

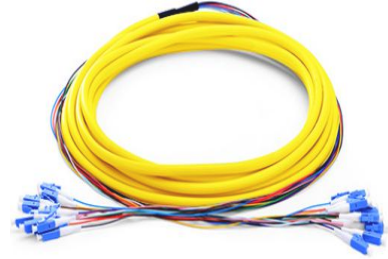
## Patch Cord



Patch Cord Simplex



Patch Cord Armored Duplex



Bunched Patch Cord



FTTH Drop Cord GJXH Simplex



Pigtail



Pigtails Colors



Bunched Pigtail h



Drop Pigtail GJXH

Patch Cord assemblies are cord-type fiber optical cables terminated with connectors at both end. The type of cable fiber and connector and the length of the patch cords can be freely specified by the customer as shown below. Pigtails are used for terminating fiber optical cables by splicing them the fibers of the cable and connecting the other end, which supplied with a connector to a patch panel or directly to equipment.

### Features

- End-Face Type: PC/UPC/APC
- Customer lengths and connectors are available upon request

- Fiber Diameter:9/125; 50/125; 62/125 Available for Simplex and duplex, pigtail type
- Low insertion loss and high return loss, high dense connection, easy for operation
- Fiber Type: Single mode fiber G652D, G657A1 and G657A2, Multimode fiber OM1, OM2, OM3 and OM4 are available
- The outer jacket can be PVC, LSZH, OFNR, OFNP, Armored etc Available for different connectors: SC, LC, FC, ST, MPO/MTP, MTRJ, MU, etc

## Applications

- CATV
- Computer networks
- Telecommunication networks
- ODF of optical transmission system
- High speed data transmission network
- High quality graphic transmission network
- Connection of optical transmission equipment

## Technical indicators

Parameter	Unit	FC, SC, LC,ST,MU,DIN,D4,MPO				E2000	
		SM(G657A1、 G652D、 SMF-28 etc.)			MM(OM1、 OM2、 OM3 etc.)	SM	
		PC	UPC	APC	PC	PC	APC
Insertion loss(typical)	dB	≤0.3	≤0.2	≤0.25	≤0.2	≤0.3	≤0.3
Return loss	dB	≥45	≥50	≥60	≥30	≥55	≥75
Operating wavelength	nm	1310, 1510					
Exchangeability	dB	≤0.2					
Vibration	dB	≤0.2					
Operating temperature	°C	-40~75					
Storage temperature	°C	-45~85					
Cable Type		Simplex or duplex (zip cord) φ2.0mm, φ0.9mm, φ3.0mm, PVC or LSZH, Armored					

## Dimensions



Armored Patch Cord



Patch Cord

## Ordering Information

### Ordering Info. for Patch Cord

**Part Number:** SPP - SC - FC - AA - 2D - 30 - 5V(A)  
 1 2 3 4 5 6 7 8 9 10

**Product Description:** Patch Cord Duplex 2×SC/UPC 2× SC/UPC G.652D 3.0mm 5M length PVC Armored

1 - Connector A	LC SC FC ST etc
2 - Connector B	LC SC FC ST etc
3 - End face A	U: UPC polish; P: PC polish; A: APC polish
4 - Endface B	U: UPC polish; P: PC polish; A: APC polish
5 - Fiber Count	1: Simplex; 2: Duplex
6 - Fiber Mode	M1: OM1; M2: OM2; M3: OM3; M3H:OM3(300); M4: OM4; D: G.652D; A1: G657.A1
7 - Diameter	09:0.9mm ; 20: 2.0mm ; 30: 3.0mm etc
8 - Length	5 : Cable total length5M ; etc
9 - Cable Jacket Materials	V: PVC; H:LSZH; O:OFNR; F:OFNP; Y:PE
10 - Armored	Null: Without armored A: Armored
Cable Jacket Color	Default: Aqua ( OM3,OM4) Gray (OM1,OM2) , Blue (SM)

### Ordering Info. for Pigtail

**Part Number:** SPP - SC - U - 2D - 0.9 - 0.5V  
 1 2 3 4 5 7 8

**Product Description:** Pigtail Duplex SC/UPC G.652D 0.9mm 0.5M length PVC

1 - Connector A	LC SC FC ST etc
2 - Endface A	U: UPC polish; P: PC polish; A: APC polish
3- Fiber Count	1: Simplex; 2: Duplex; 12:12 cores; 24:24 cores etc
4 - Fiber Mode	M1: OM1; M2: OM2; M3: OM3; M3H:OM3(300); M4: OM4; D: G.652D; A1: G657.A1
5 - Diameter	09: 0.9mm 20: 2.0mm ; 30: 3.0mm ;
6- Length	0.5 : Cable total length0.5M etc
7 - Cable Jacket	V:PVC; H:LSZH; O:OFNR; F:OFNP; Y:PE

Materials	
8 - Armored	Null: Without armored A: Armored
Cable Jacket Color	Default: Aqua ( OM3,OM4) Gray (OM1,OM2) , Blue (SM)

Ordering Info. for Bunched Patch Cord	
<b>Part Number:</b>	<b>SPP-SC-SC-A A- 12 D- 20 H- 09 09- 1</b> <b>1 2 3 4 5 6 7 8 9 10 11</b>
<b>Product Description:</b>	Patch cord Bunch 12 Cores 12× SC/APC 12× SC/APC 1M branch 0.9mm branch(0.9mm in main cable) G.652D 20M length PVC
1 - Connector A	LC SC FC ST etc
2 - Connector B	LC SC FC ST etc
3 – Endface A	U: UPC polish; P: PC polish; A: APC polish
4 – Endface B	U: UPC polish; P: PC polish; A: APC polish
5 - Cores	12: 12 cores; 24: 24 cores etc
6 - Fiber Mode	M1: OM1; M2: OM2; M3: OM3; M3H:OM3(300); M4: OM4; D: G.652D; A1: G657.A1
7 - Length	20 : Cable total length 20M etc
8 - Cable Jacket Materials	V:PVC; H:LSZH; O:OFNR; F:OFNP; Y:PE
9 -Branch Diameter	09: 0.9mm branch ; 20: 2.0mm branch; 30: 3.0mm ;
10 - Main Diameter	09:0.9mm in main cable; 20:2.0mm in main cable; 30:3.0mm in main cable;
11 - Branch Length	1:Branch length 1M

Note:

- 1.Default Connector A - Connector B order in PN: LC-SC LC-FC LC-ST SC-FC SC-ST FC-ST
- 2.When Connector A is same as Connector B , Default End face A – End face B order in PN: UA PA UP
- 3.M3 ( OM3 ) :10G multimode optical fiber can be divided into three categories, 150 M, 300 M, and 550 M according to the maximum transmission distance. The default is 150M
- 4.M3H: OM3(300) Maximum transmission distance of 300 M
5. Additional instructions for the branch:
  - ①When the main diameter cable is not marked, the default is 2.0mm ;
  - ② “-X” Other branch length, Next to the branch diameter, continue to add at the end of the model. The length of both sides of the branch is different as -M (custom branch length).

## CPRI Patch Cords



### Description

The CPRI patch cords are standard size for Duplex LC Connectors, widely used in FTTH, Base station, and the outdoor waterproof condition. SOPTO supplies FTTH(Fiber to the Antenna) DLC (Dual LC Connector) SM GYFJH 2G.657A patch cord for TD-SCDMA,WCDMA,CDMA2000, Wimax, 2G, 3G, 4G and 5G Base Station BBU-RRU outdoor. These products are good for CPRI application.

### Features

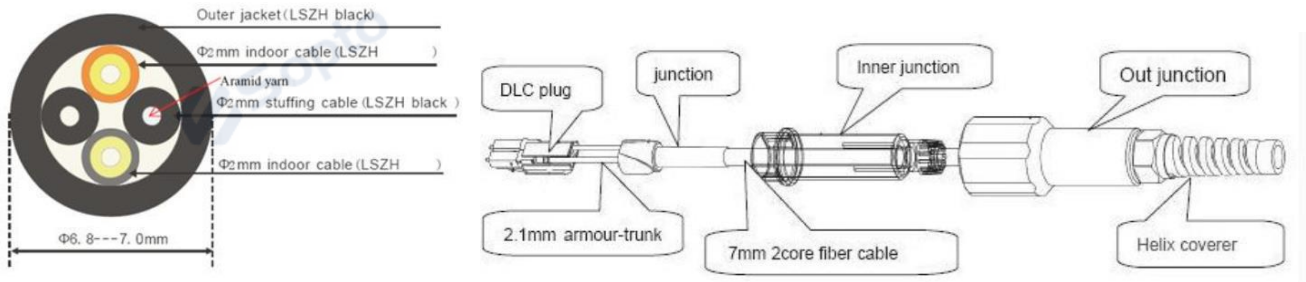
- The CPRI patch cords are used for outdoor RRU transmitting optical signal and remote fiber feeder etc;
- Standard Duplex LC connector, well connected with standard LC adaptor
- Available Single mode and Multimode
- IP67 protection, salt-mist proof, humidity proof, dust proof
- Low insertion/return loss, steady optical transmitting.
- Light weight, waterproof, dustproof, moisture proof, Metal hard housing.
- 500cycles Mechanical life



## Applications

- Widely used in FTTA & FTTH
- Used for 3G 4G base station
- BBU, RRU, RRH, LTE

## Cable Structure



GYFJH

## Fiber Parameters

G.652D For example

No.	Items	Unit	Specification	
			G.652D	
1	Mode Field Diameter	1310nm	μm	9.2±0.4
		1550nm	μm	10.4±0.5
2	Cladding Diameter	μm	124.8±0.7	
3	Cladding Non-Circularity	%	≤0.7	
4	Core-Cladding Concentricity Error	μm	≤0.5	
5	Coating Diameter	μm	245±5	
6	Coating Non-Circularity	%	≤6.0	
7	Cladding-Coating Concentricity Error	μm	≤12.0	
8	Cable Cutoff Wavelength	nm	λ <sub>c</sub> ≤1260	
9	Attenuation(max.)	1310nm	dB/km	≤0.4
		1550nm	dB/km	≤0.3

## Cable Parameters

Items		Specifications
Fiber Count		2
Tight-buffered Fiber	Dimension	2.0±0.1mm

	Material	LSZH
	Color	Default
Filler	Dimension	2.0±0.1mm
	Material	LSZH
	Color	Black
Strength member		Aramid yarn
Jacket	Dimension	7.0±0.2mm
	Material	LSZH
	Color	Black

### Ordering Information

Items	Unite	Specifications
Crush ( Long Term )	N/10cm	500
Crush ( Short Term )	N/10cm	1000
Min. Bend Radius ( Dynamic )	mm	20D
Min. Bend Radius ( Static )	mm	10D
Operating Temperature	°C	-20 ~ +60
Storage Temperature	°C	-20 ~ +60

### Product Description : SPP- CPRI- LC - LC - UU - 2 D - 70-100 HP-C(-09-0.4)

1 2 3 4 5 6 7 8 9 10 11

1 - Connector A	LC
2 - Connector B	LC SC FC etc
3 - Endface A	U: UPC polish; P: PC polish; A: APC polish
4 - Endface B	U: UPC polish; P: PC polish; A: APC polish
5 - Fiber Count	2: Duplex; 1: Simplex
6 - Fiber Mode	M1: OM1; M2: OM2; M3: OM3; M4: OM4; D: G.652D; A1: G657.A1; A2: G657.A2
7 - Diameter	70: 7.0mm; 48: 4.8mm
8 - Length	100: Cable total length 100M ; etc
9 - Cable Jacket Materials	H:LSZH
10 - Type	1. Null: Without armour or waterproof cover, with 2.0mm&0.5M branch 2. B: Armour on both sides, with 2.0mm&0.5M branch 3. P-X: with a waterproof cover on one side, with 2.0mm&0.5M branch at the other side PB-X: with a waterproof cover on one side, with 2.0mm&0.5M armored branch at the other side PP-X: with Waterproof cover on both sides At present, there are three kinds of waterproof cover. X=A,B or C A refers to Full AXS cover, suitable for 4.8mm cable diameter; B refers to ODVA cover, suitable for 5.0-7.0mm cable diameter;

<p>11 - Additional instructions on branches</p>	<p>C refers to NSN cover, suitable for 5.0-7.0mm cable diameter</p> <p>1.Null: Default 2.0mm&amp;0.5M branch</p> <p>2. for example “-09-0.4” refers to 0.4M branch 0.9mm branch</p> <p>The default branch diameter is 2.0mm, -09 : 0.9mm branch diameter , -30: 3.0mm branch diameter.</p> <p>The default branch length is 0.5M, -Y : the other branch lengths (unit: m, added at the end of the model.)</p> <p><math>Y \geq 0.1</math>, Branch without armour; <math>Y \geq 0.13</math>, Armored Branch;</p>
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Armored breakout Type



Waterproof Cover Type



Waterproof Cover+Armored Type



Normal Type



A type: Full AXS



B type: ODVA



C type: NSN



## MPO Patch Cord



### Description

The single-mode and multimode MPO products are multi fiber connectors used in high-density backplane and Printed Circuit Board(PCB) applications in data and telecommunications system. The MPO connector offers up to 12 times the density of standard connectors, providing significant space and cost savings.

MPO patch cord utilize precision molded MT ferrules, with metal guide pins and precise housing dimensions to ensure fiber alignment when mating. The MPO can be mass terminated in combination of 4,8,12 or 24 fibers.

## Features

- Precision molded MT ferrule
- High precision guide pins for exact alignment
- Compact design, up to 4,8,12,24 fibers
- IEC 61754-7 Compliant
- Telcordia GR-1435-CORE Compliant

## Applications

- Gigabit Ethernet
- Industrial & Military
- Premise Installations
- CATV, Video and Multimedia
- Telecommunication Networks
- Interconnection for O/E modules
- Active Devised/Transceiver Interface
- Asynchronous Transmission Mode(ATM)
- Optical Switch interframe connections
- Parallel optical interconnect between PC Cards and patch panels

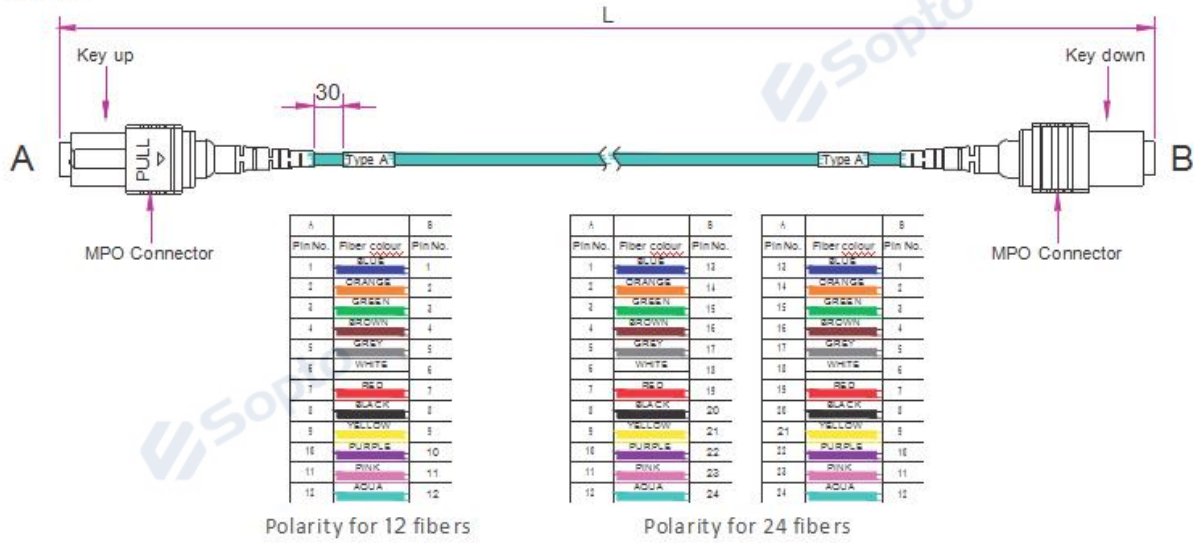


## Specifications

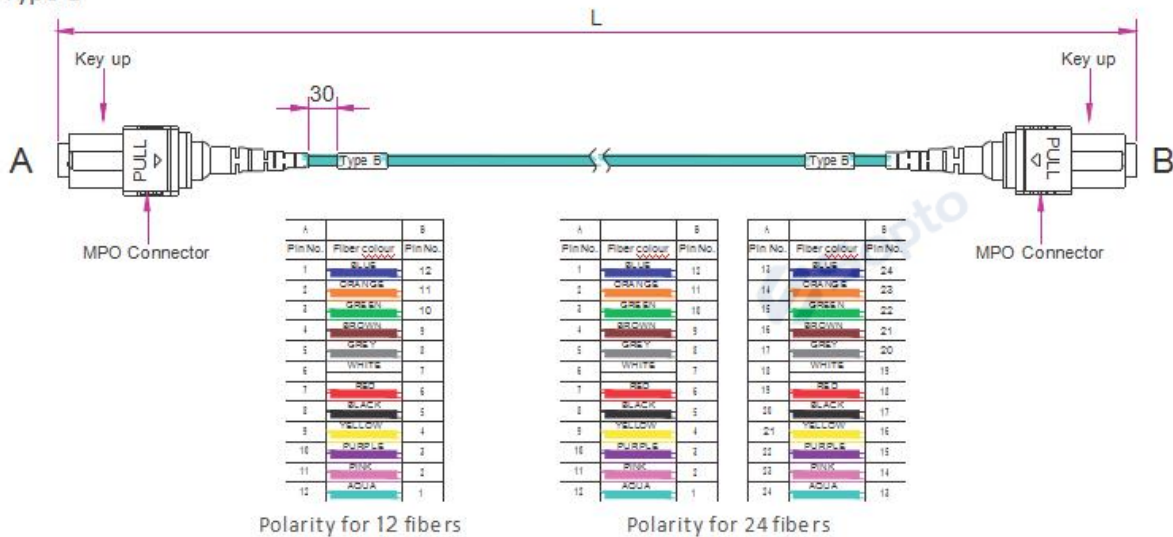
Type	Wavelength	I.L. Max	R.L.Min
MPO/PC(MM)	850nm/1300nm	0.60dB	25dB
MPO/APC(SM)	1310nm/1550nm	0.70dB	50dB

## Drawing

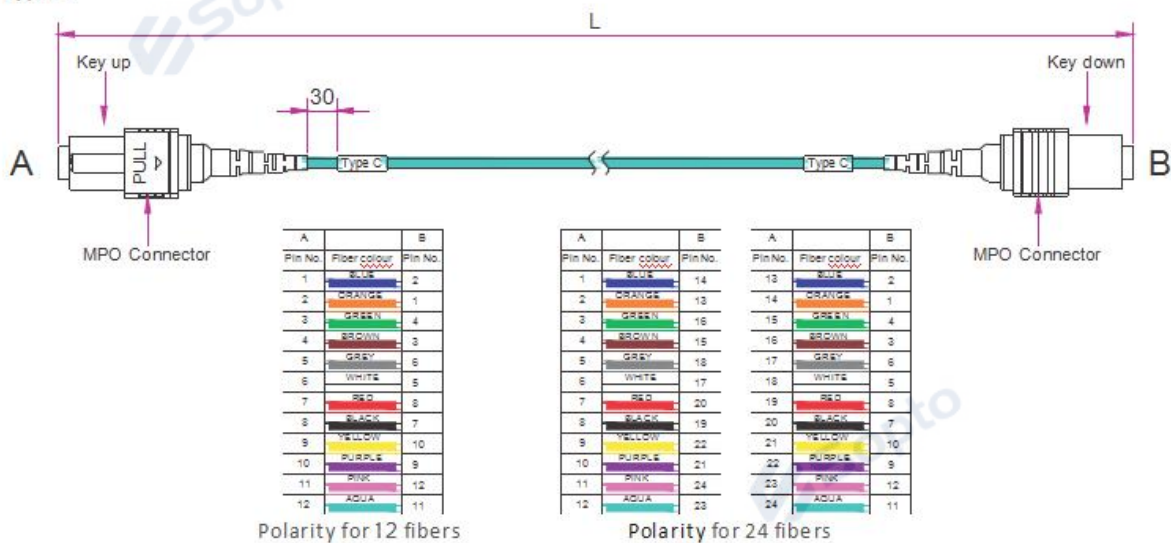
● Type A



● Type B



● Type C



## Ordering information

Product Description: <b>SPP-<u>MPOM</u> - <u>MPOM</u> - <u>AA</u> - <u>12D</u> - <u>3HA</u></b>	
	<b>1      2      3 4   5 6   7 8 9</b>
1 - Connector A	MPOF: MPO Female; MPOM: MPO Male
2 - Connector B	MPOF: MPO Female; MPOM: MPO Male
3 - Endface A	P: PC polish; A: APC polish
4 - Endface B	P: PC polish; A: APC polish
5 - Fiber Count	12: 12 Cores; 8: 8 Cores ; 24: 24 Cores
6 - Fiber Mode	M1: OM1; M2: OM2; M3: OM3; M4: OM4; D: G.652D; A1: G657.A1
7 - Length	3 : Cable total length 3M ; etc
8 - Cable Jacket Materials	H:LSZH
9 - Polarity	A: Type A; B: Type B; C: Type C
Fiber Type& Diameter	Default: Mini Round Cable 3.0mm
Cable Jacket Color	Default: Aqua ( OM3,OM4) Orange (OM1,OM2) , Yellow (SM)

- Note: 1. MPO-MPO patch cord standard polarity is “ Type A” unless specified otherwise.  
 2. MPO polishing according to industrial standard: SM-APC polishing, or PC polishing  
 3. MPO connector housing color: SM-Yellow, OM1/OM2-Beige, OM3/OM4-Aqua.  
 4. If you need more customized services, please contact us.

E-mail: [sales@sopto.com](mailto:sales@sopto.com)

Web : <http://www.sopto.com>