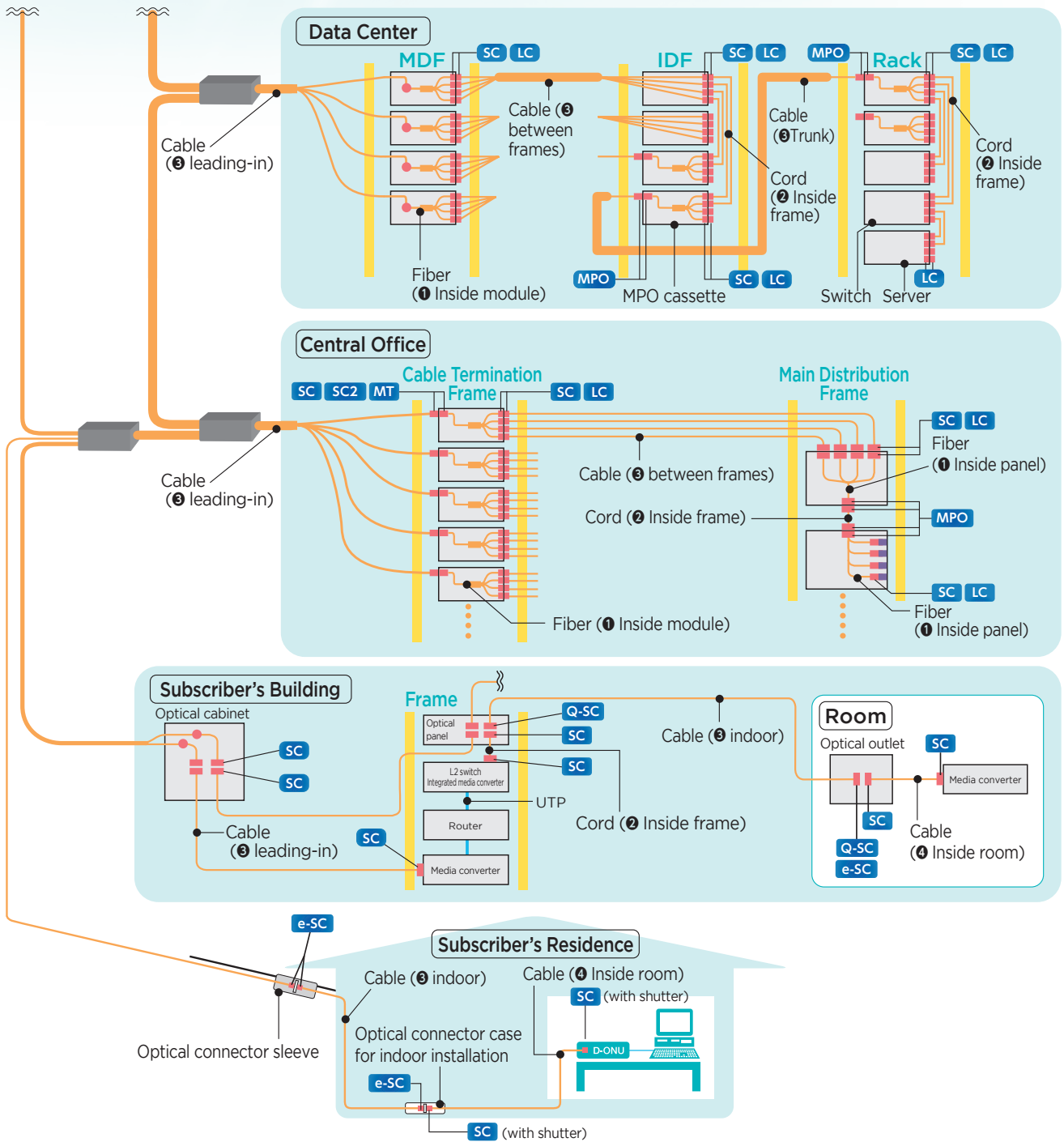


Optical Connectors

Application Example of Optical Connectors in Access Network



Point of use	Typical fiber configuration	Typical optical connector
① Inside panel or module	Fiber	SC, LC
② Inside frame	Cord	SC, LC, MPO
③ Between frames, indoor, leading-in	Cable	SC, Q-SC, e-SC
④ Indoor	Optical cable for indoor installation	SC

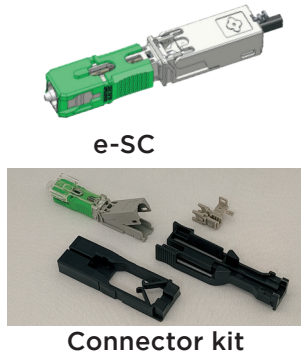


Field Installable Connectors (Mechanical Type)

“Quick SC”, “Quick LC” and “e-SC” connector series enables easy and quick fiber termination on site

e-SC (for flat cable :2x3 mm, 1.6x2 mm, 2x2 mm) NEW

- Renewed by enhancing the workability
- Compatible with factory-assembled conventional SC
- Easy and quick assembly (within 2 minutes)
- No need electric power, adhesive on site
- Reliable assembly with assembly guide jig and cut spacer appended to connector kit
- Available to re-assembly

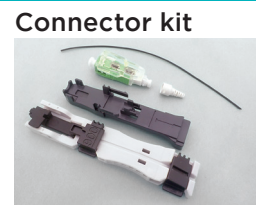


e-SC for flat cable		
Product Name	e-SC-APC<SM>A-6-D	e-SC-UPC<SM>F-6-D
Fiber Type	SM <Note 1>	
Polish	APC	UPC
Insertion Loss (against master plug)	Typ. ≤0.3 dB (max. 0.6dB)	Typ. ≤0.2 dB (max. 0.5dB)
Return Loss (against master plug)	Typ. ≥60 dB (min. 50dB)	Typ. ≥50 dB (min. 40dB)
Operating Temperature	-40 to 75°C	
Housing Color	SM.APC Green	SM.SPC Blue
Interface	IEC 61754-4	
Qualification	ANSI/TIA 568.3-D	

<Note 1> SM: ITU-T G657.A1&A2

Quick SC and Quick LC (for single fiber)

- Compatible with factory -assembled conventional SC and LC
- Easy and Quick assembly (within 2 minutes) without special tool
- No need electric power, adhesive on site
- Reliable assembly with assembly guide jig and fiber holder appended to connector kit
- Applicable for both 250 μm fiber and 900 μm fiber
- Available splice inspection with visible light source on site



Product Name	Quick-SC for fiber					Quick LC for fiber				
		Q-SC-APC<SM>-025/090-A-T	Q-SC-SPC<SM>-025/090-F-T	Q-SC-PC<62.5>-025/090-F-T	Q-SC-PC<50>-025/090-F-T	Q-SC-PC<10G>-025/090-F-T	Q-LC-APC<SM>-025/090-A-T	Q-LC-SPC<SM>-025/090-F-T	Q-LC-PC<62.5>-025/090-F-T	Q-LC-PC<50>-025/090-F-T
Fiber Type	SM		MM62.5	MM50	MM50 (10G)	SM		MM62.5	MM50	MM50 (10G)
Fiber Diameter	250 μm or 900 μm Tight Buffer <Note 1> <Note 2>									
Polish	APC	SPC	PC			APC	SPC	PC		
Insertion Loss (against master plug)	Typ. ≤0.3 dB (max. 0.75 dB)	Typ. <0.2 dB (max. 0.5 dB)	Typ. <0.1 dB (max. 0.3 dB)			Typ. ≤0.3 dB (max. 0.75 dB)	Typ. <0.2 dB (max. 0.5 dB)	Typ. <0.1 dB (max. 0.3 dB)		
Return Loss (against master plug)	Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)	Typ. ≥35 dB (min. 22 dB)			Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)	Typ. ≥35 dB (min. 22 dB)		
Operating Temperature	-40 to 75 °C					-40 to 75 °C				
Housing Color	SM.APC Green	SM.SPC Blue	MM62.5 Beige	MM50 Black	MM50(10G) Aqua	SM.APC Green	SM.SPC Blue	MM62.5 Beige	MM50 Black	MM50(10G) Aqua
Interface	IEC 61754-4					IEC 61754-20				
Qualification	ANSI/TIA 568.3-D					ANSI/TIA 568.3-D				

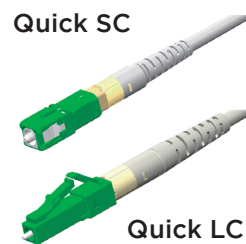
<Note 1> Tight buffered 900μm except for Nylon coated fiber

<Note 2> SM: ITU-T G652.B&D, G657.A1&A2 / MM62.5: IEC60793-2-10 A1b / MM50: IUT-T G.651.1, IEC60793-2-10 A1a.1, IEC60793-2-10 A1a.2

Quick SC and Quick LC (for 2 mm/3 mm round cord)

- Same Installation as 900 μm fiber type
- No crimping process and crimping tools
- Optional tools helps the installation easier
- Optional tools.

Cord Tool (for removing outer sheath and making slits)



Product Name	Quick-SC for round cord					Quick LC for round cord				
		Q-SC-APC<SM>-#-A-T	Q-SC-SPC<SM>-#-F-T	Q-SC-PC<62.5>-#-F-T	Q-SC-PC<50>-#-F-T	Q-SC-PC<10G>-#-F-T	Q-LC-APC<SM>-#-A-T	Q-LC-PC<SM>-#-F-T	Q-LC-PC<62.5>-#-F-T	Q-LC-PC<50>-#-F-T
Fiber Type	SM		MM62.5	MM50	MM50 (10G)	SM		MM62.5	MM50	MM50 (10G)
Fiber Diameter	2 mm or 3 mm <Note 1> <Note 2>									
Polish	APC	SPC	PC			APC	SPC	PC		
Insertion Loss (against master plug)	Typ. ≤0.3 dB (max. 0.75 dB)	Typ. <0.2 dB (max. 0.5 dB)	Typ. <0.1 dB (max. 0.3 dB)			Typ. ≤0.3 dB (max. 0.75 dB)	Typ. <0.2 dB (max. 0.5 dB)	Typ. <0.1 dB (max. 0.3 dB)		
Return Loss (against master plug)	Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)	Typ. ≥35 dB (min. 22 dB)			Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)	Typ. ≥35 dB (min. 22 dB)		
Operating Temperature	-40 to 75 °C					-40 to 75 °C				
Housing Color	SM.APC Green	SM.SPC Blue	MM62.5 Beige	MM50 Black	MM50(10G) Aqua	SM.APC Green	SM.SPC Blue	MM62.5 Beige	MM50 Black	MM50(10G) Aqua
Interface	IEC 61754-4					IEC 61754-20				
Qualification	ANSI/TIA 568.3-D					ANSI/TIA 568.3-D				

<Note 1> Tight buffered 900μm except for Nylon coated fiber

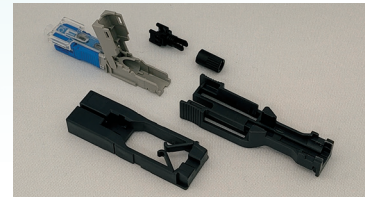
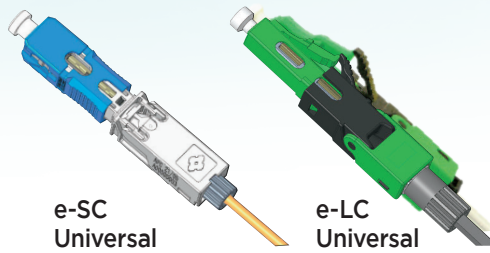
<Note 2> SM: ITU-T G652.B&D, G657.A1&A2 / MM62.5: IEC60793-2-10 A1b / MM50: IUT-T G.651.1, IEC60793-2-10 A1a.1, IEC60793-2-10 A1a.2

Optical Connectors

Field Installable Connectors (Mechanical Type)

e-SC Universal NEW /e-LC Universal (for multi-fiber medias)

- Renewed by enhancing the workability (e-SC Universal)
- Available for six types of fiber media with universal cable holder
- Same assembly procedure as e-SC for flat cable after fitting fiber media to universal cable holder



Connector Kit (ex. e-SC Universal)

e-SC Universal / e-LC Universal (for multi-fiber medias)				
Product Name	e-SC-APC<SM>A-6-U	e-SC-UPC<SM>F-6-U	e-LC-APC<SM>-025H-A-T	e-LC-UPC<SM>-025H-F-T
Fiber Type	SM<Note 1>			
Fiber Diameter	250 μm, 900 μm tight Buffer, 2 mm cord, 3 mm cord, Flat cable (2x3 mm or 1.6x2 mm or 2x2 mm)			
Polish	APC	UPC	APC	UPC
Insertion Loss (against master plug)	Typ. ≤0.3 dB (max. 0.6 dB)	Typ. ≤0.2 dB (max. 0.5 dB)	Typ. ≤0.3 dB (max. 0.75 dB)	Typ. ≤0.2 dB (max. 0.5 dB)
Return Loss (against master plug)	Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)	Typ. ≥60 dB (min. 50 dB)	Typ. ≥50 dB (min. 40 dB)
Operating Temperature	-40 to 75 °C			
Housing Color	SM.APC Green	SM.UPC Blue	SM.APC Green	SM.UPC Blue
Interface	IEC 61754-4		IEC61754-20	
Qualification	ANSI/TIA 568.3-D			

<Note 1> SM: ITU-T G657.A1&A2

Assembly Tool Kit

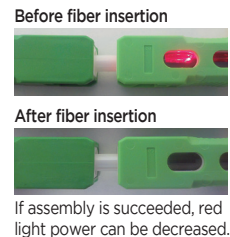
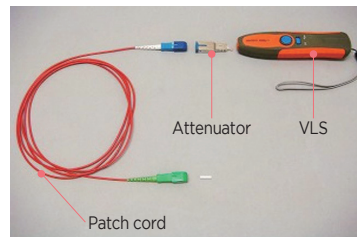
- Available for Quick SC, Quick LC, e-SC and e-SC/e-LC Universal type



- Carrying Bag
- Fiber Cleaver
- Fiber Stripper
- Nipper
- Alcohol Bottle
- Cotton Pad

Visible Light Source(VLS) Kit

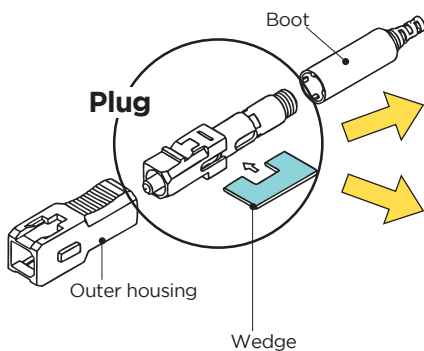
- The light power of this VLS is optimized to check splice visual inspection for SEI field installable connector.



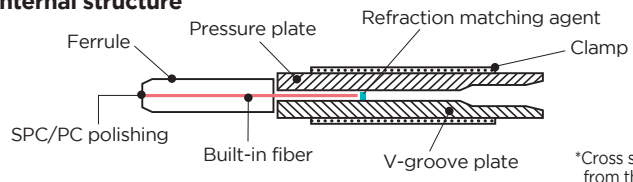
If assembly is succeeded, red light power can be decreased.

Connector termination principle based on mechanical splice technology on site

Structure



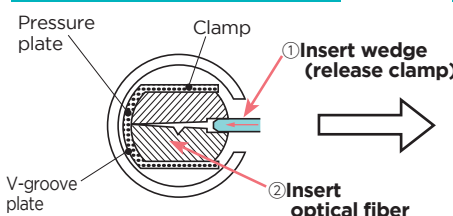
Plug internal structure



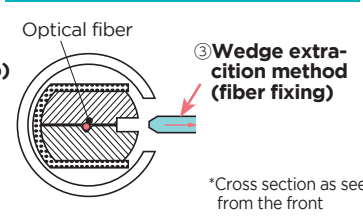
*Cross section as seen from the side

Fiber fixing mechanism

Insert wedge, Insert optical fiber



Wedge extraction method (fiber fixing)



*Cross section as seen from the front

Field Installable Connectors (Fusion Splice Type)

Lynx-CustomFit™ Splice-On Connector

Splice-on fiber optic connector enabling quick, easy and reliable permanent field terminations

- Eliminating crimping process and crimping tools
- Requires neither adhesives, hand polishing, nor matching gel
- Can apply for the place required low return loss as analog transmission, etc.
- Can apply for wide temperature range.

	SC	LC	FC	ST	Q8MPO / 12MPO
Interface standard	IEC61754-4	IEC61754-20	IEC61754-13	IEC 61754-2	IEC61754-7-1
Insertion Loss (against master plug)	SMF: Ave.0.2 dB, Max. 0.3 dB MMF: Ave.0.1 dB, Max. 0.25 dB				SMF,MMF Low Loss (LL) Max. 0.4 dB SMF Standard Loss Max. 0.75 dB
Return Loss (against master plug)	SMF: ≥ 60 dB (APC), ≥ 55 dB (UPC) MMF: ≥ 30 dB (PC)				SMF: ≥ 55 dB

Lineup for Single Fiber Connector (Lynx-CustomFit™ Ver.3)

Connector type	Polishing type	fiber type	Connector Color	fiber / Cord diameter	Boot type
SC LC FC ST ^{*1}	APC	SM	Green	250 μm/900 μm ^{*2}	Standard boot Short boot ^{*3}
	UPC	SM	Blue		
	PC	MM50(OM2)	Black	2mm with 900 μm Tight Buffer	
		MM50(OM3)	Aqua	2mm with 900 μm Loose Buffer	
		MM62.5(OM1)	Beige	3mm with 900 μm Tight Buffer	

*1 ST connector is available for SM(UPC polishing) and MM(PC polishing).

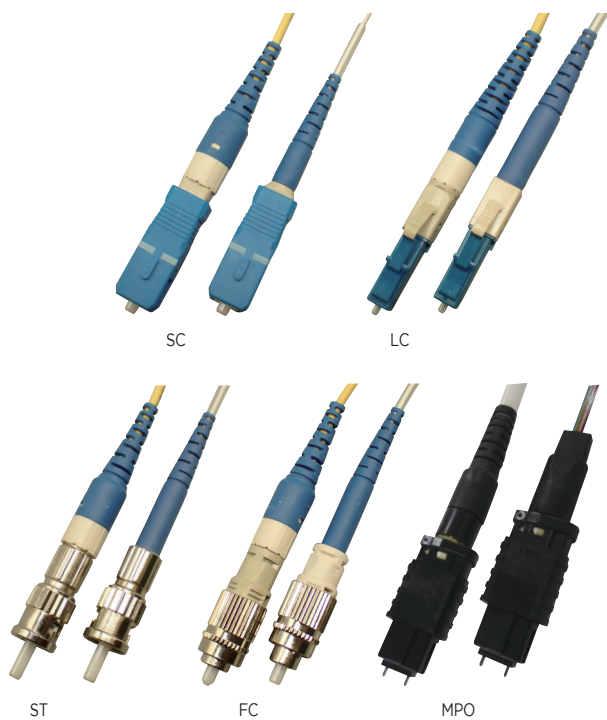
*2 250 μm/900 μm is applicable for the following; 250 μm, 900 μm Tight buffer, 900 μm Loose Tube and 900 μm Loose Buffer.

*3 Short boot is available for SC and LC type of 250 μm/900 μm tight buffer.

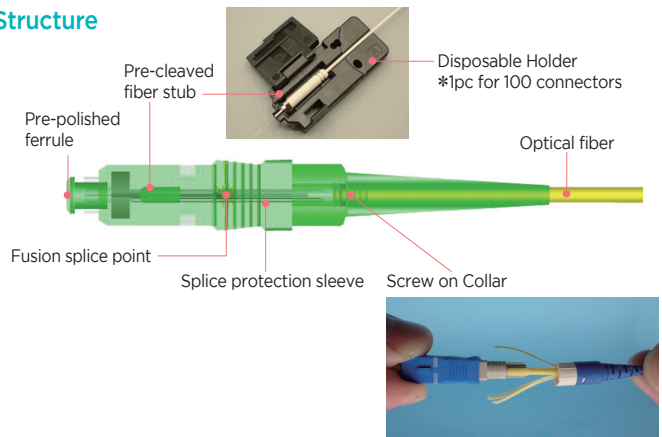
Lineup for MPO Connector (Lynx-CustomFit™ Ver.2)

Guide Pin	fiber/Polishing type	Connector color	Cord diameter
With / Without guide pin	SM Low loss	Yellow	RBN: 8c/12c Bare Ribbon
	SM Standard loss	Green	RND: 8c/12c Round cord (φ3 mm)
	MM50(OM2) Low loss*	Black	RBC: 8c/12c Ribbon cord
	MM50(OM3) Low loss	Aqua	

*MM50(OM2) Low Loss type is available for 12c(12-fiber).



Structure



e-SC Fusion™ Connector

- Compatible with the rectangular drop cable.
- No crimping process and crimping tools.



Assembly Tools

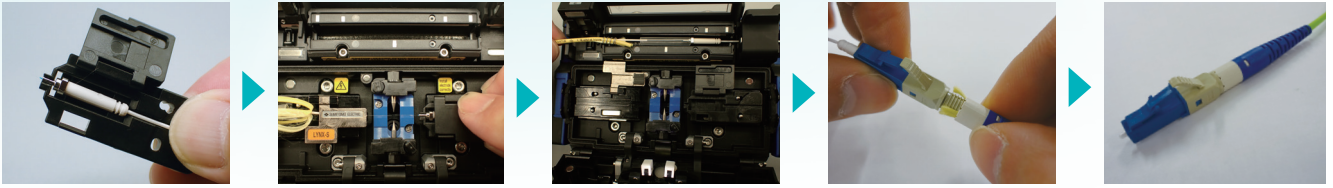
Fiber cleaver	Jacket remover	Cable snips	Cable Holder

e-SC Fusion™ Connector		
Ordering Code	ESCF-SC/APC	ESCF-SC/UPC
Fiber Type	SM	
Applicable Cable	Indoor Cable/Drop Cable 1.6×2.0 to 2.0×3.1 (mm)	
Polish	APC	UPC
Insertion Loss	SM: Typ. ≤ 0.15 dB, Max. ≤ 0.3 dB (against master plug)	
Return Loss	SM: ≥ 60 dB (APC), ≥ 50 dB (UPC) (against master plug)	
Operating Temperature	-40 to +75 °C	
Housing Color	SM.APC Green	SM.UPC Blue
Interface	IEC 61754-4	
Qualification	IEC 61753-1 Cat.OP	

Optical Connectors

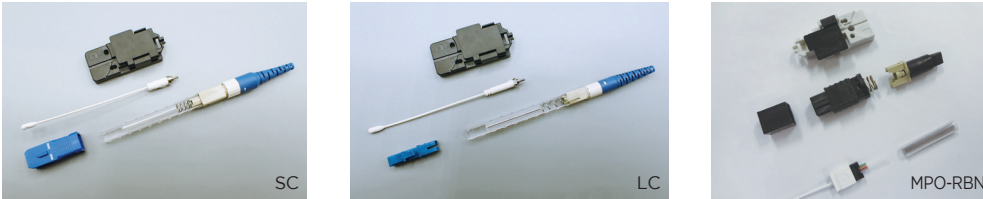
Field Installable Connectors (Fusion Splice Type)

Assembly Procedures



① Set Ferrule on Holder ② Fusion Splicing ③ Shrinking Sleeve ④ Secure Aramid yarn ⑤ Complete

Connector Kit



Assembly Tools

Tool Name [Part No.]		An appropriate Sumitomo Electric fusion splicer	Fiber cleaver	Jacket remover	Hot jacket remover	Sheath splitter [LYNX-CORDTOOL-1.6-2.4]	Sheath splitter [LYNX-CORDTOOL-2.0-3.0]	Aramid yarn snips	ST assembly tool [LYNX-ST-AT-01]
Appearance									
Single Fiber	Cord	● with all current models	●	●	—	● for 1.6 / 2.4 mm cord	● for 2 / 3 mm cord	●	● for ST connector
	Fiber		●	●	● for 0.2-0.4 mm fiber	—	—	—	● for ST connector
MPO	RoundCord/ RibbonCord	● with ribbon fiber splicer	●	—	●	—	● for round cord / ribbon cord	●	—
	Bare Ribbon		●	—	●	—	—	—	—

Fiber Holders for Single Fiber Connector (Lynx-CustomFit™ Ver.3)

Type	Part No. Left side (setting fiber / cord)	Part No. Right side (setting ferrule sub-assembly)
250 μm fiber	FHS-025 or LYNX-S-LB	LYNX-C-PLS (Plastic, Standard) * or LYNX-C (Metal, Option)
900 μm Tight Buffer	FHS-09 or LYNX-S	
900 μm Loose Tube 900 μm Loose Buffer	LYNX-S-LB	
2 mm cord with 900 μm Tight Buffer	LYNX-S	
2 mm cord with 900 μm Loose Buffer	LYNX-S-LB	
3 mm cord with 900 μm Tight Buffer	LYNX-S	

* 1 pc of LYNX-C-PLS holder is supplied with every 100 connectors.

Fiber Holders for MPO Connector (Lynx-CustomFit™ Ver.2)

Type	Left side (setting fiber / cord)	Right side (setting ferrule sub-assembly)
Bare Ribbon	12-fiber: FHM-12V 8-fiber: FHM-8	LYNX2-C(MT) (Plastic, Standard) * LYNX2-C(MT) Metal (Metal, Option)
Round Cord		
Ribbon Cord		

* 1 pc of LYNX2-C(MT) holder is supplied with every 100 connectors.

Lynx-CustomFit™ Duplex LC Clip

LC turns into Duplex type easily

- One piece, Simple design
- Easy installation, Retrofittable and detachable design
- LC for 250 μm / 900 μm Tight Buffer, 250 μm / 900 μm Tight Buffer(Short Boot), 900 μm Loose Buffer, 1.6 mm and 2 mm types are available
- Clip size: W13.4 mm × H12.6 mm

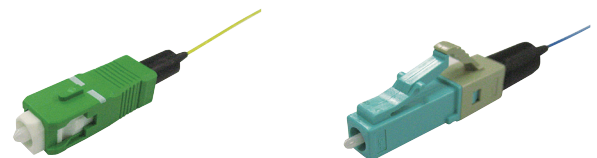


Note: In case of the optical cord with 2.4mm or larger diameter, please ask the ordering code of the connector.

Lynx-CustomFit™ Short Boot Application

Compact size for small cabinet

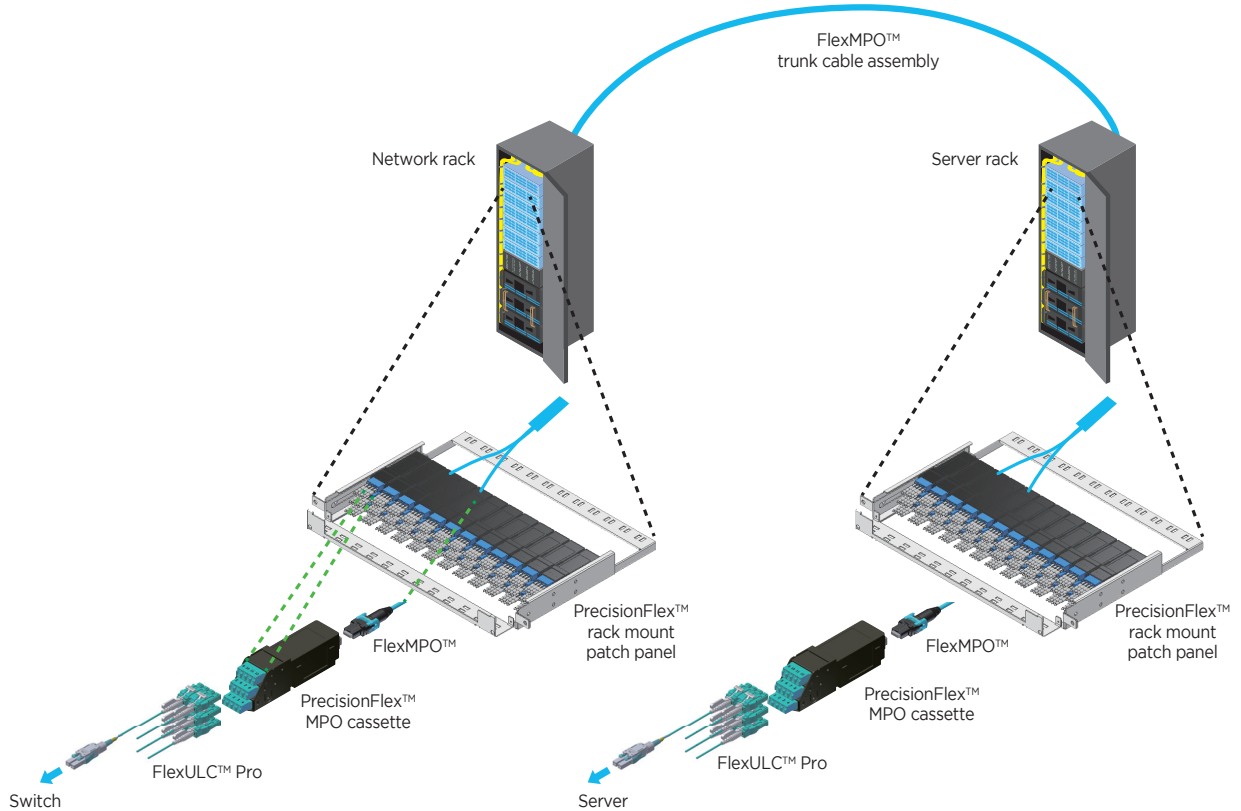
- Short Silicone Boot
- SC and LC for 250 μm and 900 μm Tight Buffer types are available



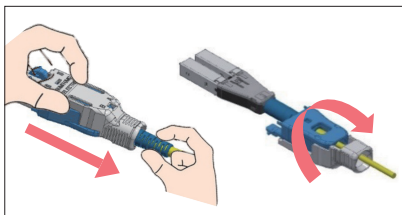
MPO Cabling Solution

MPO Cabling Solution

Our MPO cabling solution enables users to efficiently install high-density connections between optical switches and servers.

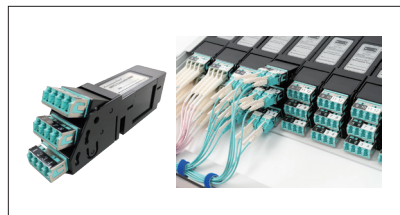


FlexULC™ Pro Uniboot LC Connector



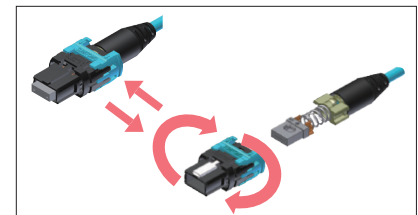
- Easy to change polarity
- Applicable with $\phi 1.6\text{mm}$ slim cord

PrecisionFlex™ MPO Cassettes & Rack Mount Patch Panel



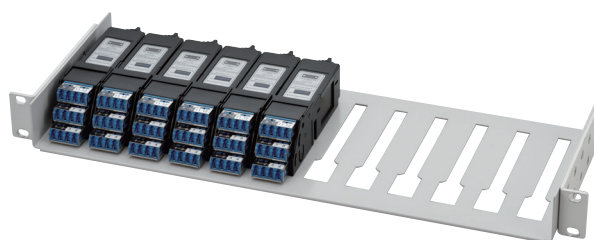
- Unique LC adaptor tiltup design
- 144 Fibers per 1U high-density connections

FlexMPO™ Connector



- Ultra compact
- Easy to change polarity

MPO Cassettes for 19 inch rack (Fixable Modle)



- More cost efficiency
- Max.12 MPO cassettes per 1RU.

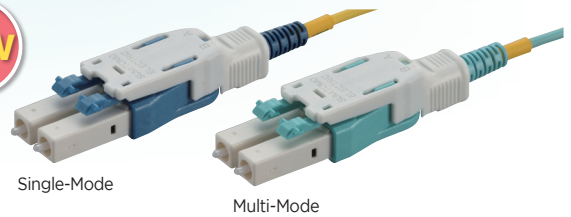
Product name	Code tray	Capacity of 12MPO cassettes	Capacity of LC connectors	Size	Dimensions W×H×D(mm)	Weight
PFCST-1U-S	●	Max.12	Max.144	1U	440×44×345	Approx. 2.2 kg
PFCST-1U-F12	-	Max.12	Max.144	1U	440×44×209	Approx. 1.0 kg

Optical Connectors

MPO Cabling Solution

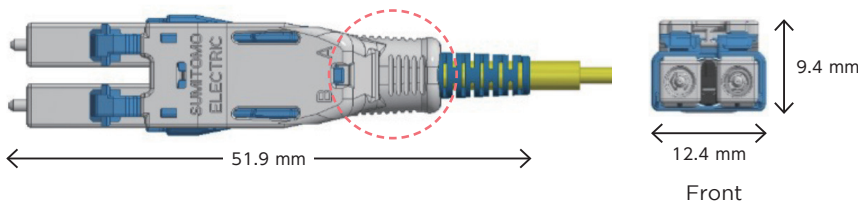
FlexULC™ Pro

New Uniboot LC connector with easy handling for high-density applications

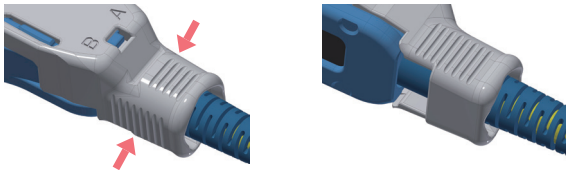


Refined design, Compact body

■ Approx. 52 mm body allows users to handle easily even in limited workspaces.

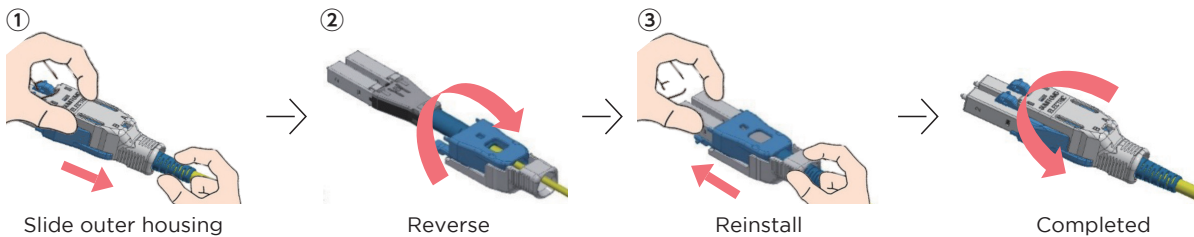


User friendly design, Push-Pull with outer housing



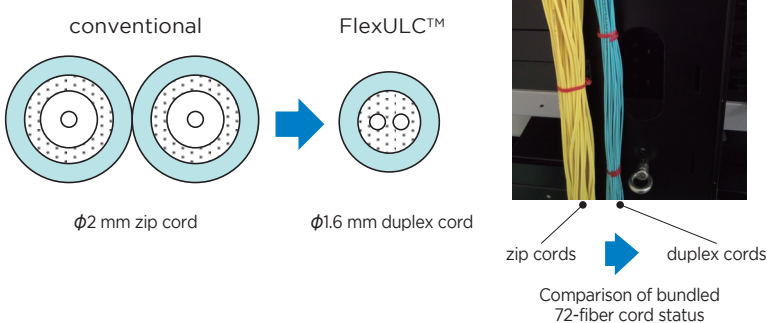
Easy polarity change, Toolless

■ Unique housing design enables users to change polarity without exposing fibers and tools.



Applicable for dia.1.6 mm round cord

■ Cable's congestion and workability in racks are improved by using dia. 1.6 mm slim round cord.



MPO Cabling Solution

Round Cord with FlexULC™ Pro Connectors

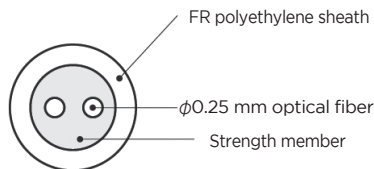
FlexULC™ Pro patch cords are applicable for various applications such as 10G/25G/100G LC Ethernet connections and LC optical patch panels

Applying with world top class $\phi 1.6$ mm 2-fiber slim cords allows users to improve cable congestions, handling more easily.

Flammability (LSZH grade)



Cable type	Round cord
Fiber count	2
Nom. Cable Diameter [mm]	1.6
Nom. Weight [kg/km]	3.0
Max. tensile strength [N]	80
Min. bend radius [mm]	OS2:7.5 OM3:15 OM4:15



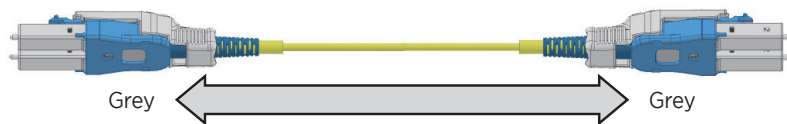
$\phi 1.6$ mm Round cord (2-fiber)

	Single-Mode	Multi-Mode
Insertion Loss	≤ 0.5 dB	≤ 0.3 dB
Return Loss	≥ 40 dB	≥ 25 dB
Applicable Media	$\phi 1.6$ mm Round cord (2-fiber)	
Polarity change	Available	
Interface	IEC61754-20	

LSZH cord assembly with FlexULC™ Pro connectors



TIA568.3 A-to-A



TIA568.3 A-to-B

Ordering Information

Fiber Count	Fiber type	Connector A/ polishing	Connector B/ polishing	Polarity	Product Name
2	OS2 SM(PA-A2)	FlexULC/SPC	FlexULC/SPC	A-to-A	2-FULC.S-FULC.S-SM(PA-A2)-LR-A-L
		FlexULC/SPC	FlexULC/SPC	A-to-B	2-FULC.S-FULC.S-SM(PA-A2)-LR-B-L
	OM3 GI(PE-A10G)	FlexULC/PC	FlexULC/PC	A-to-A	2-FULC.P-FULC.P-GI(PE-A10G)-LR-A-L
		FlexULC/PC	FlexULC/PC	A-to-B	2-FULC.P-FULC.P-GI(PE-A10G)-LR-B-L
	OM4 GI(PE-A10G+)	FlexULC/PC	FlexULC/PC	A-to-A	2-FULC.P-FULC.P-GI(PE-A10G+)-LR-A-L
		FlexULC/PC	FlexULC/PC	A-to-B	2-FULC.P-FULC.P-GI(PE-A10G+)-LR-B-L

Optical Connectors

MPO Cabling Solution

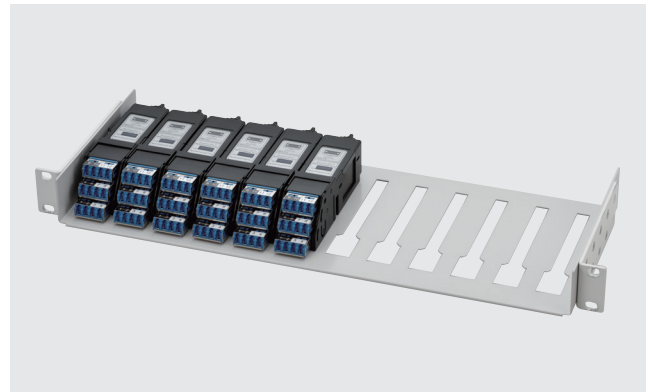
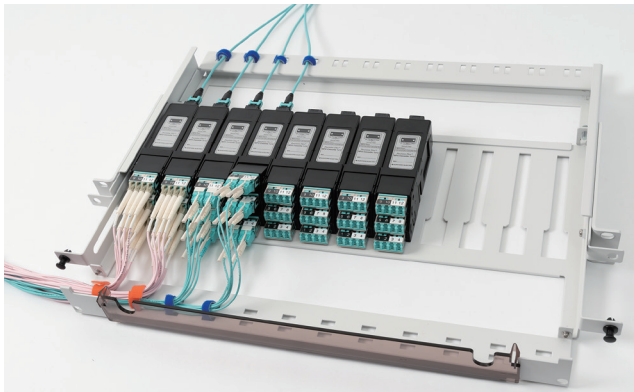
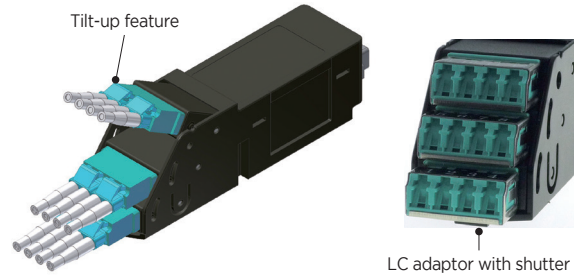
PrecisionFlex™ MPO Cassettes & Rack Mount Patch Panel

Unique design MPO cassettes and rack mount patch panel with easy handling and high-density connection.

- New rack mount patch panel can accommodate max.144-Fiber connections per 1RU.
- 12pcs cassettes (12-fiber) can be arranged horizontally on new patch panel. This allows users to install and remove the cassettes easily.
- Unique LC adaptor tilt-up feature has been applied and allows users to connect and release easily. LC adaptor has a shutter and has been enhanced dust resistance.
- New MPO cassette has 12-fiber(12MPO) and 24-fiber(24MPO) configurations.



Front view: LC adaptor arrangement



1U rack mount patch panel

Ordering Information

PrecisionFlex™ MPO cassette

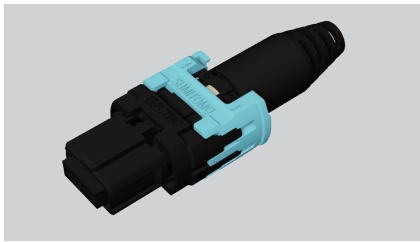
Product name	Fiber count	Fiber type	Connector	Insertion loss (dB)	Dimensions W×H×D(mm)
PFCST-SM-1X12MPOM-LC-S	12	SM OS1/OS2	12MPO-LC	SM:0.65 MM:0.55 (Against Master)	34×150×40
PFCST-MM-1X12MPOM-LC-S	12	MM OM3/OM4	12MPO-LC		34×150×40

PrecisionFlex™ 1U rack mount panel

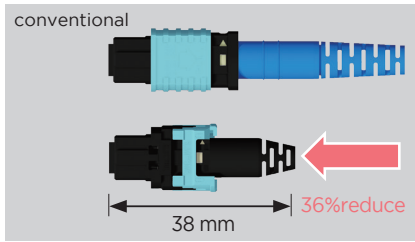
Product name	Code tray	Capacity of 12MPO cassettes	Capacity of LC connectors	Size	Dimensions W×H×D(mm)	Weight
PFCST-1U-S	●	Max.12	Max.144	1U	440×44×345	Approx. 2.2 kg
PFCST-1U-F12	-	Max.12	Max.144	1U	440×44×209	Approx. 1.0 kg

MPO Cabling Solution

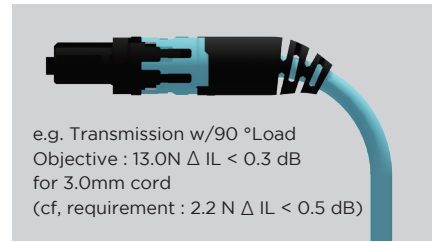
FlexMPO™ Housing for Round Cord (dia. 3.0 mm. dia.3.8 mm)



Easy to Use & Ultra compact

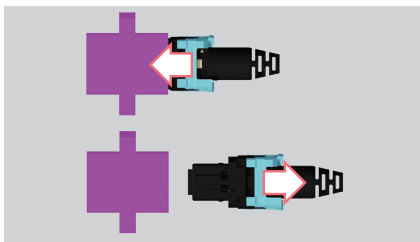


World Top Class, Super Short

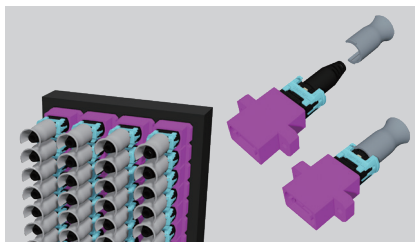


e.g. Transmission w/90 °Load
Objective : 13.0N Δ IL < 0.3 dB
for 3.0mm cord
(cf, requirement : 2.2 N Δ IL < 0.5 dB)

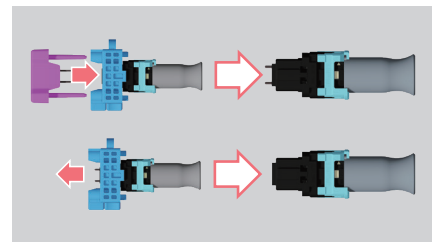
Telcordia GR1435 Objective spec. compliant



Push-Pull with outer housing (Like SC connection)



Push-Pull and compact Tab (Can set after mounting)



Can change gender w/o disassembly
Can change polarity (w/ disassembly)

MPO Connector

Features

- Easy to attach/detach by a push-on action
- Enables high-density connection of many fibers as a unit

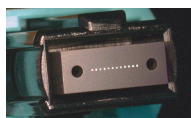


Ribbon cord Ribbon

Connector	MPO (1 row type)			
Fiber Type	SM		MM62.5,MM50,MM50 (10G)	
Media Type	Bare Ribbon, 3 mm Round Cord, Jacketted Ribbon Cord			
Fiber Count	8,12		12	
Polish	APC		Flat PC	
Insertion Loss*	Std.Loss	Low Loss	Std.Loss	Low Loss
	0.75 dB	0.35 dB	0.75 dB	0.35 dB
	Typical**	0.1 dB	0.15 dB	0.08 dB
Return Loss*	≥ 55 dB		—	

MPO (1 row type)

- With 12-fiber ribbons arranged on ferrule



MPO (1 row type)

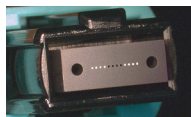
Connector	MPO (2 row type)			
Fiber Type	SM		MM62.5,MM50,MM50 (10G)	
Media Type	Bare Ribbon, 3.8 mm Round Cord, Jacketted Ribbon Cord			
Fiber Count	24			
Polish	APC		Flat PC	
Insertion Loss*	Std.Loss	Low Loss	Std.Loss	Low Loss
	0.75 dB	0.35 dB	0.75 dB	0.35 dB
	Typical**	0.15 dB	0.2 dB	0.15 dB
Return Loss*	≥ 55 dB		—	

*: Values against master plug

** : Reference Values

Q8MPO

- Only both side 4 fibers are embedded in the connector. Suitable for QSFP+ module connection.

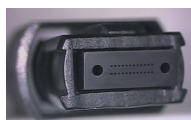


MPO (2 row type)

MPO (2 row type)

Features

- With two 12-fiber ribbons arranged in parallel on a ferrule, 24 fibers are connected as a unit.
- Most suitable for high-density fiber connection



MPO (2 row type)

Connector	Common				
Housing Color	SM.Std Loss Green	SM.Low Loss Yellow	MM62.5 Beige	MM50 Black	MM50(10G) Aqua
Interface	IEC 61754-7				

*: At the time of order, specify whether or not the guide pin is necessary.



New MPO was awarded an elite score in Lightwave Magazine's 2016 Innovation Review!

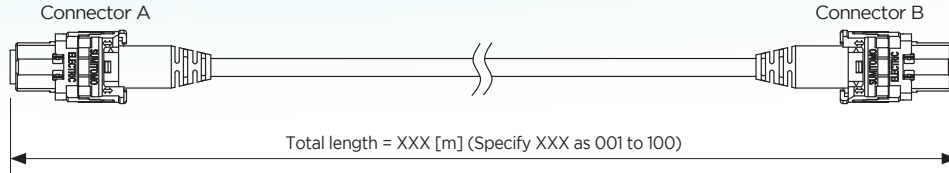
Optical Connectors

MPO Cabling Solution

Round Cord with FlexMPO™ Connectors

- Round cross section for any direction bending at installation
- UL1651 flammability(Plenum grade)

Fiber count	8	12	24
Fiber Diameter [mm]	0.25		
Nom. Cable Diameter [mm]	3	3	3.8
Nom. weight [kg/km]	9.0	9.0	13
Max. tensile strength [N]	100		
Min bend radius [mm]	25		



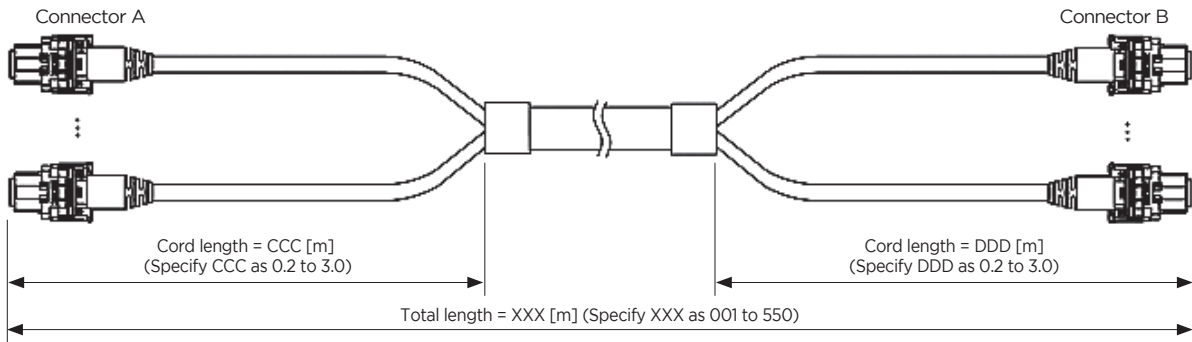
Ordering Information

Fiber Count	Fiber type	Connector A	Connector B	MPO Polarity TIA-568.3	Insertion Loss	Product Name
8	OM3 PEA10G	No pin Q8MPO	No pin Q8MPO	Type-B	Low Loss	3A008AP-VJ1VJ1ZZZB-XXXM
	OM4 PEA10G+			Type-B		4A008AP-VJ1VJ1ZZZB-XXXM
12	OS2 PAPB	No pin 12MPO	No pin 12MPO	Type-A		2A012LP-VD1VD1ZZZA-XXXM
	OM3 PEA10G			Type-A		3A012AP-VD1VD1ZZZA-XXXM
				Type-B		3A012AP-VD1VD1ZZZB-XXXM
	OM4 PEA10G+			Type-A		4A012AP-VD1VD1ZZZA-XXXM
24	OS2 PAPB	No Pin 24MPO	No Pin 24MPO	Type-B		4A012AP-VD1VD1ZZZB-XXXM
				Type-A		2A024LP-VD1VD1ZZZA-XXXM
	OM3 PEA10G			Type-A		3A024AP-VD1VD1ZZZA-XXXM
				Type-A		4A024AP-VD1VD1ZZZA-XXXM

Trunk Cable with FlexMPO™ Connectors

- Optical cables with enhanced mechanical strength for backbone cabling and horizontal cabling

Fiber count	8	12	24	24	48
Fiber count per sub unit	8	12	12	24	12
Fiber Diameter [mm]	0.25				
Nom. Cable Diameter [mm]	5.5	5.5	10	6.5	10
Nom. weight [kg/km]	40	40	85	50	85
Max. tensile strength [N]	660	660	660	660	660
Min bend radius [mm]	55	55	100	65	100



Ordering Information

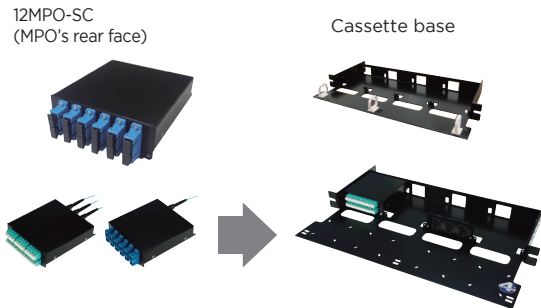
Fiber Count	Fiber count per sub	Fiber type	Connector A	Connector B	MPO Polarity TIA-568.3	Insertion Loss	Product Name
8	8	OM3 PEA10G	No pin Q8MPO	No pin Q8MPO	Type-B	Low Loss	3C008AJ-VJ1-CCC-VJ1-DDDB-XXXM
		OM4 PEA10G+			Type-B		4C008AJ-VJ1-CCC-VJ1-DDDB-XXXM
12	12	OS2 PAPB	No pin 12MPO	No pin 12MPO	Type-A		2C012LJ-VD1-CCC-VD1-DDDA-XXXM
		OM3 PEA10G			Type-A		3C012AJ-VD1-CCC-VD1-DDDA-XXXM
					Type-B		3C012AJ-VD1-CCC-VD1-DDDB-XXXM
		OM4 PEA10G+			Type-A		4C012AJ-VD1-CCC-VD1-DDDA-XXXM
24	12	OM3 PEA10G	No pin 12MPOx2	No pin 12MPOx2	Type-B		4C012AJ-VD1-CCC-VD1-DDDB-XXXM
		OS2 PAPB			Type-A		3C024AJ-VD1-CCC-VD1-DDDB-XXXM
	24	OM3 PEA10G	No pin 24MPO	No pin 24MPO	Type-A		2D024LJ-VD1-CCC-VD1-DDDA-XXXM
		OM4 PEA10G+			Type-A		3D024AJ-VD1-CCC-VD1-DDDA-XXXM
48	12	OM3 PEA10G	No pin 12MPOx4	No pin 12MPOx4	Type-A		4D024AJ-VD1-CCC-VD1-DDDA-XXXM
		OM3 PEA10G			Type-A		3C048AJ-VD1-CCC-VD1-DDDA-XXXM

Multi-Fiber Optical Connector & Application / MPO Polarity & Basic Connection with Optical Transceivers

MPO Cassettes

MPO Cassette

- A cassette that makes it easy to switch the connection between a multi-fiber MPO connector and single-fiber connector (SC or LC)
- Can be accommodated in the 1U space of a 19 inch rack
- Can accommodate maximum of 24 fibers x 8 cables (192 fibers)



Product name		MPO cassette	
Max. number of connectable fibers	12	24	
Connector	12MPO-SC	12MPOx2-LC	
Adapter-fitting face	MPO Rear face		
Insertion loss	Low	0.55 dB max. (Against Master)	
	Standard	1.05 dB max. (Against Master)	
Fiber Type	MM50, MM50 (10G)		
Fixing method	Screw		
Place of installation	MPO cassette base		
Dimensions	108(W)×116(D)×39(H) mm (excepting protrusions)		

*: Single-fiber adapters should be placed on the front face.
 *: The MPO plugs are fitted with a guide pin.

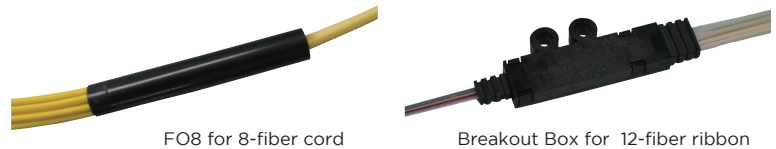
Product name	MPO cassette base A	MPO cassette base C
19-inch rack-mountable	✓	✓
Cord tray	✓	—
Number of MPO cassette per cassette base	4 cassettes/cassette base	4 cassettes/cassette base
Number of adaptor panel per cassette base	4 panels/cassette base	4 panels/cassette base
Size	1U	1U
Dimensions	470(W)×43.5(H)×230(D) mm	462(W)×43.5(H)×134(D) mm

Optical Fan-out

Transition Pieces

Features

- Various types of devices for separating multi-fiber ribbons into individual fibers are available.

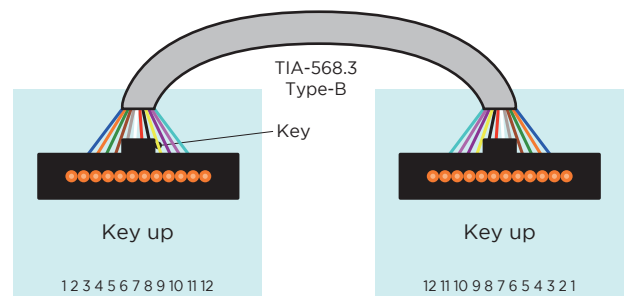
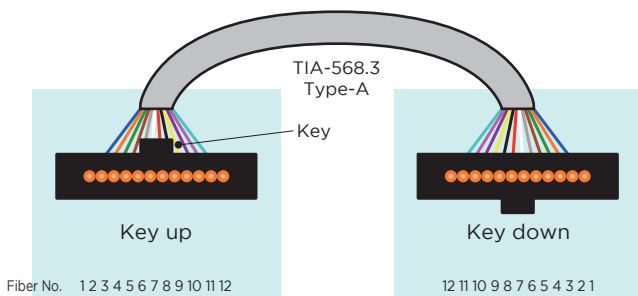


Shape	Type	Number of usable fibers	External dimensions[mm]	Shape on Multi-fiber side	Shape on Single-fiber side
Round	F08	2,4,8	φ8×50	Cord	Cord
	F011L	12	φ11×54	Cord	Cord
Rectangular	Breakout Box	4,8,12	39×11×5	Ribbon	φ0.9 mm fiber

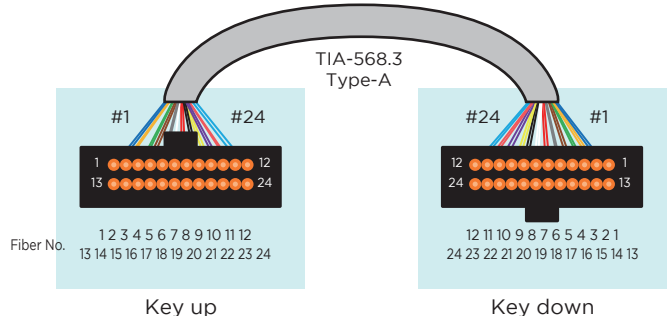
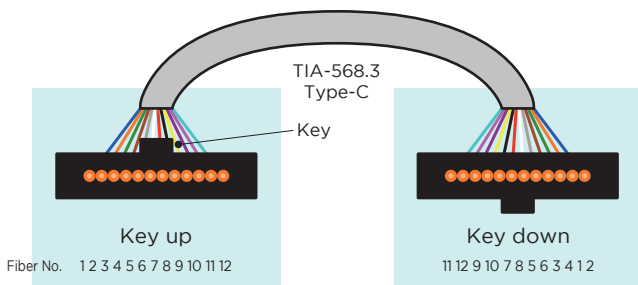
* For more information about the cord to be connected on the single fiber side, contact Sumitomo Electric.

MPO Polarity & Basic Connection with Optical Transceivers

12MPO Connector Polarity



24MPO Connector Polarity

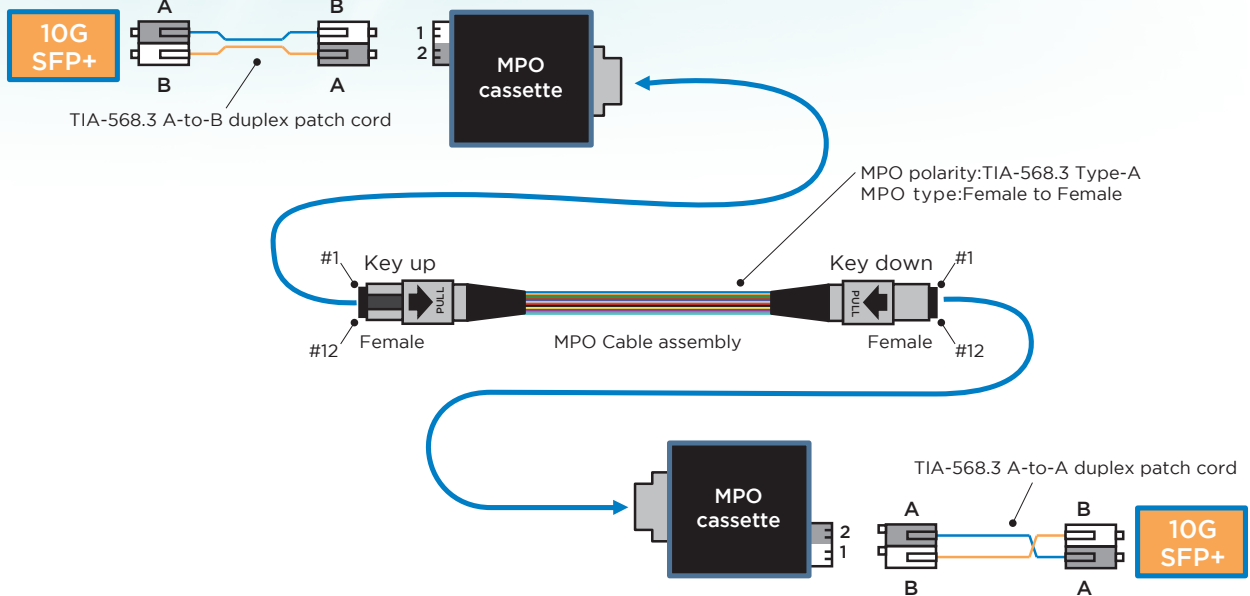


Optical Connectors

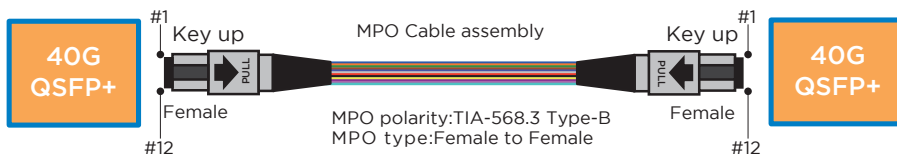
MPO Polarity & Basic Connection with Optical Transceivers

Basic Connectivity of 10 G BASE-SR(12 MPO)

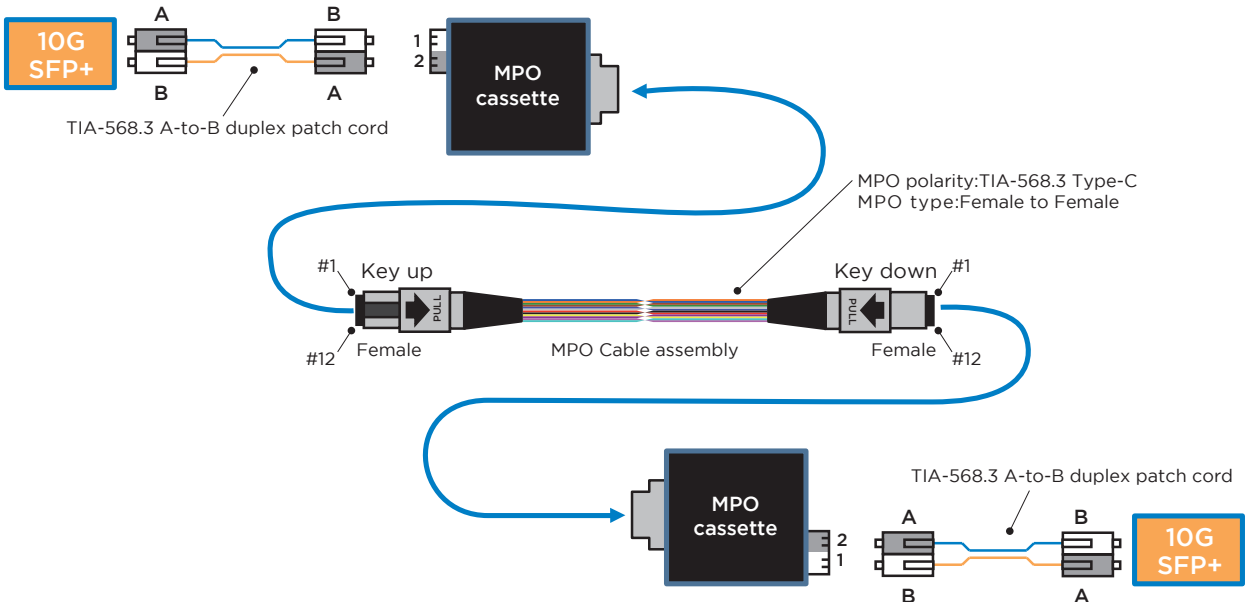
TYPE-A



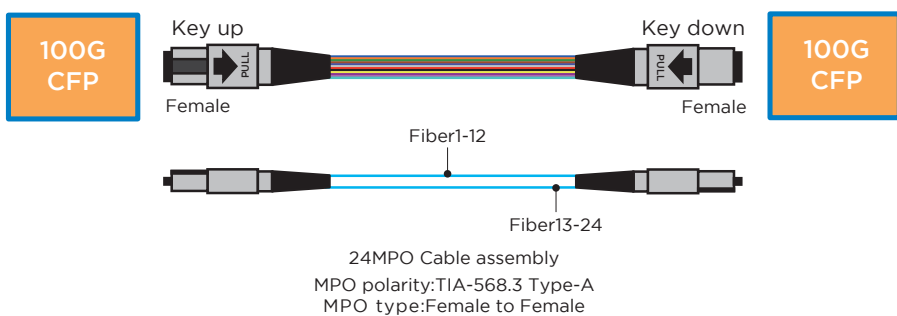
Basic Connectivity of 40G BASE-SR4 without Patch Cord (12MPO/Q8MPO)



TYPE-C



Basic Connectivity of 100G BASE-SR10 (24MPO)



Tough and Flexible Cable Assembly for Indoor Installation / SC Connector with Shutter

PureFlex™-Slim Cable

Adequate strength, remarkable tenacity, and exceptional ease of storage.

PureFlex™-slim is an epoch-making fiber-optic cable for indoor installation, allowing the technician to handle it as casually as a power cord.

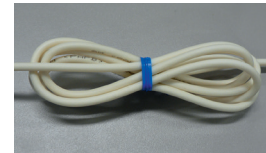
- New face of the PureFlex™ series of sturdy cables are resistant to being stepped on and bending. Just 3 mm in outside diameter, PureFlex™-slim brings about substantial improvements in reliability and look.
- Makes the most of the highly bending-resistant Access series fibers. (Permissible bending radius of 15mm when incorporating PureAccess™-PB and of 7.5mm for use with PureAccess™-[A2])
- Strong and tenacious, this cable can be tied up to make an excess length compact or can be accommodated in an ONU with ease.



Cable type	PureFlex™-slim
Number of fibers	1
Standard cable outside diameter	3.0 mm
Permissible side pressure	< 0.1 dB @ 1200 N/25 mm for 1 min
Permissible bending radius	7.5 mm (When incorporating G.657.A2) 10 mm (When incorporating G.657.A1)
Applicable connector	SC with shutter



Adequate strength



Remarkable tenacity



Exceptional ease of storage



Strong against right-angle bending

SC Connector with Shutter

Substantially improved SC connector with its ease of handling.

When disconnected, the shutter at the end of the connector closes to prevent soiling or damage to the ferrule end face.

- When the connector is engaged, the shutter self-retracts in the connector.
- Designed not to allow leakage of light, this connector prevents the light from entering the eye.

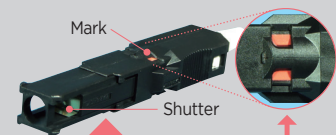
Fully compatible with SC connector

The SC connector with shutter accommodates any cord or cable that can be attached to an SC connector.

Connector type	s-SC
Applicable fiber (Optical fiber code)	SM(PAA2)
Connecting Loss (To master)	< 0.5 dB
Return Loss (Type of polishing)	> 40 dB (SPC)
Housing color	Black
Connector boot color	White

Connector disengaged from adapter

The shutter housing extends automatically and the metal shutter closes.



Connector engaged with adapter

As the shutter opens by itself, the connector serves as an ordinary SC connector.



Inside view of adapter

Optical Connectors

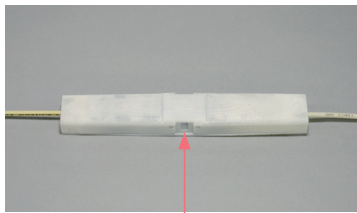
Optical Connector Cases / Optical Connector Sleeves

Optical Connector Case for Indoor Installation

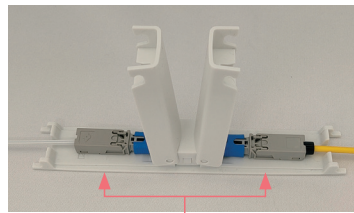
Facilitates connection between in-coming cable and premise cable such as PureFlex™-slim cable

- e-SC connector assembled with in-coming cable connects to SC connector at the end of PureFlex™-slim cable.
- Easy to implement high reliable indoor wiring with PureFlex™-slim cable.
- Its structure allows to joint with cable protection guide (duct) for smart indoor wiring.

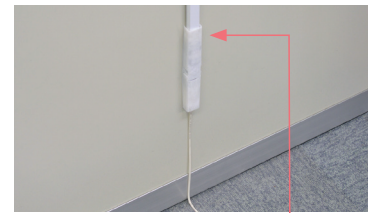
Product name	Optical connector case
Capacity of connection	1
Connection	SC, SC with shutter, and e-SC
Installation	Indoor floor or wall
Dimensions	25(W)×15(H)×140(L) mm



SC adapter is encased here.



Connectors are removable independently of each other.
No possibility of loss of a cover.



The case is joined to a cable protection guide.

Optical Connector Sleeve

Accommodate SC connectors in a compact body

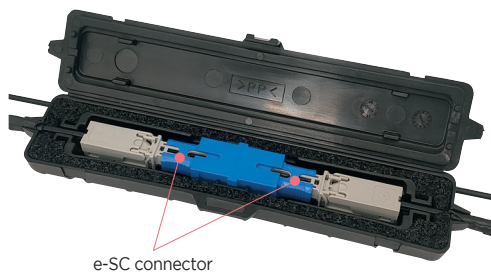
- Easy to equip a demarcation point in FTTx and LAN network
- Compact, smart, design to fit in the installation circumstance

Features of optical connector sleeve ME4

- Allows indoor FTTx installation work to be separated from outdoor FTTx installation work
- Aerial installation hanging on the suspension wire of drop cable without install onto the wall of the user's house

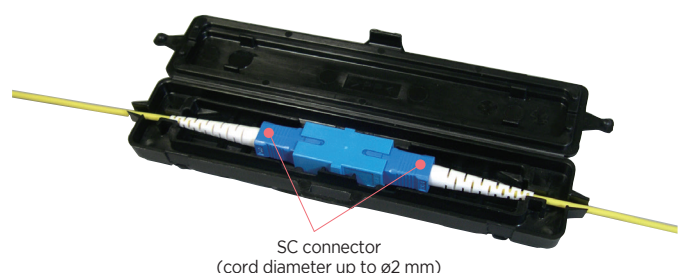
Product name	Optical connector sleeve ME4	Optical connector sleeve MS1
Installation	Outdoor	Indoor
Applicable Connector	e-SC connector	SC Connector, e-SC connector
Capacity of connection	1	
IP code	IPX4	—
Composition	Connector Sleeve with gasket ×1 Accessories (Self-bonding tape etc.)	Connector Sleeve ×1 Accessories (Tapping screws etc.)

Optical Connector Sleeve ME4 (Outdoor use)



e-SC connector

Optical Connector Sleeve MS1 (Indoor use)



SC connector (cord diameter up to ø2 mm)