 EIA/TIA-604-10, IEC61754-20 and JIS C5973.

FC: EIA /TIA-604-04, FOCIS4, NTT-FC, GR-326. IEC61754-13 and JIS C5973

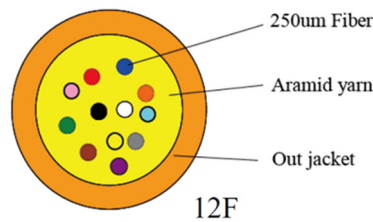
ST: TIA/EIA, FOCIS2, GR-326. IEC61754-2 and JIS C5973 Etc.

E2000: IEC61754-15



12F MPO-LC Straight harness Cables

Cable Parameters-12F Microfiber cable



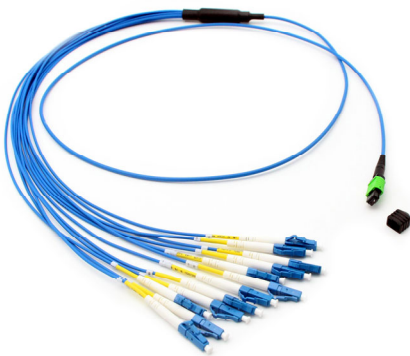
Fiber Count	OD(mm)	Minimum allowable Tensile Strength (N)	minimum allowable Crush Load(N/100mm)	Minimum Bending Radius(MM)
12	3.0±0.15	Short-term: 180; Long-term: 90	Short-term: 500; Long-term: 150	Static: 10D Dynamic: 20D

Available for

G657A1 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 G657A2/B2 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 G657B3 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 OM1 62.5/125 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 OM2 50/125 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 OM3 50/125 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 OM4 50/125 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000
 OM5 50/125 MPO-LC, MPO-SC, MPO-FC, MPO-SC, MPO-ST, MPO-E2000

LC Uni-boot connector is available for many kinds of different Uni-boot

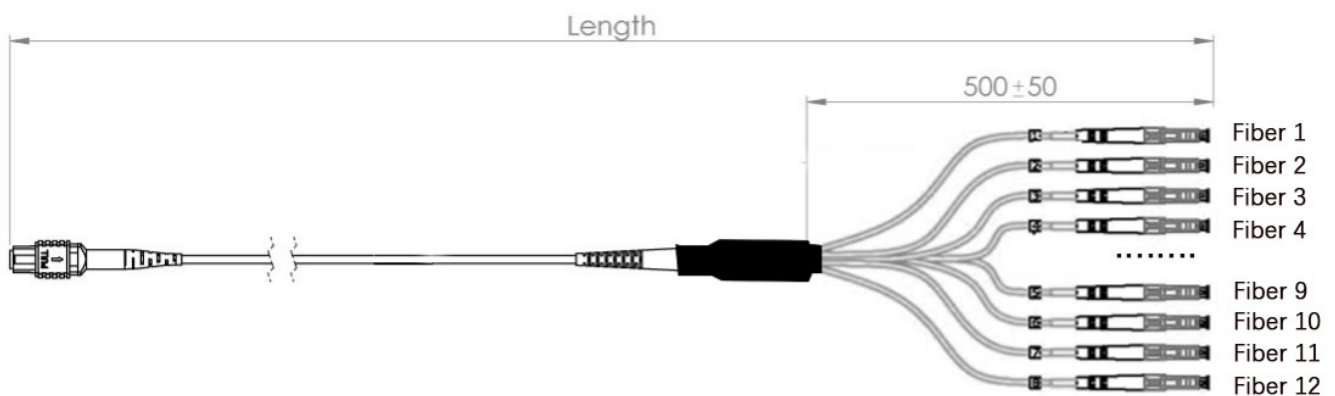
Products Details



Type 1

MPO –12 x LC Simplex structure

Fanout 2.0mm or 0.9mm OD leg.
 Fanout length: 0.5m
 MPO can be Female and Male
 Main cable OD:3.0mm

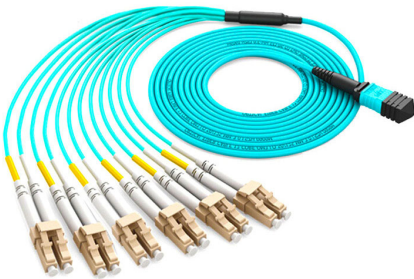


The cable's Polarity method is not fixed. Customer can use it as Polarity A and B freely.
 Other connectors such as SC,FC,E2000... are available



12F MPO-LC Straight harness Cables

Products Details

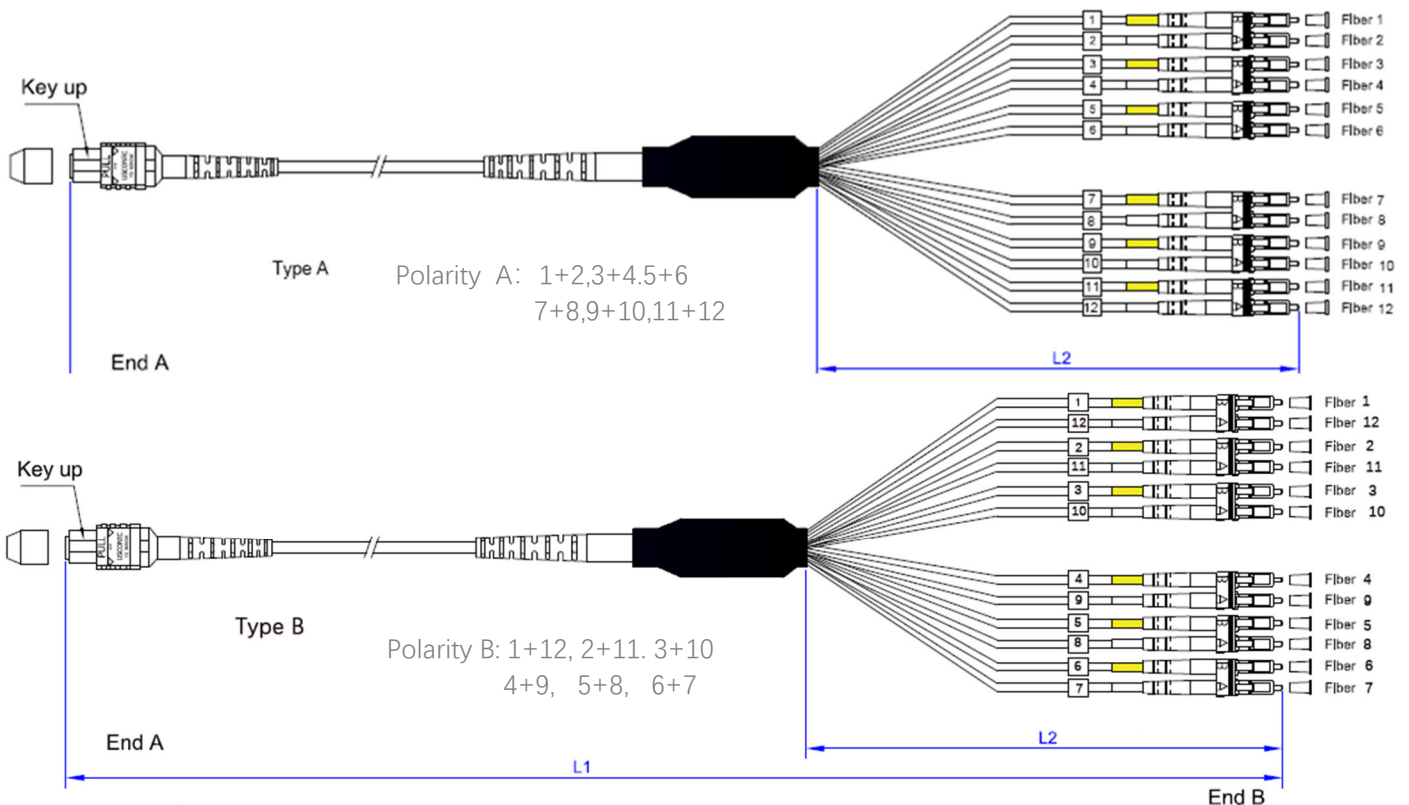


Type 2 MPO –6 x LC Duplex structure

Fanout 2.0x4.1mm/0.9mm OD leg.
Fanout length: 0.5m
MPO can be Female and Male
Main cable OD:3.0mm



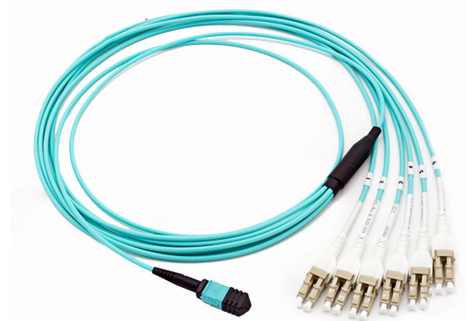
Polarity for MPO-LC Duplex type cable



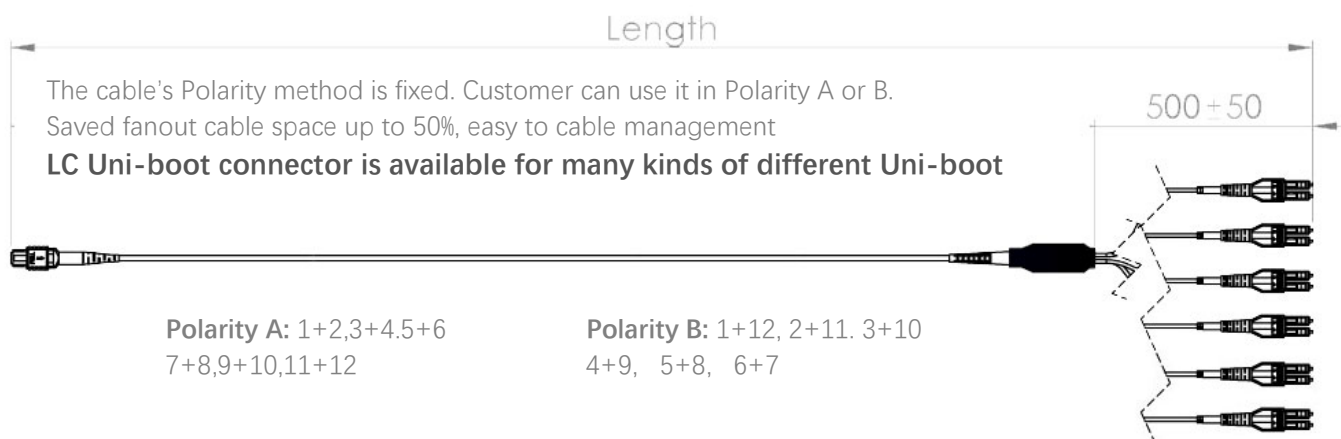
The cable's Polarity method is fixed. Customer can use it in Polarity A or B.
Other connectors such as SC,FC,E2000... are available

Type 3 MPO –6 x Uniboot LC structure

Fanout 2.0mm/3.0mm OD leg.
Fanout length: 0.5m
MPO can be Female and Male
Main cable OD:3.0mm
LC connector is available for many kinds of different Uni-boot LC connectors



Polarity for MPO-LC Uni-boot type cable



Push Pull Tab For Senko MPO



Optical Specifications

Spec items.	Single mode (APC 8-degree polished)	Multimode (PC Flat polish)
Insertion loss (MPO) (IEC 61300-3-34)	Standard loss: $\leq 0.75\text{dB}(\text{max}), \leq 0.50\text{dB}(\text{Typical})$ Super Low loss: $\leq 0.35\text{dB}(\text{max}), \leq 0.20\text{dB}(\text{Typical})$	Standard loss: $\leq 0.6\text{dB}(\text{max}), \leq 0.50(\text{Typical})$ Super Low loss: $\leq 0.35\text{dB}(\text{max}), \leq 0.20\text{dB}(\text{Typical})$
Insertion loss (LC/SC/FC/ST) (IEC 61300-3-6)	$\leq 0.3\text{dB}$	$\leq 0.3\text{dB}$
Return loss(MPO)	$\geq 60\text{dB}$ (8degree polishing)	$\geq 25\text{dB}$
Return loss(LC/SC/FC/ST)	APC $\geq 60\text{dB}$; UPC $\geq 50\text{dB}$	$\geq 35\text{dB}$
Durability	$<0.3\text{dB}$ typical change, 200 matings	
Interchangeability	$\leq 0.2\text{dB}$	
Tensile strength	$>70\text{N}$	
Operating Temperature	-40 to $+85^{\circ}\text{C}$	

MPO End-Face 3D Interference Index

Item (IEC-61300-3-30)			Minimum	Maximum
Radius of curvature (mm)	ROC-X(ABS)		2000	\
	ROC-Y(ABS)		50mm	\
Angle	Angle-X		-0.2°	-0.2°
	Angle-Y	APC	7.85°	8.15°
		PC	-0.2°	-0.2°
Fiber height (nm)			1000nm	3500nm
Max.DH.All Fiber:			-300nm	300nm
DH.Adj:			-300nm	300nm
DH.Ave Fiber:			-300nm	300nm
Core Dip:	SM		N/A	N/A
	MM		-200nm	300nm



12F MPO-LC Straight harness Cables

LC/SC/FC/ST End-Face Geometry 3D Interference Index

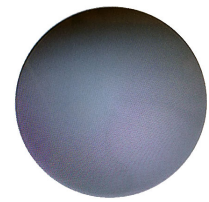
Items	Connector	PC End-face	APC End-face
Radius of Curvature	SC/FC/ST	10~25 mm	5~12 mm
	LC/MU	7~25 mm	5~15 mm
Apex Offset		$\leq 50 \mu\text{m}$	
Fiber Spherical Height		$\pm 100 \text{ nm}$	
Angular Offset		-----	$8^\circ \pm 0.5^\circ$

End-face Quality (LC/SC/FC/ST 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	



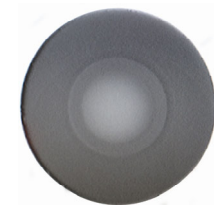
SM UPC



SM APC

End-face Quality (LC/SC/FC/ST 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	



MM PC

- OME service**
- 1, Cable color, printing word, material of cable jacket, connector's color
 - 2, OEM Label, Identify ring, cable's label, box, shipping marks
 - 3. Different quality Level.

Packaging

This easily taken and well-protected fiber patch cable package has been labelled and marked by OMC as default standard carton size : 34*22*15 cm; 44*34*24 cm ; 54*39*34 cm . Which carton to be used depends on goods Qty . Packing can be customized.



1, Self-seal PE Bag



2 Bubble Bag



3, Paper Carton



4, fumig-free Pallet



12F MPO-LC Straight harness Cables

Features:

Low insertion loss, high return loss

MT based Multi-fiber Connector, 4,8,12 and 24 fiber connector terminations and assemblies

Economical solution for mass-termination of fiber

Designed for low loss and Straight loss SM and MM applications

Ruggedized round cable, oval cable and bare ribbon options available

Color coded housings available to differentiate fiber type, polish type and/or connector grade

Good in repeatability and exchangeability

The merits of MTP/MPO Patch cable/trunk cable generally include:

High quality—MTP/MPO Patch cable/trunk cables are factory pre-terminated, tested and packaged along with the test reports. These reports serve as long-term documentation and quality control.

Decreasing cable volume—MTP/MPO Patch cable/trunk cables have very small diameters, which decrease the cable volume and improve the air-conditioning conditions in data centers.

Time saving—With the special plug and play design, MTP/MPO Patch cable/trunk cables can be incorporated and immediately plugged in. It greatly helps reduce the installation time.

Application

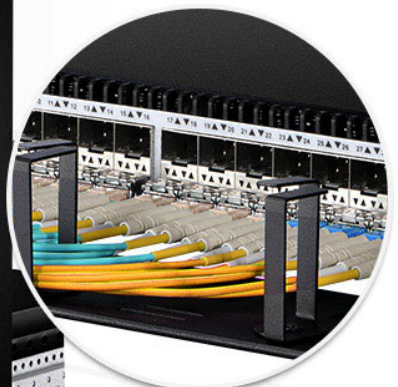
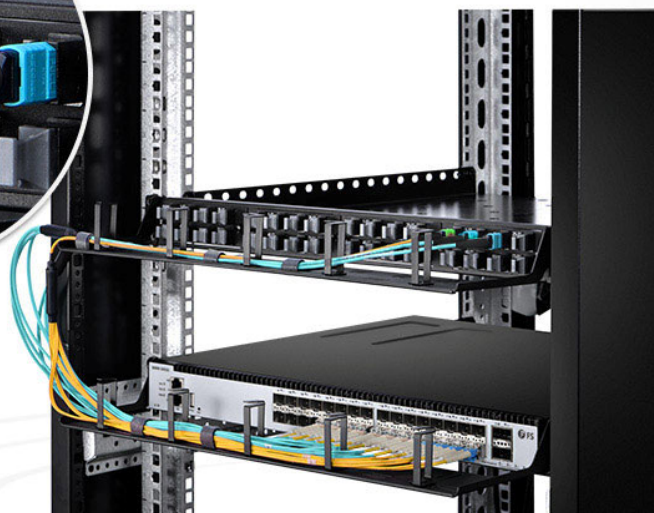
12F MPO- LC/SC/FC/ST Straight harness Cables designed for 40G LR4 PSM, 40GBASE-SR4, 40G QSFP+ PLR4 and high-density data center. It is optimized for 10/40/100G high-density data center applications.

All of OMC's MPO Connectors are from Senko/Nissin/Sumitomo. MPO Patch cable/trunk cable is a kind of high density cable assemblies which is generally use in three areas.

- 1, The Data Center application with high dense degree environment
- 2, The optical fiber to the building
- 3, The internal connector application in fiber equipment.



1× MPO connector for
adapter panel



6×LC connectors for 10G SFP+



12F MPO-LC Straight harness Cables

Order Index

Products	Fiber & cable	Fiber	Connect- or A	Connector B	Main Cable Color	Fanout cable	Fanout Cable Color	Cable Jacket	Polarity	length
M1 -Senko MPO without tab	1- 8F round cable	1-G652D	1- Standard loss Female	1-LC UPC Straight	A-Blue	1-0.9mm- 30cm	A-Blue	H-LSZH	0- Simplex connector	1-1m
M2-MTP without tab	2-12F round cable	2-G657A1	2-Standard loss male	2-LC APC Straight	B-Orange	2-2.0mm- 50cm	B-Orange	C-PVC	A-Polarity A	1.5-1.5m
M3-China MPO	3-16F round cable	3-G657A2/ B2	3- Super Low loss Female	3-LC PC Uniboot V1	C-Green	3-2.0mm- different length	C-Green	F-OFNR	B-Polarity B	2-2m
M4-Senko MPO with tab	4-20F round cable	4-G657B3	4-Super low loss male	4-LC PC Uniboot V2	D-Brown	4-3.0mm uniboot- 50cm	D-Brown	P-OFNP	C-Polarity C	..
M5-MTP with tab	5-24F round cable	5-BIF om1		5-LC PC Uniboot with Pull Tab V1	E-Grey	5-.0mm uniboot- different length	E-Grey	U-PU		
	6-8F ribbon cable	6-BIF om2		6-LC PC Uniboot with flat Clip	F-Whitie		F-Whitie			
	7-12F ribbon cable	7-BIF om3		7-LC PC Uniboot with Pull Tab V2	G-Red		G-Red			
	8-8F ribbon bare fiber	8-BIF om4		8-LC PC Uniboot with Push-Pull Tab V1	H-Black		H-Black			
	9-12F ribbon bare fiber	9-BIF om5		9-LC APC Uniboot V1	I-Yellow		I-Yellow			
				0-LC APC Uniboot V2	J-Purple		J-Purple			
				A-LC APC Uniboot with Pull Tab V1	K-Pink		K-Pink			
				B-LC APC Uniboot with flat Clip	L-Aqua		L-Aqua			
				C-LC APC Uniboot with Pull Tab V2	M- Magenta		M-Magenta			
				D-LC APC Uniboot with Push-Pull Tab V1			0-different colors			
				E-SC PC Connector						
				F-FC PC Connector						
				G-ST PC Connector						
				H-SC APC Connector						
				I-FC APC Connector						
				J-E2000 PC Connector						
				K-E2000 APC Connector						