Optical Connectors

Patch Cord	Single-fiber Optical Connector
	Simplex Patch Cord
	Duplex Patch Cord
MPO Cabling System	MPO Cabling System
	Optical Patch Panel and Connector Module
	MPO Connector
	Trunk Cable
	Patch Cord with Fiber-optic Connector for MPO Cabling System
Field Installable Connector	FAST™ Connector Series
	FAST™ Plus Connector
	FuseConnect™ Series
	FuseConnect™ for MPO
Mechanical Splices	Mechanical Splice Element
Cleaners	One-Click™ Cleaner MPO ESD
	One-Click™ Cleaner PRO
	One-Click™ Cleaner

![Fujikura logo]

Single-fiber Optical Connector

Fujikura Simplex/Duplex Patch Cords support following optical connectors.

SC Connector

SC Connector   SC2 Connector (Note)
                         (Note) Special tools are required for attaching and detaching.
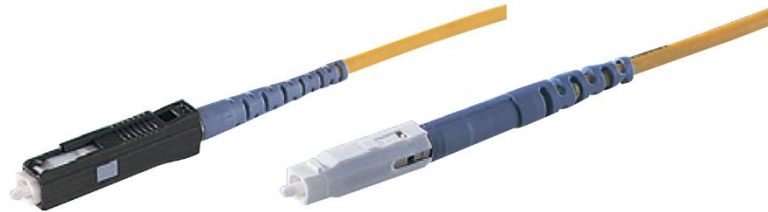
LC Connector

Cord Type   Fiber Type

MU Connector

MU Connector   MUJ Connector (Note)
                        (Note) Special tools are required for attaching and detaching.

FC Connector

Cord Type   Fiber Type

Duplex Type Connector

SCF Connector (SCF)   LC Connector (DXLC)

Contact us

Single-fiber Optical Connector Lineup for Simplex/Duplex Patch Cords

Optical Connector Type		Single Mode Fiber (SMF) / Multimode Fiber (MMF)							
		Polishing Method (MMF can only be PC polished.)				Cord Size [mm]			
						Fiber	Simplex Cord		Zipcord
		PC	SPC	UPC	APC	Ø 0.9	Ø 2	Ø 2.8	Ø 2 x 2
SC	SC	✓	✓	✓	✓	✓	✓	✓	✓
	SC2	✓	✓	✓		✓	✓	✓	✓
	SCF	✓	✓	✓		✓	✓	✓	✓
LC	LC	✓	✓	✓		✓	✓		✓
	DXLC	✓	✓	✓		✓	✓		✓
MU	MU	✓	✓	✓		✓	✓		✓
	MUJ	✓	✓	✓		✓	✓		✓
FC	FC	✓	✓	✓	✓	✓	✓	✓	✓

Optical Specifications of Single-fiber Optical Connector

Item		Single Mode	Multimode
Fiber Type		SM10/125 (R15, R30)	GI50/125 GI62.5/125
Applicable Optical Connectors		SC, LC, MU, FC	
Insertion Loss (against Master)	PC Polishing	0.5 dB or less	0.3 dB or less
	SPC Polishing		Not Supported
	UPC Polishing		
	APC Polishing *1		
Return Loss	PC Polishing	- *2	- *2
	SPC Polishing	40 dB or more	Not Supported
	UPC Polishing	50 dB or more	
	APC Polishing *1	60 dB or more	

*1: SC2, LC and MU connectors do not support APC polishing.
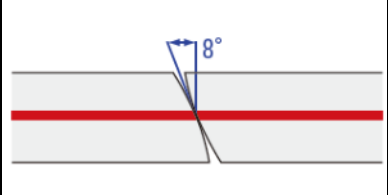*2: If specification of the return loss is required, please contact Fujikura Sales.

Contact us

Methods for Polishing Optical Fiber Connectors

■Please choose a polishing method that meets the return loss specifications of Patch Cord.

| Polishing Method and End face Shape of the ferrule		Features	Return Loss (SM)
Physical Contact (PC) *3		Establishes a secure connection by aligning spherical polished end faces to ensure close contact between fibers.	-
Super PC (SPC) *4		PC polishing that helps to reduce reflection.	40dB
Ultra PC (UPC) *4		PC polishing that further reduces reflection compared to SPC.	50dB
Angled PC (APC)	8°	Helps further reduce reflection by obliquely polishing to a spherical compared to UPC.	60dB

*3. PC stands for Physical Contact.
*4. For AdPC cases, please specify when placing your order.

Availability of connections in different polished end faces

It is able to connect PC, SPC and UPC as it has spherical end face. For example, SPC end face is able to connect UPC end face. In that case, the return loss is as same as SPC-SPC connection. On the other hand, APC cannot connect to PC, SPC or UPC as it has angled end face.
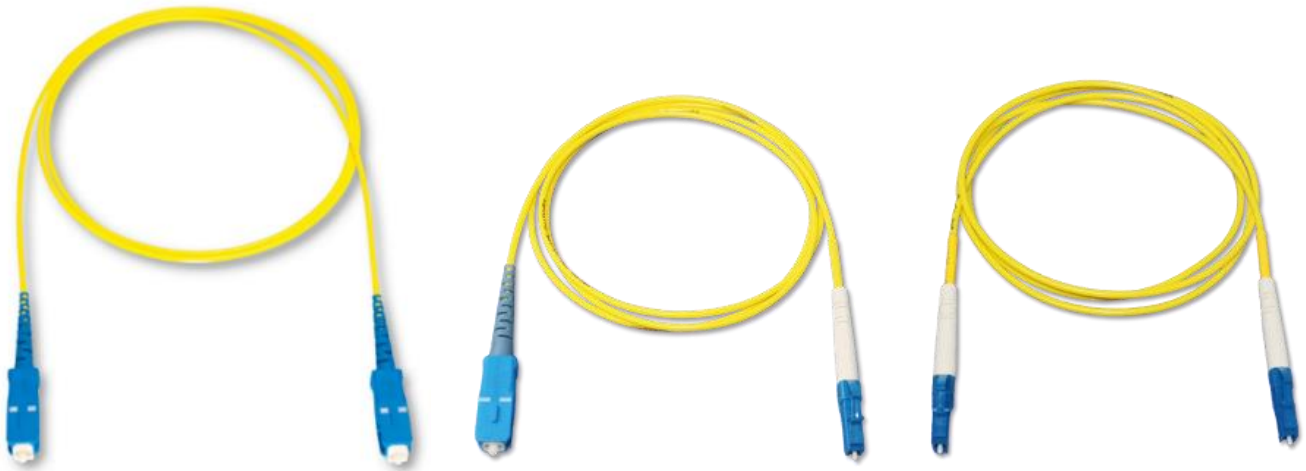
Available — SPC — UPC

The return loss is as same as SPC-SPC connection

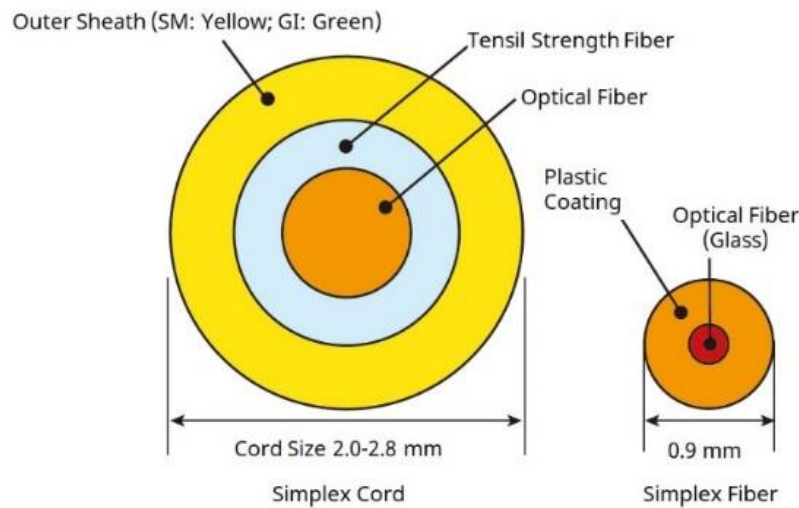NOT Available — SPC — APC
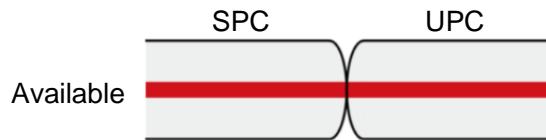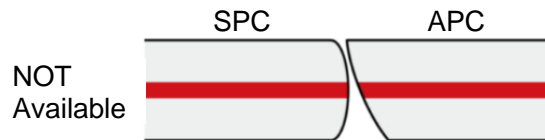
Simplex Patch Cords and Pigtails

SC-SC   SC-LC   LC-LC

This product is a general Simplex Patch Code used for Optical Distribution Frame. The Simplex Fiber with connector is used for wiring in the optical equipment.

Features

■Applicable for SC, LC, MU and FC connector
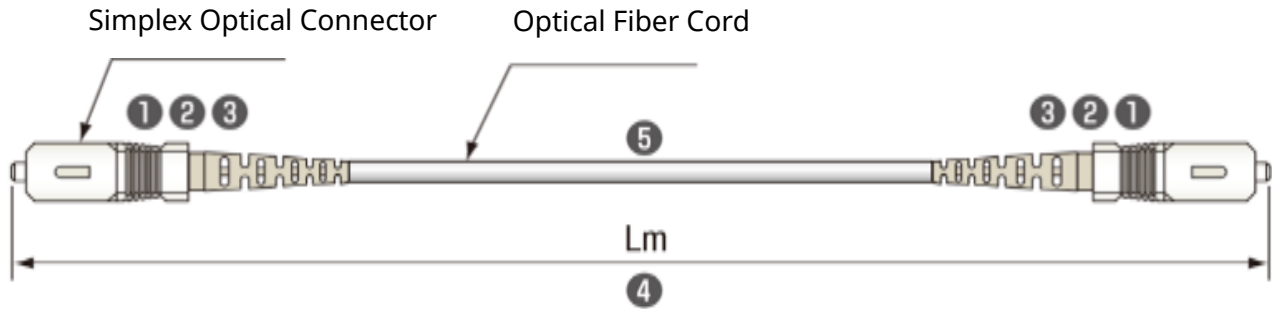
■Applicable for SM fiber and MM fiber

Applications

■Wiring in the optical equipment for inside plant

■Wiring in the Optical Termination Enclosure and Optical Distribution Frame

![Fujikura logo]

Ordering Information
Both End with Connectors

Simplex Optical Connector   Optical Fiber Cord

Model Number: FSC-2PS-SPC-3M-SMC10/125-S
❶ ❷ ❸❹ ❺

❶	❷	❸	❹	❺	
Connector Type (*1)	**Connector at Fiber End**	**Polishing Type (*2)**	**Product Length (*3)**	**Fiber Type (*4)**	
FSC: SC **FSC2**: SC2 **FLC**: LC **FMU**: MU **FMUJ**: MUJ **FFC**: FC **FLC(TAB)**	**Single Mode Fiber** **1PS**: One End Only **2PS**: Both Ends **Multimode Fiber** **1P**: One End Only **2P**: Both Ends	**PC**: PC Polishing **SPC**: SPC Polishing **UPC**: UPC Polishing **APC**: APC Polishing (SC, FC only)	Number in Metric (0.3 m or more)	**Simplex Cord** **GC50/125-S**: MM50 (Green), OM2 **GC62.5/125-S**: MM62.5 (Green), OM1 **SMC10/125-S**: SM (Yellow), R30 **SR15E-SMC10/125-S**: SM (Yellow), R15 **GC50/125-S(10G)**: MM10G (Green), OM3	**Simplex Fiber** **G50/125**: MM50 (White), OM2 **SM10/125**: SM (White), R30 **SR15E-SM10/125**: SM (White), R15

(*1): When different connectors are attached at both ends, indicate FFC/FSC.

(*2): When polishing at both ends is different, indicate PC/SPC. Multimode fiber is PC polishing only.

(*3): Product length tolerances are shown below:

Product Length	Tolerance
L ≤ 1 m	+10 cm, -0
1 m < L ≤ 10 m	+10%, -0
10 m < L ≤ 50 m	+1 m, -0
50 m < L	+2%, -0

(*4): For Ø 0.9 mm fiber and Ø 2 mm cord, color in () indicates coating color.

Contact us

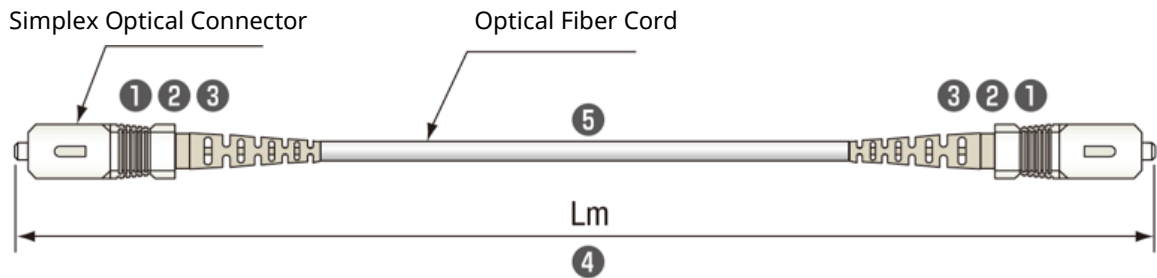| Item	Model Number Example *	Standard Product Length (m)	Overview
1	FSC-2PS-SPC-LM-SMC10/125-S	L = 1, 2, 3, 5	SM (R30) Simplex Cord with SC Connectors at Both Ends
2	FSC-2PS-SPC-LM-SR15E-SMC10/125-S	L = 1, 2, 3, 5	SM (R15) Simplex Cord with SC connectors at Both Ends
3	FLC-2PS-SPC-LM-SR15E-SMC10/125-S	L = 1, 2, 3, 5	SM (R15) Simplex Cord with LC connectors at Both Ends
4	FSC-2P-PC-LM-GC50/125-S	L = 1, 2, 3, 5	GI 50/125 Simplex Cord with SC connectors at Both Ends
5	FSC-2P-PC-LM-GC62.5/125-S	-	GI 62.5/125 Simplex Cord with SC connectors at Both Ends
6	FSC/FLC-2P-PC-LM-GC50/125-S	-	GI 50/125 Simplex Cord with LC Connector at One End and SC Connector at Other End
7	FSC-1PS-SPC-LM-SR15E-SMC10/125-S	L = 1, 2, 3, 5	SM (R15) Simplex Cord with SC Connector at One End Only
8	FSC-2PS-SPC-LM-SM10/125	-	SM Simplex Fiber with SC Connectors at Both Ends
9	FSC-2P-PC-LM-G50/125	-	GI 50/125 Simplex Fiber with SC Connectors at Both Ends

* Specify the total length (m) for L

Duplex Patch Cord

Duplex Patch Cord

Tensil Strength Fiber
Optical Fiber Core
Outer Sheath
(SM: Yellow; GI: Green)

Both End with Connectors

Simplex Optical Connector   Optical Fiber Cord

❶❷❸   ❸❷❶

⑤

Lm

④

Model Number: FSC-2PS-SPC-3M-SMC10/125-S
　　　　　　　　　❶　❷　❸④　　⑤

❶		❷	❸	❹	⑤
Connector Type (*1)		**Connector at Fiber End**	**Polishing Type (*2)**	**Product Length (*3)**	**Fiber Type (*4)**
Simplex Connector **FSC**: SC **FSC2**: SC2 **FMU**: MU **FMUJ**: MUJ **FLC**: LC **FFC**: FC	**Duplex Connector** **FSCF**: SCF **DXMU**: DXMU **DXLC**: DXLC	**Single Mode Fiber** **1PS**: One End Only **2PS**: Both Ends **Multimode Fiber** **1P**: One End Only **2P**: Both Ends	**PC**: PC Polishing **SPC**: SPC Polishing **UPC**: UPC Polishing **APC**: APC Polishing (SC, FC only)	Number in Metric (1.0 m or more)	**Simplex Cord** **GC50/125-2SR**: MM50 (Green), OM2 **GC62.5/125-2SR**: MM62.5 (Green), OM1 **SMC10/125-2SR**: SM (Yellow), R30 **SR15E-SMC10/125-2SR**: SM (Yellow), R15 **GC50/125-2SR (10G)**: MM10G (Green), OM3

(*1): When different connectors are attached to both ends, use FFC/FSC notation.
(*2): When polishing with different ends, indicate PC/SPC notation. Multimode fiber is PC polishing only.
(*3): Product length tolerances are shown below:

Product Length	Tolerance
1 m < L ≤ 10 m	+10%, -0
10 m < L ≤ 50 m	+1 m, -0
50 m < L	+2%, -0

(*4): Color in () indicates coating color.
(*5): When duplex connectors (SCF, DXLC, DXMU) are installed on both ends, polarity specification (1X, -ST) is required. Standard Branch Length is 0.5 m. (Please contact us for short items.)
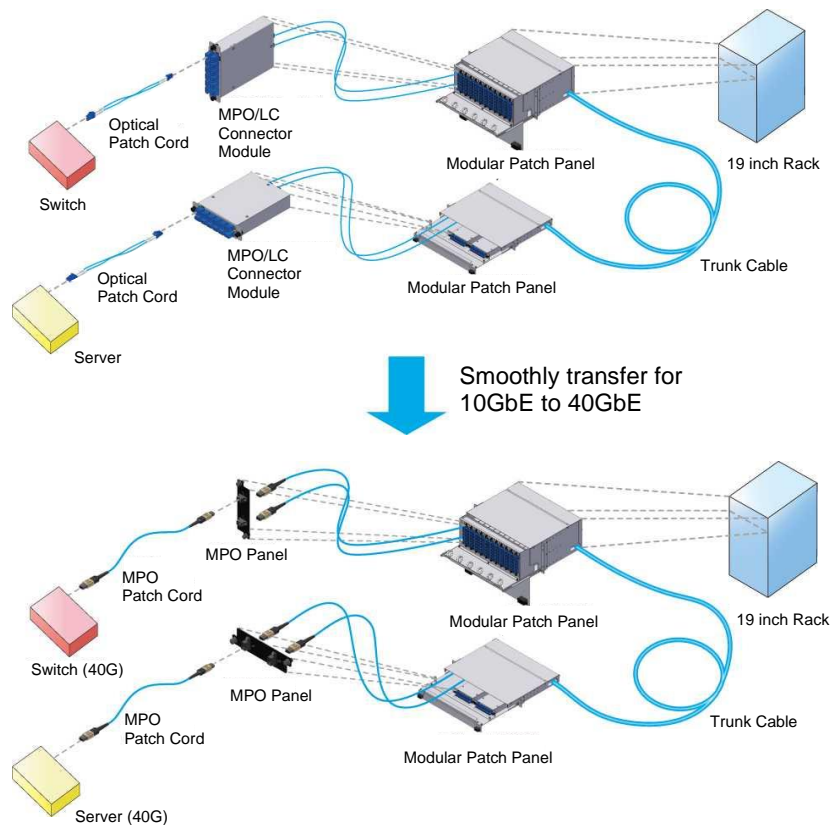
Contact us

Fiber-optic Cabling System Using 12-Fiber MPO (12MPO) Connectors for Data Centers

Features

- **High-Speed, High-Capacity Transmission**

  Our high-performance optical fiber supports current 10GbE networks and is ready for future upgrades to 40GbE and 100GbE, ensuring long-term scalability and superior data transmission capabilities.

- **Rapid Installation**

  The Fujikura fiber-optic cabling system is designed for efficiency, featuring pre-terminated fiber-optic connectors that facilitate a plug-and-play setup. This design dramatically reduces installation time, making it ideal for data centers needing swift deployment.

- **Unmatched Reliability**

  Every Fujikura product is processed and assembled in a meticulously controlled factory environment. This ensures that our fiber-optic cabling systems offer exceptional reliability, eliminating the need for direct handling of optical fibers within your data center.

- **Superior Performance**

  Utilizing wideband multimode optical fiber, our system extends transmission distances significantly. For example, 10GBASE-SR transmissions can reach up to 300 meters with OM3 and 400 meters with OM4, providing flexibility and enhanced performance for various applications.

- **High-Density Solutions**

  Our trunk cables with 12MPO connectors minimize cabling volume, while our modular patch panels support high-density mounting. This design optimizes space and enhances the efficiency of your data center infrastructure.

- **Quick Recovery**

  In the event of cable damage, the FuseConnect™ splice-on connector enables swift and effective recovery. This feature ensures minimal downtime and maintains the operational integrity of your fiber-optic cabling system.

Smoothly transfer for 10GbE to 40GbE

Contact us

Optical Patch Panel and Connector Module

Versatile Deployment and Easy Integration

- Comprehensive Module Deployment: Suitable for various areas, including main distribution for networking.
- Diverse Range of Options: Choose from modular types to adapter panel types for optimal customization.
- Efficient and Reliable Systems: Plug-and-play connections ensure quick, easy installation and reliable performance.
- Seamless Integration: Compatible with various trunk cables and patch cords for flexible and scalable network solutions. Feel free to combine them with various trunk cables and patch cords.

Patch Panel Chassis & Modules

FBC514P-1U

FBC514M-24LC-SM

FBC514MA-2MPO

Features

Versatile and High-Density Fiber Optic Solutions
- High-Density Mounting: Our modules are designed for high-density mounting in the chassis, ensuring efficient use of space and easy insertion and removal of connectors.
- Flexible Connectivity: The trunk cable features a multi-fiber MPO connector, with options to choose LC or SC connectors on the patch cord side for versatile connectivity.
- Dual Cabling Support: Each module supports both type A and type B cabling, providing flexibility and compatibility with various cabling standards.

Patch Panel Chassis

FBC514P-[ ]	1U	2U	4U
Installation Type	19 inch Rack (EIA Standard)		
Configuration	Connector + (Module) + Connector		
Cable Entry	Rear Side (Right and Left)		
Number of Cables	Max. 6	Max. 6	Max. 12
Number of Modules	Max. 3	Max. 6	Max. 12
Color	Black		
Dimensions (mm)	W 482.6 x H 43.7 x D 360	W 482.6 x H 88.1 x D 360	W 482.6 x H 177 x D 400

Module

FBC514M-[ ]	24LC-SM	24LC-MM	24LC-LM
Connector Type	LC Duplex: 12 pcs, MPO (Male): 2 pcs		
Insertion Loss (dB)	Max. 1.3	Max. 0.9	Max. 0.5

FBC514M-[ ]	12SC-SM	12SC-MM	12SC-LM
Connector Type	SC Duplex: 6 pcs, MPO (Male): 1 pc		
Insertion Loss (dB)	Max. 1.3	Max. 0.9	Max. 0.5

FBC514M-[ ]	2MPO
Connector Type	MPO: 2 pcs

Adapter Panel & Cord Storage Tray
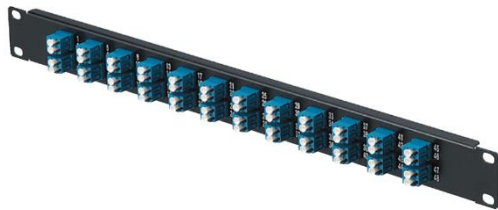
FBC514A-48LC-BL

FBC514T-02

Features

- Utilizes a combination of adapter panel and cord storage tray.
- Supports LC, SC, and MPO connectors.

Adapter Panel

FBC514M-[ ]	48LC-aa	24SC-aa	12MPO
Connector Type	19 inch Rack (EIA Standard)		
Insertion Loss (dB)	LC Duplex: 24 pcs	SC Duplex: 12 pcs	MPO: 12 pcs
Color	Black		
Dimensions (mm)	W 482.6 x H 43.7 x D 10 (not including adapter)		

Cord Storage Tray

FBC514T-[ ]	02
Installation Type	19 inch Rack (EIA Standard)
Cable Entry	Front, Rear, Right and Left: 2 each (8 in total)
Color	Black
Dimensions (mm)	W 482.6 x H 43.7 x D 360

Contact us

MPO Connector

MPO Connector

24-Fiber MPO Connector

Features

- Advanced multi-fiber connector solutions
- MT ferrule multi-fiber connector: Utilizes an MT ferrule, with a 24-fiber type available in our lineup.
- Low-loss performance: Designed to deliver low loss even as a multi-fiber connector, ensuring reliable and efficient data transmission.

12-Fiber MPO (12MPO) Connector

		Single Mode Fiber (OS2)	Multimode Fiber (OM3, OM4)
Fiber Count		12	12
Insertion Loss (against Master)	Standard Grade	≤ 1.0 dB	≤ 0.6 dB
	Low-Loss Grade	≤ 0.35 dB	≤ 0.2 dB
Return Loss		≥ 55 dB	-
Polishing Type		APC	PC
Conforming Standard		JIS C5982 (F13) IEC-61754-7	

24-Fiber MPO (24MPO) Connector

		Single Mode Fiber (OS2)	Multimode Fiber (OM3, OM4)
Fiber Count		24	24
Insertion Loss (against Master)	Standard Grade	≤ 1.0 dB	≤ 0.75 dB
	Low-Loss Grade	≤ 0.35 dB	≤ 0.35 dB
Return Loss		≥ 55 dB	-
Polishing Type		APC	PC

Contact us

Trunk Cable

Features

- Efficient trunk cable solutions
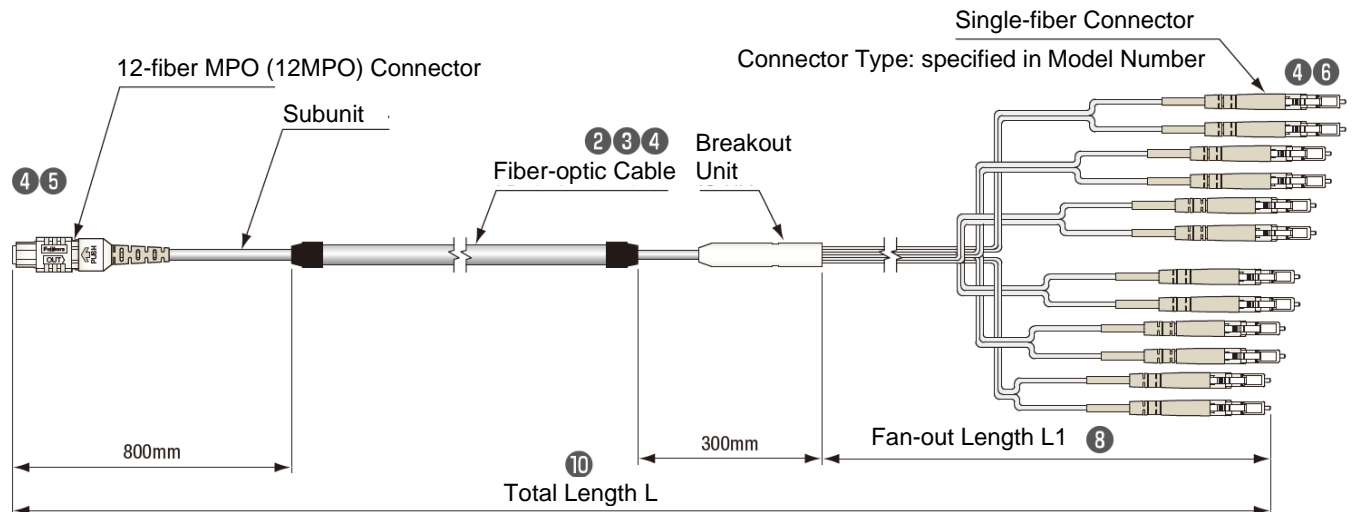- Data center connectivity: Trunk cables are ideal for connecting racks and rooms within data centers.
- Pre-installed connectors: Delivered with MPO and simplex connectors installed for ready-to-use convenience.
- Flexible packaging options: Available with tow-ends and reel packaging to suit various installation environments.

MPO – MPO

MPO – Single-fiber Connector (Fan-out)

Single-fiber Connector (Fan-out) – Single-fiber Connector (Fan-out)

Single-fiber Connector
Connector Type: specified in Model Number
❹❺

Single-fiber Connector
Connector Type: specified in Model Number
❹❻

Breakout Unit

Fiber-optic Cable
❷❸❹

Subunit

❼

300mm

❿

300mm

Fan-out Length L2 ❽

Fan-out Length L1

Total Length L

Model Number : FJ-■-■ ■■   ■ ■■■-■■ ■ M ■■■ ■

❶ ❷ ❸ ❹ ❺ ❻ ❼❽❾ ❿ ⓫

❶	❷	❸	❹
Polarity (TIA-568-C.3)	Cable Type	Fiber Type & Jacket Color	Fiber Count
A: Type A	**K:** Trunk Cable • Flame-retardant Rating: Plenum	**SY:** SM, OS2, Yellow **LA:** MM 50 um, OM3-BIF, Aqua **CA:** MM 50 um, OM4-BIF, Aqua • BIF: Bend-insensitive Fiber	**2:** 2 fibers **4:** 4 fibers **6:** 6 fibers **8:** 8 fibers **C:** 12 fibers **D:** 24 fibers **E:** 36 fibers **F:** 48 fibers • Indicates number of fibers for connector termination

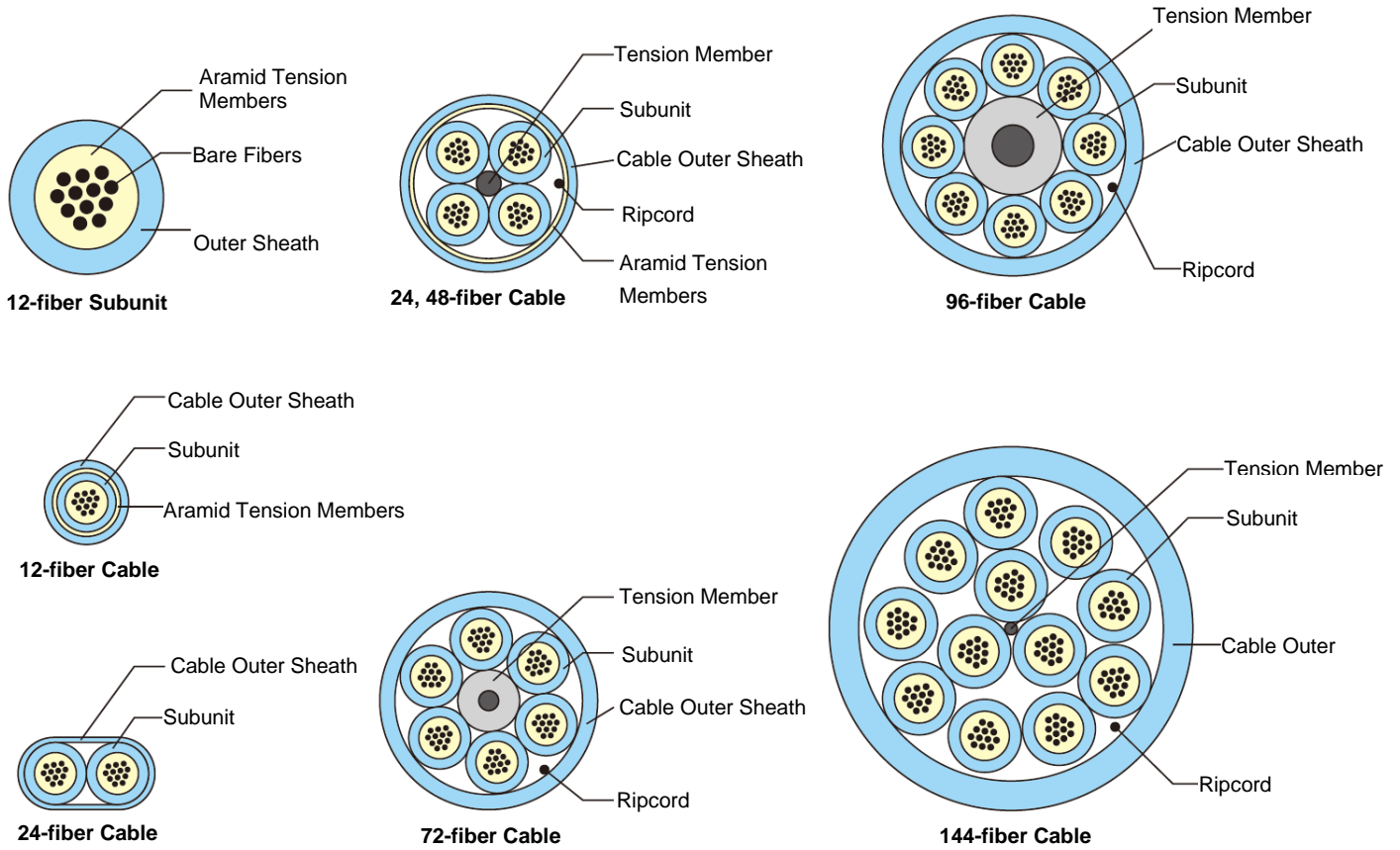| ❺❻	❼❽	❾
Connector Type	**Fan-out Length L1, L2**	**Pulling Eye**

MPF: 12MPO (Female)
 MPM: 12MPO (Male)
 LPF: Low-loss 12MPO (Female)
 LPM: Low-loss 12MPO (Male)
 SSC: Simplex SC (PC)
 SSA: Simplex SC (APC)
 SLC: Simplex LC (PC)
 UCO: No Connector
 	
 • PC: UPC for SM
 • Please contact us for further assistance to ensure support for the duplex connector. It is essential to verify the wiring configuration.
	A: Fixed Length for MPO
	 B: 500 mm
	 C: 1000 mm
	 D: 1500 mm
	 E: 2000 mm
		A: No Pulling Eye
		 B: Pulling Eye on Side B (end) (*1)
		 C: Pulling Eyes on Both Ends
		
		 (*1) Assembly Priority in case of B
		     1st Priority: No Connector Side
		     2nd Priority: MPO Side
		     3rd Priority: Single-fiber Connector Side (*2)
		
		 (*2) Maximum Fiber Count for Single-fiber Connectors:
		     LC: 48 fibers or less
		     SC: 24 fibers or less

❿	⓫
Total Length L (3 digits)	**Packaging Type (Bundled/Reeled)**

001: 1 m
 010: 10 m
 100: 100 m
 	
 • Tolerance
   L ≤ 10 m : +10%, -0
   10 m < L ≤ 50 m: +1 m, -0
   50 m < L: +2%, -0
 	
 • Minimum Length
   MPO − MPO: 3 m or more
   MPO − Single-fiber Connector: 7 m or more
   Single-fiber Connector − Single-fiber connector: 10 m or more
	C: Bundled
	 R: Reeled

Structure of Trunk Cable

12-fiber Subunit
- Aramid Tension Members
- Bare Fibers
- Outer Sheath

24, 48-fiber Cable
- Tension Member
- Subunit
- Cable Outer Sheath
- Ripcord
- Aramid Tension Members

96-fiber Cable
- Tension Member
- Subunit
- Cable Outer Sheath
- Ripcord

12-fiber Cable
- Cable Outer Sheath
- Subunit
- Aramid Tension Members

24-fiber Cable
- Cable Outer Sheath
- Subunit

72-fiber Cable
- Tension Member
- Subunit
- Cable Outer Sheath
- Ripcord

144-fiber Cable
- Tension Member
- Subunit
- Cable Outer
- Ripcord

Type	Trunk Cable						
Fiber Count	12	24	24	48	72	96	144
Outer Diameter (mm)	4.5	4.5 x 7.4	9.7		11.1	13.3	14.9
Weight (kg/km)	22	33	80		125	175	194
Sheath Color	OS2: Yellow OM3/OM4: Aqua						
Flame-retardant Rating	Plenum (OFNP UL910)						

Contact us

Reel

Compact and Eco-Friendly Reel Packaging

Durable Construction: The reel features a wooden board and paper tube body, assembled with bolts and nuts for easy disassembly and disposal on-site.

Compact Design: Available in flange diameters of 44 cm and 60 cm, making it easy to transport into server rooms.

Eco-Friendly Materials: The materials are resistant to wood waste, ensuring suitability for use within the server room environment.

Pulling Eye

Adaptable Pulling Eye Design

Variable Outer Diameter: The outer diameter of the pulling eye ranges from 30 to 50 mm, tailored to the fiber count and the number of connectors.

Customizable Length: The length of the pulling eye is adjustable based on the fan-out length and the quantity of connectors, ensuring a precise fit for your specific installation needs.
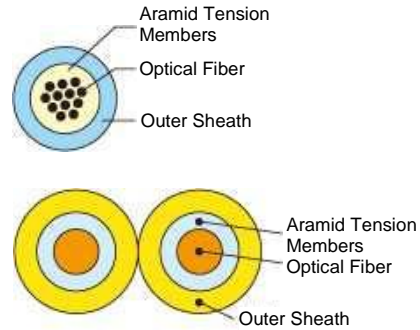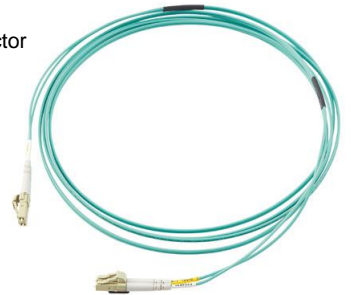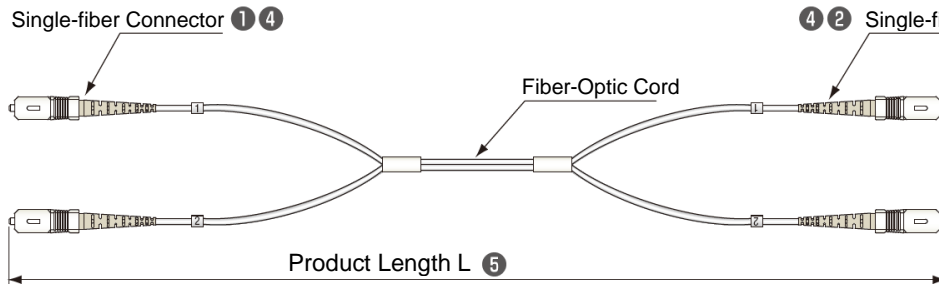
Contact us

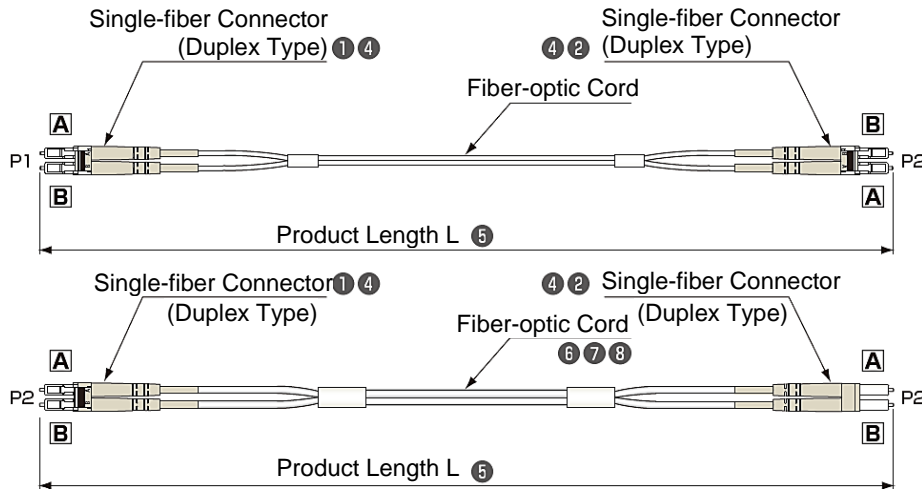# Patch Cord with Fiber-optic Connector for MPO Cabling System

Features

- Optimized patch cord solutions
- Ideal for short-distance connections: Specifically designed for short-distance connections or intra-rack use within data centers.
- Pre-terminated connectors: Supplied with MPO and single-fiber connectors, enabling quick and efficient installations.

Aramid Tension Members
Optical Fiber
Outer Sheath

Aramid Tension Members
Optical Fiber
Outer Sheath

Simplex Connector

Single-fiber Connector ❶❹

❹❷ Single-fiber Connector

Fiber-Optic Cord

Product Length L ❺

Duplex Connector

Single-fiber Connector (Duplex Type) ❶❹

Single-fiber Connector ❹❷ (Duplex Type)

Fiber-optic Cord

A B
P1 B A P2

Product Length L ❺

Single-fiber Connector❶❹ (Duplex Type)

❹❷ Single-fiber Connector (Duplex Type)

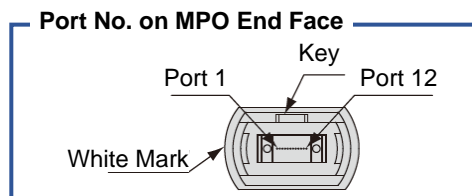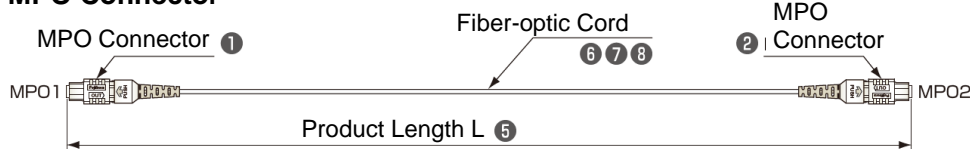Fiber-optic Cord ❻❼❽

A A
P2 B B P2

Product Length L ❺

Polarity of Duplex Connectors

Duplex connectors on both ends exhibit polarity. Please specify one of the following two polarities (X: Cross Connection, ST: Straight Connection) and include it in the model number when placing an order.

Symbol	Polarity	
	From: P1	To: P2
X	A ⟶ B	
	B ⟶ A	
ST	A ⟶ A	
	B ⟶ B	

MPO Connector

MPO Connector ❶

Fiber-optic Cord ❻❼❽

❷ MPO Connector

MPO1 MPO2

Product Length L ❺

Port No. on MPO End Face

Key
Port 1   Port 12

White Mark

Polarity of MPO Connectors

MPO connectors on both ends exhibit polarity. Please specify one of the following two polarities (X: Cross Connection, ST: Straight Connection) and include it in the model number when placing an order.

ST: Straight Connection		X: Cross Connection	
MPO1 Port No.	MPO2 Port No.	MPO1 Port No.	MPO2 Port No.
1	1	1	12
2	2	2	11
3	3	3	10
4	4	4	9
5	5	5	8
6	6	6	7
7	7	7	6
8	8	8	5
9	9	9	4
10	10	10	3
11	11	11	2
12	12	12	1

Contact us

Model Number : ■/■−2P■−■−■M−(■−)■−■
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶❷		❸	❹
Connector Type		**Fiber Type**	**Polishing Type**
FSC: Simplex SC **FLC:** Simplex LC **DXSC:** Duplex SC **DXLC:** Duplex LC **12MPOF:**12MPO (Female) **12MPOM:**12MPO (Male) **P12MPOF:** Low-loss 12MPO (Female) **P12MPOM:** Low-loss 12MPO (Male) • 12MPO: 12-fiber MPO • ❷ could be omitted when both ends are the same connector.		**No entry:** MM **S:** SM	**PC** **SPC** **UPC** **APC** (SC only) • Specify polishing such as PC/SPC for different polished ends. Omit for MPO. • SM is APC polishing and MM is PC polishing.

❺	❻
Product Length **L**	**Flame-retardant Option (Optional)**

Metric
(1.5 m or greater)
 	
• Tolerance
    L ≤ 10 m: +10%, -0
    10 m < L ≤ 50 m: +1 m, -0
    50 m < L: +2%, -0
	No Symbol: PVC, flame-retardant not specified
	RS: Riser Grade
	PL: Plenum Grade
	
	• 3 mm dia. 12-fiber round cord is Plenum grade.

❼	❽
Fiber Type & Cord Shape	**Polarity**
SMC-S: Single-fiber Cord, SM, 2 mm **SR15EC-S:** Single-fiber Cord, SM SR15E, 2 mm **SMC-2 SR:** Zipcord, SM, 2 mm **SR15EC-2SR:** Zipcord, SM SR15E, 2 mm **OM3C-2SR:** Zipcord, MM 50 um, OM3, 2 mm **OM4C-2SR:** Zipcord, MM 50 um, OM4, 2 mm **SMCx12C:** 12-fiber Round Cord, SM, 3 mm **OM3Cx12C:** 12-fiber Round Cord, MM 50 um, OM3, 3 mm **OM4Cx12C:** 12-fiber Round Cord, MM 50 um, OM4, 3 mm	**X:** Cross Connection **ST:** Straight Connection • Specify only for duplex and MPO connectors at both ends.

Ordering Model Number Example

DXLC-2P-PC-3M-RS-OM3C-2SR-X
OM3 Duplex LC Connector on Both Ends, Zipcord, Riser Grade, Aqua, DXLC-DXLC, 3m, Cross Connection
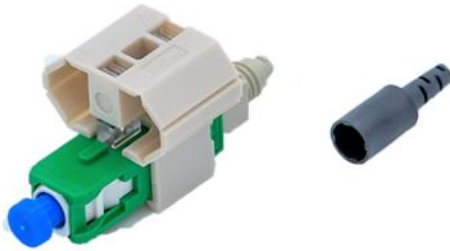
12MPOF-2PS-SM-PL-SMCx12C-ST
SM MPO Connector at both ends, 12-fiber Cord, Plenum Grade, Yellow, MPO (Female) -MPO (Female), 2 m, Straight Connection
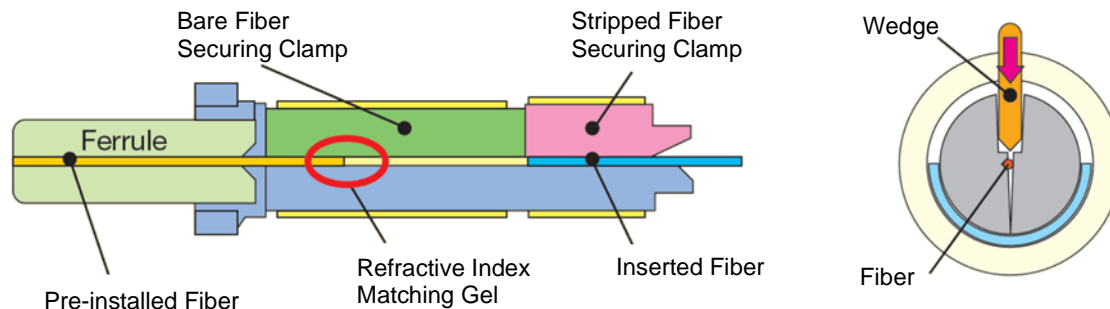
FAST™ Connector Series

FAST connectors are factory pre-polished, field-installable connectors that eliminate the need for hand polishing in the field. Proven mechanical splice technology ensures precise fiber alignment, a factory pre-cleaved fiber stub, and a proprietary index-matching gel, all combined to offer an immediate low-loss termination for either single-mode or multimode optical fibers.

Features

- Easy field installation through a simplified process, without the need for electrical power, epoxy, or field polishing.
- FAST connectors are designed to accommodate 0.25 mm / 0.9 mm coated fiber, 2 mm / 3 mm cords, and rectangular-shaped outdoor/indoor cables.
- FAST connectors demonstrate high performance when combining SC/LC/ST connectors and mechanical splices.
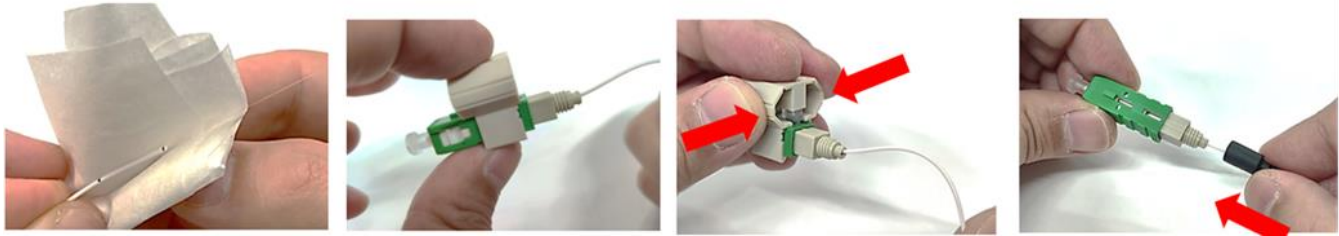
Structure of Mechanical Splice

Polished optical fiber is pre-affixed at the tip of the connector and stripped fiber is cleaved, aligned and meets the pre-installed fiber, where connection is done via mechanical splice method.

Contact us

Assembly Flow of FAST Connector (0.25 / 0.9 mm Fiber Type)

1. Fiber preparation

2. Insert the cleaved fiber into the connector

3. Create a slight bend to maintain contact. Release the wedge clip by squeezing both sides and remove the wedge clip.

4. Lastly, push the boot onto the connector's body

Specifications

1. 0.25 mm / 0.9 mm Fiber, 2 mm / 3 mm Cord

Applicable Fiber / Cord	0.25 mm fiber (240-265 µm), 0.9 mm fiber (850-950 µm), 2 mm cord (Ø 2, 0.9 mm fiber inside), 3 mm cord (Ø 3, 0.9 mm fiber inside)		
Connector	SC, LC, ST		
Fiber	SM		MM (OM1, OM2, OM3) (*1)
Polishing	SPC	APC	PC
Housing Color	Blue	Green	OM1: Beige, OM2: Black, OM3: Aqua
Insertion Loss (*2)	≤ 0.5 dB	≤ 0.6 dB	≤ 0.4 dB
Return Loss (*2)	≥ 40 dB	≥ 50 dB (*3)	-

2. Rectangular Shaped Cable (Outdoor / Indoor)

Applicable Fiber	Outdoor cable (3.1 x 2 mm), Indoor cable (2 x 1.6 mm) (*4)	
Connector	SC, LC (*5)	
Fiber	SM	
Polishing	SPC	APC
Housing Color	Blue	Green
Insertion Loss (*2)	≤ 0.5 dB	≤ 0.6 dB
Return Loss (*2)	≥ 40 dB	≥ 50 dB (*3)

***1.** OM1: GI 62.5/125, IEC 60793-2-10 A1b, OM2: GI 50/125, IEC 60793-2-10 A1a.1, OM3: GI 50/125, IEC 60793-2-10 A1a.2
***2.** with reference connector, SM @ 1310, 1550 nm, MM @ 850, 1310 nm
***3.** Internal fiber is flat cleaved. Angle cleaved is available.
***4.** For other cable types, please consult with us.
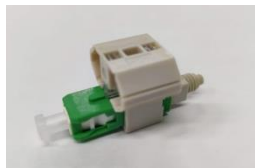***5.** Only indoor cable is available.

 Contact us

Ordering Information

1. 0.25 mm / 0.9 mm Fiber, 2 mm / 3 mm cord:

Fiber	Polishing	SC	LC	ST
SM	SPC	FAST-SC-SM-ALL	FAST-LC-SM-ALL	FAST-ST-SM-ALL
	APC	FAST-SC-APC-SM-ALL	FAST-LC-APC-SM-ALL	-
MM (OM1)	PC	FAST-SC-GI6-ALL	FAST-LC-GI6-ALL	FAST-ST -GI6-ALL
MM (OM2)	PC	FAST-SC-GI5-ALL	FAST-LC-GI5-ALL	FAST-ST-GI5-ALL
MM (OM3)	PC	FAST-SC-10G-ALL	FAST-LC-10G-ALL	FAST-ST-10G-ALL

FAST-SC-APC-SM-ALL 0.9 mm Boot 0.9 mm Spacer Tube 2 mm Boot 3 mm Boot

2. Rectangular Shaped Cable (Outdoor / Indoor)

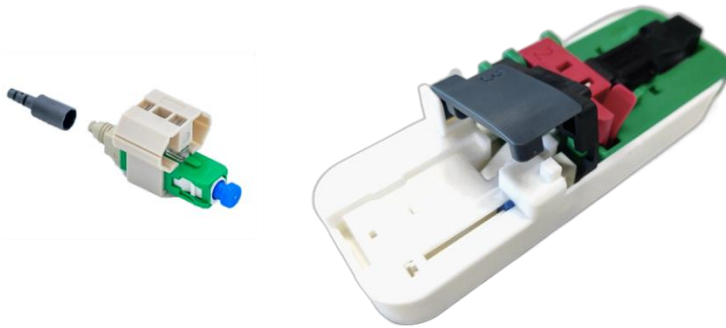| Fiber	Polishing	SC	LC (*6)	ST
SM	SPC	FAST(N)-SC-SM-UNI/GT (*E)	FAST-LC-SM-LF/GT	-
	APC	FAST(N)-SC-APC-SM-UNI/GT	FAST-LC-APC-SM-LF/GT	-

***6.** Only indoor cable available

*E. FAST(N)-SC-SM-UNI/GT

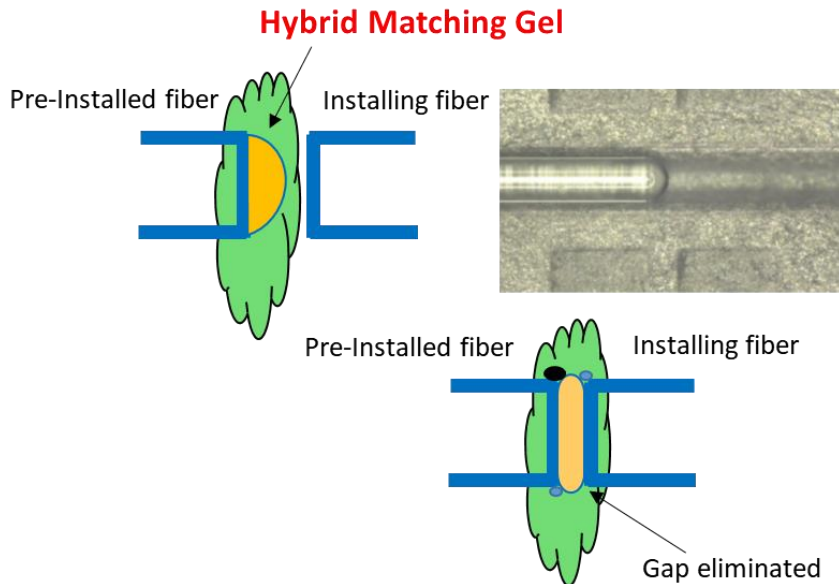Contact us

FAST™-Plus Connector

FAST™-Plus introduces a special cleave tool, maintenance free cleaver and a new type of index matching material, called 'solid gum' which is combined with the existing index matching gel.

Due to the blade design and operation, the maintenance free cleaver produces a highly repeatable and high-quality fiber cleave condition which enables an exceptional 'first time pass' connection; meaning an OPEX reduction in customer site revisits. Due to the fact Fujikura supply the maintenance free cleaver as a pre-packaged accessory with every box of FAST™-PLUS; the CAPEX normally associated with the use of a high precision cleave tool is therefore completely negated.

In conclusion, the FAST™ PLUS product range will benefit operators in their FTTH networks builds, especially in their access network where speed, accuracy and repeatable good results matter.
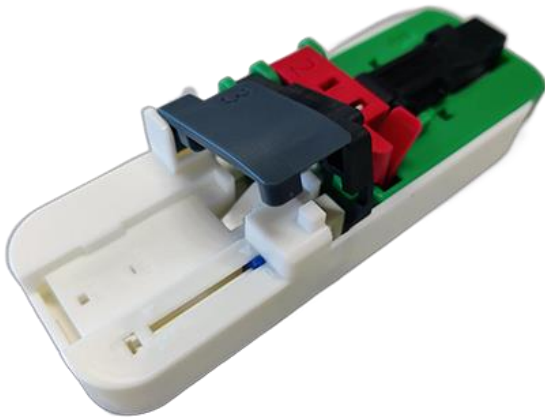
Hybrid Matching Material

FAST™-Plus connector comes with a new type of index matching material, called 'solid gum' which is combined with the existing index matching gel. This technology fills tiny gaps between the pre-installed fiber and the installing fiber. On top of that, it prevents air bubbles and contaminations from moving.
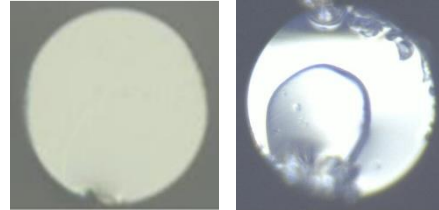
Maintenance-Free Cleaver

Features

- Complementary, comes with every 100 connectors
- No cleaver investment needed, CAPEX reduction
- Easy to operate
- Every cleave is a good cleave

Fiber End Face

Good Cleave   Bad Cleave

Specifications

Applicable Fiber/code	0.25 mm Fiber (240−265 µm), 0.9 mm Fiber (850−950 µm), 2 mm Cord, 3 mm Cord				
Connector	SC, LC				
Fiber	SM (*1)		MM (OM1) (*2)	MM (OM2) (*3)	MM (OM3) (*4)
Polishing	UPC	APC	PC		
Housing Color	Blue	Green	Beige	Black	Aqua
Insertion Loss (*5)	≤ 0.5 dB	≤ 0.6 dB	≤ 0.4 dB		
Return Loss (*5)	≥ 45 dB (Typical 50 dB)	≥ 60 dB (Typical 65 dB)	-		

*1. SM ITU-T G. 625D, ITU-T G.657.A1 (ITU-T G.657.A2 type is also available, please contact us.)
*2. GI 62.5/125, IEC 60793-2-10 A1b
*3. GI 50/125, IEC 60793-2-10 A1a.1
*4. GI 50/125, IEC 60793-2-10 A1a.2
*5. with reference connector, SM @ 1310, 1550 nm, MM @ 850, 1310 nm

Ordering Information

Fiber	Polishing	SC	LC
SM	UPC	FAST-SC-PLUS-UPC-A1-ALL	FAST-LC-PLUS-UPC-A1-ALL
	APC	FAST-SC-PLUS-APC-A1-ALL	FAST-LC-PLUS-APC-A1-ALL
MM (OM1)	PC	FAST-SC-PLUS-GI6-ALL	FAST-LC-PLUS-GI6-ALL
MM (OM2)	PC	FAST-SC-PLUS-GI5-ALL	FAST-LC-PLUS-GI5-ALL
MM (OM3)	PC	FAST-SC-PLUS-10G-ALL	FAST-LC-PLUS-10G-ALL

Contact us

FuseConnect™ Series

FuseConnect™ is designed to work with an industry standard cleaver and splicers utilising a fibre holder system and the simplified field installation process minimises the potential for operator error and expensive connector scrap, even in difficult field environments or in exposed conditions at remote site locations.

Our latest fusion splicers are also pre-programmed for FuseConnect™ terminations, which further simplifies the assembly process.

Features

- No epoxy, no polishing
- Easily fusion splicer termination operation
- FuseConnect is designed for 900 µm coated fiber, 2 mm / 3 mm cord and rectangle shaped drop/indoor cable

Specifications

1) 0.9 mm Fiber

Applicable Fiber	0.9 mm fiber (850−950 µm)		
Connector	SC, LC, ST, FC		
Fiber	SM		MM (OM1, OM2, OM3)
Polishing	UPC	APC	PC
Housing Color	Blue	Green	OM1: Beige, OM2: Black, OM3: Aqua
Insertion Loss	≤ 0.4 dB		
Return Loss	≥ 50 dB	≥ 60 dB	-

2) 2 mm / 3 mm Code

Applicable Fiber/Cable	⌀ 2 mm (Inside 0.9 mm fiber), ⌀ 3 mm (Inside 0.9 mm fiber) or both use		
Connector	SC, LC, ST, FC		
Fiber	SM		MM (OM1, OM2, OM3)
Polishing	UPC	APC	PC
Housing Color	Blue	Green	OM1: Beige, OM2: Black, OM3: Aqua
Insertion Loss	≤ 0.4 dB		
Return Loss	≥ 50 dB	≥ 60 dB	-

3) Rectangular Shaped Cable

Applicable Fiber/Cable	Outdoor (3.1 x 2 mm) or Indoor (2 x 1.6 mm)	
Connector	SC	
Fiber	SM	
Polishing	UPC	APC
Housing Color	Blue	Green
Insertion Loss	≤ 0.4 dB	
Return Loss	≥ 50 dB	≥ 60 dB

Contact us

Ordering Information / Product Image (After assembly)

1) 0.9 mm Fiber

Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-SF-SM-09	LC-SF-SM-09 (*A)	ST-SF-SM-09	FC-SF-SM-09
	APC	SC-SF-APC-09	LC-SF-APC-09 (*B)	-	FC-SF-APC-09
MM (OM1)	PC	SC-SF-GI6-09	LC-SF-GI6-09	ST-SF-GI6-09	FC-SF-GI6-09
MM (OM2)	PC	SC-SF-GI5-09	LC-SF-GI5-09	ST-SF-GI5-09	FC-SF-GI5-09
MM (OM3)	PC	SC-SF-10G-09	LC-SF-10G-09 (*C)	ST-SF-10G-09	FC-SF-10G-09

*A : LC-SF-SM-09

*B : LC-SF-APC-09

*C: LC-SF-10G-09

2-1) 2 mm Code Only

Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-QA-SM-20 (*D)	LC-QA-SM-20 (*F)	ST-SF-SM-20	-
	APC	SC-QA-APC-20 (*E)	LC-QA-APC-20 (*G)	-	-
MM (OM1)	PC	SC-QA-GI6-20	LC-QA-GI6-20	ST-SF-GI6-20	-
MM (OM2)	PC	SC-QA-GI5-20	LC-QA-GI5-20	ST-SF-GI5-20	-
MM (OM3)	PC	SC-QA-10G-20	LC-QA-10G-20	ST-SF-10G-20	-

2-2) 3 mm Code Only

Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-QA-SM-30	LC-SF-SM-30	ST-SF-SM-30	-
	APC	SC-QA-APC-30	LC-SF-APC-30	-	-
MM (OM1)	PC	SC-QA-GI6-30	LC-SF-GI6-30	ST-SF-GI6-30	-
MM (OM2)	PC	SC-QA-GI5-30	LC-SF-GI5-30	ST-SF-GI5-30	-
MM (OM3)	PC	SC-QA-10G-30	LC-SF-10G-30	-	-

2-3) Both Use for 2 mm and 3 mm Code

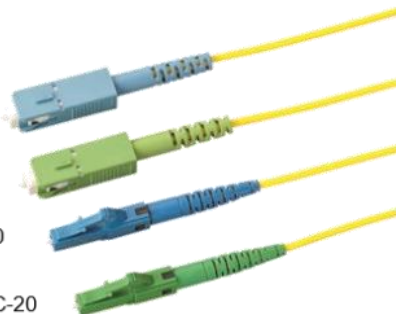| Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-SF-SM-20/30 (*H)	-	-	FC-SF-SM-20/30
	APC	SC-SF-APC-20/30 (*J)	-	-	FC-SF-APC-20/30
MM (OM1)	PC	SC-SF-GI6-20/30	-	-	FC-SF-GI6-20/30
MM (OM2)	PC	SC-SF-GI5-20/30	-	-	FC-SF-GI5-20/30
MM (OM3)	PC	SC-SF-10G-20/30	-	-	FC-SF-10G-20/30

・QA type : xx-QA-xxx-xx

・SF type : xx-SF-xxx-xx

*D : SC-QA-SM-20

*E : SC-QA-APC-20

*F : LC-QA-SM-20

*G : LC-QA-APC-20

*H : SC-SF-SM-20/30

*J : SC-SF-APC-20/30

Contact us

3-1) Rectangular Shaped Cable: Outdoor (3.1 x 2 mm)

Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-DC (*K)	-	-	-
	APC	SC-DC-APC	-	-	-

3-2) Rectangular Shaped Cable: Indoor (2 x 1.6 mm)

Fiber	Polishing	SC	LC	ST	FC
SM	UPC	SC-LFC (*L)	-	-	-

*K : SC-DC

*L : SC-LFC
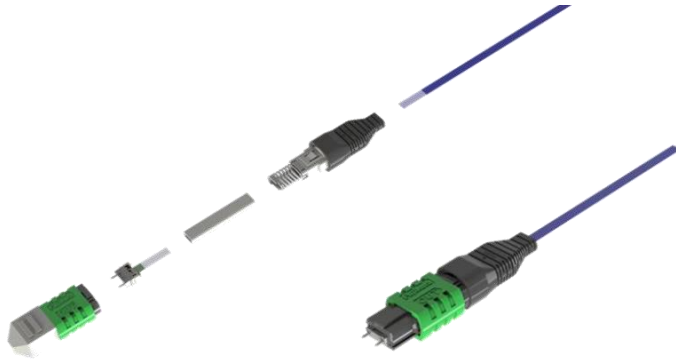
FuseConnect™ MPO

FuseConnect™ MPO splice-on, field-installable connectors are uniquely designed and feature just six components. The innovative factory pre-polished ferrule allows for a field-termination process that eliminates the need for polishing, adhesives and crimping in the field and minimizes the potential for operator error and expensive connector scrap. FuseConnect™ MPO is part of the FuseConnect™ splice-on connector family which includes SC, LC and ST style connectors.

The connector is designed for use with the new RT-02 ribbonizing tool which does not require ribbonizing glue resulting in a cleaner termination process.

FuseConnect™ MPO performs as an equivalent to the standard factory terminated MPO/MTP® assemblies. Designed to utilize standard ribbon, SpiderWeb Ribbon™, or loose tube cable, this connector helps minimize the complexity involved in the termination of a multi-fiber connection, allowing for a reliable and repeatable termination in field applications. Fujikura offers a tool kit as well as a variety of accessories designed to meet all your installation needs for your FuseConnect™ MPO application.

Specifications

Applicable Fiber / Cord	● 12 fiber ribbon type (0.25 mm fiber) ● 3 mm cord type			
Connector	MPO (12f)			
Type	SM (*1)	Low Loss SM	MM (OM1) (*2)	MM (OM4) (*3)
Polishing	APC		PC	
Housing Color	Green	Yellow	Beige	Aqua
Insertion Loss (*4)	≤ 0.75 dB	≤ 0.35 dB	≤ 0.35 dB	
Return Loss (*4)	≥ 65 dB	≥ 65 dB	-	
Remark	6 pcs packing unit			

***1.** Mode field diameter: 8.6 µm (For 9.2 µm type, please consult us.)
***2.** GI 62.5/125, IEC 60793-2-10 A1b
***3.** GI 50/125, IEC 60793-2-10 A1a.3
***4.** with reference connector, SM @ 1310, 1550 nm, MM @ 850, 1310 nm

Ordering Information

Type	Polishing	Male (Connector with Guide Pin)	Female (Connector without Guide Pin)
SM	APC	FUSECONNECT-MPO-S-MALE-SM15-6	FUSECONNECT-MPO-S-FEMALE-SM15-6
Low Loss SM	APC	FUSECONNECT-MPO-S-MALE-LLSM15-6	FUSECONNECT-MPO-S-FEMALE-LLSM15-6
MM (OM1)	PC	FUSECONNECT-MPO-S-MALE-GI6-6	FUSECONNECT-MPO-S-FEMALE-GI6-6
MM (OM4)	PC	FUSECONNECT-MPO-S-MALE-OM4-6	FUSECONNECT-MPO-S-FEMALE-OM4-6

FuseConnect™ MPO
Connector body

Boot1:
3 mm cord type boot

Boot2:
12 fiber ribbon type boot
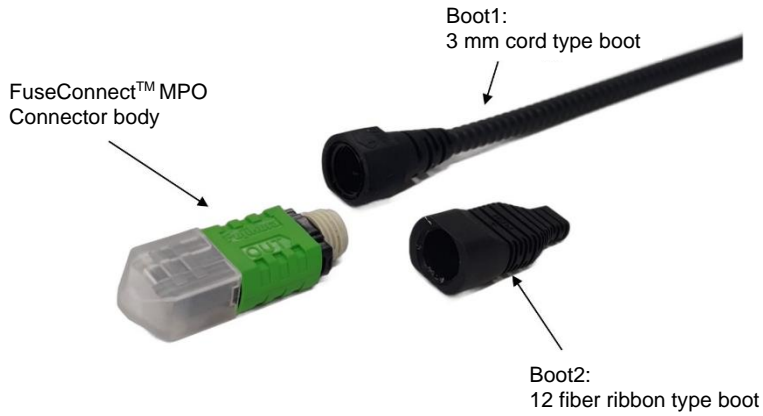
Optical product:
RT-02/Ribbonizing tool

Contact us

Mechanical Splice

FMSEZ-025   **Assembly tools for FMSEZ-025**   **FMSEZ-025/09**

The Mechanical Splice Element enables efficient field splicing without the need for a fusion splicer.

Features

- Two types of connections are possible: Ø 0.25 mm / Ø 0.25 mm fiber and Ø 0.25 / Ø 0.9 mm
  (For Ø 0.9 mm fiber, use thermoplastic resin coating)

Specifications

		Mechanical Splice	
		Ø 0.25 mm fiber	Ø 0.25 mm fiber and Ø 0.9 mm fiber
		FMSEZ-025	FMSEZ-025/09
Size		40 x 4 x 4 (mm)	
Insertion Loss		Average 0.1 dB, Maximum 0.4 dB	
Reflection Loss		≥ 40 dB	
Required tools		Fujikura's Cleaver and etc (Assembly tools is attached in product)	Assembly tools(see next page), Fiber stripper, Fujikura's Cleaver and etc
Connector Apply	Ø 0.25 mm – Ø 0.25 mm	Available	Available
	Ø 0.25 mm – Ø 0.9 mm	-	Available
	Ø 0.9 mm – Ø 0.9 mm	-	Available
Applicable Temperature Range		Ø 0.25 mm fiber: -40−75 °C Ø 0.9 mm fiber: 0−50 °C	

Assembly Tools for FMSEZ-025/09

	Model Number	Remark
(1)	FMSECO-TL2-EZ	Assembly tools for FMSEZ-025/09
(2)	FMSECO-FH09	Fiber holder for 0.9mm fiber
(3)	FMSECO-FH05/025	Fiber holder for 0.25mm fiber
(4)	FMSECO-SP-C2	Spacer for using Fujikura's cleaver

(1)   (2)   (3)   (4)

Contact us

One-Click™ Cleaner MPO ESD

Features

- The cleaner body is made from highly conductive resin, allowing for rapid dissipation of static electricity.
- It effectively suppresses static electricity generated on the ferrule end-face during cleaning, reducing the risk of dust attraction.
- Suitable for use in ESD (electrostatic discharge) protected area and compliant with IEC 61340-5-1[*1] standards.

The One-Click™ Cleaner MPO ESD is inaugural multi-connector (MPO) cleaning solution compliant with IEC IEC 61340-5-1[*1] standards. This cutting-edge device effectively mitigates static electricity on the connector's end face during the cleaning process, thereby preventing the movement of dust caused by static charges. It is particularly well-suited for optical transceivers sensitive to static electricity and for connections that demand exceptional low-loss performance.

Specifications

	One-Click™ Cleaner MPO ESD
Type Name	MPOESD-CLK-A
Applicable Connector	MPO (12/24c MPO, SM/MM)
Dimension (mm) (Not included guide cap)	W19 x H43.5 x L194
Cleaning Times	≤ 500 times
Surface Resistance (Ω) [*1]	$< 1 \times 10^{12}$
Charge Decay (sec) [*1]	< 2
Applicable Polishing Type	PC, APC

(*1) IEC 61340-5-1: ESD management standard, ESD (Electro Static Discharge)

* One-Click™ is a trademark of Fujikura Ltd.

Contact us

## One-Click™ Cleaner PRO Series

Features

- PRO series maintaining the features of One-Click™ Cleaner:
  - Patented single-action cleaning in a small ergonomic design
  - Variety of sizes and types for different connector styles
  - Cleans connectors in both jumpers and bulkhead adapters
  - Low cost per clean
- Reduced cleaning time by eliminating the guide cap
- Increased number of cleanings by 1.5 times compared to Fujikura conventional products
- High cleaning performance by moving the cleaning string and rotating the head at the same time
- Compact/Extendable cleaning nozzle

Applications

- Removing oil, dust, and dirt without damaging delicate fiber end-faces
- Clean connectors in tight spaces
- Field or laboratory use

One-Click™ Cleaner is an easy-to-use solution for cleaning fiber optic connectors on jumpers and in adapters. Since over 85% of network outages are attributed to dirty and/or damaged connectors, it is critical to clean every connector!

The patented One-Click™ Cleaner uses the mechanical push action to advance an optical grade cleaning tape while the cleaning tip is rotated to ensure the fiber end-face is effectively, but gently, cleaned. It is a favorite of field technicians for its ease of use, durability, effectiveness, and small size.
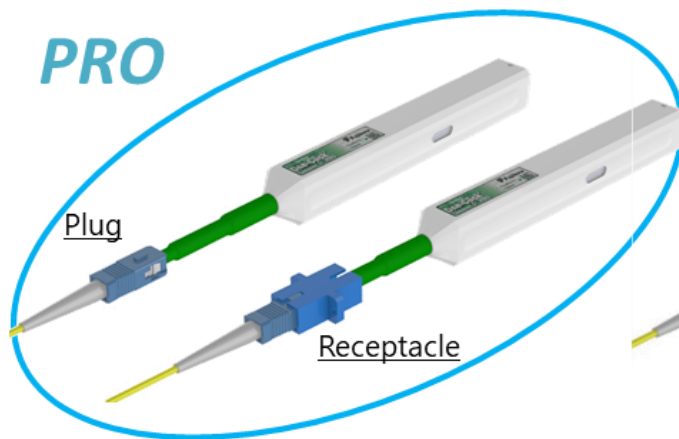
Not required to attach guide cap   **Required to attach guide cap**
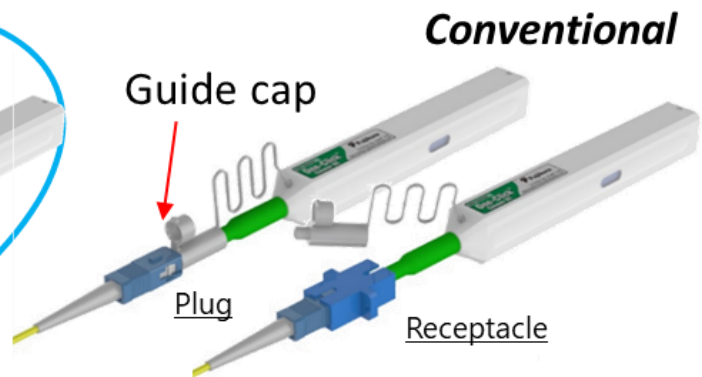
Reduced Cleaning Time by Eliminating the Guide Cap

Contact us

Specifications

	One-Click™ Cleaner SC PRO	One-Click™ Cleaner LC PRO
Model Number	SCPRO-CLK-A	LCPRO-CLK-A
Color	Green	Blue
Applicable Connector	SC connector	LC connector
Applicable Polishing Type	PC, APC	PC, APC
Dimensions (mm)	W 17.5 x H 17.5 x L 185 (with nozzle extended: L 220)	
Cleaning Times	775 times or more	
Cleaning Method	Dry cleaning	
Appearance		

 * One-Click™ is a trademark of Fujikura Ltd.

One-Click™ Cleaner

- One-Click™ Cleaner is specialized for optical connectors. It allows for the removal of oils and dust adhering to the fiber end faces.
- It prevents issues such as increased optical connector loss and damage to the ferrule end faces.

Connector Cleaning Image

High-quality connector connections rely on meticulous cleaning of the connector end faces.

- Even invisible dust and dirt can affect communication performance.
- Contaminants on the connector end faces may risk damaging other connectors during mating.
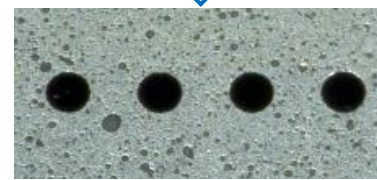
SC Connector Dust Removal

Optical Fiber

Connector End Face
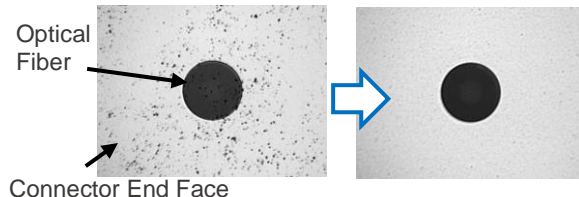
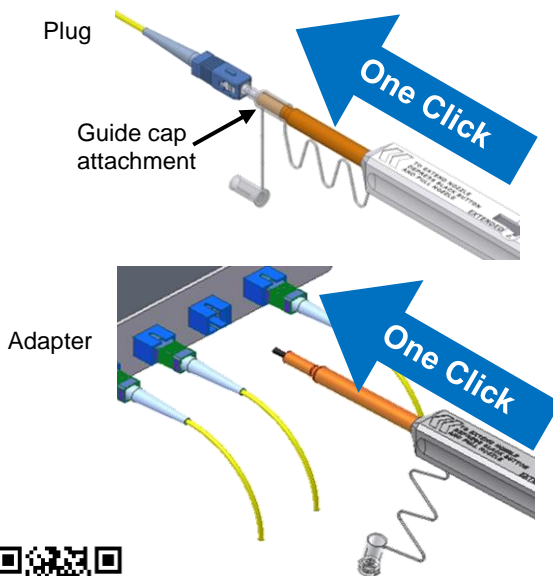### SC Connector Oil Cleaning

MPO Connector Dust Removal

Optical Fiber

Connector End Face
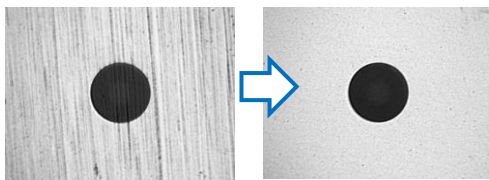
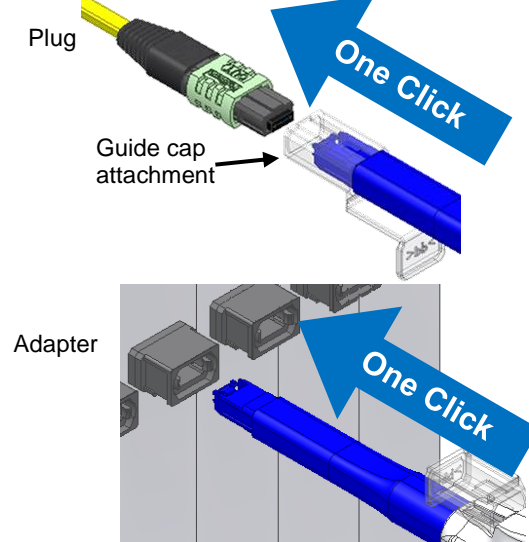## How to use

- Both the plug and adapter can be cleaned by replacing the included guide cap.
  (PRO series does not require guide cap replacement)
- Applicable for PC and APC polishing type connector. (The APC type depends on connector type)

SC Connector Cleaner

Plug

Guide cap attachment

One Click

Adapter

One Click

MPO Connector Cleaner

Plug

Guide cap attachment

One Click

Adapter

One Click

Contact us

Product lineup

We have a wide range of products to support any connection.

①   ④   ⑦

②   ⑤   ⑧

③   ⑥   ⑨

One-Click™ Model name	Target connectors etc.	Cleaning times	Main use / market [4]			
			Telecom	Data center	Factory	Machine
SCPRO-CLK-A①	SC[2], PRO	775	✓	✓	✓	✓
SC-CLK-A②	SC/FC/ST[2], standard		✓	✓	✓	✓
SC-MINI-CLK-A③	SC/FC/ST[2], mini	500	✓	✓		
M250-E-CLK-A⑦	SC/FC/ST[2], cleaning area expansion			✓		
LCPRO-CLK-A④	LC, PRO	775	✓	✓	✓	✓
MU/LC-CLK-C⑤	MU/LC, standard		✓	✓	✓	✓
MU/LC-MINI-CLK-A⑥	MU/LC, Mini		✓	✓		
DLC-CLK-A⑧	LC Duplex			✓		
CS/MDC-CLK-A	CS™[3] / MDC			✓		
SN-CLK-A	SN™[3]			✓		
MTRJ-CLK-A	MT-RJ			✓		
MPO-CLK-D⑨	MPO	500		✓	✓	
MPO16-CLK-A	MPO-16			✓	✓	
MPOESD-CLK-A	MPO, Anti electrostatic discharge			✓	✓	
MMC-CLK-A	MMC-24			✓		
MMC16-CLK-A	MMC-16			✓		
ODC-CLK-A	Φ 1.25mm Multi /MU/LC					✓
M20-CLK-A	Φ 2.0 mm multi (SMPTE304M, etc.)					✓
HOC-CLK-A	SC/AFL TRIDENT™/AFL TITAN RTD™[5]		✓			

(*2) Including SC2, FA, and FAS connectors.
(*3) A trademark of Senko Advanced Components, Inc.
(*4) This is just an example and can be used in places that are not checked.
(*5) AFL TRIDENT™ and AFL TITAN RTD™ are trademarks of AFL Telecommunications LLC.

* One-Click™ is a trademark of Fujikura Ltd.

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