Simplex and zip-cord patchcord

■ Optical connectors

● SC Connector

Simplex SC type   Duplex SC type

Item	Content	
Fiber Type	Single Mode	Multi Mode
	SM10/125	G50/125
	DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
	Angled PC polish (APC)	≥ 60 dB	-
Suitable Cord Type	φ 2 cord, φ 3 cord, φ 0.9 fiber	
Conformity Standard	IEC61754-4	

(※) Available for "premium grade" with excellent insertion loss and return loss.
(※) Please enquire on the return loss for multi-mode fiber if required.

● LC Connector

Simplex LC type   Duplex LC type

Item	Content	
Fiber Type	Single Mode	Multi Mode
	SM10/125	G50/125
	DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	
	Angled PC polish (APC)	≥ 60 dB	
Suitable Cord Type	φ 2 cord, φ 0.9 fiber	
Conformity Standard	TIA/EIA-604-10, IEC61754-20	

(※) Available for "premium grade" with excellent insertion loss and return loss.
(※) Please enquire on the return loss for multi-mode fiber if required.

● MU Connector

Simplex MU type   Duplex MU type

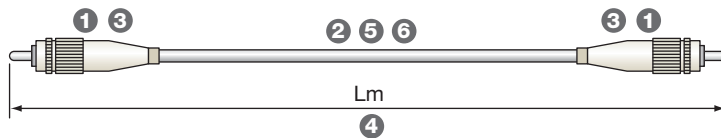| Item	Content	
Fiber Type	Single Mode	Multi Mode
	SM10/125	G50/125
	DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
Suitable Cord Type	φ 2 cord, φ 0.9 fiber	
Conformity Standard	IEC61754-6	

(※) Available for "premium grade" with excellent insertion loss and return loss.
(※) Please enquire on the return loss for multi-mode fiber if required.

● FC Connector

Cord type   Tight-buffered fiber type

Item	Content	
Fiber Type	Single Mode	Multi Mode
	SM10/125	G50/125
	DSM8/125	G62.5/125
Connector Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
	Angled PC polish (APC)	≥ 60dB	-
Suitable Cord Type	φ 2 cord, φ 3 cord, φ 0.9 fiber	
Conformity Standard	JIS C5970(F01), IEC61754-13	

(※) Available for "premium grade" with excellent insertion loss and return loss.
(※) Please enquire on the return loss for multi-mode fiber if required.

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Simplex and zip-cord patchcord

■ Pigtails, Simplex and Duplex Cable Assemblies

- Compatible with SC, FC and other types of single fiber connectors.
- Available in various cord sizes Φ0.9 (TBF), 1.6, 2 and 3 mm.

Product Code Interpretation

F FC – 2PS – UPC – L M – SMC10/125 – S
❶ ❷ ❸ ❹ ❺ ❻

❶	❷	❸	❹	❺	❻
Optical Connector Name	**Differentiate Between Single/Double Ended Termination and Fiber Type (SM or GI)**	**Polishing Method**	**Product Length**	**Fiber Type and Size**	**Cord Size**
■ Shows the connector type ■ Please indicate clearly if different connectors are required to be terminated at both ends (ex. FFC/FSC)	* Single-ended: 1 * Double-ended: 2 * GI:P * SM:PS	* Spherical: PC * Ultra PC:UPC * Angled PC:APC ■ Please indicate clearly if polishing is different at both ends (ex. APC /UPC)	* Unit in meter * Tolerance L ≤ 1m +10cm, -0 1m < L ≤ 10m +10%, -0 10m < L ≤ 50m +1m, -0 L > 50m +2%,-0	* GC50/125: MM50 (Orange) * GC62.5/125: MM62.5 (Orange) * SMC10/125: SM (Yellow) * SR15E -SMC10/125: SR15E (Yellow) * DSMC8/125: DSM (Orange)	* φ2 simplex: S * φ3 simplex: Leave blank. * φ2 zipcord: 2SR * φ3 zipcord: 2R * φ1.6 simplex: SS * φ1.6 zipcord: 2SSR

■ Please refer to the Application Table for the relevant fibers and cords for each type of connector.
■ Shape and color of connector boot may vary depending on the type of fiber/cord and polishing method.
■ Please enquire on flame retardant type of cords.

Application Table

Connector	Single Mode (SM/DSM)									Multi-Mode						
	Polishing Method			Suitable TBF/cord diameter				Suitable Cord		Polishing Method	Suitable TBF/cord diameter				Suitable Cord	
	PC	UPC	APC	Φ0.9	Φ1.6	Φ2	Φ3	Simplex	Duplex	PC	Φ0.9	Φ1.6	Φ2	Φ3	Simplex	Duplex
SC	O	O	O	O	O	O		O	O	O	O	O	O	O	O	O
FC	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
MU	O	O		O	O	O		O	O	O	O	O	O		O	O
LC	O	O	O	O	O			O	O	O	O	O	O		O	O
DXSC	O	O	O	O	O	O	O	O	O	O	O	O	O		O	O
DXMU	O	O		O	O	O		O	O	O	O	O	O		O	O
DXLC	O	O	O	O	O	O		O	O	O	O	O	O		O	O

- Patchcords compliant with ISO/IEC 11801 and TIA/EIA-568-C.3 available for customer premises and commercial building telecommunications cabling.
- Simplex and zipcord cables meet TIA/EIA 568-C.3, Telcordia GR-409-CORE and Directive 2002/95/EC (RoHS) and Plenum, Riser and OFNR-listed LSZH grade jackets available.
- LSZH meets the requirement of IEC 61034-1, 61034-2, 60332-1-1,60332-1-2, 60754-1 and 60754-2.
- OS1, OS2, bend-insensitive FutureGuide-SR15E (ITU-T G.657.A1), FutureGuide-BIS-B (ITU-T G.657.A2) and ITU-T G.657.B3 fiber for singlemode applications and OM1, OM2, OM3 and OM4 for multimode applications available as options.
- 3 or 4 mm dia. ultra-flexible cables (MageTsuyo) with FutureGuide-BIS-B (ITU-T G.657.A2) for FTTH cabling available as options.

Notes

Ultra Flexible Cable

Mage Tsuyo™ (3mm)

FutureGuide® BIS-B

Features

- Mage Tsuyo cable is the best product for indoor wiring
- Good performance of lateral pressure, it is no effect even if cable is stepped.
- Fiber with high performance of bending
- Connector with shutter, which can shut the optical signal when connector is disconnected.
- Only provide the patch cord with both ends of connector

Optical fiber
Aramid yarn
Non halogen flame retardant

① Disconnected

② Connected
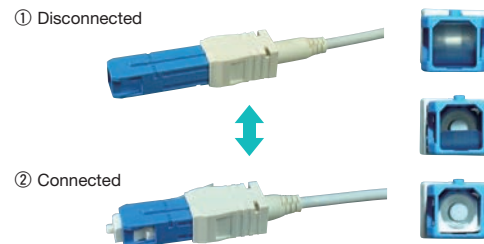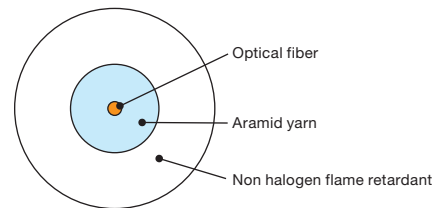
Specification

Item		Mage Tsuyo (3mm)
Fiber type		FutureGuide BIS-B
Nominal Diameter (mm)		3mm
Sheath		Non halogen flame retardant
Color		White
Permissible tensile strength (N)		68.5
Permissible bending radius (mm)		7.5
Connector type		SC or SC with Shutter
Insertion Loss (with master cord)	Ultra PC polish (UPC)	Typical 0.2dB
	Angled PC polish (APC)	
Return Loss	Ultra PC polish (UPC)	Typical 55dB
	Angled PC polish (APC)	>=60dB
Conformity Standard		IEC61754-4

Ordering Information

Product Code   **FSC**–2PS–**UPC**–**L**M–MAGETSUYO3
    ❶   ❷   ❸

❶ Connector Type	❷ Polishing Type	❸ Length
SC **SCS** : SC with shutter	UPC APC	**1.5** : 1.5m **3** : 3m **5** : 5m **10** : 10m
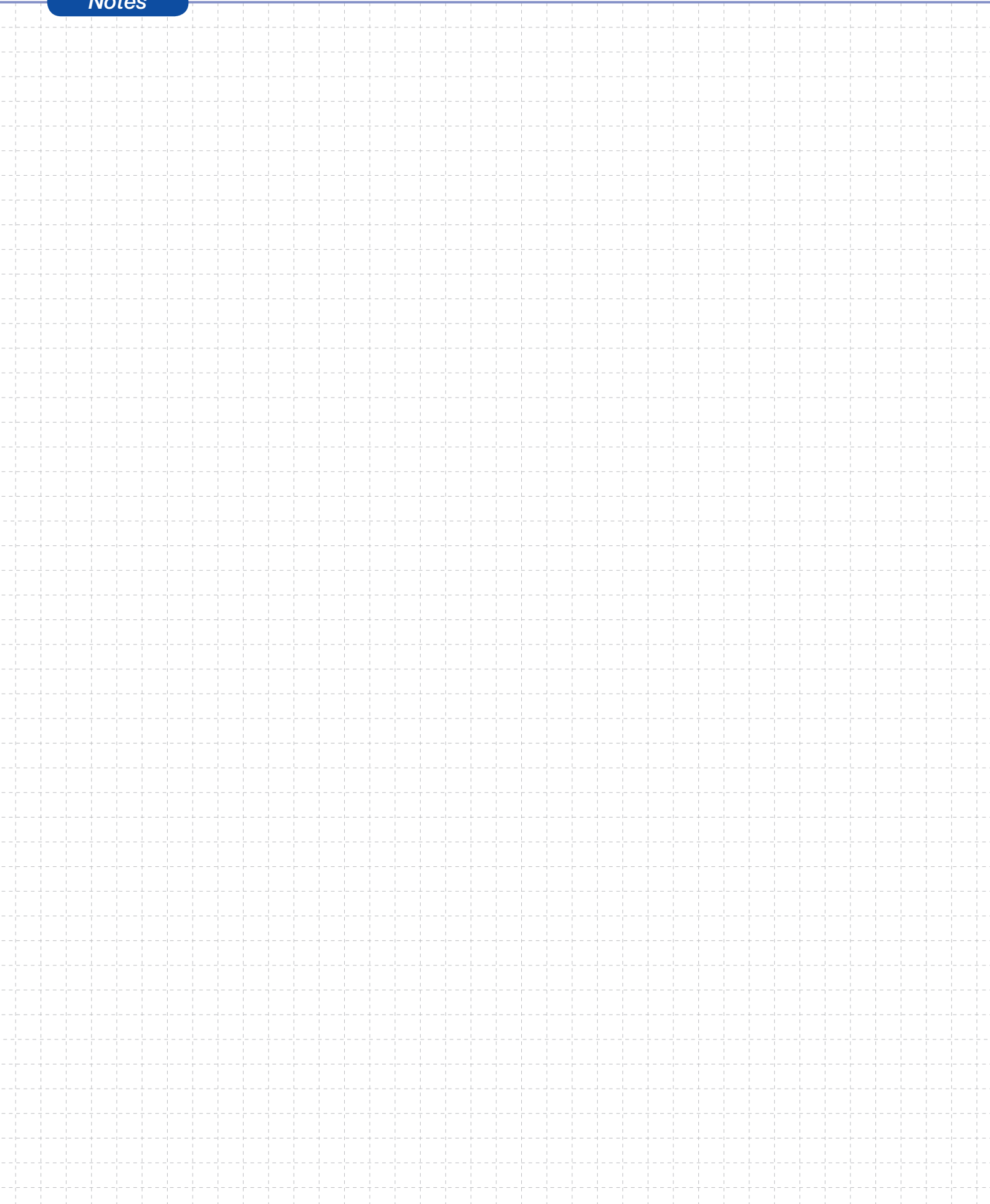
Multiple fibers patchcord

■ MPO Patchcord

■ Features & Benefits
- Multiple fiber connection for high capacity system
- High density providing space and cost saving
- Easy installation, maintenance and expansion
- Reliable optical performance

■ Applications
- Data center and central office cabling
- Equipment internal connection
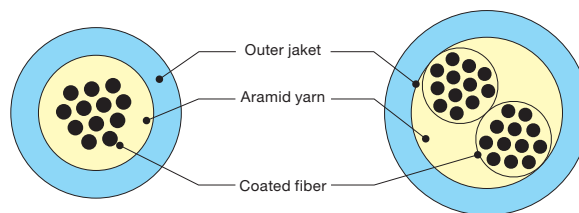- High capacity data exchange application

■ Specification
● MPO connector
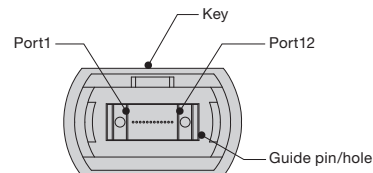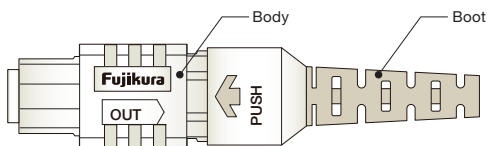
Item		Content			
Fiber type		SM(SM10/125)		MM(G50/125)	
Connector count		12F	24F	12F	24F
Polishing		Angled PC		Flat PC	
Insert loss	Standard type	≤1.0dB		≤0.5dB	
	Low-loss type	≤0.25dB	≤0.35dB	≤0.3dB	≤0.3dB
Return loss		≥55dB		-	
Suitable cord type		Ribbon fiber, round cord			
Conformity standard		IEC61754-7			

● Cordage

Item	Content	
Fiber type	SM(SM10/125), MM(G50/125)	
Cable count	12C	24C
Outer diameter(mm)	3.0	3.8
Bandwidth(MHz·Km, at 850nm)	SM:N/A, OM2: 500MHz·Km, OM3:1500MHz·Km, OM4:3500MHz·Km	
Max transmission length at 10GbE (m)	SM:N/A, OM2: 82m, OM3:300m, OM4:550m (850nm)	
Sheath color	OS2: yellow, OM2: orange, OM3/OM4: aqua or customized	
Sheath flame retardant grade	Plenum grade*	

* Contact us for PVC, Riser or LSZH grade

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Multiple fibers patchcord

■ Ordering Information

Product Code	**12MPOF** / **12MPOF** – **2PS** – **5 M** – **PL** – **OM2C×12C** – **X**
	❶❷ ❸ ❹ ❺ ❻ ❼

❶❷	❸	❹	❺	❻	❼
Connector type	**Fiber mode**	**Length**	**Flame grade**	**Fiber type**	**Polarity**
12MPOF: 12F-MPO without pin 12MPOM: 12F-MPO with pin *SM: angled polishing; MM: PC polishing	1P: single-ended MM type 2P: double-ended MM type 1PS: single-ended SM type 2PS: double-ended SM type	Unit: meter Tolerance: L≤10m: +10%, -0 10m<L≤50m: +1m, -0 50m<L: +2%, -0	PL: Plenum grade * PVC, Riser ,LSZH also available	SMCx12C: 12F, SM OM2Cx12C:12F, 0M2 OM3Cx12C: 12F, OM3 OM4Cx12C: 12F, OM4 SMCx24C: 24F, SM OM2Cx24C:24F, 0M2 OM3Cx24C: 24F, OM3 OM4Cx24C: 24F, OM4 *3mm cord	X: Cross wiring ST: Straight wiring *refer to 'Polarity Table'

■ Please refer to the 'Application Table' for the relevant fibers and cords for each type of connector.
■ Shape and color of connector housing part may vary depending on the type of fiber/cord and polishing method
■ Contact us for other type MPO, such as 24, 48F-MPO cords

Polarity Table

● Straight wiring

MPO No.	Port No.											
MPO 1	1	2	3	4	5	6	7	8	9	10	11	12
MPO 2	1	2	3	4	5	6	7	8	9	10	11	12

● Cross wiring

MPO No.	Port No.											
MPO 1	1	2	3	4	5	6	7	8	9	10	11	12
MPO 2	12	11	10	9	8	7	6	5	4	3	2	1

Notes

Mechanical Splice

Mechanical Splice Unit

■ Features

Mechanical splice connection makes use of mechanical splice unit where 2 fibers are first inserted into the unit. The fibers are next aligned and then held in position by clamping parts.

- Fast and Easy splicing of 250 or 900um SM/MM fibers.
- Power source not required, all necessary tools are provided in the standard tool kit.
- Much faster compared to fusion splicing method

Single fiber Mechanical Splice

■ Structure

Mechanical splice connection is done by using the mechanical splice shown in Figure 1. Fibers are set to the V-groove of the mechanical splice. The fibers are hold in place by clamping with the clamping parts. Index matching gel is added to the center of the mechanical splice (at the supposed connection point of the two fibers) to ensure good insertion and return loss.

Figure 2 and Figure 3 show the inner structure of the mechanical splice. Both the 0.25mm section and 0.125mm (bare fiber) section of the fiber are being clamped and held in position.Therefore, to ensure good connection, both the fiber stripping length and the fiber cleaved length must be controlled within specifications.
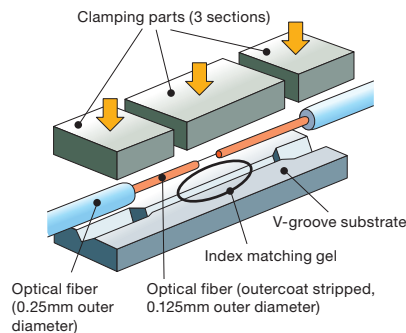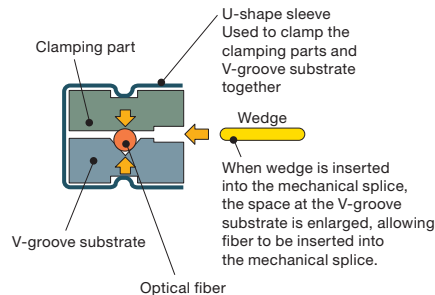
Figure 1

Mechanical splice
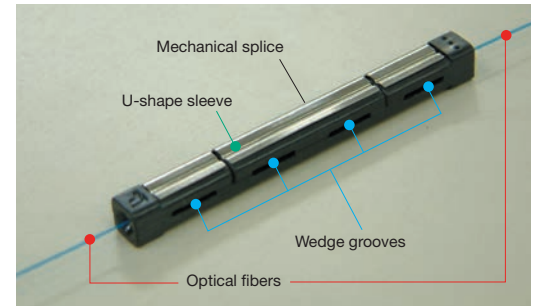U-shape sleeve
Wedge grooves
Optical fibers

Figure 2-1

Clamping parts (3 sections)
V-groove substrate
Index matching gel
Optical fiber (0.25mm outer diameter)
Optical fiber (outercoat stripped, 0.125mm outer diameter)

Figure 2-2

U-shape sleeve
Used to clamp the clamping parts and V-groove substrate together
Clamping part
Wedge
When wedge is inserted into the mechanical splice, the space at the V-groove substrate is enlarged, allowing fiber to be inserted into the mechanical splice.
V-groove substrate
Optical fiber

Figure 3

0.25mm fiber inserted section
Inner structure of mechanical splice
Optical fiber holder
0.125mm bare fiber section
0.25mm fiber section
Connection point
0.125mm bare fiber (no outercoat: fiber glass section)

■ Specifications

Type	Mechanical Splice Unit	Remark
Product Code	FMSEZ-025/09	
Application	Dia.0.25mm single fiber or Dia.0.9mm single fiber	Cladding : 0.125mm Except Nylon coating fibers
Applicable fiber diameter range	Dia.0.235mm to 0.265mm , Dia. 0.85mm to 0.95mm	ITU-T compliance
Size	L40 x W4 x H4 (mm)	
Connection Loss	Average < 0.1dB	
Return Loss	≥ 40dB	
Fiber Adhesion Force	< 3N (Connection Loss change < 0.2dB)	
Required Tools	Single fiber MS/EZ Assembly tool	

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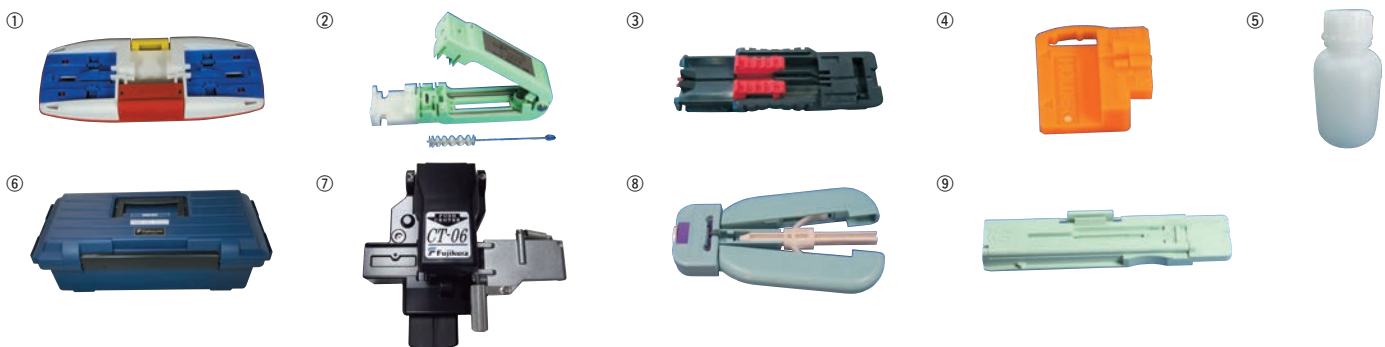# Mechanical Splice

MS/EZ Assembly tool
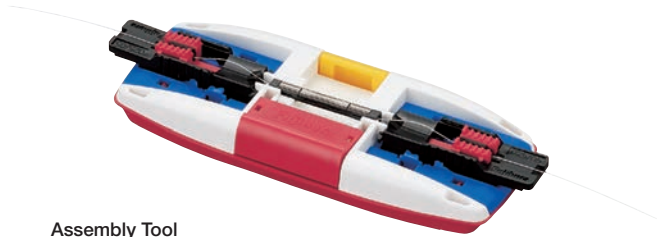
Assembly Tool

■ Features

- MS/EZ assembly tool for φ0.25/0.9mm single optical fiber.
- MS/EZ assembly tool for FMSEZ-025/09.
- No electric power is required and assembly can be done quickly.
- Suitable for FTTH drop cable solution.
- MS/EZ assembly kit is also available.

■ Single Fiber MS/EZ Assembly tool

|	Item	Model No.	Quantity	Remarks
①	MS/EZ Assembly Tool	FMSECO-TL2-EZ	1ea	
②	Mechanical Stripper 「F」	FMSECO-MSTR025	1ea	
③	Single Fiber Holder 「F」	FMSECO-FH05/025	10ea	
④	Spacer for Mechanical Splice Spacer 「F」	FMSECO-SP-C2	2ea	
⑤	Alcohol Bottle	FMSEZ-ALC	1ea	
	Wiper	-	1set	
	Instruction Manual	-	1set	
⑥	Carrying Case	-	1set	
⑦	Fiber Cleaver	CT-06	-	Option
⑧	Micro Stripper (φ0.9)	MS1-08S-40-FS	-	Option
⑨	Single Fiber Holder 「F」 (φ0.9) (Instruction Manual Included)	FMSECO-FH09	-	Option

Single fiber MS/EZ assembly tool (for φ250um fiber) is also available.
- FMSEC0EZ-KIT025C-10 (without Fiber Cleaver)
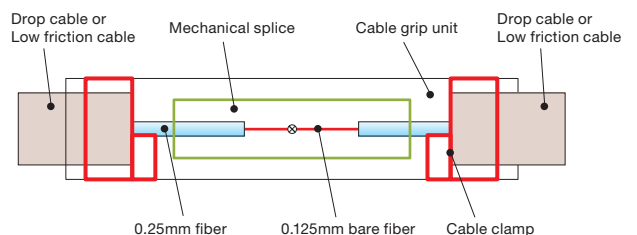- FMSEC0EZ-KIT025C-11 (with Fiber Cleaver)

① ② ③ ④ ⑤

⑥ ⑦ ⑧ ⑨

Mechanical Splice

Cable Grip Splice
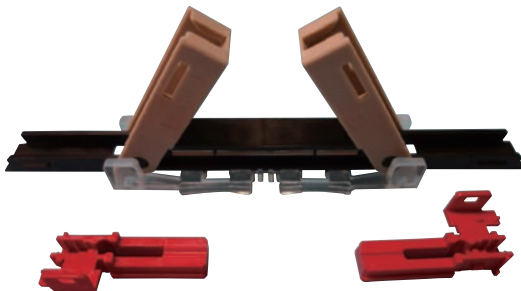
■ Features

- Cable grip splice enables the connection between drop cables and low friction cables.
- No need to prepare special tool.

Drop cable or Low friction cable   Mechanical splice   Cable grip unit   Drop cable or Low friction cable

0.25mm fiber   0.125mm bare fiber   Cable clamp

■ Specificaiton

Type	Mechanical Splice Unit for cables
Product Code	CABLE GRIP SPLICE
Applicable cable	Drop cable, Low friction cable
Size	L 97 x W 9.2 x H 7.4 (mm)
Connection Loss	Aveverage ≤ 0.1dB
Return Loss	≥ 40dB
Cable Adhesion Force	> 20N (Connection Loss change ≤ 0.2dB)

FAST-Connector

FAST-Connector (UNI) Series (for 250um, 900um fiber)
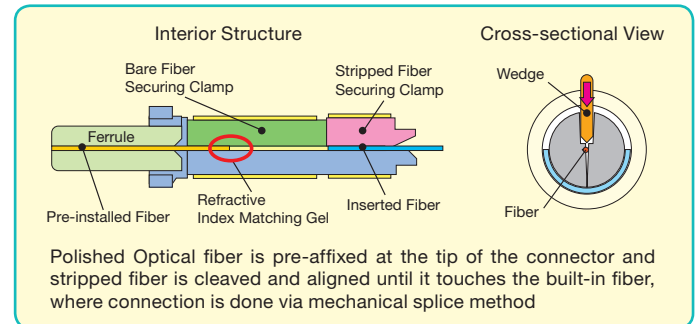
Before Assemble
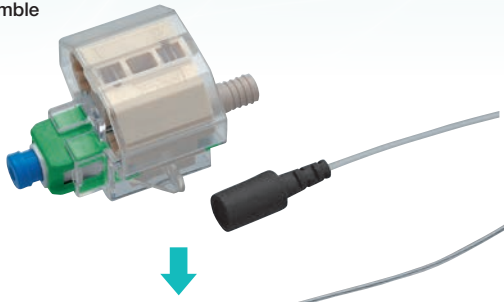
After Assemble

Fujikura has greatly simplified process of joining two fibers, therefore providing significant support for our customers in the construction of FTTH network. Fujikura FAST connector is a series of field-installable connectors, which require no polishing. Unlike conventional field-installable connectors, FAST connector series do not employ assembling tool but incorporate its own pre-assembled wedge launcher. The pre-assembled wedge launcher is a disposal part after installing fiber. Fujikura FAST connector uses a mechanism of "Push-pull-wedge", which has been introduced by Fujikura's Mechanical Splices. As the "Push-pull-wedge" mechanism achieves clamping both bare fiber part and coating part, this clamping mechanism enhances strength against fiber twist.
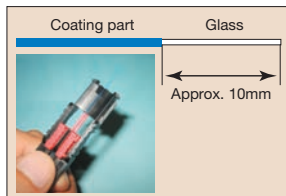
■ Features

FAST-SC-UNI, FAST-LC-UNI has own design to clamp 250um and 900um coated fibers. Both are fully compatible with the standard SC, LC connectors and demonstrate the performance combining SC, LC connectors and Mechanical Splices.
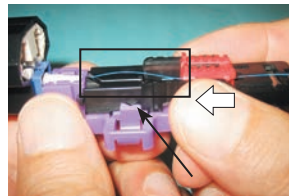
■ Specification

Item	Content
Applicable fiber diameter	240 ~ 265 um (for 250um fiber), 850 ~ 950 um (for 900um fiber)
Fiber Polishing Method	UPC Polish, APC Polish
Connection Loss	< 0.5dB (Singlemode)
	< 0.6dB (Singlemode APC Polish)
	< 0.4dB (Multimode)
Return Loss	> 45dB (SM fiber UPC polish)
	> 65dB (SM fiber APC polish / When use with Angled cleaver)
	> 50dB (SM fiber APC polish / When use with Flat cleaver)
Working temperature	-40°C ~ 75 °C (for 250um fiber)
	Base on fiber spec (for 900um fiber)

Interior Structure

Bare Fiber Securing Clamp
Stripped Fiber Securing Clamp
Wedge
Ferrule
Pre-installed Fiber
Refractive Index Matching Gel
Inserted Fiber

Cross-sectional View

Fiber

Polished Optical fiber is pre-affixed at the tip of the connector and stripped fiber is cleaved and aligned until it touches the built-in fiber, where connection is done via mechanical splice method

■ Assembly Flow

Coating part | Glass
Approx. 10mm
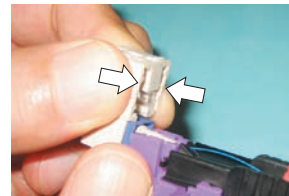
1. Prepare fiber

2. Insert fiber into connector body and confirm fiber bend

3. Remove connector unit from the wedge launcher

4. Insert the boots

■ Package Information

- 250um Fiber holder : 1pc/10connectors
- 250um Fiber insert guide : 1pc/10connectors
- 900um Fiber Holder : Order separately
- 1pc of spacer/10connectors
- 1pc of marker/10 connectors (only for APC connector with angled fiber cleave)

250um fiber holder | 250um fiber insert guide | 900um fiber insert guide | Marker
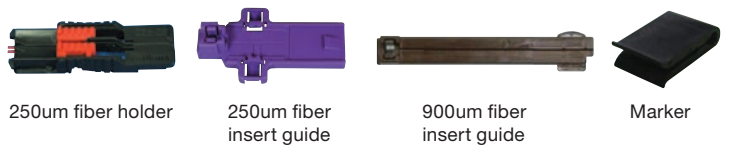
■ Ordering Information

Type	Product Code		
	FAST-SC	**FAST-LC**	**FAST-ST**
Singlemode UPC Polish	FAST-SC-SM-UNI/00-BL/BK	FAST-LC-SM-UNI/00-BL/BK	FAST-ST-SM-UNI/00-BL/BK
Singlemode APC Polish	FAST-SC-APC-SM-UNI/00	FAST-LC-APC-SM-UNI/00	-
50/125 Multimode	FAST-SC-GI5-UNI/00-BK/BK	FAST-LC-GI5-UNI/00-BK/BK	FAST-ST-GI5-UNI/00-BK/BK
62.5/125 Multimode	FAST-SC-GI6-UNI/00-BG/BK	FAST-LC-GI6-UNI/00-BG/BK	FAST-ST-GI6-UNI/00-BG/BK
MM10G	FAST-SC-10G-UNI/00-AQ/BK	FAST-LC-10G-UNI/00-AQ/BK	FAST-ST-10G-UNI/00-AQ/BK

Interface-APC connector with flat fiber cleave available upon request.

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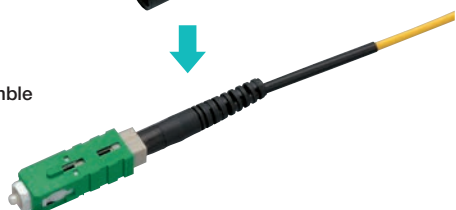
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FAST-Connector

FAST-Connector Cord series (for 2mm & 3mm)

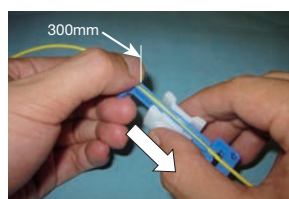**Before Assemble**

After Assemble

■ Features

FAST-SC-09/CO FAST-LC-09/CO have own design to clamp 2mm, and 3mm cord. Both are fully compatible with the standard SC, LC connectors. Therefore, FAST-SC, FAST-LC demonstrates the performance combining SC, LC connectors and Mechanical Splices.

■ Specification

| Item	Content
Applicable Cord Diamer	φ 2mm (for 2mm cord), φ 3mm (for 3mm cord)
Fiber Polishing Method	UPC Polish, APC Polish
Connection Loss	< 0.5dB (Singlemode)
	< 0.6dB (Singlemode APC Polish)
	< 0.4dB (Multimode)
Return Loss	> 45dB (SM fiber UPC polish)
	> 65dB (SM fiber APC polish / When use with Angled cleaver)
	> 50dB (SM fiber APC plish / When use with Flat cleaver)
Fiber Retention Force	Cord : <68.6N

■ Assembly Flow

1. Secure cord using cable clamp
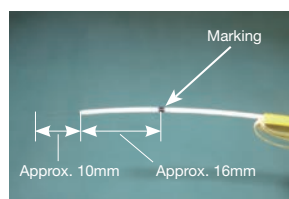
2. Remove outer jacket and strip

3. Set connector and cord onto assembly tool and insert fiber to connector
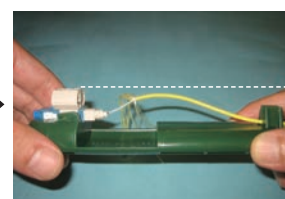
4. Make bend and disengage Wedge Unit

6. Tighten boot, remove connector from assembly tool and trim aramid yarn

5. Fix aramid yarn

■ Package Information

- Assembly Tool : 1pc/50connectors
- Φ2 Cable Clamp :1pc / 50 connectors
- Φ3 Cable Clamp : 1pc / 50 connectors
- 1pc of spacer/10 connectors
- 1pc of marker/10 connectors (only for APC connector with angled fiber cleave)

Assembly Tool   φ 2 Cable Clamp   φ 3 Cable Clamp   Marker

■ Ordering Information

Type	Product Code		
	FAST-SC	FAST-LC	FAST-ST
Singlemode UPC Polish	FAST-SC-SM-09/CO	FAST-LC-SM-09/CO	FAST-ST-SM-09/CO
Singlemode APC Polish	FAST-SC-APC-SM-09/CO	FAST-LC-APC-SM-09/CO	-
50/125 Multimode	FAST-SC-GI5-09/CO	FAST-LC-GI5-09/CO	FAST-ST-GI5-09/CO
62.5/125 Multimode	FAST-SC-GI6-09/CO	FAST-LC-GI6-09/CO	FAST-ST-GI6-09/CO
MM10G	FAST-SC-10G-09/CO	FAST-LC-10G-09/CO	FAST-ST-10G-09/CO

Interface-APC connector with flat fiber cleave available upon request.

FAST-Connector

FAST-Connector (for Drop/Indoor Cable/Low Friction Indoor Cable)

Before Assemble
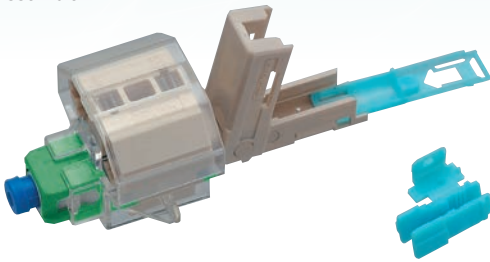
After Assemble

■ Features

FAST-SC(/LC)-GT type has own design to clamp drop cable or indoor cable and low friction indoor cable. FAST-SC(/LC) is fully compatible with the standard SC(/LC) connectors. Therefore, FAST-SC(/LC) demonstrates the performance combining both SC(/LC) connectors and Mechanical Splices.

■ Specification

Item	Content
Applicable Cable Diamer	3.1 ± 0.2mm x 2.0 ± 0.2mm (Drop/Indoor Cable)
	2.0 ± 0.1mm x 1.6 ± 0.1mm (Low Friction Indoor Cable)
Fiber Polishing Method	UPC Polish, APC Polish
Connection Loss	< 0.5dB (Singlemode)
	< 0.6dB (Singlemode APC Polish)
	< 0.4dB (Multimode)
Return Loss	> 45dB (SM fiber UPC polish)
	> 65dB (SM fiber APC polish / When use with Angled cleaver)
	> 50dB (SM fiber APC plish / When use with Flat cleaver)
Fiber Retention Force	> 20N (<0.2dB with impressed pressure)

■ Assembly Flow

Approx. 10mm   Approx. 15mm
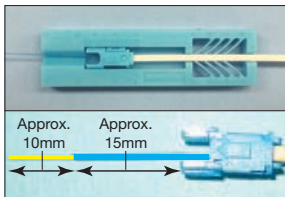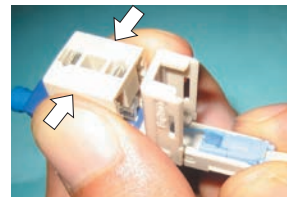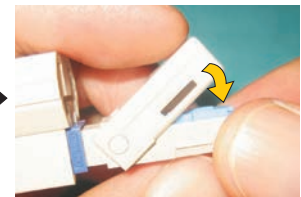
1. Secure cable using with matching cable clamp & holder
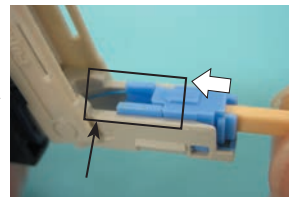
2. Insert fiber and confirm fiber bend

3. Disengage Wedged unit

4. Down the lever and fix cable

■ Package Information

- Cable clamp: 1pc blue clamp and 1pc Yellow clamp for 1pc connector
- Cable holder: 1pc/10pcs connectors
- 250um fiber stripper: 1pcs/10pcs connectors

Blue Clamp   Yellow Clamp   Cable Holder   250um Fiber Stripper

■ Ordering Information

Item	Product code
Drop/Indoor cable, UPC polish, SC	FAST-SC-SM-025/GT
Drop/Indoor cable, APC polish, flat pre-installed fiber*	FAST-SC-Interface-APC-SM-025/GT
Low friction indoor cable, UPC polish, SC	FAST-SC-SM-LF/GT
Low friction indoor cable, UPC polish, LC	FAST-LC-SM-LF/GT
Low friction indoor cable, APC polish, SC, flat pre-installed fiber*	FAST-SC-Interface-APC-SM-LF/GT
Low friction indoor cable, APC polish, LC, flat pre-installed fiber*	FAST-LC-Interface-APC-SM-LF/GT

*Contact us for angled pre-installed fiber

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For Enquiry ▶ E–mail : **fjk.ftth@jp.fujikura.com**

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Future Access

Mechanical Splice

FAST-Connector Assembly Tools

The FAST Connector Assembly Tool Kit provides all the necessary installation tools.

■ Features

- Industry standard fiber preparation tools
- Compact design, flexible but rugged case
- Complete instructions provided

No.	Name	Model	Purpose	KIT (A)	KIT (B)	KIT (C)	KIT (D)
1	Optical fiber holder 025	FMSECO-FH05/025	To assemble FAST-SC for 250um fiber	●	●	●	●
2	Cable Holder	-	To assemble FAST-SC(GT)	●	●	●	●
3	Mechanical Stripper 025	FMSECO-MSTR025	To strip 250um fiber	●	●	●	●
4	Micro Stripper 09	MS1-08S-40-FS	To strip 900um fiber			●	●
5	Alcohol Container	FMSEZ-ALC	-	●	●	●	●
6	Cotton Pad	-	-	●	●	●	●
7	High Precision Cleaver	CT-06	Flat Cleaving		●		●
8	Fiber Plates	AD-10	To adjust bare fiber length	Option			
9	Spacer	FMSECO-SP-C2	To adjust bare fiber length	●	●	●	●
10	250um fiber insert tool	-	To assemble FAST-SC for 250um fiber	●	●	●	●
11	Carrying Case	-	-	●	●	●	●
12	Cordage Assembly tool	FAST-SC-KIT-CO	To assemble cordage			●	●
13	φ 2mm Cable Clamp	FAST-SC-KIT-CO	To assemble φ 2mm cordage			●	●
14	φ 3mm Cable Clamp	FAST-SC-KIT-CO	To assemble φ 3mm cordage			●	●

* Kit(A) ; FAST-SC-KIT025DR-10, Kit(B) ; FAST-SC-KIT025DR-11 , Kit(C) ; FAST-SC-KIT/ALL-10, Kit(D) ; FAST-SC-KIT/ALL-11

① ② ③ ④ ⑤

⑦ ⑧ ⑨ ⑩ ⑪

⑫ ⑬ ⑭
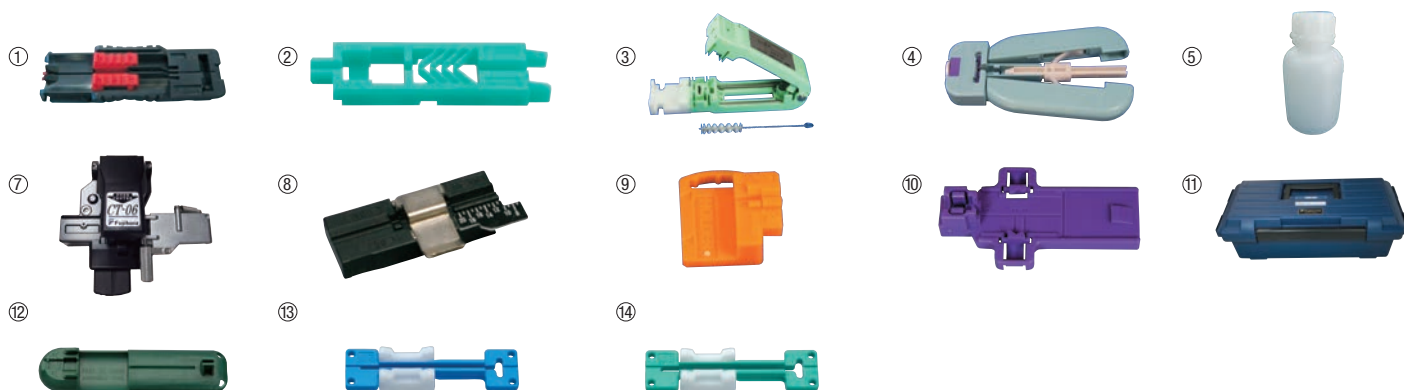
Notes

FuseConnect™

FuseConnect™ (for 900um fiber)

FuseConnect-SC-SF-SM-09   FuseConnect-LC-SF-SM-09

■ Features & Benefits

Fujikura's FuseConnector™ family connectors are factory pre-polished, and easily terminate by fusion splicer in the field. Similar with Fujikura's FAST family connectors, FuseConnector™ family are extremely simple and easy to assemble and apply via many innovative designs. Besides, FuseConnector™ provides less than 0.3dB insert loss and more than 65dB (APC polishing) return loss, and extend the applications from digital network to analog network.

■ Applications

- Optical equipment internal connection
- FTTx network connection
- General optical network connection

■ Specification

Item	Content
Cable type	ϕ 900um fiber
Connector type	SC, LC
Ferrule polishing	UPC polishing, APC polishing
Insert loss	SM/MM: ≤ 0.30dB
Return loss	SM UPC: ≥ 55dB, SM APC: ≥ 65dB

■ Assembly Flow

1. fiber processing   2. fiber splicing   3. protection sleeve shrinking   4. assembled connector

■ Ordering Information

Product Code   FuseConnect - **X1** - SF - **X2** - 09

Connector type:
SC : SC connector
LC : LC connector

Ferrule polishing:
SM : SM UPC polishing
APC: SM APC polishing
GI5 : 50/125 MM UPC polishing
GI6 : 62.5/125 MM UPC polishing
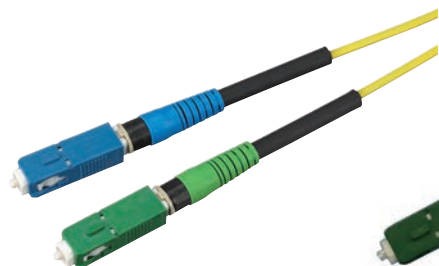**10G** : MM 10G UPC polishing

■ Package Information

- Connector with necessary parts: 1set / box

■ Option

Item	Description
Fusion splicer	single-fiber fusion splicer, such as 70S, 19S, FSM-60S, 12S
Assembly tools	900um fiber stripper (MS1-08S-40-FS), fiber cleaver (CT-06)

Latest information also available on the internet ▶ URL   : **www.fujikura.co.jp**

For Enquiry ▶ E–mail : **fjk.ftth@jp.fujikura.com**

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Future Access

FuseConnect™

FuseConnect™ (for 2mm and 3mm cord)

FuseConnect-SC-SF

FuseConnect-SC-QA-APC-30

■ Feature
- ● Applicable for 2/3mm cordage
- ● High optical performance
- ● High reliability

■ Applications
- ● FTTx network connection
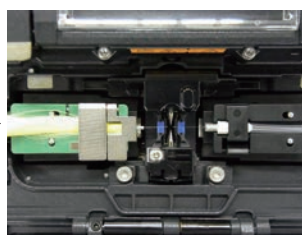- ● Optical equipment internal connection
- ● General optical network connection

■ Specification

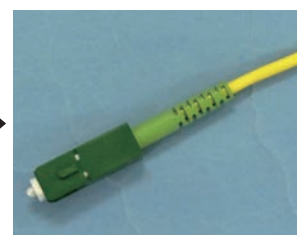| Item	Content
Cable type	φ 2mm, 3mm cord
Connector type	SC, LC
Ferrule polishing	UPC polishing, APC polishing
Insert loss (wrt master)	SM/MM: ≤ 0.30dB
Return loss	SM UPC: ≥ 55dB, SM APC: ≥ 65dB

■ Assembly Flow

1. fiber processing

2. fiber splicing

3. protection sleeve shrinking

4. assembled connector

■ Ordering Information

Product Code

FuseConnect - **X1** - QA - **X3** - **X4**

Connector type:
SC : SC connector
LC : LC connector

Cord type:
20 : 2mm cord
30 : 3mm cord*

Ferrule polishing:
SM : SM UPC polishing
APC : SM APC polishing
GI5 : 50/125 MM UPC polishing
GI6 : 62.5/125 MM UPC polishing
10G : MM 10G UPC polishing

*Only for SC type

■ Package Information
- ● Connector with necessary parts: 1set / box
- ● Cable clamp for 2mm or 3mm cord: 1pc / 10 connectors

■ Option

Item	Description
Fusion splicer	single-fiber fusion splicer, such as 70S, 19S, FSM-60S, 12S
Assembly tools	Jacket split tool (FUSE-ST), 900um fiber stripper (MS1-08S-40-FS), fiber cleaver (CT-06)

Notes

FuseConnect™

FuseConnect™ (for drop cable and low friction indoor cable)

FuseConnect-SC-LFC   FuseConnect-SC-DC

Feature

- Fusion termination for drop cable and low- friction indoor cable
- Factory pre-polished ferrule and easy assembly
- Low insert loss and high return loss

Applications

- FTTx network connection
- CATV or RoF network connection
- General optical network connection

Specification

Item	Content	
Cable type	Drop cable	Low-friction cable
Cable dimension	$3.1 \pm 0.2 \times 2.0 \pm 0.2$mm	$2.0 \pm 0.1 \times 1.6 \pm 0.1$mm
Connector type	SC	SC, LC
Polishing	UPC polishing, APC polishing	
Insert loss	≤ 0.30dB	
Return loss	SM UPC: $\geq$ 55dB, SM APC: $\geq$ 65dB	

Assembly Flow

1. fiber processing   2. fiber splicing   3. protection sleeve shrinking   4. assembled connector

Ordering Information

Product Code   FuseConnect - SC - **X1** - **X2**

Ferrule polishing:
Null : SM UPC polishing
APC : SM APC polishing

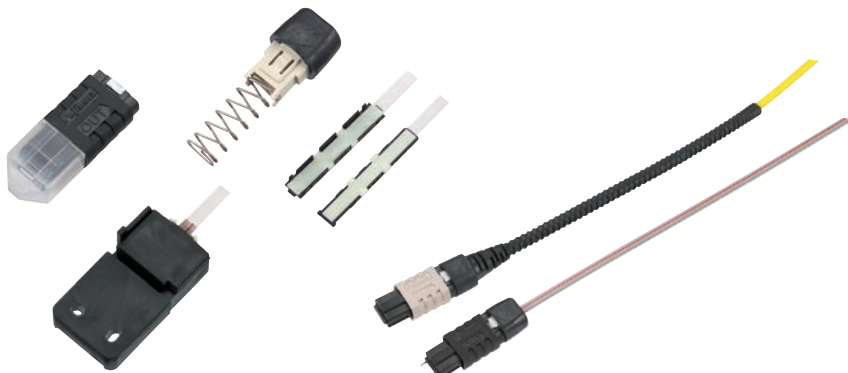Cord type:
DC : drop cable
LFC : low friction cable

Package Information

- Connector with necessary parts: 1set / box

Option

Item	Description
Fusion splicer	single-fiber fusion splicer, such as 70S, 19S, FSM-60S, 12S
Assembly tools	900um fiber stripper (MS1-08S-40-FS), fiber cleaver (CT-06)

Latest information also available on the internet ▶ URL   : **www.fujikura.co.jp**
For Enquiry ▶ E–mail : **fjk.ftth@jp.fujikura.com**

Fujikura

Future Access

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FuseConnect™

FuseConnect™ (for MPO)

Before Assemble

After Assemble

Features
- 12F fuse spliced by one time
- Factory pre-polished, easy assembly
- Mechanical protect mechanism, heat-free
- Applicable for 12F-ribbon and 3mm ribbon cord

Applications
- Data center installation and maintenance
- Central office cabling and replacement
- Patch cord customization in the field
- FTTx multi-fiber connection

Specification

Item	Content			
Fiber type	SM	GI 50/125	GI 62.5/125	MM 10G
Fiber count	12F			
Housing color	Green	Black	Beige	Aqua
Insert loss (wrt master)	≤ 0.75dB	≤ 0.50dB		
Return loss	≥55dB	-		
Cord tension	≤ 50N			

Assembly Flow (MPO)
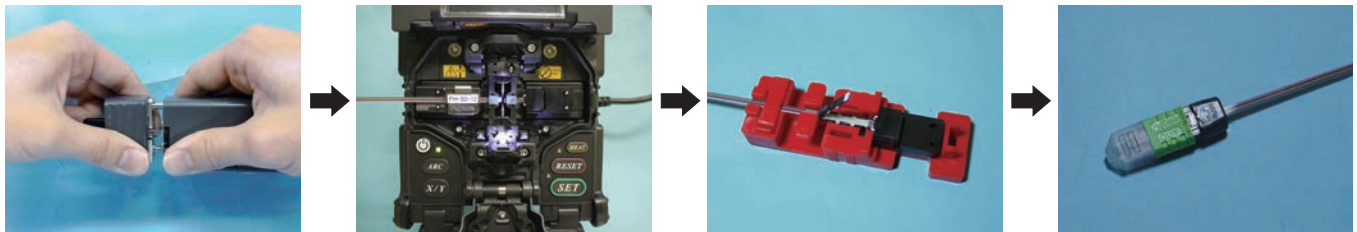
1. fiber ribbon processing
2. fiber ribbon splicing
3. protection part housing
4. assembled connector

Ordering Information

Product Code FuseConnect-MPO- **X1** - **X2** - **X3**

Type of connector:
Male : with guide pin
Female : without guide pin

Type of fibers:
SM : SM fiber
GI5 : 50/125 MM fiber
GI6 : 62.5/125 MM fiber
MM10G : MM 10G fiber

Type of cable:
Cordage : 3mm cord
Ribbon : 12F ribbon tape

Package Information
- Connector with necessary parts: 1set / box
- Assembly tool: 1pc / 10pcs connectors

Option

| Item	Description
Fusion splicer	12F multi-fiber fusion splicer, such as 70R, 19R, FSM-60R
Assembly tools	Jacket split tool (FUSE-ST), ribbon tape cleaver, ribbon-form tool

55

One-Click™ Cleaner

Covered by US Patent No. 8,087,118

■ Features

- Removes dust and oil adhering to the ferrule endface of fiber optic connector with one push mechanical action.
- Cleans the ferrule endface inside an adapter or connectors on jumpers by making full use of guide cap.
- Refrains from transmission error or endface damage by dirty endface.
- Comfortable and user friendly design with one click cleaning.
- Complies with EU/95/2002/EC directive (RoHS).

■ Applications

- Cleans the ferrule endface inside an adapter or connectors on jumpers and builds reliable networks for Datacom, FTTH, etc. with faster installation of patchcords, pigtails and field assembly connectors.
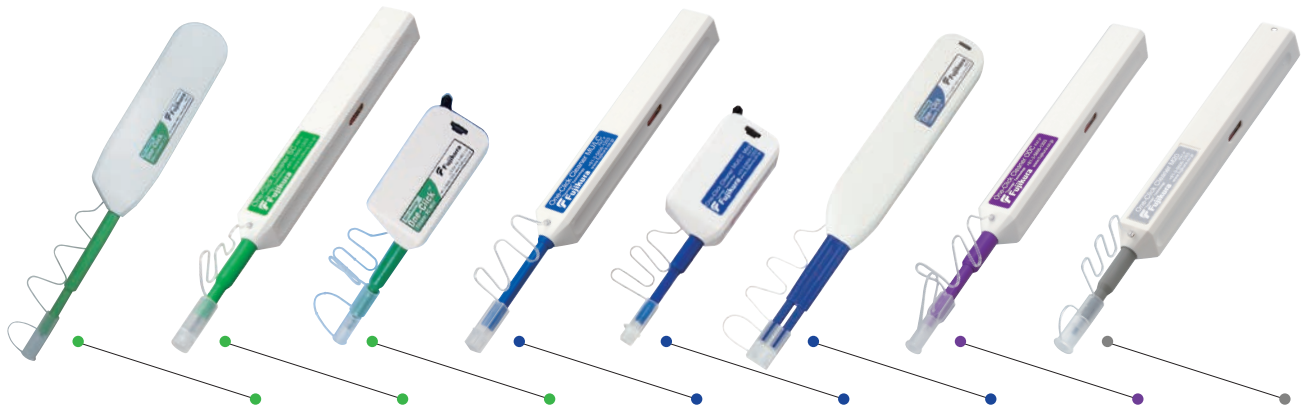
Product Name	One-Click Ultra Cleaner 2.5	One-Click Cleaner SC	One-Click Cleaner SC Mini	One-Click Cleaner MU/LC	One-Click Cleaner MU/LC Mini	One-Click Cleaner D-LC	One-Click Cleaner ODC	One-Click Cleaner M20
Model Number[3]	M250-E-CLK-A	SC-CLK-B	SC-MINI-CLK-A	MU/LC-CLK-C	MU/LC-MINI-CLK-A	DLC-CLK-A	ODC-CLK-A	M20-CLK-A
Applicable Fiber Optic Connector & Adapter[1] — SC	●	●	●					
FC	●	●	●					
ST	●	●	●					
MU				●	●		●	
LC				●	●	● (only for Duplex)	●	
φ 1.25 mm Multi-connector (ODC®)							●	
φ 2.0 mm Multi-connector (SMPTE 304M, etc.)								●
Applicable Polish Type	PC, UPC, APC					PC, UPC, APC	PC, UPC	
Type	Enlarged Area	Standard	Mini	Standard	Mini	Duplex	Standard	Standard
Nozzle Extendability		●		●			●	●
No. of Cleanings	≥ 500 times					≥ 500 times	≥ 500 times	
Cleaning Method	Dry (Cleaning the ferrule endface with cleaning cloth, with no chemical or solvent.)							
Dimensions (mm)[2] Extended Dimensions	22.5 W x 33.4 H x 193 L	17.5 W x 17.5 W x 165 L (200 L)	17.5 W x 30.5 H x 104 L	17.5 W x 17.5 W x 173 L (208 L)	17.5 W x 30.5 H x 104 L	18.0 W x 30.0 H x 195 L	17.5 W x 17.5 H x 178 L (213 L)	17.5 W x 17.5 H x 164 L (199 L)

*1: Limited to the connector endface inside an adapter. *2: Guide cap dimensions and prongs are not included. *3: Last letter indicates model version. This is subjected to change.

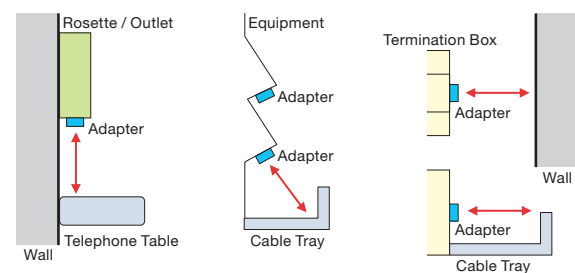### ● Cleaning Example (UPC Polish) with Enlarged Area Type

M250 type can clean wider area of the connector endface.

- Optical fiber
- Ferrule
- Cleaning Area

M250   **SC**
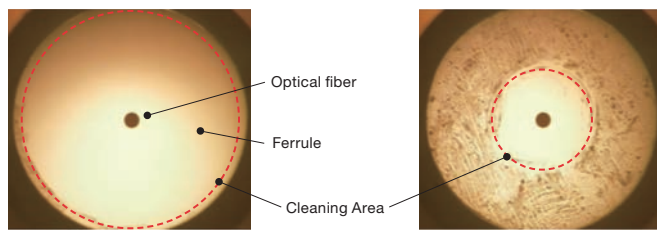
* The above is an example only.

● Applications of Mini Type
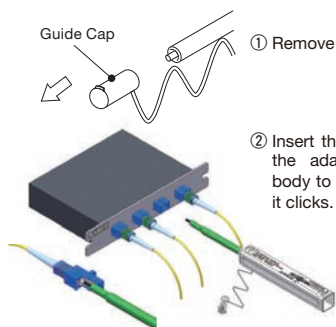
Mini type is useful when the work space is limited and it is difficult for workers to access to adapters.

Rosette / Outlet — Adapter — Wall — Telephone Table

Equipment — Adapter — Adapter — Cable Tray

Termination Box — Adapter — Wall — Adapter — Cable Tray

Fujikura   **Future Access**

One-Click™ Cleaner

■ How to use*1

● To clean the ferrule endface inside an adapter*2

Guide Cap

① Remove the guide cap.

② Insert the nozzle tip into the adapter. Push the body to the adapter until it clicks.

① Open the lid of guide cap.

Guide Cap
Lid

② Insert the ferrule into a hole on the guide cap and push the body to the adapter until it clicks.

*1 Do not use the cleaner except for the endface cleaning.
*2 Limited to the connector endface inside an adapter.

● Check the remainder of cleaning cloth through window.
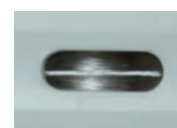
Many

Few

Nil

● Points

1. Insert the cleaner tip into the adapter or connector on jumpers straight and vertically, and then push it.
2. Push it slowly and gently.
3. Do not push it after hearing the click sound. Take it out gently and backward.
4. Do not squeeze it into the adapter or connector.

■ Cleaning Example (UPC Polish)

Enlarged image of endface before and after cleaning

● Cleaning of Oil

Before cleaning   After cleaning

Ferrule   Optical fiber

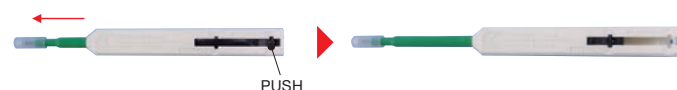* The above is an example only.

● Cleaning of Dust

Before cleaning   After cleaning

Ferrule   Optical fiber

■ Extension Features of Nozzle (Standard type only)

Nozzle length can be extended if the adapter or connector is not reachable.

PUSH

Gently pull the nozzle by pressing the unlock button, and then extended.

Multi-fiber Connector Cleaner

One-Click™ Cleaner MPO

MPO-CLK-D

Product Name	MPO Cleaner
Item / Model No	MPO-CLK-D
Applicable Connector	MPO, MTP®
Applicable Polish Type	PC, APC
No. of cleanings	≥ 500 times

MTP is a registered trademark of US Conec Ltd.

Multi-fiber Connector Cleaner

One-Click™ Cleaner MT-RJ

MTRJ-CLK-A

Product Name	One-Click cleaner MT-RJ
Item / Model No.	MTRJ-CLK-A
Applicable Connector	MTRJ
Applicable Polish Type	PC
No. of Cleanings	≥ 500 times

Multi-fiber Connector Cleaner

One-Click™ Cleaner BNC

BNC-CLK-A

Product Name	One-Click cleaner BNC
Item / Model No	BNC-CLK-A
Applicable Connector	Multiplex optical BNC connector (ARIB STD-B58 compliant)
Applicable Polishing Type	PC
No. of cleanings	≥ 500 times