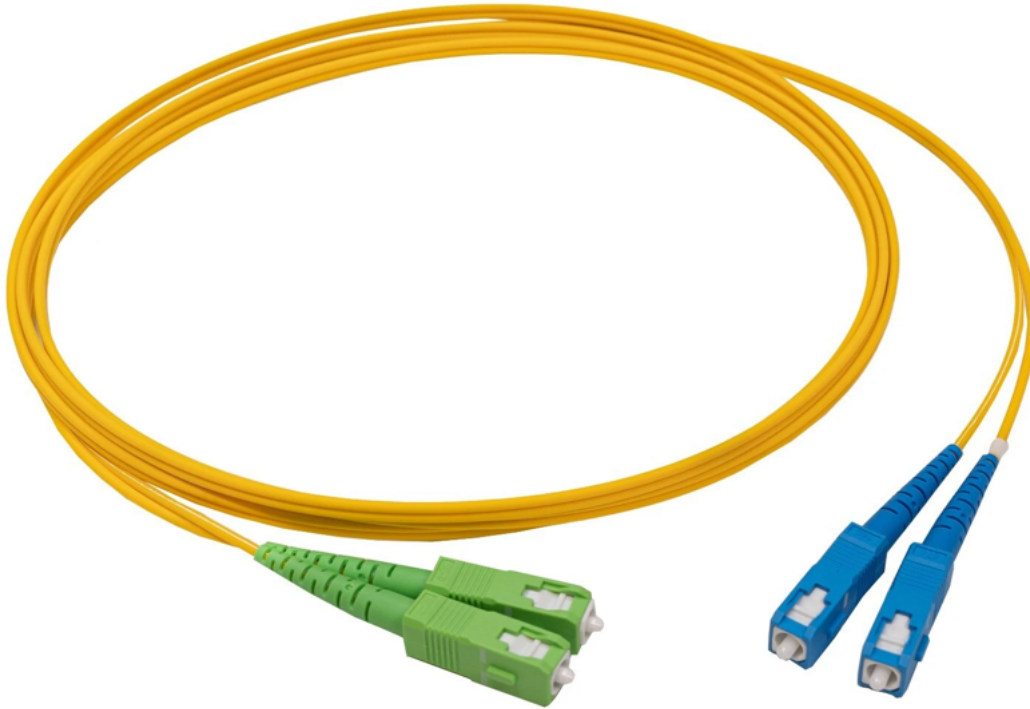


# Patchcord Duplex SC/UPC-SC/APC

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 [fiberhk.com/product\\_fhk/patchcord-duplex-sc-upc-sc-apc/](https://fiberhk.com/product_fhk/patchcord-duplex-sc-upc-sc-apc/)



## Patchcord Duplex SC/UPC-SC/APC

Sales No. PC-DX-SCU-SCA

Manufacturer: FiberHK

Product Category: Patchcord | Duplex

## Precision Engineered Fiber Optic Solutions

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FHK operates a state-of-the-art cable assembly facility specializing in the manufacture of high-performance patch cords and pigtails. Utilizing premium-grade connectors and optical cables, each assembly undergoes

### Rigorous Testing

IEC-compliant optical performance validation

### Traceable Quality

Unique ID with certified test reports

### Standardized Production

ISO-certified manufacturing processes

## Features

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- Configuration Options: Simplex & duplex patch cords
- Cable Specifications: PVC/LSZH jackets with Ø0.9/2.0/3.0mm diameters
- Fiber Types:
  - Single-mode: OS2 (G.652D/G.657):
  - Multimode: OM1/OM2/OM3/OM4/OM5
- Compliance: RoHS, REACH
- Certification: IEC 61300 / IEC 61753 / TIA-568.3-D
- Connectors: SC/LC/FC/ST/MU/MPO (UPC/APC polish)
- Performance: ≤0.3dB IL, -40°C to +85°C operating range

## Applications

- Telecom Infrastructure: 5G fronthaul, FTTH, OLT connections
- Cloud Data Centers: Spine-leaf architecture, 400G Ethernet
- Broadcast & Media: 4K/8K video production, OB vans
- Industrial Automation: PLC networks, robotic cells
- Enterprise Networks: Campus backbones, PoE++ systems
- Test Laboratories: Optical component validation
- Defense Systems: Secure comms, drone command links
- Medical Imaging: Endoscopy, laser surgery systems
- Smart Transportation: Traffic management, V2X comms

## General Mechanical Specifications for Fiber Optic Patch Cords

Parameter	Single Mode (SM)	Multimode (MM)	Test Standard
Insertion Loss	≤0.3 dB	≤0.3 dB	IEC 61300-3-4
Return Loss	≥50 dB (PC/UPC)	≥35 dB (OM3/OM4)	IEC 61300-3-6
	≥60 dB (APC)	≥30 dB (OM1)	
Repeatability	≤0.1 dB	≤0.1 dB	IEC 61300-3-28
Durability	≤0.2 dB change (500 matings)	≤0.2 dB change (500 matings)	IEC 61300-3-28
Interchangeability	≤0.2 dB	≤0.2 dB	IEC 61300-3-32
Tensile Strength	>100 N (SC/FC/ST)	>100 N (SC/FC/ST)	IEC 61300-3-12
	>80 N (LC/MU)	>80 N (LC/MU)	
Operating Temperature	-40°C ~ +85°C	-40°C ~ +85°C	IEC 61753-1
Bend Radius	≥30 mm (static)	≥30 mm (static)	IEC 61753-1
	≥15 mm (dynamic)	≥15 mm (dynamic)	

1. LC/MU connectors have lower tensile strength due to miniaturized design.
2. APC connectors require higher return loss (≥60 dB).
3. Test conditions: 1310/1550nm (SM), 850/1300nm (MM), 45-75% RH.

## Special Specifications for MPO/MTP Connectors

Parameter	Single Mode (SM)	Multimode (MM)	Key Requirement
Insertion Loss	≤0.5 dB	≤0.5 dB	Average of 12/24 fibers
Core-to-Core Variation	≤0.3 dB	≤0.3 dB	Loss deviation within connector

Parameter	Single Mode (SM)	Multimode (MM)	Key Requirement
Alignment Accuracy	≤1.0 μm	≤1.5 μm	Guide pin precision (IEC 61754-7)
Mating Force	≤40 N	≤40 N	With push-pull housing
End Face Geometry	Radius: 10-25 mm Apex Offset: ≤50 μm	Same as left	3D interferometry (IEC 61300-3-35)

### Additional Specifications for Pigtails

Parameter	Requirement	Test Method
Fusion Splice Strength	>1.0 GPa	IEC 60793-1-31
Bare Fiber Length	1.0±0.1 m (Up to 3m customized)	N/A
Coating Diameter	245±10 μm (Standard)	IEC 60793-1-20
Thermal Aging	≤0.1 dB change (85°C/85%RH, 500h)	IEC 61300-2-42
End Face Scratches	Max Scratch: ≤5 μm	Microscopy (IEC 61300-3-35)

### Key Differences by Connector Type

Type	Ferrule Diameter	Mating Cycles	IP Rating	Typical Applications	Locking Mechanism
E2000	Ø1.25 mm	>500	IP68	Data Centers and Cloud Computing Infrastructure	Push-pull latch
LC	Ø1.25 mm	>500	IP40	High-density (SFP modules)	Latch
SC	Ø2.5 mm	>1,000	IP50	Data centers/Telecom	Push-pull
FC	Ø2.5 mm	>1,000	IP67	High-vibration environments	Threaded
MPO	6.4×2.4 mm	>500	-	40G/100G SR4 modules	Push-pull with guide pins
MU	Ø1.25 mm	>500	-	Japan market	Push-pull
ST	Ø2.5 mm	>500	IP54	Legacy networks	Bayonet

### Critical Notes Table

Parameter	Single Mode (SM)	Multimode (MM)	Key Requirement
Insertion Loss	≤0.5 dB	≤0.5 dB	Average of 12/24 fibers

Parameter	Single Mode (SM)	Multimode (MM)	Key Requirement
Core-to-Core Variation	≤0.3 dB	≤0.3 dB	Loss deviation within connector
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Mating Force	≤40 N	≤40 N	With push-pull housing
End Face Geometry	Radius: 10-25 mm Apex Offset: ≤50 μm	Same as left	3D interferometry (IEC 61300-3-35)

## Availability

Parameter	Single Mode (SM)	Multimode (MM)	Key Requirement
Insertion Loss	≤0.5 dB	≤0.5 dB	Average of 12/24 fibers
Core-to-Core Variation	≤0.3 dB	≤0.3 dB	Loss deviation within connector
Alignment Accuracy	≤1.0 μm	≤1.5 μm	Guide pin precision (IEC 61754-7)
Mating Force	≤40 N	≤40 N	With push-pull housing
End Face Geometry	Radius: 10-25 mm Apex Offset: ≤50 μm	Same as left	3D interferometry (IEC 61300-3-35)

## Purchase Information

Product Type	Fiber Type	Fiber Spec	Structure	Conn A	Polish A	Conn B	Polish B	Diam (mm)	Length	
Patch cord	SM	9/125	Simplex	E2000	APC	E2000	APC	0.9	0.5M	
									1M	
	MM	50/125	Duplex	FC	UPC	FC	UPC	2.0	1.5M	
									2M	
		62.5/125	LC	PC	LC	PC	3.0	3M		
								5M		
										10M
					MPO		MPO			20M
					MU		MU			25M
										30
			SC		SC			Custom lengths available		
			ST		ST					

Product Type	Fiber Type	Fiber Spec	Structure	Conn A	Polish A	Tail End	Diam (mm)	Length
Pigtail	SM	9/125	Simplex	E2000	APC	BF	0.9	0.5M
	MM	50/125	Duplex	FC	UPC		2.0	1M
								1.5M
	62.5/125				LC	PC		3M
								5M
								10M
								20M
					MPO			25M
30								
				MU			Custom lengths available	
							ST	

[Product Specification \(PDF\)](#)

[PRODUCT COMPLIANCE STATEMENT](#)

[CONFLICT MINERALS POLICY](#)



FAQ



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