

STANDARD CONNECTOR SERIES

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STANDARD CONNECTOR SERIES

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SC FC ST

SENKO Connector and Adapter Series

SENKO Offers **3 Product Grades** to Meet Customer Needs

PREMIUM 1 PC Connector Series



Pre-assembled 1pc Type Connector

This premium connector is available in SC, FC, and ST. It was designed to meet the highest requirements in the market.

The premium SC and FC Connector is designed to meet and exceed the Verizon FOC TPR requirement, for the OSP application, or for anywhere customers need a high quality product. Premium SM and Premium Low Loss SM (LS) are available. Typical IL of 0.05 for LS SM Ferrule, and 0.08 for Premium UPC. Various option for boots are available.

STANDARD 1 PC Connector Series



Pre-assembled 1pc Connector

This connector series (SC, FC, and ST) gives value for cost. Using high quality components, these connectors meet IEC, and the general requirement of GR-326.

The same crimp and boot can be interchanged for all the Standard Connector Series (SC, FC, ST).

CONNECTOR KIT Multi-Piece Connector



Multi-Piece Connector Kit

(Ferrule to be Purchased Separately)

Manufactured to the original NTT designed SC Connector kit, it is supplied as a multi-piece unassembled connector. Using high quality components, this connector meets IEC, and the general requirement of GR-326.

Ferrule with Flange are to be ordered separately.

FEATURES COMPARISON CHART

For SC Premium and SC Standard	PREMIUM LS CONNECTOR	PREMIUM SM CONNECTOR	STANDARD CONNECTOR	CONNECTOR KIT
IL Average Against Master (UPC)	0.05	0.08	0.12	***
IL Mean Value Random Mating (UPC)	0.07	0.12	0.25	***
Verizon FOC TPR-9409	○	○		
GR-326 Core Issue 4	○	○	△	
IEC, TIA/EIA JIS Spec	○	○	○	○
IEC Random Mating Grade A*	○			***
IEC Random Mating Grade B*	○	○		***
IEC Random Mating Grade C*	○	○	○	***
RoHS Compliant	○	○	○	○
UL 94V-0	○	○	○	○
4 Position Tuning After Assembly (SC, FC)**	○	○		
MINI Boots	○	○		
Standard Boots	○	○	○	
Long Boots	○	○		○
Premium Crimp Ring	○	○		
Standard Crimp Ring			○	
Pre-assembled 1pc Body	○	○	○	
Push Pull Mechanism	○	○	○	○
Free Floating Ferrule	○	○	○	○
Metal Back Post	○	○	○	○
Premium Duplex Clip	○	○		
Standard Duplex Clip			○	○
Crimp Tool CRT-401	○	○	○	CRT-501

○ Complies with GR-326 issue 4 TWAL test with 4 wavelength △ Good for general usage

Note: *Based on IEC 61753-1 **Only for UPC Connector

***Depend on ferrule selected

TECHNICAL SPECIFICATIONS Premium and Standard Connector

PRODUCT SERIES	TYPE OF CONNECTOR SENKO P/N	IL AGAINST MASTER (dB)		IL RANDOM MATING (dB)	
		Average IL	Maximum IL	Mean IL	Maximum IL
Premium Low Loss SM	SC (254-199-xxx), FC (351-109-xx), (215-109-xx)	0.05	0.15	0.07	0.15 ^{*1}
Premium SM	SC (254-193-xxx), FC (351-103-xx), ST (215-103-xx)	0.08	0.20	0.12	0.25 ^{*2}
Premium Low Loss APC	SC APC (291/294-199-xx), FC APC (292/293-209-xx)	0.07	0.15	0.09	0.20
Premium SM APC	SC APC (291/294-193-xx), FC APC (292/293-203-xx)	0.10	0.25	0.14	0.30
Premium MM Connector	SC (254-291-xxx), FC (351-201-xx), ST (215-201-xx)	0.10	0.20	-	-
Standard SM	SC (231-191-xxx), FC (341-101-xx), (233-101-xx)	0.12	0.30	0.25	0.50 ^{*3}
Standard MM	SC (231-291-xxx), FC (341-201-xx), (233-201-xx)	0.15	0.30	-	-
	Singlemode	Multimode			
Operating Temperature	-40°C to +75°C	-40°C to +75°C			
Durability	<0.1dB typical change, 500 matings	<0.1dB typical change, 500 matings			

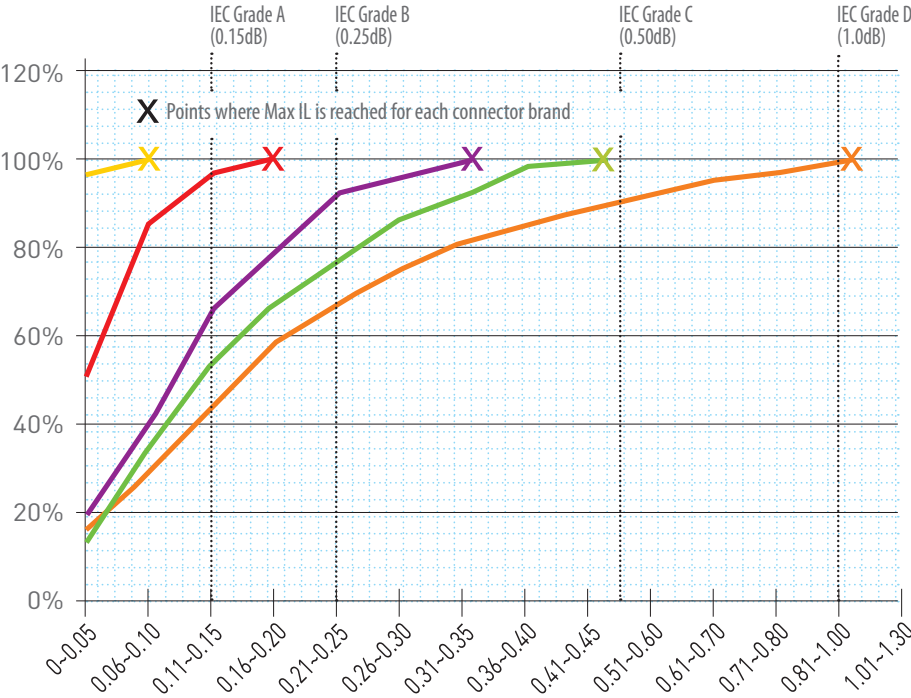
IEC Random mating test IEC 61753-1
 1 - To meet IEC Random Mating Grade A ($\leq 0.07\text{dB}$ mean, $\leq 0.15\text{dB}$ max for >97% of sample).
 Grade A Spec is not finalized, above is a recommendation
 2 - To meet IEC Random Mating Grade B ($\leq 0.12\text{dB}$ mean, $\leq 0.25\text{dB}$ max for >97% of sample)
 3 - To meet IEC Random Mating Grade C ($\leq 0.25\text{dB}$ mean, $\leq 0.50\text{dB}$ max for >97% of sample)

Random Mating IL

SENKO has categorized its connectors to reflect the IEC Random Mating specified grades A*, B, and C, allowing the end-user to make an informed decision when selecting connectors, of how finished patchcords using SENKO connectors will perform.

Random mating Insertion Loss

- SENKO Low Loss
- SENKO Premium
- SENKO Standard
- High quality Competitor
- Low quality Competitor



1 PC Connector (254 Series)

SC UPC PREMIUM



900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot

CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
254 Premium	193 SM: Premium 125µm	5 Aqua	7 Long 3.0mm	1 Blue
	199 SM: Low Loss 125µm	6 Blue	A Long 2.0mm	2 Black
	291 MM: Premium 127µm	7 Black	M Standard 900µm	3 Green
		8 Red	N Standard 2.0mm	4 Red
		9 Beige	P Standard 3.0mm	6 Yellow
			J MINI 900µm	7 White
			K MINI 2.0mm	8 Beige
			L MINI 3.0mm	9 Aqua
			F Flex Angle Boot 3.0mm	
			G Flex Angle Boot 2.0mm	

254 - 193 - 6F1 ORDER CODE example

Note: Other ferrule ID size are available
SM 81µm SM 125.5µm MM 230µm MM 144µm

Features:

- SENKO's flagship Premium Connector series
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirements
- Premium Low Loss SM, typical IL against Master 0.05dB
- Premium Low Loss SM to meet IEC 61753-1 Grade A random mating requirement of Max 0.15dB
- Premium SM typical IL against Master 0.08dB
- Premium SM to meet IEC 61753-1 Grade B random mating requirement of Max 0.25dB
- 4 direction tuning feature to improve random mating IL
- Crimp tool to be used CRT-401

1 PC Connector (291/294 Series)

SC APC PREMIUM



900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot

CONNECTOR	FERRULE TYPE	POLISH	BOOT TYPE
291 Premium Step	193 SM: Premium 125µm	1 No Angle	7 Long 3.0mm
294 Premium Cone	199 SM: Low Loss 125µm	2 8° Pre-Angle	A Long 2.0mm
			M Standard 900µm
			N Standard 2.0mm
			P Standard 3.0mm
			J MINI 900µm
			K MINI 2.0mm
			L MINI 3.0mm
			F Flex Angle Boot 3.0mm
			G Flex Angle Boot 2.0mm

291 - 193 - 1F ORDER CODE example

Note: Other ferrule ID size are available
SM 81µm SM 125.5µm

Features:

- SENKO's flagship Premium Connector series
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Low Loss SM, typical IL against Master 0.07dB
- Premium SM typical IL against Master 0.10dB
- Cone Ferrule type and Step Ferrule type available
- Option of an 8 degree pre-angle cut available
- Crimp tool to be used CRT-401



SC UPC STANDARD

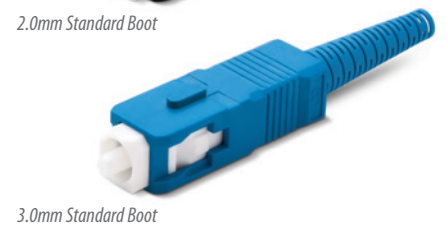
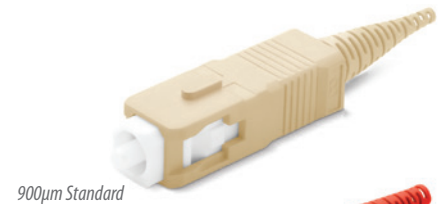
1 PC Connector (231 Series)

CONNECTOR		FERRULE TYPE		HOUSING		BOOT TYPE		BOOT COLOR	
231	Standard	191	SM: Standard 125.5µm	5	Aqua	P	Standard 3.0mm	1	Blue
			MM: Standard 127µm	6	Blue	N	Standard 2.0mm	2	Black
				7	Black	M	Standard 900µm	4	Red
				8	Red	J	MINI 900µm	6	Yellow
				9	Beige			8	Beige

231 - 191 - 7N4 ORDER CODE example

Features:

- Pre-assembled one piece design to reduce assembly time
- Meets and exceeds the TIA/EIA, IEC and JIS SC Specification
- Typical IL against master to be 0.12dB Max 0.3dB
- Crimp tool to be used CRT-401



SC CONNECTOR KIT

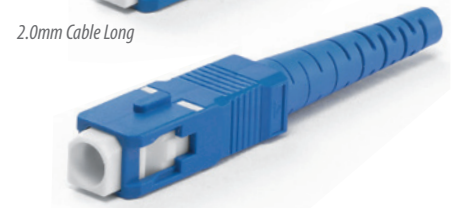
NTT Kit Style (132 Series)

CODE	OUTER HOUSING		BOOT TYPE		BOOT COLOR	
132	A11	Blue with White Line	7	3.0mm Cable Long	1	Blue
	B11	Black with White Line	9	2.0mm Cable Long	2	Black
	C11	Beige with White Line	D	900µm MINI Fiber Boot	3	Green
	D11	Green with White Line			4	Red
				8	Beige	

132 - A11 - 71 ORDER CODE example

Features:

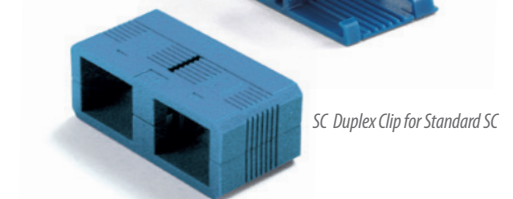
- The original NTT Style Connector Kit design (*Multi Piece Connector*)
- Meets and exceeds the TIA/EIA, IEC and JIS SC Specification
- Various housing and boot color to meet customer need.
- Ferrule to be ordered separately
- Crimp tool to be used CRT-501



SC DUPLEX CLIP

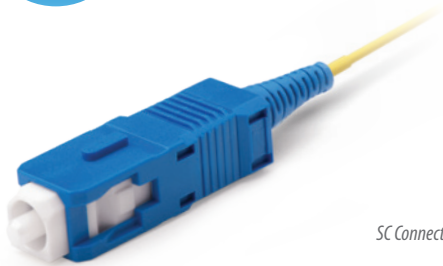
CLIP			CLIP COLOR
224	SC Duplex Clip for Premium Connector		591 Black
274	SC Duplex Clip for Standard & Connector Kit		592 Green
			593 Blue
			594 Beige
			595 Red
			596 Aqua

224 - 591 ORDER CODE example



SC CONNECTOR 1.2

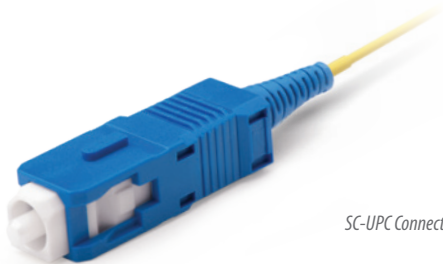
The new SC Connector is as strong as a 3mm cable. Reduce your cable size, but keep the strength. The SC Connector for 1.2mm cable is fully compliant to GR-326-Core for Media 1.



SC Connector

CONNECTOR		FERRULE SIZE		HOUSING COLOR		BOOT SIZE		BOOT COLOR	
556	SC Premium 1.2mm Assembled	193	Premium SM	4	Violet (OM4)	R	1.2mm	1	Blue
557	SC Premium 1.2mm Un-Assembled	291	MM 127µm	5	Aqua (OM3)			7	White
				6	Blue				
				7	Black				
				8	Red				
				9	Beige				

556 - 193 - 4R7 ORDER CODE example



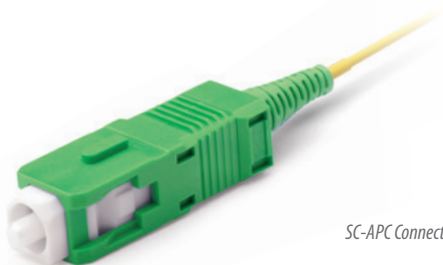
SC-UPC Connector

CONNECTOR		FERRULE SIZE		FERRULE POLISH		BOOT SIZE	
596	SC APC Step 1.2mm Assembled	193	Premium SM	1	No angle	R	1.2mm
597	SC APC Step Premium 1.2mm Un-Assembled			2	Pre-angle		
598	SC APC Cone Premium 1.2mm Assembled						
599	SC APC Cone Premium 1.2mm Un-Assembled						

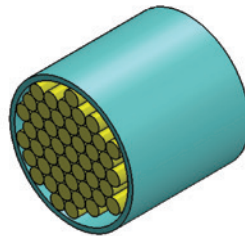
596 - 193 - IR ORDER CODE example

Features:

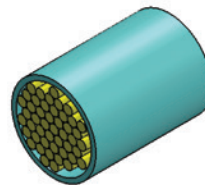
- Meets the same GR-326 mechanical requirements as a conventional 3mm and 2mm cable
- Exceeds 15lb Proof Test Objective as per GR-326-Core section 1.4.4.3.4
- Passes the GR-326 TWAL Test for Media 1 (ruggedized cable) as per section 4.4.3.5
- Reduces cable congestion without sacrificing mechanical strength



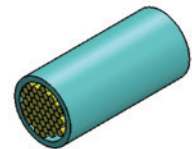
SC-APC Connector



Duct containing 48 x Ø 3mm cable



Duct containing 48 x Ø 2mm cable



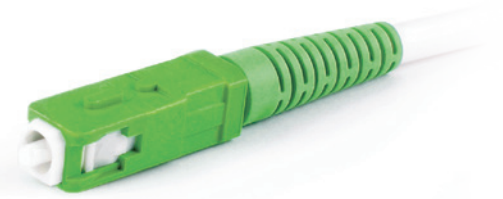
Duct containing 48 x Ø 1.2mm cable

Note: Duct size reduced by 1/6 (approx 16%) compared to a 3mm cable

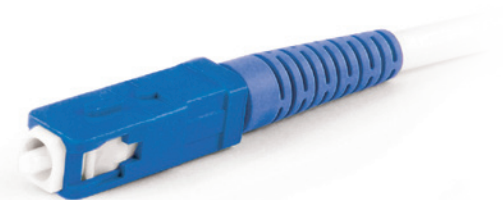
SC CONNECTOR 4.8

SPECIFICATION	SINGLEMODE	MULTIMODE
For SC Connector 4.8	Typical	Typical
Insertion Loss	Premium Connector UPC	0.08dB
	Premium Connector APC	0.10dB
Return Loss	≥ 55dB typical (PC) ≥ 68dB typical (APC)	
Durability	< 0.1dB change, 500 matings	
Operating Temperature	-40 to +75°C	

Note: Specifications shown above were obtained using SENKO recommended products and procedures.



4.8mm APC Connector



4.8mm UPC Connector



4.8mm MM Connector

CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
554 SC Premium PC	193 SM: Premium 125µm	6 Blue	1 4.8mm Boot	1 Blue
	199 SM: Low Loss 125µm	8 Beige		8 Beige
	291 MM: 127µm			

554 - 193 - 611 ORDER CODE example

Note: Other ferrule ID size are available
SM 81µm SM 126µm SM 125.5µm

CONNECTOR	FERRULE TYPE	POLISH	BOOT TYPE
591 SC Premium APC Step	193 SM: Premium 125µm	1 No Angle	1 4.8mm Boot
594 SC Premium APC Cone	199 SM: Low Loss 125µm	2 8° Pre-Angle	

591 - 193 - 11 ORDER CODE example

Note: Other ferrule ID size are available
SM 81µm SM 126µm SM 125.5µm

Features:

- Compliance with Telcordia, TIA/IEA, IEC and JIS interface specifications
- Low insertion loss & back reflection*
- One-piece construction & pull-proof design
- Free-floating ceramic ferrule
- Precision anti-rotation key and corrosion resistant body
- UL-rated plastic housing and boots in a variety of colors
- Telcordia style boots
- Adapters with choice of metal or plastic housing, mount styles & flange options

SC CRIMP TOOL

CODE	CONNECTOR TYPE
CRT	401 SC, FC, ST One Piece Connectors
	501 SC Connector Kit 132 series
	705 SC/LC 1.2mm Connector

CRT - 401 ORDER CODE example



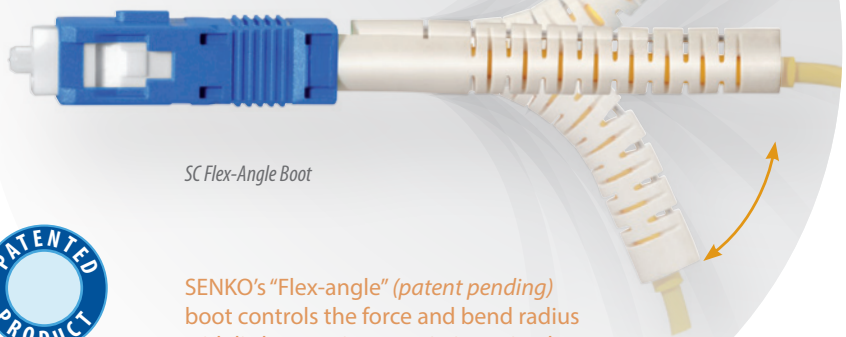
SC FLEX ANGLE BOOT



SC Flex-Angle Boot

SENKO's new 2.0mm and 3.0mm boot addition for the Premium SC connectors. The Flex-Angle boot is designed to bend and maintain any angle or direction from straight to 90°. The boot is molded over a single stainless steel wire and can be easily positioned by hand. The internal wire holds the boot at the desired angle or direction.

The Flex-Angle boot is designed to bend in any angle or direction from straight to 90°

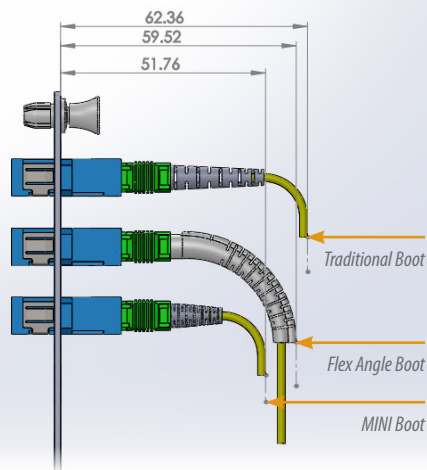


SC Flex-Angle Boot



SENKO's "Flex-angle" (patent pending) boot controls the force and bend radius with little to no increase in insertion loss

Flex Angle Boot Reduces Boot Protrusion From Panel



PRODUCT SERIES	BOOT	TYPE OF CONNECTOR
Premium SC 2.0mm	HW-25001-xx	254-xxx-xGx
Premium SC 3.0mm	HW-25002-xx	254-xxx-xFx
Standard SC 2.0mm	HW-25001-xx	231-xxx-xGx
Standard SC 3.0mm	HW-25002-xx	231-xxx-xFx

Note: When using angled boots, always maintain the proper bend radius per the cable manufacturer's specification

SC TOP SIMPLEX ADAPTER

TOP (True One Piece) Adapter 263/268 series

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER	
263	Flange	1 Simplex	0 Blue	1 Zirconia	1 High Tg	N No Shutter
268	No Flange	1 Green	1 Zirconia	1 High Tg	N No Shutter	
		2 Beige				
		3 Black				
		9 Aqua				

263 - 101 - 1N ORDER CODE example



SC TOP Simplex Adapter

- Note:** 1. Custom colors available upon request
2. High TG Hook meets GR326 TG100 requirements

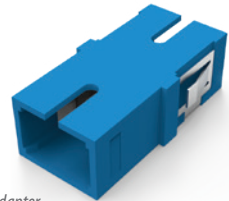


SC One Piece Adapter, No Weld Type



SC Standard Adapter, Welded Type

The new patented one piece housing design prevents breakage of the adapter due to the absence of ultrasonic weld type construction.



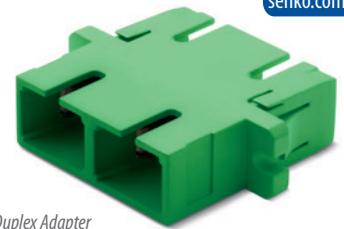
SC TOP Simplex Adapter without Flange

SC TOP DUPLEX ADAPTER

TOP (True One Piece) Adapter 243/248 series

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER	
243	Flange	2 Duplex	0 Blue	1 Zirconia	1 High Tg	N No Shutter
		1 Green	1 Zirconia	1 High Tg	N No Shutter	
		2 Beige				
		3 Black				
		9 Aqua				

243 - 201 - 1N ORDER CODE example



SC TOP Duplex Adapter

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER	
248	No Flange	2 Duplex	0 Blue	1 Zirconia	1 High Tg	N No Shutter
		1 Green	1 Zirconia	1 High Tg	N No Shutter	
		2 Beige				
		3 Black				
		9 Aqua				

248 - 201 - 1N ORDER CODE example



SC TOP Duplex Adapter without Flange

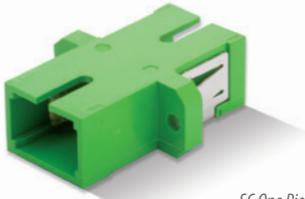
Features:

- One piece solid body, no welding point (*patent pending*)
- Built in panel mounting plate
- Rattle free wings to support tight fit in the panel (*patent pending*)
- Inner shutter and Outer shutter ready for eye safety
- Flange type, and No flange type available

Premium Adapter 242/247 series

SC PREMIUM ONE PIECE SIMPLEX ADAPTER

The SENKO patented design, one piece adapter is stronger than the conventional, seam-welded SC adapter giving improved side loading strength and the preventing adapter breakage. SC Simplex adapters have been tested to the Verizon FOC TPR 9409 standard and sleeves used in this adapter have been tested and passed the TRP requirements. High TG hooks are used to meet the GR-326 requirements. Shuttered versions are also available.



SC One Piece Adapter



SC One Piece Adapter without Flange

ADAPTER SPECIFICATION	ZIRCONIA SLEEVE		METAL SLEEVE	
	Typical	Max	Typical	Max
For SC, FC and ST Adapters				
Insertion Loss	0.05	0.20	0.10	0.30
Sleeve / Ferrule Withdraw Force	200gf - 600gf			
Operating Temperature	-40° to +75°			
Durability	<0.1 dB typical change, 500 matings*			

Note: Zirconia tested with SMF Fiber, metal sleeve tested with MMF

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER
242 Flange	1 Simplex	0 Blue	1 Zirconia	1 High Tg	N No Shutter
247 No Flange		1 Green			
		2 Beige			
		3 Black			
		9 Aqua			

247 - 101 - 1N ORDER CODE example

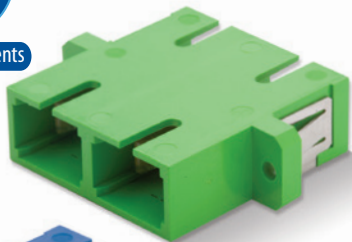
Note: Custom colors available upon request

Features:

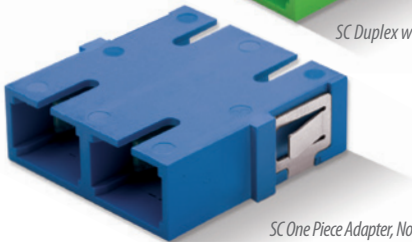
- SENKO's highest quality adapter series
- Patented one piece housing design prevents housing breakage
- Designed to exceed the requirement of the Verizon FOC TPR 9409 requirement
- High TG hook prevents unwanted hook opening in OSP application
- Typical insertion loss under 0.05dB and Max IL of 0.20dB
- Various housing color to meet customer's requirement
- Shutter option ready for eye safety

Premium Adapter 242/247 series

SC PREMIUM ONE PIECE DUPLEX ADAPTER



SC Duplex with Flange



SC One Piece Adapter, No Weld Type

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER
242 Flange	2 Duplex	0 Blue	1 Zirconia	1 High Tg	N No Shutter
247 No Flange		1 Green			
		2 Beige			
		3 Black			
		9 Aqua			

247 - 202 - 1N ORDER CODE example

Note: Custom colors available upon request



SC One Piece Adapter, No Weld Type



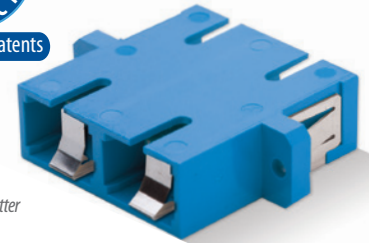
Conventional Adapter Welded type

The new one piece housing design prevents breaking of the adapter due to the absence of ultrasonic weld type construction.

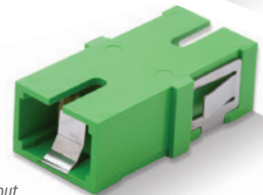
SC PREMIUM ONE PIECE ADAPTER WITH SHUTTER

Internal Shutter

CODE	TYPE	COLOR	SLEEVE TYPE	HOOK MATERIAL	SHUTTER
242	Flange	1 Blue	1 Zirconia	1 High Tg	A Internal Shutter (w/o mark)
247	No Flange	1 Green	2 Metal		C Internal Shutter (w/mark)
		2 Beige			
		3 Black			
		9 Aqua			



SC Duplex with Internal Shutter



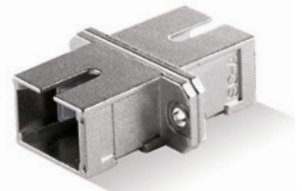
SC Simplex without Flange and Internal Shutter

242 - 121 - 1C ORDER CODE example

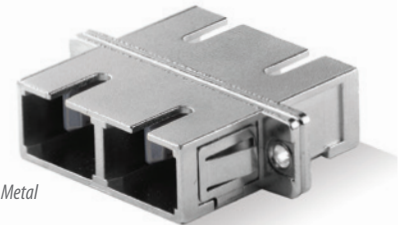
SC METAL ADAPTER

TYPE	SLEEVE TYPE	HOOK MATERIAL
226 Simplex	101 Zirconia	1 Hi-Tg
228 Duplex		

226 - 101 - 1 ORDER CODE example



SC Simplex Metal Adapter



SC Duplex Metal Adapter

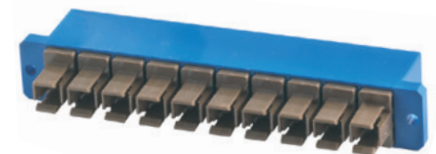
SC SIMPLIFIED CONNECTOR AND ADAPTER

CONNECTOR CODE	FERRULE TYPE	BOOT TYPE	BOOT COLOR
774 SC Simplified Connector	191 SM: 125.5µm	2 1.0mm Fiber	2 Black

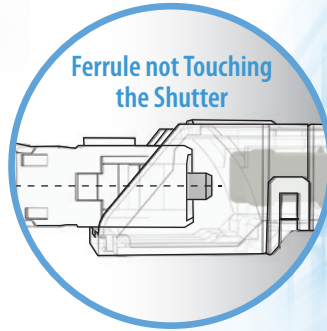
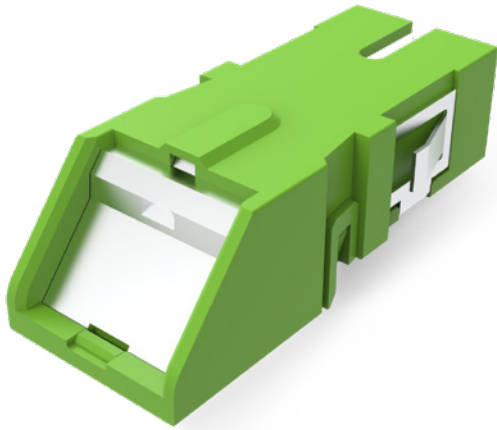
774 - 191 - 22 ORDER CODE example

ADAPTER CODE	TYPE	SLEEVE	HOUSING COLOR
229 SC Simplified Adapter	1 Simplex	1 Zirconia Straight Split	1 Blue
	2 Duplex		
	3 8 Ways		
	4 10 Ways		

229 - 111 ORDER CODE example



SC ADAPTER WITH DUST SHUTTER



Features:

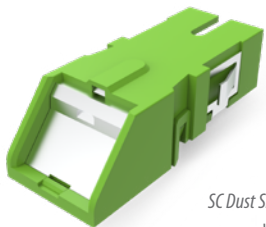
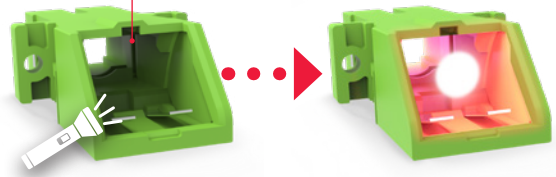
- 100% automatic shutter action
- IP5X dust protection
- SC footprint on non-shuttered side
- Compatible with standard SC connectors
- Adapter traceability with Visible Light Source

SC Adapter Traceability

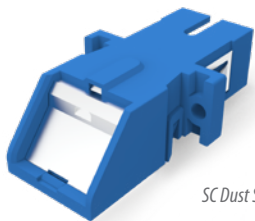


When trying to trace the adapter using a visible light source, you can see the red light glowing through the adapter sleeve.

Automatic shutter mechanism



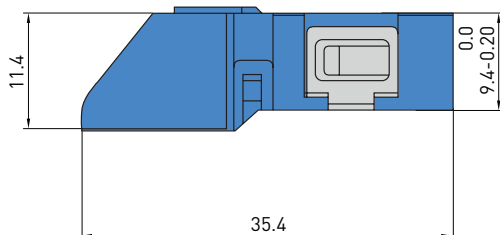
SC Dust Shutter Adapter without Flange



SC Dust Shutter Adapter with Flange

ADAPTER CODE	TYPE	HOUSING COLOR	SLEEVE TYPE	SHUTTER
24A SC Adapter with Dust Shutter with Flange	1 Simplex	0 Blue 1 Green	1 Zirconia	A Shutter
24B SC Adapter with Dust Shutter no Flange		7 Violet OM4 (MOQ Req) 9 Aqua OM3		

24A - 101 - A ORDER CODE example



Fits in SC Footprint

FC UPC PREMIUM

1 PC Connector (351 Series)

CONNECTOR	FERRULE TYPE	BOOT TYPE	BOOT COLOR
351 Premium	103 SM: Premium 125µm	7 Long 3.0mm	1 Blue
	109 SM: Low Loss 125µm	A Long 2.0mm	2 Black
	201 MM: Premium 127µm	M Standard 900µm	3 Green
		N Standard 2.0mm	4 Red
		P Standard 3.0mm	6 Yellow
		J MINI 900µm	7 White
		K MINI 2.0mm	8 Beige
		L MINI 3.0mm	9 Aqua
		F Flex Angle Boot 3.0mm	

351 - 103 - L6 ORDER CODE example

Note: Other ferrule ID size are available

SM 81µm SM 126µm SM 125.5µm MM 230µm MM 144µm

Features:

- SENKO's flagship highest quality Premium Connector Series
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Low Loss SM, typical IL against Master 0.05dB
- Premium Low Loss to meet IEC 61753-1 Grade A random mating requirement of Max 0.15dB
- Premium SM typical IL against Master 0.08dB
- Premium SM to meet IEC 61753-1 Grade B random mating requirement of Max 0.25dB
- 4 directions tuning ferrule to improve random mating IL
- Crimp tool to be used CRT-401
- Narrow key width 2.00mm+/-0.02mm

900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot



FC APC PREMIUM

1 PC Connector (292/293 Series)

CONNECTOR	FERRULE TYPE	FERRULE POLISH	BOOT TYPE
292 Premium Step	203 SM: Premium 125µm	1 No Angle	7 Long 3.0mm
293 Premium Cone	209 SM: Low Loss 125µm	2 8° Pre-Angle	A Long 2.0mm
			M Standard 900µm
			N Standard 2.0mm
			P Standard 3.0mm
			J MINI 900µm
			K MINI 2.0mm
			L MINI 3.0mm
			F Flex Angle Boot 3.0mm

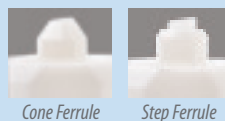
293 - 203 - 2A ORDER CODE example

Note: Other ferrule ID size are available

SM 81µm SM 126µm SM 125.5µm

Features:

- SENKO's flagship highest quality Premium Connector Series
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Low Loss SM, typical IL against Master 0.07dB
- Premium SM typical IL against Master 0.08dB
- Cone ferrule type and Step ferrule type available
- Option of an 8 degree pre-angle cut available
- Various choices of boots types
- Crimp tool to be used CRT-401
- Narrow key width 2.00mm+/-0.02mm



900µm MINI Boot



2.0mm MINI Boot

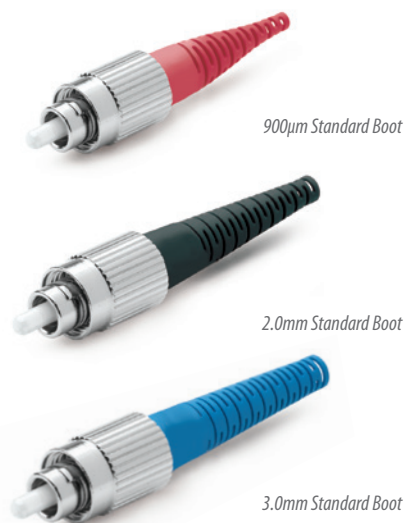


3.0mm MINI Boot



1 PC Connector (343/331 Series)

FC STANDARD



CONNECTOR	FERRULE TYPE	BOOT TYPE	BOOT COLOR
343 Preassembled 1pc	101 SM: 125.5µm	P Standard 3.0mm	1 Blue
332 Unassembled Inner Key	201 MM: 127µm	N Standard 2.0mm	2 Black
		M Standard 900µm	4 Red
		J MINI 900µm	6 Yellow
			8 Beige

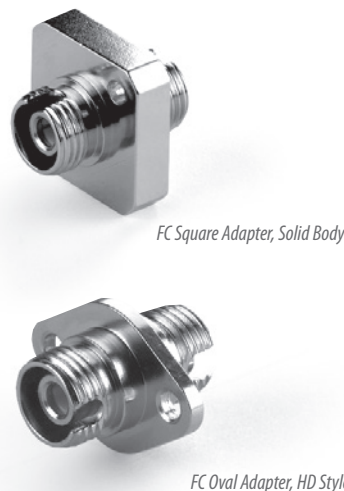
343 - 101 - J1 ORDER CODE example

Features:

- SENKO's Standard Connector series gives the highest value for cost
- Pre-assembled one piece design and Connector Kit available
- Meets and exceeds the TIA/EIA, IEC and JIS SC Specification
- Typical IL against master to be 0.12dB Max 0.3dB
- Various boot color to meet customer need
- Crimp tool to be used CRT-401
- Narrow key width 2.00mm+/-0.02mm

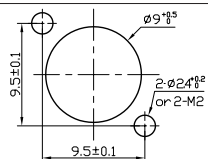
Square (297) and Oval (298)

FC ADAPTER



ADAPTER TYPE	SLEEVE	KEY WIDTH
297 Solid Body	1 Zirconia Straight Split	01 2.15 +.05/-0 mm
298 FC Oval Adapter "HD"		02 2.05 +/-0.02mm

297 - 101 ORDER CODE example



Mounting Hole Dimensions

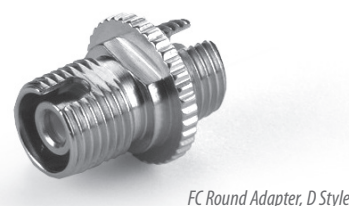
FC Square, Standard Body and Oval Adapter, HD Style

Features:

- FC Square, High Density Oval and Round type available
- Available in both Narrow and Wide Key width
- Typical insertion loss under 0.05dB and Max IL of 0.20dB
- High quality and durable Ni-Plated Brass body

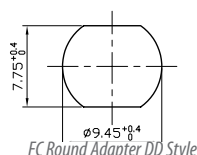
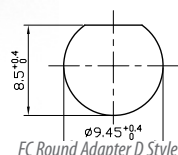
Round (253 type)

FC ROUND ADAPTER



CODE	SLEEVE	KEY WIDTH	FLANGE
253 FC Round Adapter "D" & "DD"	1 Zirconia Straight Split	0 2.15 +0.05/-0 mm	3 D: ∅8.85mm x 7.95mm
	2 Metal Straight Split	2 2.05 +/-0.02mm	4 DD: ∅9.35mm x 7.65mm

253 - 103 ORDER CODE example



Mounting Hole Dimensions

ST PREMIUM

1 PC Connector (215 Series)

CONNECTOR	FERRULE TYPE	BOOT TYPE	BOOT COLOR
215	103 SM: Premium 125µm	7 Long 3.0mm	1 Blue
	109 SM: Low Loss 125µm	A Long 2.0mm	2 Black
	201 MM: Premium 127µm	M Standard 900µm	3 Green
		N Standard 2.0mm	4 Red
		P Standard 3.0mm	6 Yellow
		J MINI 900µm	7 White
		K MINI 2.0mm	8 Beige
		L MINI 3.0mm	9 Aqua
		F Flex Angle Boot 3.0mm	

215 - 103 - 76 ORDER CODE example

Note: Other ferrule ID size are available
SM 81µm SM 126µm SM 125.5µm MM 230µm MM 144µm



900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot

ST ADAPTER

CODE	SLEEVE
216 Simplex Metal Housing	101 Zirconia Straight Split
316 Duplex Horizontal Metal Housing	

216 - 101 ORDER CODE example

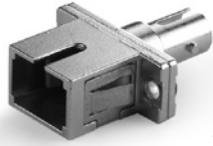


ST Adapter Simplex



ST Adapter Duplex

SC-ST HYBRID ADAPTER



SC-ST Simplex Adapter with Rectangular Flange



SC-ST Adapter with Square Flange

CODE		APPLICATION	SLEEVE	
283	Square Flange Simplex (metal)	1 For PC Connector	01	Zirconia Straight Split
286	Rectangular Flange, Simplex (metal)			
288	Rectangular Flange, Duplex (metal)			

Note: All adapters listed above are made with metal housing

288 - 101 ORDER CODE example

FC-SC HYBRID ADAPTER



FC-SC Adapter with Square Flange



FC-SC Adapter with Rectangular Flange

CODE		KEY WIDTH	SLEEVE	
282	Square Flange	1 2.15 +0.05/-0 mm	01	Zirconia Straight Split
285	Rectangular Flange	2 2.05 +/-0.02mm		

282 - 101 ORDER CODE example

FC-ST HYBRID ADAPTER



FC-ST Adapter with Square Flange



FC-ST Adapter with Rectangular Flange

CODE		KEY WIDTH	SLEEVE	
284	Square Flange	1 2.15 +0.05/-0 mm	01	Zirconia Straight Split
287	Rectangular Flange			

284 - 101 ORDER CODE example

D4 PREMIUM

Connector and Adapter

CONNECTOR	FERRULE TYPE	BOOT TYPE	BOOT COLOR
272 D4 Crimp Style	101 SM: 125.5µm	M Standard 900µm	1 Blue 5 Gray
		N Standard 2.0mm	2 Black 6 Yellow
		P Standard 3.0mm	3 Green 7 White
			4 Red 8 Beige

272 - 101 - N1 ORDER CODE example



D4 Connectors

SMA 905 STANDARD

Connector and Adapter

CONNECTOR CODE	FERRULE TYPE	BOOT TYPE	BOOT COLOR
211 SMA with Hex Nut	201 MM: 127µm	P Standard 3.0mm	1 Blue
	202 MM: 230µm		2 Black
	203 MM: 144µm		
	204 MM: 245µm		
	205 MM: 250µm		
	206 MM: 360µm		
	207 MM: 460µm		
	208 MM: 240µm		

211 - 201 - P2 ORDER CODE example



SMA Connector

ADAPTER CODE	ADAPTER TYPE
212 SMA Adapter	101 SMA Adapter

212 - 101 ORDER CODE example

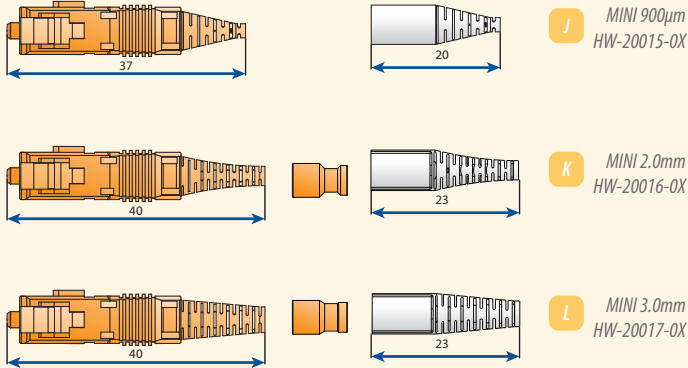


SMA Adapter

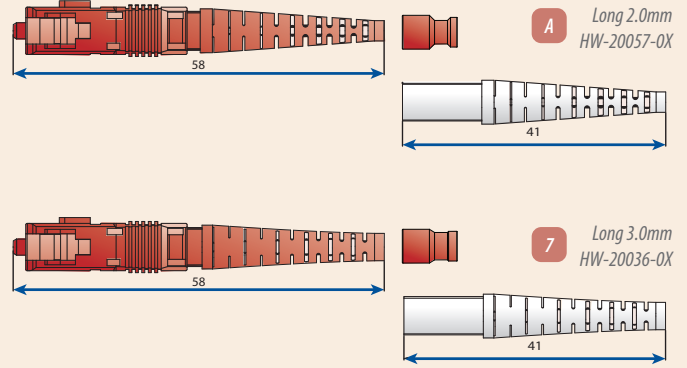
SC CONNECTOR BOOT OPTIONS

Premium Connector MINI Boots

Recommended for R7.5 & R15 Fiber

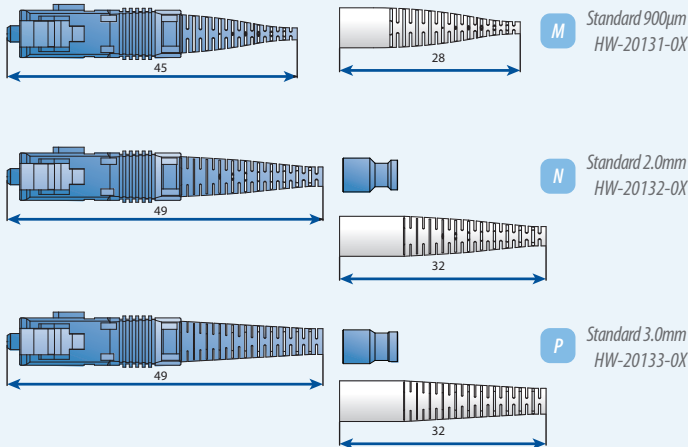


Premium Connector Long Boots



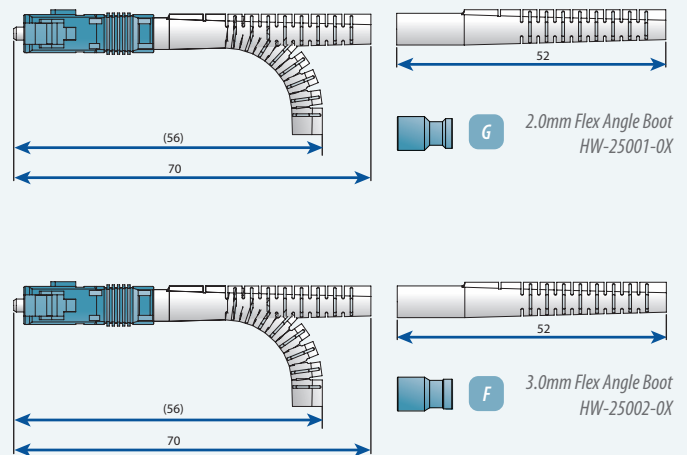
Standard Boots*

Recommended for R15 & R30 Fiber



*These boots are for Premium and Standard connectors

Flex Angle Boots



FEATURES COMPARISON CHART

For SC Connector Boots	BOOT PART NUMBER	BOOT ORDER CODE	R-7.5 FIBER	R-15 FIBER	R-30 FIBER
MINI Boot 900µm	HW-20015-0X	J	●	▲	
MINI Boot 2.0mm*	HW-20016-0X	K	●	▲	
MINI Boot 3.0mm	HW-20017-0X	L	●	▲	
Standard Boot 900µm	HW-20131-0X	M	●	●	▲
Standard Boot 2.0mm*	HW-20132-0X	N	●	●	▲
Standard Boot 3.0mm	HW-20133-0X	P	●	●	▲
SC Long Boot 2.0mm*	HW-20057-0X	7	●	●	●
SC Long Boot 3.0mm	HW-20036-0X	A	●	●	●
Flex Angle Boot 2.0mm*	HW-25001-0X	G	●	▲	
Flex Angle Boot 3.0mm	HW-25002-0X	F	●	▲	

● Complies with GR-326 issue 4 TWAL test with 4 wavelength ▲ Good for general usage

* Also available in 1.6mm

Note: 1. X=Color Code: 1=Blue, 2=Black, 3=Green, 4=Red, 5=Gray, 6=Yellow, 7=White, 8=Beige
2. When using Flex Angle Boot, always maintain the proper bend radius per the cable manufacturer's specification.

BOOT TYPE	BOOT COLOR
7 Long 3.0mm	1 Blue
A Long 2.0mm	2 Black
M Standard 900µm	3 Green
N Standard 2.0mm	4 Red
P Standard 3.0mm	6 Yellow
J MINI 900µm	7 White
K MINI 2.0mm	8 Beige
L MINI 3.0mm	9 Aqua
F Flex Angle Boot 3.0mm	
G Flex Angle Boot 2.0mm	

CRIMP RING CODE

Premium Crimp Ring (Supplied with Premium Connector)

1.6mm Premium Crimp Ring	HW-20061
2mm Premium Crimp Ring	HW-20026
3mm Premium Crimp Ring	HW-20001

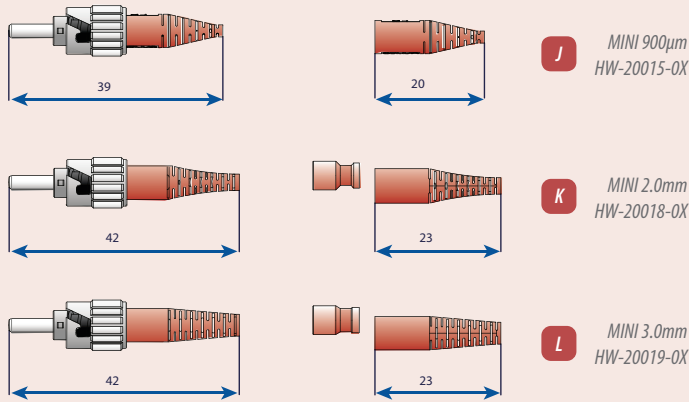
Standard Crimp Ring (Supplied with Standard Connector)

2mm Standard Crimp Ring	HW-23025
3mm Standard Crimp Ring	HW-23026

ST, FC CONNECTOR BOOT OPTIONS

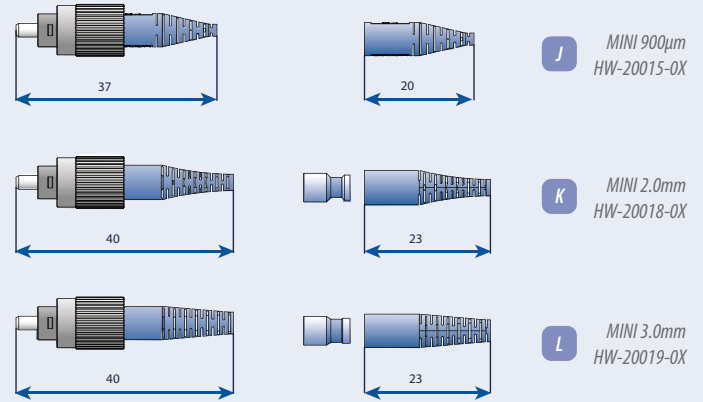
ST Premium MINI Boot

Recommended for R7.5 & R15 Fiber



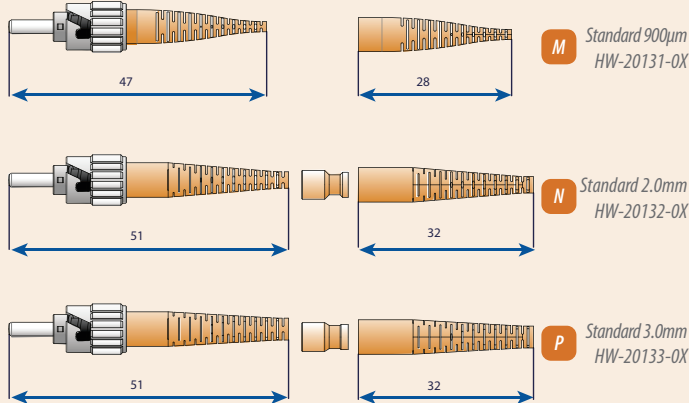
FC Premium MINI Boot

Recommended for R7.5 & R15 Fiber



ST Premium Standard Boot

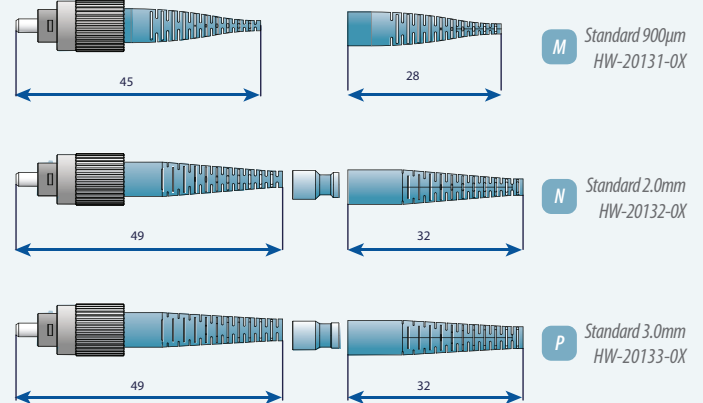
Recommended for R15 & R30 Fiber



Note: These boots are for Premium and Standard Connectors

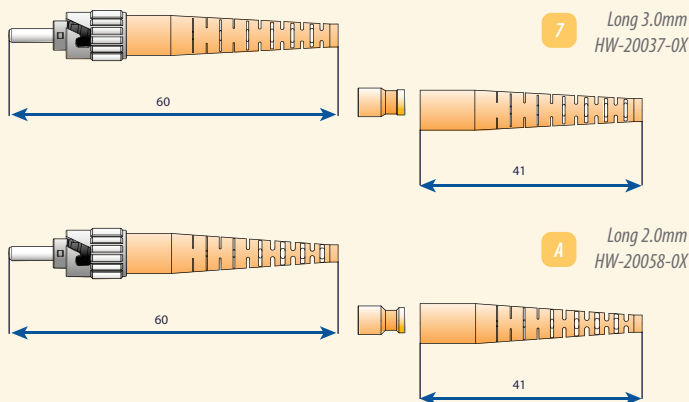
FC Premium Standard Boot

Recommended for R15 & R30 Fiber

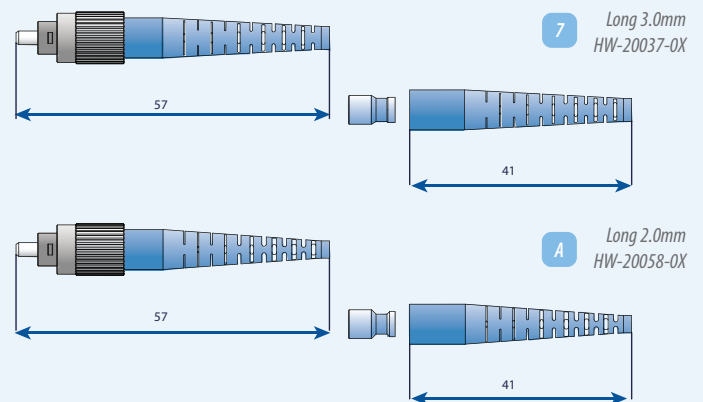


Note: These boots are for Premium and Standard Connectors

ST Premium Long Boot



FC Premium Long Boot



CRIMP RING CODE

Premium Crimp Ring (Comes with Premium Connector)

1.6mm Premium Crimp Ring	HW-20061
2mm Premium Crimp Ring	HW-20026
3mm Premium Crimp Ring	HW-20001

CRIMP RING CODE

Standard Crimp Ring (Comes with Standard Connector)

2mm Standard Crimp Ring	HW-23025
3mm Standard Crimp Ring	HW-23026

E-2000™ CONNECTOR

INSERTION LOSS

For E-2000™	Typical	Maximum
Multimode	0.20dB	0.30dB
Singlemode, PC	0.20dB	0.40dB
Singlemode, APC 8°	0.20dB	0.40dB

Return Loss

Singlemode, PC	50dB	45dB
Singlemode, APC 8°	-	60dB

Mechanical Properties

Mating Cycles	1000
Temperature Cycling	-25 to +70°C, 12 cycles

Materials

Housing, Protective Cap and Tension Relief	PBT/UL94 V-0
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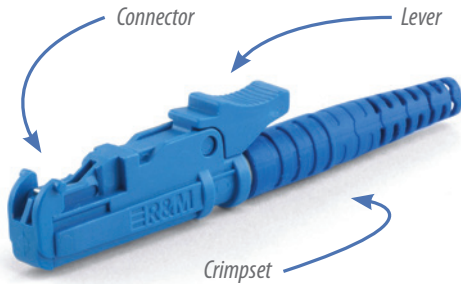


E-2000 APC

Each E-2000 Connector comprises the following three sub components:

- Connector Body
- Lever
- Boot & Crimp set

This allows you to customize the boot and lever color of the finished connector. Please see the order code example, below, for more details.



E-2000 UPC

CONNECTOR BODY CODES		LEVER CODES		BOOT & CRIMPSET CODES	
R847361	Simplex, PC, Multimode, Black	R304403	White	R861303	For Pigtail, Black
R847356	Simplex, PC, Singlemode, Blue	R307017	Blue	R861304	For Pigtail, Blue
R847353	Simplex, APC, Singlemode, Green	R304405	Brown	R861302	For Pigtail, Green
		R307018	Green	R862107	For Pigtail, Red
		R308035	Violet	R861305	For Pigtail, Beige
		R304407	Orange	R812805	FO Crimpset for 1.7-2.3 Cable, Green
		R304408	Red	R812806	FO Crimpset for 1.7-2.3 Cable, Blue
		R309210	Black	R812807	FO Crimpset for 1.7-2.3 Cable, Black
		R304832	Yellow	R812808	FO Crimpset for 1.7-2.3 Cable, Red
		R308034	Turquoise	R812809	FO Crimpset for 2.4-2.8 Cable, Green
				R812810	FO Crimpset for 2.4-2.8 Cable, Blue
				R813158	FO Crimpset for 2.4-2.8 Cable, Black
				R813159	FO Crimpset for 2.4-2.8 Cable, Red
				R813160	FO Crimpset for 2.9-3.2 Cable, Green
				R813161	FO Crimpset for 2.9-3.2 Cable, Blue
				R813162	FO Crimpset for 2.9-3.2 Cable, Black
				R813163	FO Crimpset for 2.9-3.2 Cable, Red
				R813164	FO Crimpset for 2.9-3.2 Cable, White



E2000 Multimode

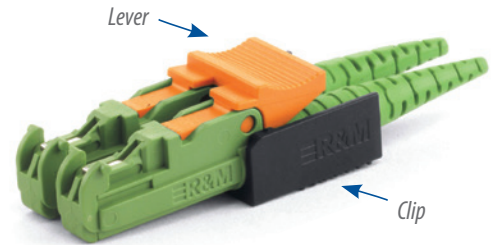
R847353 - R307018 - R861303 ORDER CODE example

Features:

- Secure transmission of high bit-rate protocols
- Zirconia ceramic ferrule fully protected by spring loaded shutter
- Push-pull locking mechanism for easy installation
- Color coded release levers
- Compliant with European (EN 186270) and International (IEC 61754-15) standards
- Tested and approved by Swisscom

Accessories

Two E-2000 connectors can be joined together to make a duplex connector by using the COMPACT DUPLEX CLIP and the DUPLEX CONNECTOR LEVER.



E-2000™ Compact APC Connector



E-2000™ Compact Adapter Duplex

COMPACT (RJ) DUPLEX CONNECTOR LEVER

R305513	Blue
R305514	Green
R305515	Orange
R309004	Turquoise
R305517	Black
R305518	White

COMPACT (RJ) HOUSING CLIP CODE

R305542	Compact (RJ) Duplex Clip for Connector Housing
---------	--

Features:

- Secure transmission of high bit-rate protocols
- Spring loaded shutter
- Compliant with European (EN 186270) and International (IEC 61754-15) standards
- Tested and approved by Swisscom

E-2000™ SIMPLEX ADAPTER

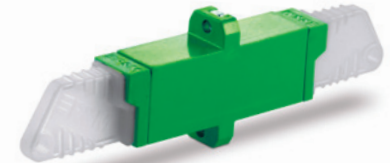
SIMPLEX ADAPTER CODE

R847081	Black, SC footprint, with Flange
R846580	Blue, SC footprint, with Flange
R846577	Green, SC footprint, with Flange
R846343	Beige/white, Flangeless, SC Footprint
R846340	Blue, Flangeless, SC Footprint
R846339	Green, Flangeless, SC Footprint

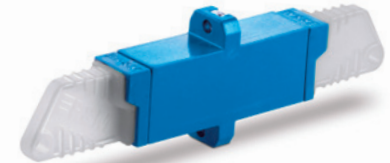
R847081 ORDER CODE example

Features:

- Spring loaded shutter
- High quality split ceramic sleeve
- Injection molded PBT housing UL94V-01 Rated
- High performance over 1000 matings



E-2000™ APC Simplex Adapter



E-2000™ APC Simplex Adapter

E-2000™ COMPACT DUPLEX ADAPTER

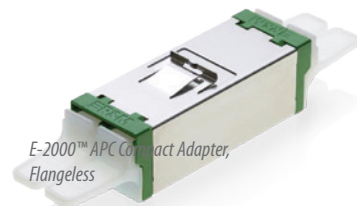
COMPACT (RJ) ADAPTER

R823264	Black, with Flange
R823260	Black, Flangeless
R823262	Blue, With Flange
R823258	Blue, Flangeless
R823261	Green, with Flange
R823257	Green, Flangeless

R823264 ORDER CODE example

Features:

- Spring loaded shutter
- High quality split ceramic sleeve
- Injection molded PBT housing UL94V-01 Rated
- High performance over 1000 matings

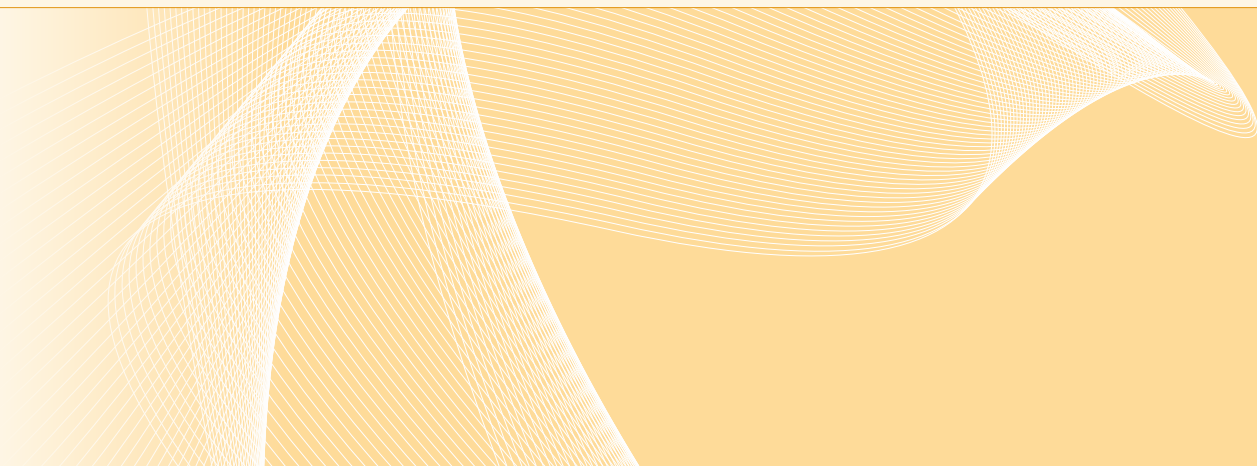


E-2000™ APC Compact Adapter, Flangeless



E-2000™ SM UPC Compact Adapter, with Flange

STANDARD CONNECTOR SERIES	pg. 02
SMALL FORM FACTORS	pg. 23
SPECIALTY PRODUCTS	pg. 61
FERRULES AND SLEEVES	pg. 73
POLISHING SYSTEMS	pg. 79



SMALL FORM FACTORS

LC-UPC Unibody	pg. 26	MU Adapter	pg. 45
LC-APC Unibody	pg. 27	MU Backboard & Package Housing	pg. 45
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LC Connector 1.2mm	pg. 27	MT Ferrule	pg. 47
LC Switchable Uniboot	pg. 28	MPO Plus Premium Connector	pg. 48
LC-HD Connector	pg. 30	MPO Plus Push Pull Tab	pg. 48
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LC Flex Angle Boot	pg. 32	MPO Plus Latch Connector & Adapter	pg. 52
LC Connector Boots	pg. 33	MPO Plus Bayonet Connector	pg. 54
LC Adapter Series	pg. 34	MPO Plus Micro Connector & Adapter	pg. 55
LC-MU Hybrid Adapter	pg. 35	MPO Plus MT Ferrule	pg. 55
LC-SC Hybrid Adapter	pg. 35	MPO Plus Dust Shutter Adapter	pg. 55
LC TOP Adapter Series	pg. 37	MPO Plus Polarity Changeable Adapter	pg. 56
LC Crimp Tool	pg. 37	MPO Metal Adapter	pg. 56
LC Adapter with Inner Shutter	pg. 38	MPO SC Footprint Adapter	pg. 57
LC Adapter with Dust Shutter	pg. 39	MPO Stackable Adapter	pg. 58
LC Keyed Connector & Adapter	pg. 40	MPO Plus Tools	pg. 59
LC EZ-Flip	pg. 41	MPO Plus Crimp Tool	pg. 59
Micro-LC	pg. 42	MPO Plus Gender Changeable Pin	pg. 59
MU One Piece Connector	pg. 42		
MU Connector Kit	pg. 42		



SENKO's Long Standing LC Connector License Offers Various Styles of LC Connectors and Adapters to Meet the Customers Need



LC PREMIUM UNIBODY Connector



The LC Premium Unibody Connector molded with a Single body delivers maximum strength against mechanical tests including side loading test and TWAL tests. Manufactured to the highest standard, the LC Unibody connector is designed to meet and exceed the Verizon FOC TPR requirement and designed for the usage for the OSP application or where customers needs the highest quality product.

- Premium SM and Premium Low Loss SM (LS) are available
- Typical IL of 0.05 for LS SM and 0.08 for Premium SM Ferrule
- Various option of boots are available to meet your need
- PC Type and APC Type available



LC STANDARD (2PC) Connector



The Original LC designed connector gives the maximum value for cost. Using high quality components, this connector meets IEC, TIA/EIA and the general requirement of GR-326.

- Available with Pre-assembled 1pc style or in a Multi piece kit
- Typical IL of 0.12 for Standard ferrules
- Various options of boots are available to meet your demand

FEATURES COMPARISON CHART

For LC Premium and LC Standard	PREMIUM UNIBODY LOW LOSS SM FERRULE	PREMIUM UNIBODY SM FERRULE	STANDARD 2PC SM FERRULE
LC License Holder	○	○	○
IL Average Against Master (UPC)	0.05	0.08	0.12
IL Mean Value Random Mating (UPC)	0.07	0.12	0.25
Verizon FOC TPR-9409	○	○	
GR-326 Core Issue 4	○	○	△
IEC, TIA/EIA JIS Spec	○	○	○
IEC Random Mating Grade A*	○		
IEC Random Mating Grade B*	○	○	
IEC Random Mating Grade C*	○	○	○
ROHS Compliant	○	○	○
UL 94V-0	○	○	○
Ruggedized Unibody Structure	○	○	
Universal Body For Sim-Dup-BTW	○	○	
6 Position Tuning After Assembly (UPC)	○	○	○
LC MINI Boots	○	○	○
Standard Boots	○	○	○
TWAL Proof 900µm Boots	○	○	○
Pre-assembled 1pc Style	○	○	○
Free Floating Ferrule	○	○	○
Metal Back Post	○	○	○
Crimp Tool CRT-701**	○	○	○

○ Complies with GR-326 issue 4 TWAL test with 4 wavelength △ Good for general usage

Note: *IEC 61753-1 **CRT-705 to be used for 1.2mm Unibody

TECHNICAL SPECIFICATIONS

Unibody Premium and Standard 2pc Connector

PRODUCT SERIES	TYPE OF CONNECTOR	IL AGAINST MASTER (dB)		IL RANDOM MATING (dB)	
		Average IL	Maximum IL	Mean IL	Maximum IL
Unibody Premium Low Loss SM	931-159-1xx, 932-159-1xx	0.05	0.15	0.07	0.15 ^{*1}
Unibody Premium SM	931-153-1xx, 932-153-1xx	0.08	0.20	0.12	0.25 ^{*2}
Unibody Premium APC Low Loss	931-159-3xx, 932-159-3xx	0.07	0.15	0.09	0.20
Unibody Premium APC	931-153-3xx, 932-153-3xx	0.10	0.25	0.14	0.30
Unibody Premium MM	931-251-2xx, 932-251-2xx	0.10	0.20	-	-
Standard 2pc + Standard SM Ferrule	911-151-1xx, 912-151-1xx	0.12	0.30	0.25	0.50 ^{*3}
Standard MM	911-251-2xx, 912-251-2xx	0.15	0.30	-	-
Singlemode					
Operating Temperature	-40°C to +75°C				
Durability	<0.2dB typical change, 500 matings*				

IEC Random mating test IEC 61753-1

1 - To meet IEC Random Mating Grade A (≤ 0.07 dB mean, ≤ 0.15 dB max for >97% of sample. Grade A Spec is not finalized, above is a recommendation.

2 - To meet IEC Random Mating Grade B (≤ 0.12 dB mean, ≤ 0.25 dB max for >97% of sample)

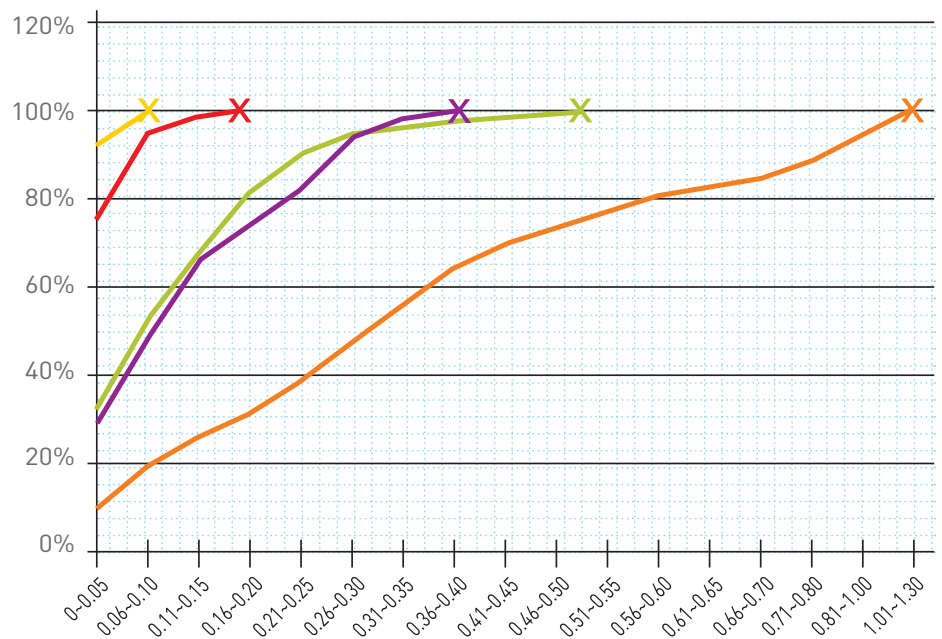
3 - To meet IEC Random Mating Grade C (≤ 0.25 dB mean, ≤ 0.50 dB max for >97% of sample)

Random Mating IL

SENKO has categorized its connectors to reflect the IEC Random Mating specified grades A*, B, and C, allowing the end-user to make an informed decision when selecting connectors, of how finished patchcords using SENKO connectors will perform.

Random mating Insertion Loss

- SENKO Low Loss
- SENKO Premium
- SENKO Standard
- High quality Competitor
- Low quality Competitor



931, 932 Series

LC PREMIUM UNIBODY



900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot

CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
931 LC Unibody Simplex	153 SM: Premium 125µm	1 SM: Blue	B MINI Boot 900µm	1 White
932 LC Unibody Duplex	159 SM: Low Loss 125µm	2 MM: Beige	C MINI Boot 2.0mm	2 Blue
	251 MM: Premium 127µm	5 MM OM3: Aqua	D MINI Boot 3.0mm	3 Black
		6 MM OM4: Heather Violet	1 BTW Boot	4 Yellow
			4 2.0mm Round	5 Red
			5 2.0mm Boot Short	
			6 3.0mm Boot	
			7 Flex-Angle 2.0mm	
			9 Flex-Angle 3.0mm	

931 - 153 - 141 ORDER CODE example

Note: Other ferrule ID size are available
SM 126µm SM 125.5µm

Features:

- SENKO's flagship highest quality LC connector Series
- Solid body robust design to improve mechanical strength.
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Super Low loss, typical IL against Master 0.05dB
- Premium Super Low Loss to meet IEC 61753-1 Grade A random mating requirement of Max 0.15dB
- Premium SM typical IL against Master 0.08dB Max
- Premium SM to meet IEC 61753-1 Grade B random mating requirement of Max 0.25dB
- 6 direction tuning feature to improve random mating IL
- Wide choice of boot types
- Crimp tool to be used CRT-701

931, 932 Series

LC PREMIUM UNIBODY



900µm MINI Boot



2.0mm MINI Boot



3.0mm MINI Boot

CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
931 LC Unibody Simplex	153 SM: Premium 125µm	3 APC: Green	B MINI Boot 900µm	6 Green
932 LC Unibody Duplex	159 SM: Low Loss 125µm		C MINI Boot 2.0mm	
			D MINI Boot 3.0mm	
			1 BTW Boot	
			4 2.0mm Round	
			5 2.0mm Boot Short	
			6 3.0mm Boot	
			7 Flex-Angle 2.0mm	
			9 Flex-Angle 3.0mm	

931 - 153 - 316 ORDER CODE example

Note: Other ferrule ID size are available
SM 126µm SM 125.5µm

Features:

- SENKO's flagship highest quality LC connector Series
- Solid body robust design to improve mechanical strength
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Super Low loss, typical IL against Master 0.07dB
- Premium SM typical IL against Master 0.10dB
- Wide choice of boot types
- Crimp tool to be used CRT-701

LC STANDARD 2PC

911, 912, 921, 922 Series

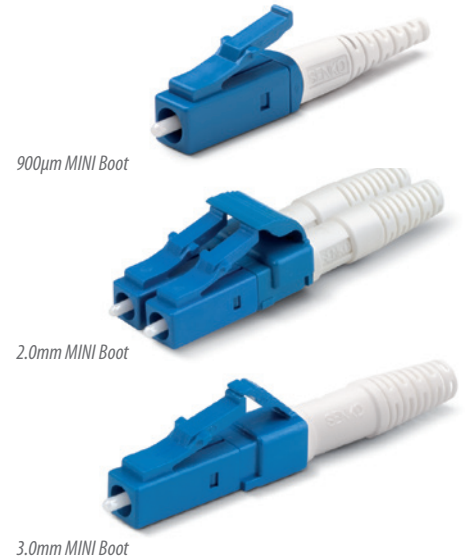
CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
911 Preassembled Simplex	151 SM: Standard 125.5µm	1 SM: Blue	B MINI Boot 900µm	1 White
912 Preassembled Duplex	251 MM: Standard 127µm	2 MM: Beige	C MINI Boot 2.0mm	2 Blue
921 Kit Simplex		5 MM OM3: Aqua	D MINI Boot 3.0mm	3 Black
922 Kit Duplex		6 MM OM4: Heather Violet	2 2.0mm Original	4 Yellow
			6 3.0mm Boot	5 Red

912 - 151 - 121 ORDER CODE example

Note: Other ferrule ID size are available
SM 126µm SM 125µm MM 230µm MM 144µm

Features:

- The original 2pc LC Design
- SENKO's Standard Connector series gives the highest value for cost
- Pre-assembled one piece design and Connector Kit style available
- Meets and exceeds the TIA/EIA, IEC and JIS LC Specification
- Standard SM Ferrule typical IL against Master 0.12dB
- Crimp tool to be used CRT-701



LC CONNECTOR 1.2mm

The new LC Connector is as strong as a 3mm cable. Reduce your cable size, but keep the strength. The LC Connector for 1.2mm cable is fully compliant to GR-326-Core for Media 1.



CONNECTOR PC	FERRULE SIZE	HOUSING COLOR	CABLE SIZE	BOOT COLOR
931 LC Unibody Pre-Assembled Simplex	153 125µm	1 Blue	G 1.2mm	1 White
932 LC Unibody Pre-Assembled Duplex	251 MM 127µm	2 Beige		
933 LC Unibody Un-Assembled Simplex		5 Aqua		
934 LC Unibody Un-Assembled Duplex		6 Heather Violet		

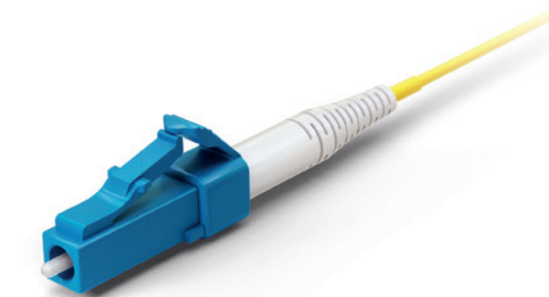
931 - 153 - 1G1 ORDER CODE example

CONNECTOR APC	FERRULE SIZE	HOUSING COLOR	CABLE SIZE	BOOT COLOR
931 LC Unibody Pre-Assembled Simplex	153 125µm	3 Green	G 1.2mm	6 Green
932 LC Unibody Pre-Assembled Duplex				
933 LC Unibody Un-Assembled Simplex				
934 LC Unibody Un-Assembled Duplex				

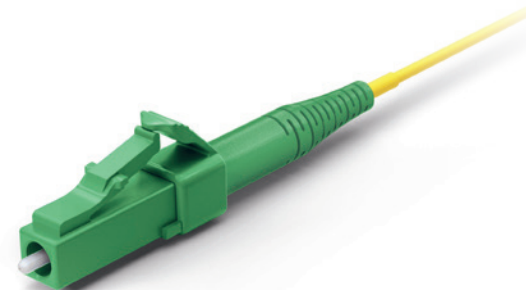
931 - 153 - 3G6 ORDER CODE example

Features:

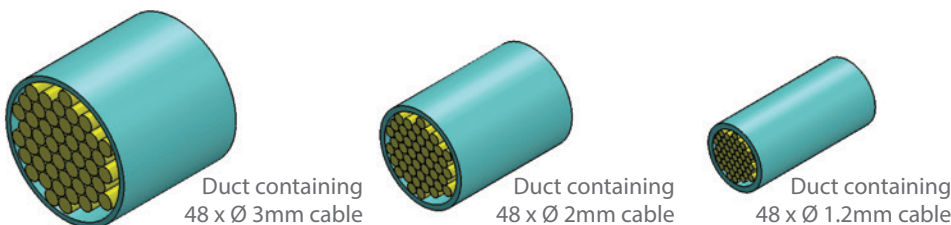
- Meets the same GR-326 requirements as a conventional 3mm and 2mm cable
- Exceeds 15lb Proof Test Objective as per GR-326-Core section 4.4.3.4
- Passes the GR-326 TWAL Test for Media 1 (ruggedized cable) as per section 4.4.3.5
- Reduces cable congestion without sacrificing mechanical strength



LC-UPC Connector



LC-APC Connector



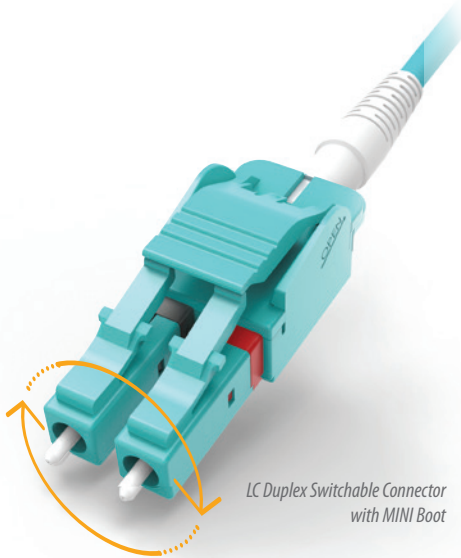
E-3.1

Note: Duct size reduced by 1/6 (approx 16%) compared to a 3mm cable

948 Series

LC SWITCHABLE UNIBOOT

SENKO LC Duplex Switchable Connector is a unique design that allows the use of round style, 2.0mm or 3.0mm jacketed cable instead of the traditional zipcord duplex cable for a more compact design. The housing of the LC Duplex Switchable Connector can be taken apart in the field without the use of any special tooling. This duplex LC allows the fiber polarity to be switched at the time of cable assembly installation without having to re-terminate the connectors.



CODE	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
948	151 SM: Standard 125.5µm	1 Blue	C MINI Boot 2.0mm	1 White
	251 MM: Standard 127µm	2 Beige	D MINI Boot 3.0mm	2 Blue
		3 Green	7 Flex-Angle 2.0mm	3 Black
		5 Aqua	9 Flex-Angle 3.0mm	5 Red
		6 Heather Violet	T 90d Boot	6 Green
			V 3.0mm Boot, <i>Cable feed through back post*</i>	7 Aqua
			G MINI Boot 1.2mm	
			L 3.6mm Boot*	
			M 4.5mm Boot*	
			N 5.0mm Boot*	
			P 5.5mm Boot*	

948 251 5D1 ORDER CODE example

Note*: Standard boot color black.

Features:

- Uniboot connector aids cable management
- Switchable Connector to change polarity
- NEW- Latch Lock Ready
- MINI Boot ready
- Right Angle Clip for better panel management
- Flex angle boot ready
- Red / Black color indication for easy Polarity Check



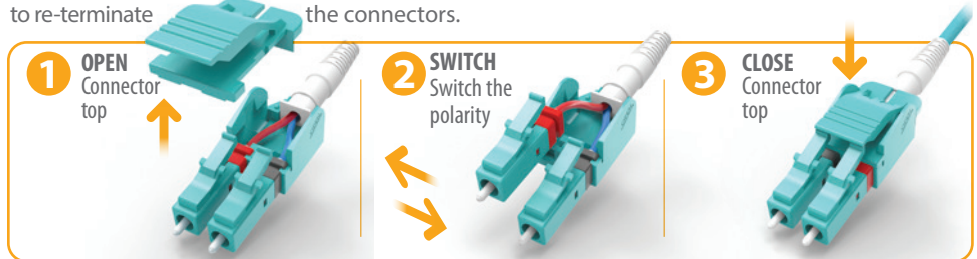
CONNECTOR

948-LOCK-01 LC Switchable Uniboot Latch Lock Key Insert

948 LOCK 01 ORDER CODE example

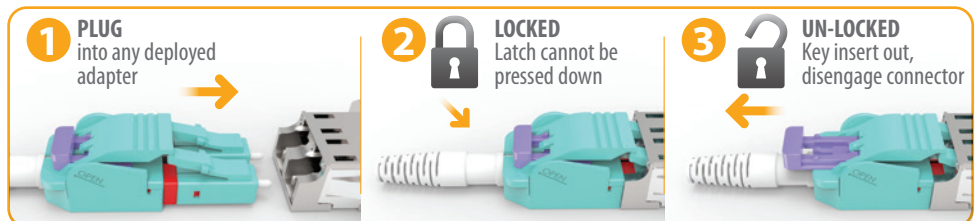
SWITCH POLARITY

Allows the fiber polarity to be switched at the time of cable assembly installation without having to re-terminate the connectors.



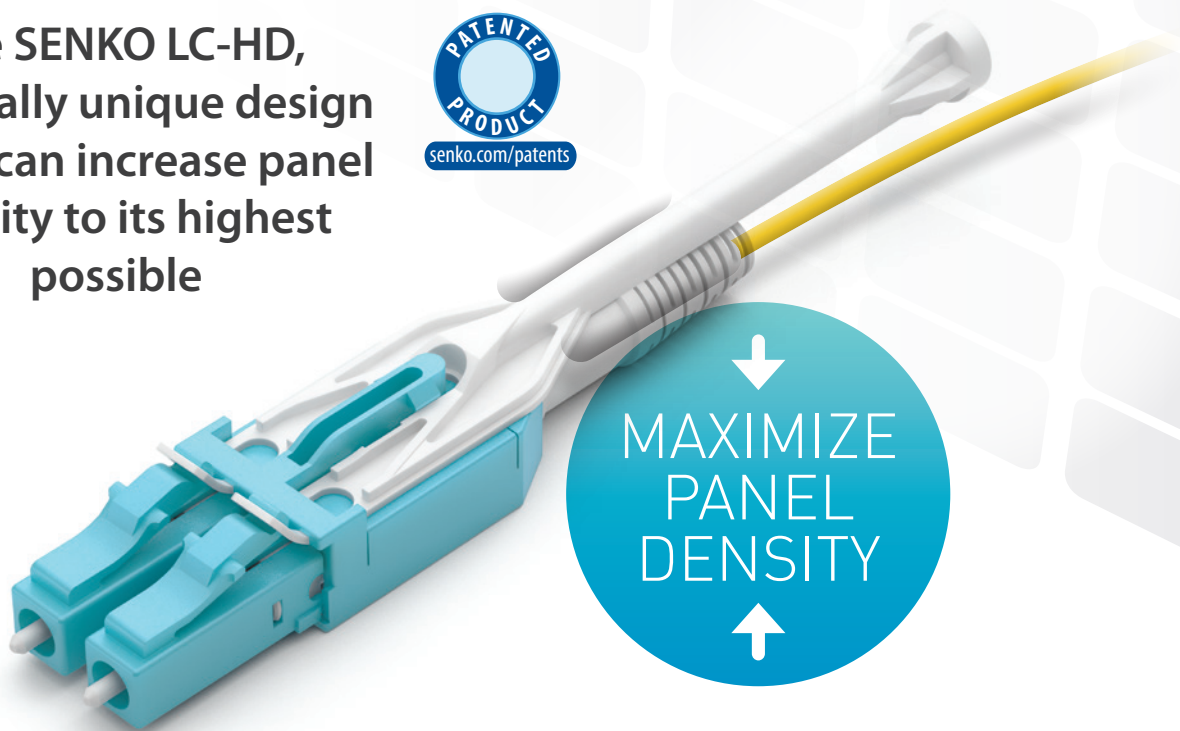
LATCH LOCK

With Add-on key insert, still connects to any conventional adapter but prevents accidental disconnection. Key insert can be removed with no tool.



LC-HD | HIGH DENSITY CONNECTOR

The SENKO LC-HD, is a totally unique design which can increase panel density to its highest possible



Easy to release trigger connector

The Senko LC-HD's lever design utilizes a flexible "pull-tab" allowing for the connector to be disengaged easily from densely loaded panels without the need for special tools.

"Pull-Tabs" are available in three standard lengths and multiple colors.



Stackable adapters

In the days before the Senko LC-HD connector, the LC adapter spacing was limited by the room required to reach LC connectors with the human fingers or with special tools. The overall height of standard LC connectors also required a small vertical space above and below the LC adapters. The low profile Senko LC-HD, together with its pull tab allow the LC adapter to be stacked with absolutely no vertical space.

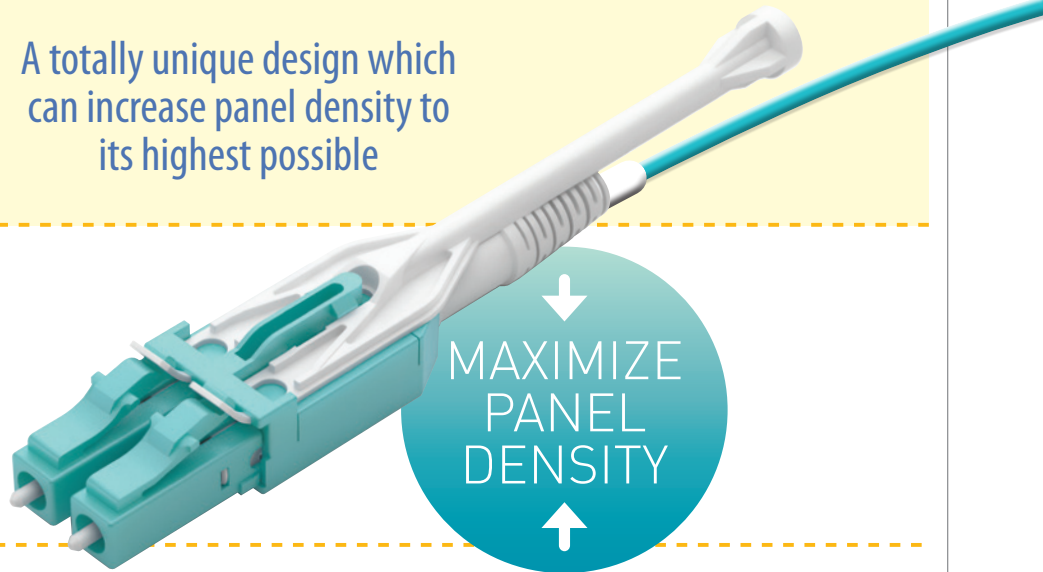


60% increase in density

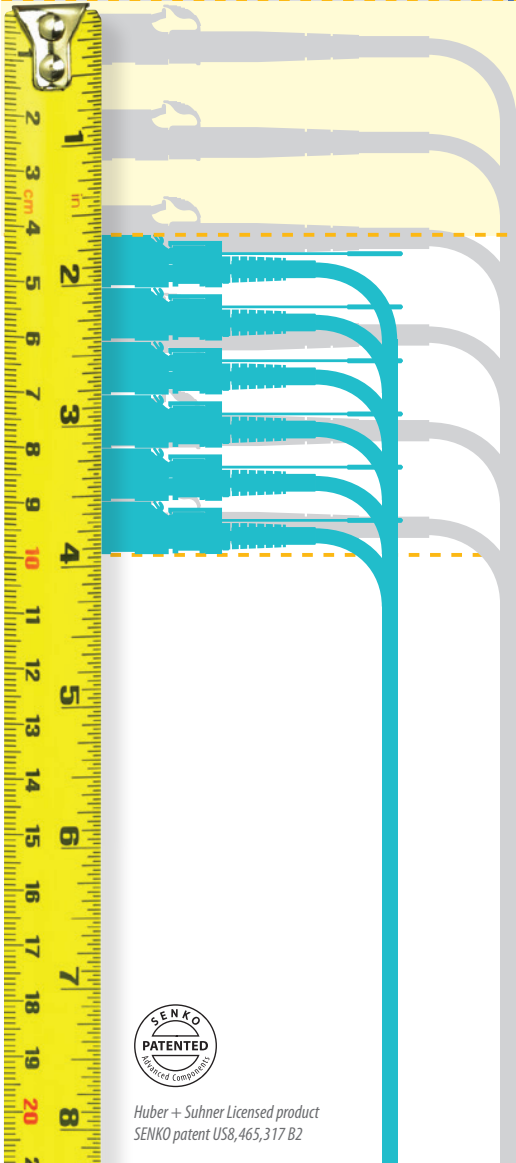
Because the Senko LC-HD connector can be removed using a simple pull tab, it eliminates the need for finger access to the LC connectors latch mechanism, therefore LC adapters can now be mounted much closer than spacing required in the past.

LC-HD HIGH DENSITY CONNECTOR

A totally unique design which can increase panel density to its highest possible



The SENKO LC-HD, is a totally unique design which can further increase panel density over currently available solutions and allow for the highest density possible. A gentle pull on the tab will disengage it from an extremely dense fiber optical panel. The pull tab is a perfect location to affix a connector label to help in the quick identification of the connector.



Huber + Suhner Licensed product
SENKO patent US8,465,317 B2

Features:

- Easy to release trigger connector
- 60% increase in density
- Stackable adapters

HIGH DENSITY RACK

10
PACK
LC-HD
SPACING

60%
increase in
density

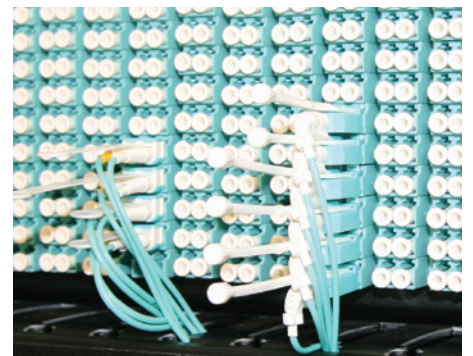
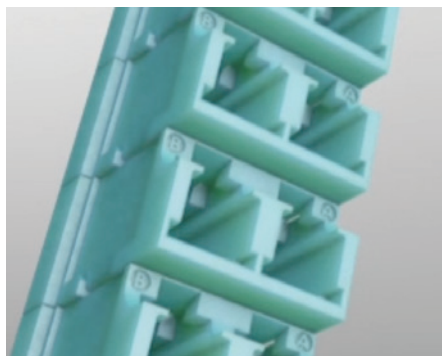
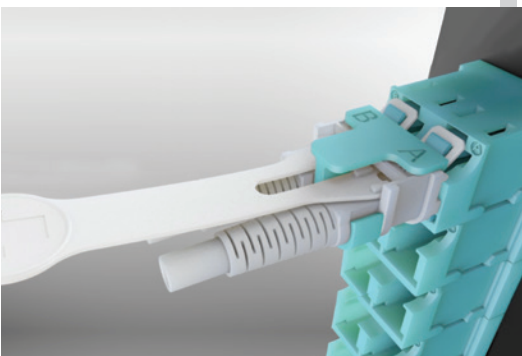
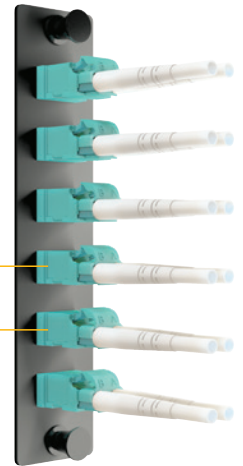
9.4 mm
(0.37 in)



CONVENTIONAL RACK

6
PACK
SPACING

17.4 mm
(0.69 in)



LC-HD CONNECTOR FEATURES

Easy to release trigger connector

The Senko LC-HD's lever design utilizes a flexible "pull-tab" allowing for the connector to be disengaged easily from densely loaded panels without the need for special tools. "Pull-Tabs" are available in three standard lengths and multiple colors.

60% increase in density

Because the Senko LC-HD connector can be removed using a simple pull tab, it eliminates the need for finger access to the LC connectors latch mechanism, therefore LC adapters can now be mounted much closer than spacing required in the past.

Stackable adapters

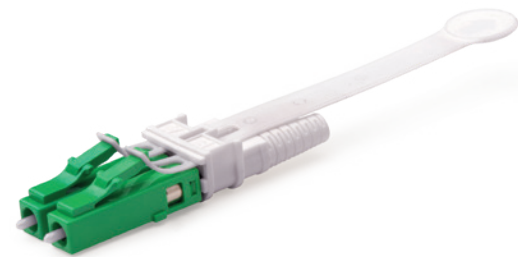
In the days before the Senko LC-HD connector, the LC adapter spacing was limited by the room required to reach LC connectors with the human fingers or with special tools. The low profile Senko LC-HD, together with its pull tab allow LC adapters to be stacked with no vertical space.

LC-HD

CONNECTOR TYPE	FERRULE ID	HOUSING COLOR	BOOT TYPE	BOOT COLOR
913 LC-HD Simplex	153 SM: Premium 125	1 SM: Blue	B LC-HD MINI 900µm	1 White
913P LC-HD Simplex	159 SM: Low Loss 125	2 MM: Beige	C LC-HD MINI 2.0mm	2 Blue
914 LC-HD Duplex	251 MM: Premium MM	3 SM APC: Green	U LC-HD 2.0mm Duplex	3 Black
914P LC-HD Duplex		5 MM: OM3 Aqua	G LC-HD 1.2mm Boot	4 Yellow
		6 MM: OM4 Heather Violet		5 Red
				6 Green

Note: 1. Pull tab must be purchased separately to complete the set
2. 900µm boot available for 913P and 914P series only

913P - 153 - 1B1 ORDER CODE example



LC-HD Connector with Pull Tab

LC-HD UNIBOOT

CONNECTOR TYPE	FERRULE ID	HOUSING COLOR	BOOT TYPE	BOOT COLOR
946P LC-HD Uniboot	153 SM: Premium 125	1 SM: Blue	C MINI Boot 2.0mm	1 White
	159 SM: Low Loss 125	2 MM: Beige	D MINI Boot 3.0mm	2 Blue
	251 MM: Premium MM	3 SM APC: Green		3 Black
		5 MM: OM3 Aqua		4 Yellow
		6 MM: OM4 Heather Violet		5 Red
				6 Green

Note: Pull tab must be purchased separately to complete the set

946P - 153 - 1C1 ORDER CODE example



LC-HD Uniboot with Push Pull Tab

PULL TAB

TYPE	CONNECTOR TYPE TO USE WITH	TAB LENGTH	TAB COLOR
HDPT LC-HD Pull Tab	S Simplex	44 44mm	W White
	D Duplex/Uniboot	64 64mm	
		84 84mm	

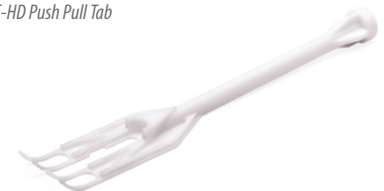
LC-HD Pull Tab



PUSH PULL TAB

TYPE	CONNECTOR TYPE TO USE WITH	TAB LENGTH	TAB COLOR
HDPP LC-HD Push Pull Tab	S Simplex	44 44mm	W White
	D Duplex/Uniboot	64 64mm	
		84 84mm	

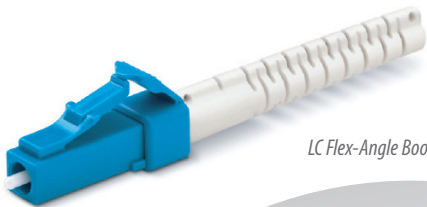
LC-HD Push Pull Tab



TYPE	CONNECTOR TYPE TO USE WITH
HDPP-S-BTW-W	LC-HD Push Pull Tab Simplex

Note: Push Pull Tab for LC-HD Uniboot only

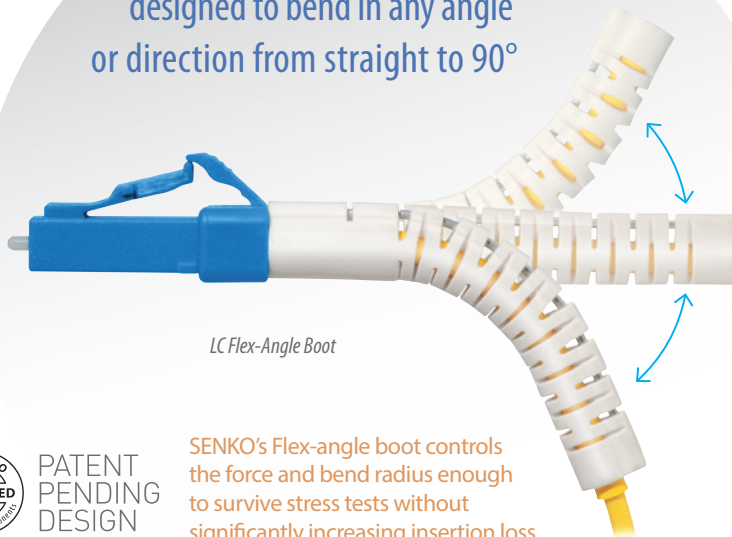
LC FLEX ANGLE BOOT



LC Flex-Angle Boot

SENKO's new 2.0mm and 3.0mm boot addition for the Premium LC connectors. The Flex-Angle boot is designed to bend and maintain any angle or direction from straight to 90°. The boot is molded over a single stainless steel wire and can be easily positioned by hand. The internal wire holds the boot at the desired angle or direction.

The Flex-Angle boot is designed to bend in any angle or direction from straight to 90°



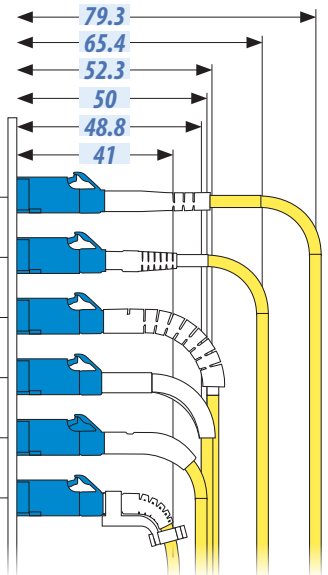
LC Flex-Angle Boot



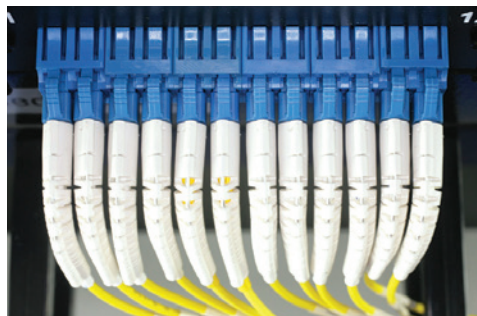
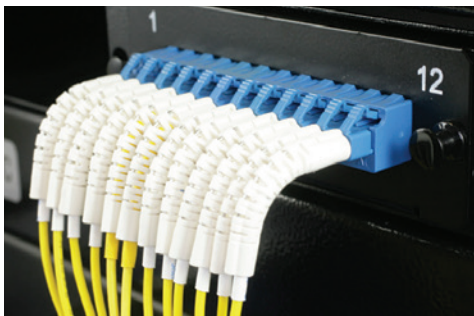
PATENT PENDING DESIGN

SENKO's Flex-angle boot controls the force and bend radius enough to survive stress tests without significantly increasing insertion loss.

- LC Conventional Boot
- LC MINI Boot
- LC w/Flex-Angle Boot
- LC w/90 Degree Boot
- LC w/50 Degree Boot
- LC +MINI Boot+Right Angle Clip



High density patch panels can be tricky to maneuver around when they are fully populated with rigid 90° boots, and the boots can interfere with a technician's access to the panel. SENKO's Flex-Angle boot allows bending in any direction and freedom of movement around other connectors. Also, removing a jumper is made easy; simply straighten out the boot and remove it without worrying about it affecting other connectors in the panel.



LC ANGLE BOOTS

TYPE	ITEM NUMBER
LC 50 Angle Boot	BTLC-2-50-x
LC 90 Angle Boot	BTLC-2-90-x
LC 2mm Flex Angle Boot	931-JCBF-x
LC 3mm Flex Angle Boot	931-JCBF3-x
LC Right Angle Clip	931-CLIP-RAB-W

BTLC-2-50-X ORDER CODE example

Highlight: The Angle boots are assembled using the same termination procedure established for the 2.0mm or 3.0mm connector (same crimp ring and crimp tool), and can be used on simplex and duplex connector configurations.

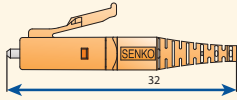
- Provide fixed and flex angle positioning for better cable management
- Made of RoHS material and UL94-V0 rated type

Note: Custom configurations available upon request

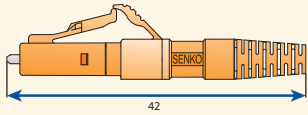
Note: 1. Right Angle Clip for 2mm only
2. When using angled boots, always maintain the proper bend radius per the cable manufacturer's specification

LC CONNECTOR BOOT OPTIONS

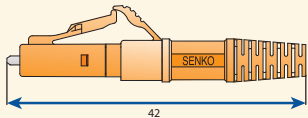
Standard Connector MINI Boots



B MINI 900µm
931-MINI-X-ON

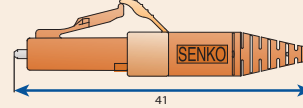


C MINI 2.0mm
931-MINI2-X-ON

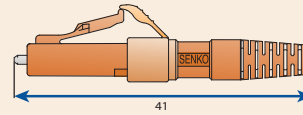


D MINI 3.0mm
931-MINI3-X-ON

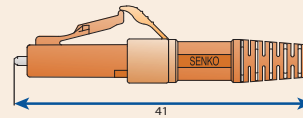
Unibody Connector MINI Boots



B MINI 900µm
931-UNI1-X-ON

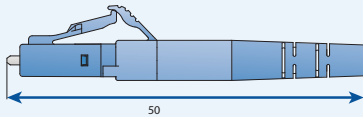


C MINI 2.0mm
931-MINI2-X-ON

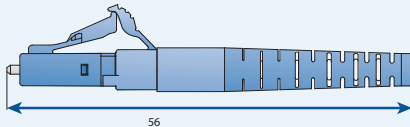
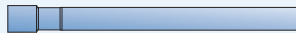


D MINI 3.0mm
931-MINI3-X-ON

Standard Connector Boots



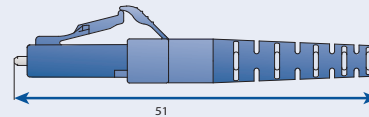
2 2.0mm Original
BTLC-2-X-ON



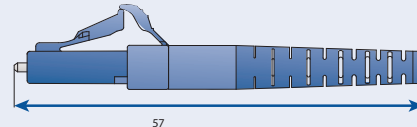
6 3.0mm Boot
931-JCB3-X-ON



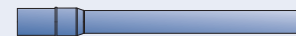
Unibody Connector Boots



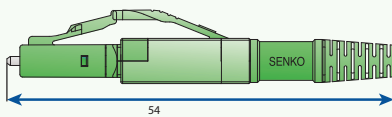
4 2.0mm Round
931-JCB-X-ON



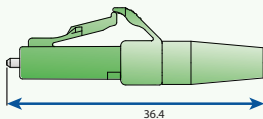
6 3.0mm Boot
931-JCB3-X-ON



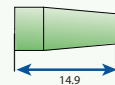
More Boots Options



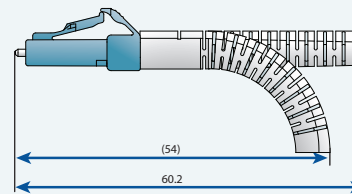
LC Switchable with MINI Boot 3.0mm
931-MINI3-X-ON



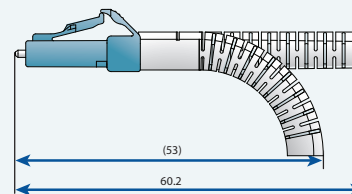
5 2.0mm Short Boot
931-JCBS-X-ON



Flex Angle Boots



7 2.0mm Flex Angle Boot
931-JCBF-X-ON



9 3.0mm Flex Angle Boot
931-JCBF3-X-ON

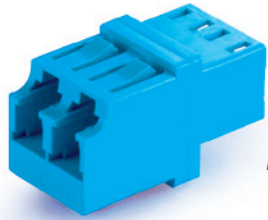
Note: 1. X=Color Code

W=White, G=Green, L=Blue, B=Black, A=Aqua, R=Red

2. When using Flex Angle Boot, always maintain the proper bend radius per the cable manufacturer's specification

999 Series

LC ADAPTER STANDARD



LC Adapter Duplex



LC Adapter Duplex

CODE	TYPE	COLOR	SLEEVE TYPE
999	2 Duplex	1 Blue	1 Zirconia Straight Split
		2 Black	
		3 APC Green	
		8 Beige	
		9 Aqua	

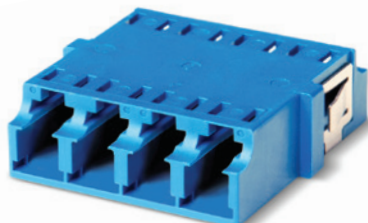
999 - 291 ORDER CODE example

Features:

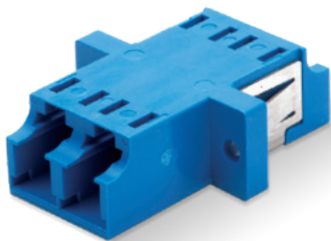
- Compact design
- RJ-45 Style Interface
- Simplex and duplex type available
- Telcordia, ANSI, TIA/EIA, and IEC compliance*
- Color coding
- High precision alignment with zirconia sleeve or metal sleeve

988 Series (SC Footprint SNR-SNR)

LC ADAPTER (SC FOOTPRINT STYLE) SYMMETRICAL DESIGN



LC Quad Adapter, with SC Footprint, without Flange, Senior-Senior



LC Duplex Adapter, with SC Footprint, with Flange, Senior-Senior

CODE	TYPE	COLOR	SLEEVE TYPE	SHUTTER
988	3S Duplex with Flange	1 Blue	1 Zirconia Straight Split	N No Shutter
	4S Duplex with No Flange	2 Black		
	5S Quad with Flange	3 APC Green		
	6S Quad with No Flange	8 Beige		
		9 Aqua		

988 - 3S11 - N ORDER CODE example

Features:

- SC Foot print design allows to use the LC Adapter in a SC panel and double the density
- Premium One piece housing design / no welding point
- Telcordia, ANSI, TIA/EIA and IEC Compliance
- Internal shutter available
- SC Foot print type, Senior - Junior type also available
- High precision alignment with zirconia sleeve or metal sleeve



LC One Piece Adapter, No Weld Type



LC Two Piece Adapter, Welded Type

The new one piece housing design prevents breaking of the adapter due to the absence of ultrasonic weld type construction.

LC ADAPTER WITH SHUTTER

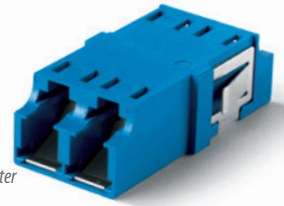
SENKO offers internal shutters for adapters to shield potentially harmful light. SENKO's patented internal shutter is a retractable shutter inside the adapter body and is only actuated by inserting the connector in to the

body, designed specifically to prevent end face damage of the ferrule. The internal shutter is fully automatic and provides an alternative to external shutter solutions.

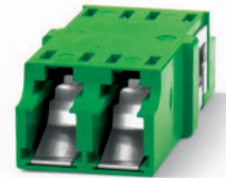
CODE	TYPE	COLOR	SLEEVE TYPE	SHUTTER
988	3S Duplex with Flange	1 Blue	1 Zirconia Straight Split	A Internal Shutter (w/o mark)
	4S Duplex with No Flange	2 Black	2 Metal Straight Split	
		3 APC Green		
		8 Beige		
		9 Aqua		

988 - 3S11 - A ORDER CODE example

988 Series



LC One Piece Adapter with SC Foot Print



LC One Piece Adapter with SC Foot Print (SNR/SNR)

LC-MU & LC-SC HYBRID ADAPTER

PART NUMBER	DESCRIPTION
M90-101	LC-MU Simplex Hybrid Adapter with Zirconia Sleeve
990-113-M	LC-SC Simplex Hybrid Adapter with Zirconia Sleeve

990 - 113 - M ORDER CODE example



LC-MU Hybrid Adapter



LC-SC Hybrid Adapter

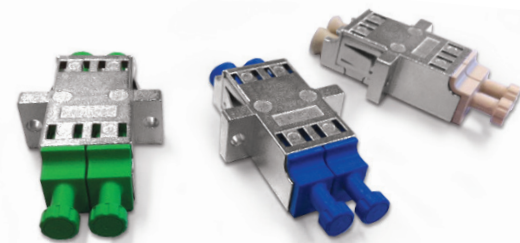
LC METAL ADAPTER

LC one piece duplex metal adapters are available in symmetrical SC foot print design with or without flanges. They can be ordered with internal shutters to provide much needed eye safety by shielding the potentially harmful laser light. These adapters have color coded

dust cap and sleeve holder to ensure right adapter is used for the correct application (PC SM: Blue, PC MM: Beige, APC: Green). Both zirconia and phosphor bronze alignment sleeves are available on this product.

CODE	TYPE	DUST CAP/INTERNAL COLOR	SLEEVE TYPE	SHUTTER
988M	3S Duplex with Flange	1 Blue	1 Zirconia	N No Shutter
	4S Duplex without Flange	2 Green	2 Metal	A Internal Shutter
		3 Beige		

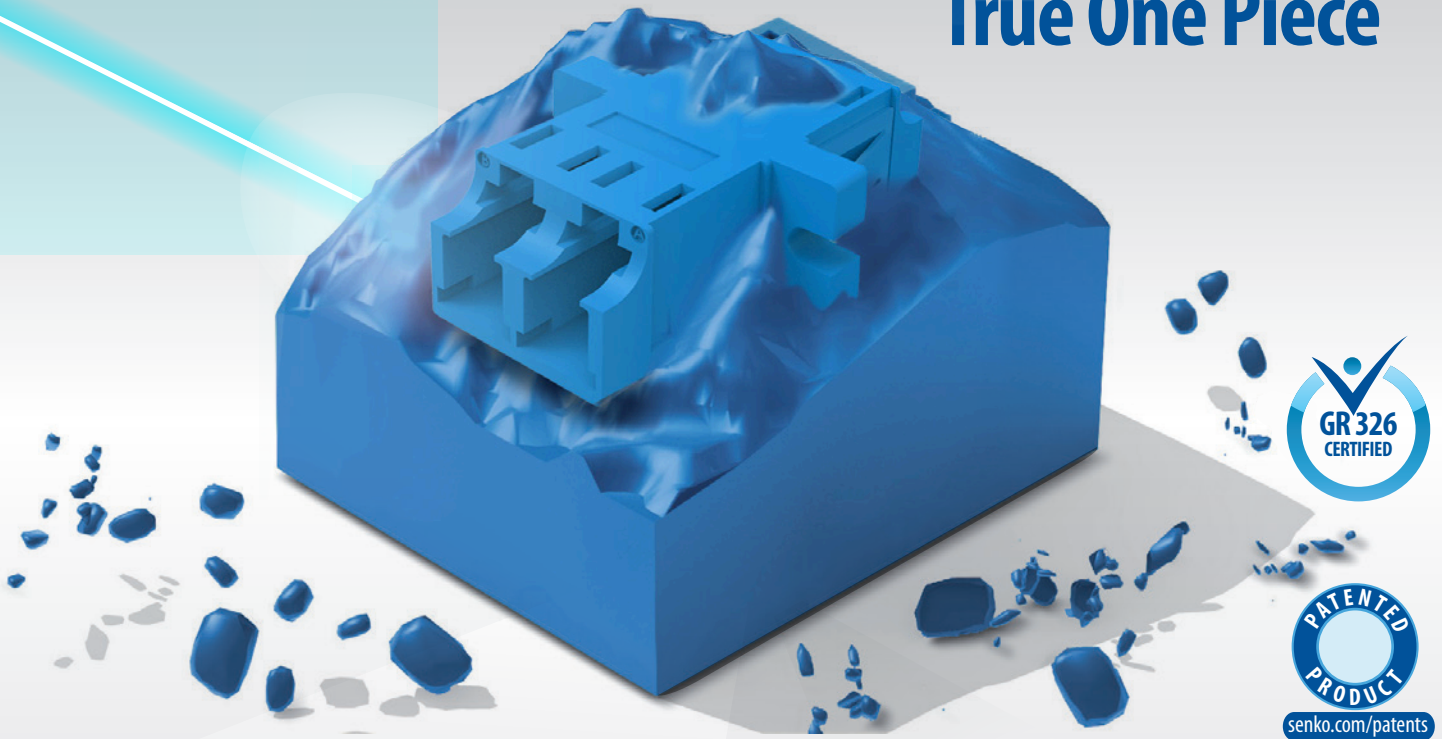
988M - 3S11 - N ORDER CODE example



LC One Piece Duplex Adapters

LC TOP ADAPTER

True One Piece



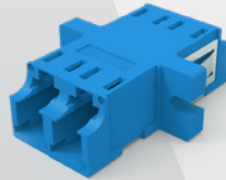
Meet the New, More Rugged, True One Piece (TOP) Design

FEATURES

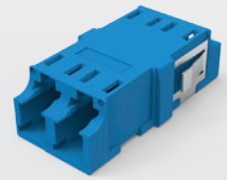


External/Internal
shutter capable

SENKO introduces its new line of True One Piece adapters. Available in both flange and no flange configurations. The True One Piece design has proven increased side loading performance over conventional adapters.



LC TOP Adapter with flange

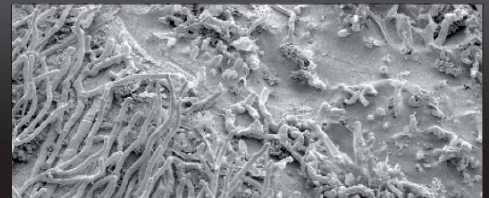


LC TOP Adapter no flange

FUNGUS RESISTANCE

Over a period of time it is possible that Polymeric materials can grow fungus on the surface, (see image of a Polymeric sample with fungus growth present) but according to the requirements of Telcordia GR-326 it stipulates that samples shall not support fungus growth per ASTM G21-96. A rating of 0 (zero) is required.

NOTE: This requirement applies to the connector (including boots) and adapter plastic components. SENKO premium connectors are manufactured using materials that do not support this fungus growth, after independent testing of SENKO connectors are rated at 0 (zero).



LC TOP ADAPTER WITH SC FOOT PRINT

TOP (True One Piece) Adapter 98C series

Senko introduces its new line of True One Piece adapters. Available in both flange and no flange configurations. The True One Piece

design has proven increased side loading performance over conventional adapters.

CODE	TYPE	COLOR	SLEEVE TYPE	SHUTTER
98C	1 Simplex	1 Blue	1 Zirconia	N No Shutter
	3S Duplex with Flange	2 Black		A Internal Shutter (simplex only)
	4S Duplex No Flange	3 Green		
	AS 12 Port with Flange	7 Violet OM4 (MOQ Req)		
	BS 12 Port No Flange	8 Beige		
		9 Aqua OM3		

98C - 3S11 - N ORDER CODE example

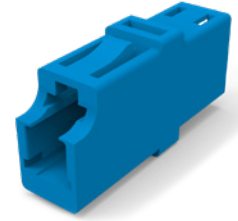


LC One Piece Adapter, No Weld Type

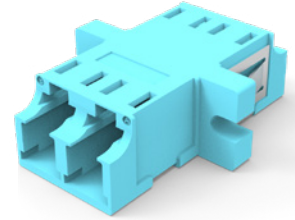


LC Standard Adapter, Welded Type

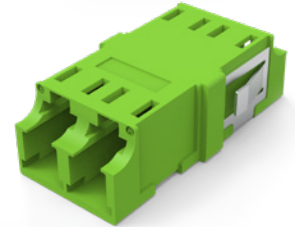
The new one piece housing design prevents breaking of the adapter due to the absence of ultrasonic weld type construction.



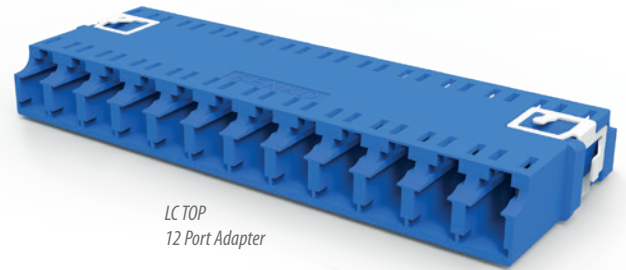
LC TOP Adapter No Shutter



LC TOP Adapter with Flange



LC TOP Adapter no Flange



LC TOP 12 Port Adapter

LC TOP ADAPTER FEATURES

Features:

- One piece solid body design for increased strength over standard welded adapters
- SC Foot print for Duplex adapters
- Anti-Fungus plastic UL94 V-0
- Recesses on both sides of the adapter allow the current external shutter to be used



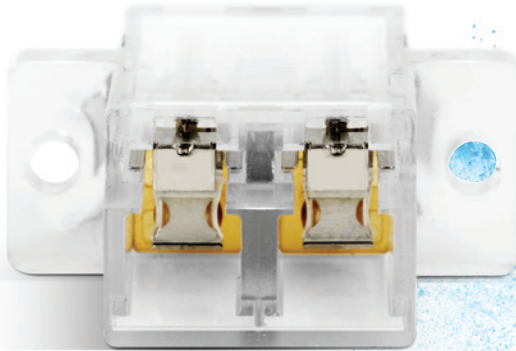
LC CRIMP TOOL

CODE	CONNECTOR TYPE
CRT	701 LC/MU Dual Crimp Tool
	705 SC/LC 1.2mm Connectors

CRT - 701 ORDER CODE example

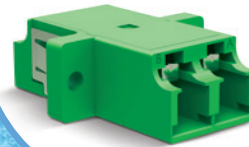


LC ADAPTER INNER SHUTTER



It keeps adapter's interior clean from dust

Dust and Laser Protection



Features:

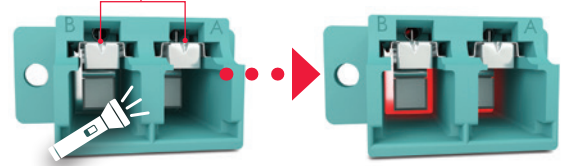
- Provides eye safety by attenuating laser light when the mated connector is removed
- 100% automatic shutter mechanism
- Compatible with standard LC connectors
- Keeps adapter's interior clean from dust
- SC footprint
- Light visible through the adapter

LC Adapter Traceability



When trying to trace the adapter using a visible light source, you can see the red light glowing through the adapter sleeve.

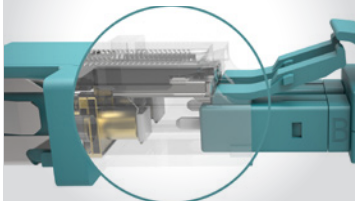
Automatic shutter mechanism



LC Adapter with Inner Shutter Step by Step

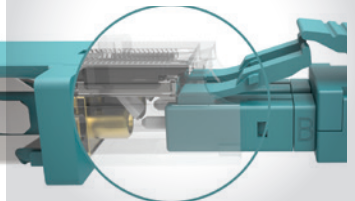
▶ 1 - Connector insertion

When the connector is inserted into the adapter it compresses the springs, opening the internal shutter.



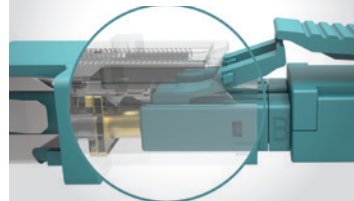
▶ 2 - Shutter opening

The internal shutter opens, and due to the special design of the shutter, it will not touch the ferrule end face.



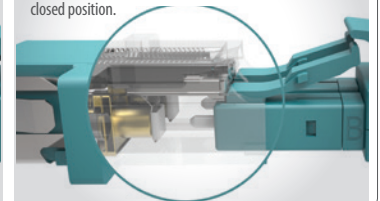
▶ 3 - Connector mated with adapter

The opening of the shutter allows for the ferrule to be inserted inside the adapter sleeve.

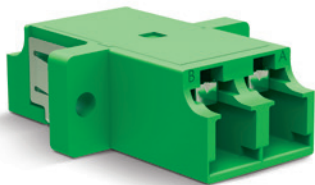


▶ 4 - Connector removal

As the connector is removed from the adapter, the shutter spring automatically returns the internal shutter to the closed position.



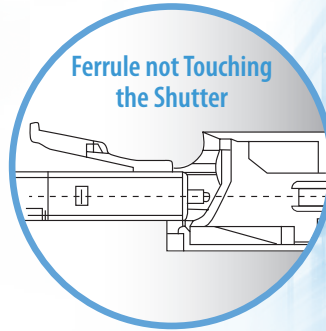
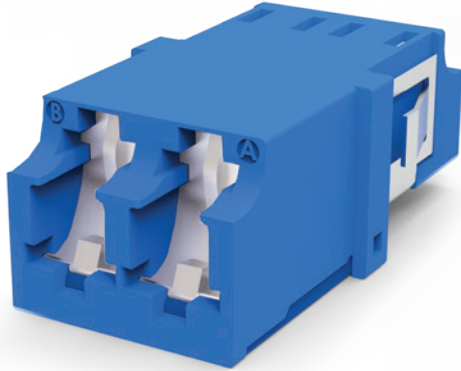
LC SHUTTERED ADAPTER



ADAPTER TYPE		HOUSING COLOR		SLEEVE MATERIAL		LASER WARNING MARK	
985-3S	Duplex with Flange	1	Blue	1	ZR	A	Without Mark
985-4S	Duplex without Flange	2	Black			C	With Mark
985-5S	Quad with Flange	3	Green				
985-6S	Quad without Flange	5	Lime Green (OMS)				
		7	Violet (OM4)				
		8	Beige				
		9	Aqua (M3)				

985-3S - 11A ORDER CODE example

LC ADAPTER WITH DUST SHUTTER



Features:

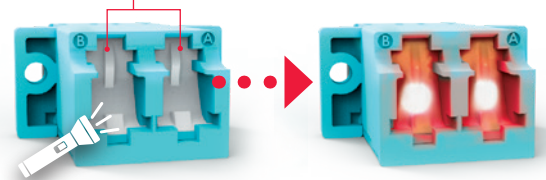
- 100% automatic shutter action
- IP5X dust protection
- SC footprint on non-shuttered side
- Compatible with standard LC connectors
- Adapter traceability with Visible Light Source

LC Adapter Traceability



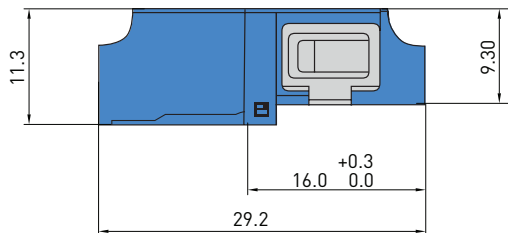
When trying to trace the adapter using a visible light source, you can see the red light glowing through the adapter sleeve.

Automatic shutter mechanism



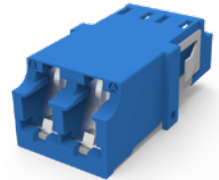
ADAPTER CODE	TYPE	HOUSING COLOR	SLEEVE TYPE	SHUTTER	
98D	LC Adapter	3 Duplex with Flange	1 Blue	1 Zirconia	A Shutter
	with Dust Shutter	4 Duplex No Flange	3 Green		
		5 Quad with Flange	7 Violet OM4 (MOQ Req)		
		6 Quad No Flange	9 Aqua OM3		

98D - 311 - A ORDER CODE example

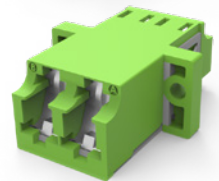


Fits in SC Footprint

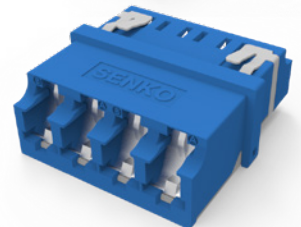
LC Duplex Adapter with Dust Shutter



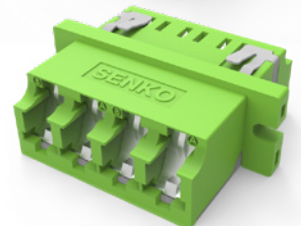
LC Duplex Adapter with Dust Shutter



LC Quad Adapter with Dust Shutter



LC Quad Adapter with Dust Shutter



LC KEYED CONNECTOR AND ADAPTER



LC Keyed Connectors and Matching Adapters

SENKO Keyed LC Connector Solution offers mechanical network security for organizations wanting to segregate networks due to privacy or security concerns.

Features:

- LC Keyed connectors and adapters prevent improper connection of separate networks with common access points
- LC Keyed products feature twelve color-coded, keyed designs to limit improper connections networks
- Each LC Keyed connector will mate only with same-color LC Keyed adapter

CODE	TYPE	FERRULE I.D.	COLOR/CLIP	HOUSING COLOR & KEY	BOOT	BOOT COLOR									
93	LC Keyed Connector	5	Simplex (Un-assembled)	153	SM: 125µm	1	Blue	A	Pink	K	Turquoise	B	MINI Boot 900µm	1	White
		6	Duplex (Un-assembled)	251	MM: 127µm	2	Beige	B	White	L	Magenta	C	MINI Boot 2.0mm		
		7	Simplex (Assembled)			5	Aqua	C	Yellow	M	Olive	D	MINI Boot 3.0mm		
		8	Duplex (Assembled)					D	Red			4	2.0mm Round		
								E	Orange			6	3.0mm Boot		
								F	Violet			7	Flex-Angle 2.0mm		
								G	Gray			9	Flex-Angle 3.0mm		
								H	Cobalt						
							J	Brown							

936 - 251 - 2A41 ORDER CODE example

CODE	TYPE	COLOR & KEY	SLEEVE TYPE						
977	LC Keyed Adapter	4S	Duplex with No Flange	A	Pink	H	Cobalt	1	Zirconia Straight Split
				B	White	J	Brown		
				C	Yellow	K	Turquoise		
				D	Red	L	Magenta		
				E	Orange	M	Olive		
				F	Violet	U	Black (Universal)		
				G	Gray				

977 4SD1 ORDER CODE example

LC EZ-FLIP

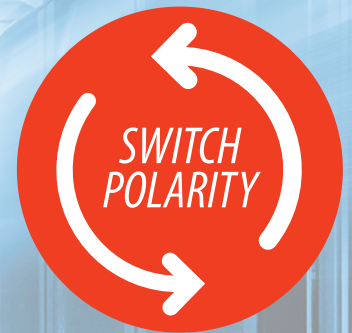
The Duplex LC connector for round cable, which allows the polarity to be switched without connector re-termination or twisting of the fiber.

Features:

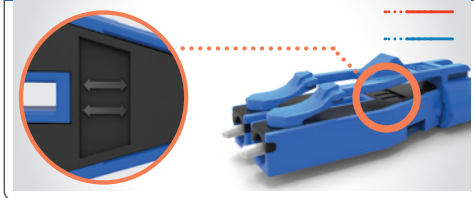
- Preassembled for reduced termination and kitting time
- 20% time savings vs standard LC DX
- Push/pull tab ready for high density applications
- Uniboot connector aids cable management
- Polarity reversal without twisting fiber
- Visual indication for polarity check
- Short boot design for reduced connector length



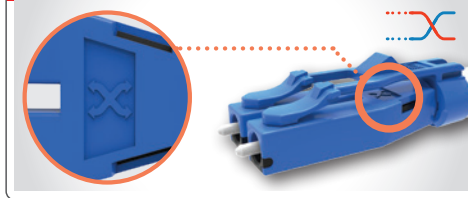
Polarity reversible connectors



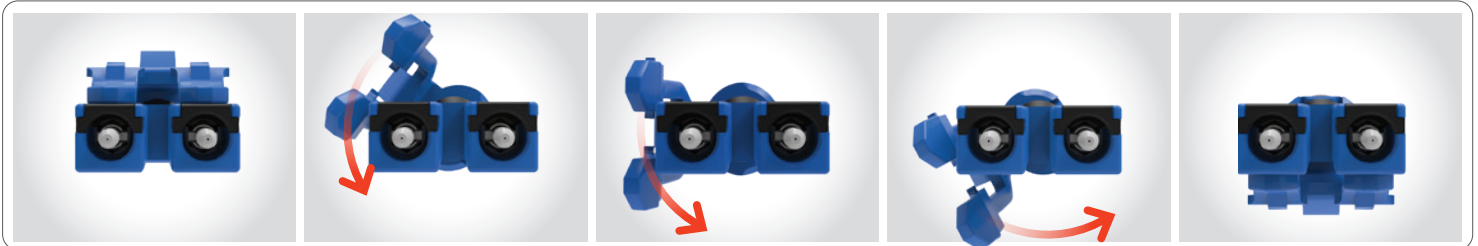
REGULAR POLARITY



CROSSED POLARITY



How to switch:



LC EZ-FLIP PC 2MM, 3MM

CONNECTOR TYPE	FERRULE SIZE	HOUSING COLOR	BOOT TYPE	BOOT COLOR
94Q EZ Flip LC Uniboot	151 SM 125.5µm	1 Blue	C 2.0 mm	1 White
Premium Unassembled	251 MM 127µm	2 Beige	D 3.0 mm	2 Blue
94Q EZ Flip LC Uniboot		5 Aqua	7 Flex-Angle 2.0mm	3 Black
Premium Preassembled		6 Heather violet	9 Flex-Angle 3.0mm	

94Q - 151 - 1C1 ORDER CODE example

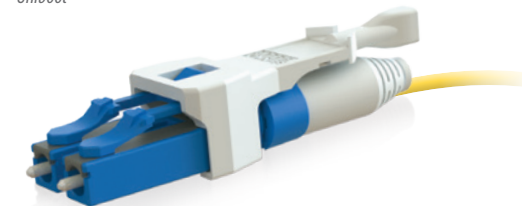
TYPE	
94Q-HDPP-34-W	EZ Flip LC Uniboot, Push-Pull tab 34mm
94Q-HDPP-51-W	EZ Flip LC Uniboot, Push-Pull tab 51mm
94Q-HDPP-67-W	EZ Flip LC Uniboot, Push-Pull tab 67mm

94Q-HDPP-34-W ORDER CODE example

Note: Push pull tab is optional, connector can be used with/without tabs



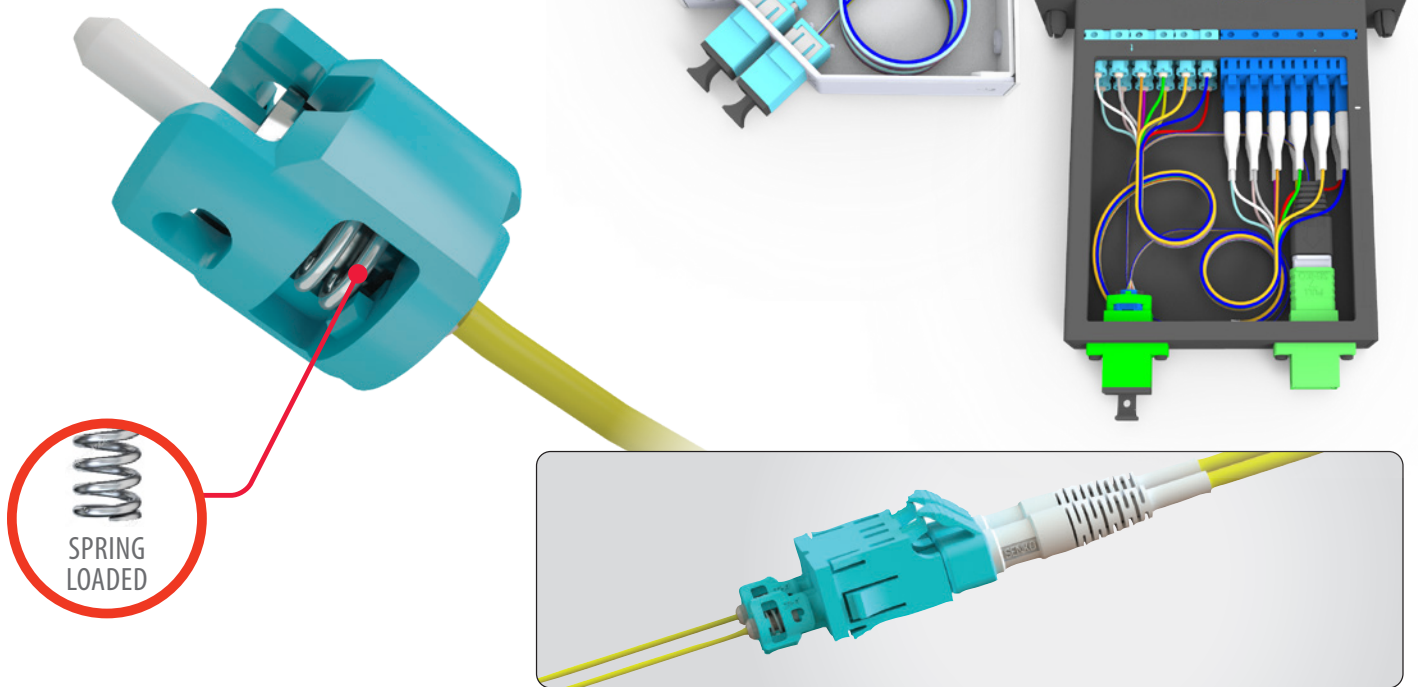
LC EZ-Flip Uniboot



LC EZ-Flip Push-Pul Tab

MICRO LC CONNECTOR

Micro LC
Bayonet Style Connector



The unique combination of small size and bayonet style connectivity makes the Micro LC Connector the right choice for BTW applications. The Micro LC Solution is a complete family of products designed to offer the optimal, high-density solution for private and public networks.

Features:

- Compatible to generic LC
- Significant space saving on back end of faceplate
- High density
- Simple bayonet mechanism
- Cost effective
- IEC Grade B compatible

Locking System



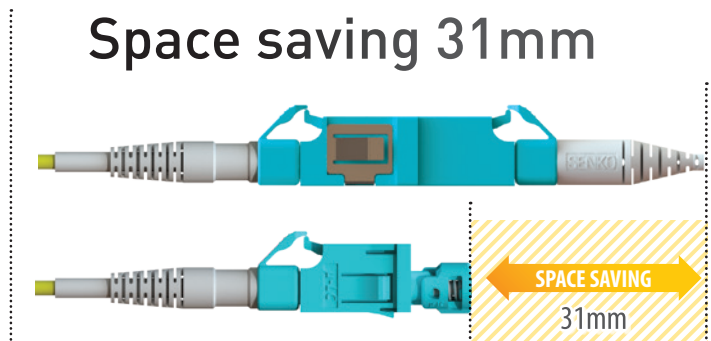
Stackable adapters



Space saving



Space saving 31mm

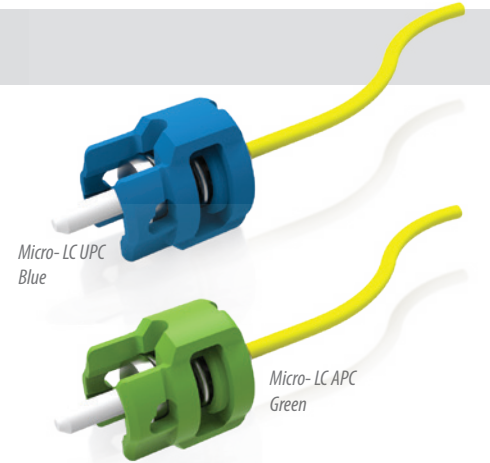


MICRO LC CONNECTOR

CODE	FERRULE TYPE	HOUSING
92B uLC Premium	153 SM: Premium 125µm	T Beige
	159 SM: Low Loss 125µm	A Aqua
	251 MM: Premium 127µm	L Blue

CODE	FERRULE TYPE	HOUSING
94B uLC APC Premium	153 SM: Premium 125µm	G APC-Green
93B uLC APC Premium Separate Piece	159 SM: Low Loss 125µm	

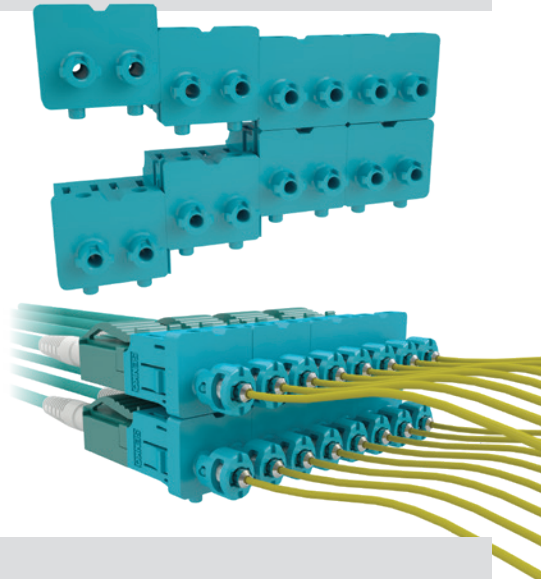
94B - 153 - G ORDER CODE example



MICRO LC to LC STACKABLE ADAPTER

CONNECTOR TYPE	HOUSING COLOR	STYLE	POSITION	SHUTTER
96B-P Duplex	1 Blue	1 Vertical Stackable	CO Center Adapter Duplex	N No Shutter
	2 Black	4 Not Vertical Stackable	L1 Left Adapter Duplex Flange	A Inner Shutter
	3 APC Green	7 Top Flat, Bottom Vertical Stackable	LO Left Adapter Duplex No Flange	
	8 Beige	8 Bottom Flat, Top Vertical Stackable	R1 Right Adapter Duplex Flange	
	9 Aqua	9 Top and Bottom Flat, Not Stackable	RO Right Adapter Duplex No Flange	

96B-P - 14 - CON ORDER CODE example



MICRO LC to LC ADAPTER

CODE	HOUSING COLOR	TYPE
99B-P	1 Blue	1 Duplex with Flange
	2 Black	0 Duplex No Flange
	3 APC Green	
	8 Beige	
	9 Aqua	

99B-P - 2 - 1 ORDER CODE example



MICRO LC INSTALLATION-REMOVAL TOOL

CODE	DESCRIPTION
RMT-702	Installation-removal tool

RMT-702 ORDER CODE example



1 PC Connector (510 Series)

MU ONE PIECE CONNECTOR



MU with 2.0mm Cable Boot



MU with 1.0mm Fiber Boot



MU with 1.0mm Fiber Short Boot

CONNECTOR	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
510 MU Connector	113 SM: 125µm	1 Blue	1 2.0mm Cable	1 Blue
	211 MM: 127µm	2 Black	2 1.0mm Fiber	2 Black
		3 Red	4 1.6mm Cable	3 Green
		4 Beige	5 1.0 Fiber Short	4 Red
		5 Brown		5 Gray
		6 Yellow		6 Yellow
		0 MU-J*		7 White
				8 Beige
				9 Lavender

510 - 113 - 519 ORDER CODE example

Note: Other ferrule ID size are available
SM 126µm SM 125.5µm

Features:

- NTT-MU hardware compatibility
- NTT & JIS compliance
- Pre assembled 1pc style
- Compact, pull-proof design
- One piece construction
- Tunable zirconia connector ferrule
- Corrosion resistant body
- UL-rated plastic housing and boot
- Universal Duplex Clip
- Low insertion loss & back reflection

Connector Kit (511 Series)

MU CONNECTOR KIT



MU Kit with 2.0mm Cable Boot



MU Kit with 1.0mm Fiber Short Body

CODE	FERRULE TYPE	HOUSING	BOOT TYPE	BOOT COLOR
511 MU Kit	xxx	5 Brown	1 2.0mm Cable	9 Lavender
		0 MU-J*	3 1.0mm Fiber Short Body	

511 - xxx - 519 ORDER CODE example

Note: 1. Custom configurations available upon request
2. Ferrule to be ordered separately

MU ADAPTER

MU Adapter

CODE	TYPE	SLEEVE
MUA	1 Simplex	ZA Zirconia
	2 Duplex	
	3 8-Port	

MUA - 1 - ZA ORDER CODE example

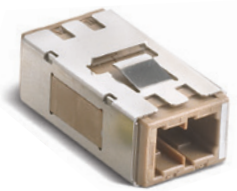
Features:

- Compact design
- Low insertion and return loss and back reflection*
- NTT-MU hardware compatibility
- Corrosion resistance reflection
- NTT & JIS compliance
- High precision alignment

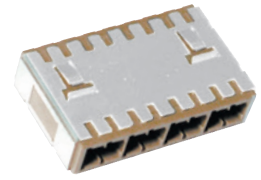
Simplex



Duplex



8-Port



MU BACKBOARD AND PACKAGE HOUSING

MU Back Board

CODE	TYPE	HOUSING TYPE
MUB	2 Duplex	1 2.4mm Back Board Thickness
	8 8-Port	2 3.2mm Back Board Thickness
		3 Package Housing

MUB - 2 - 1 ORDER CODE example

Features:

- Compact design
- Low insertion and return loss and back reflection*
- NTT-MU hardware compatibility
- Corrosion resistance reflection
- NTT & JIS compliance
- High precision alignment

Duplex Backboard Housing



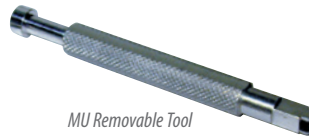
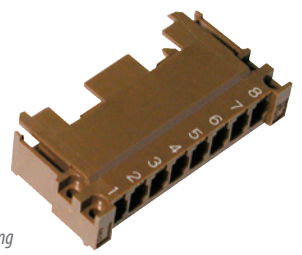
8-ports Backboard Housing



Duplex Package Housing



8-port Package Housing



CODE	TYPE
MU Sleeve Holder	SH

MU - SH ORDER CODE example

CODE	TYPE
MU Removable Tool	JRT

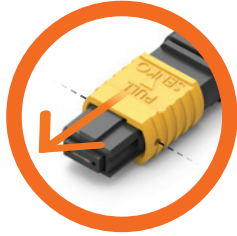
MU - JRT ORDER CODE example

Types and Loss Data

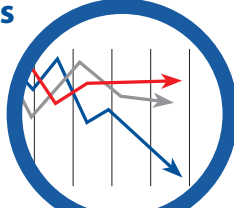
MPO PLUS CONNECTOR

MPO PLUS[®]

Removable Housing



Low Insertion Loss



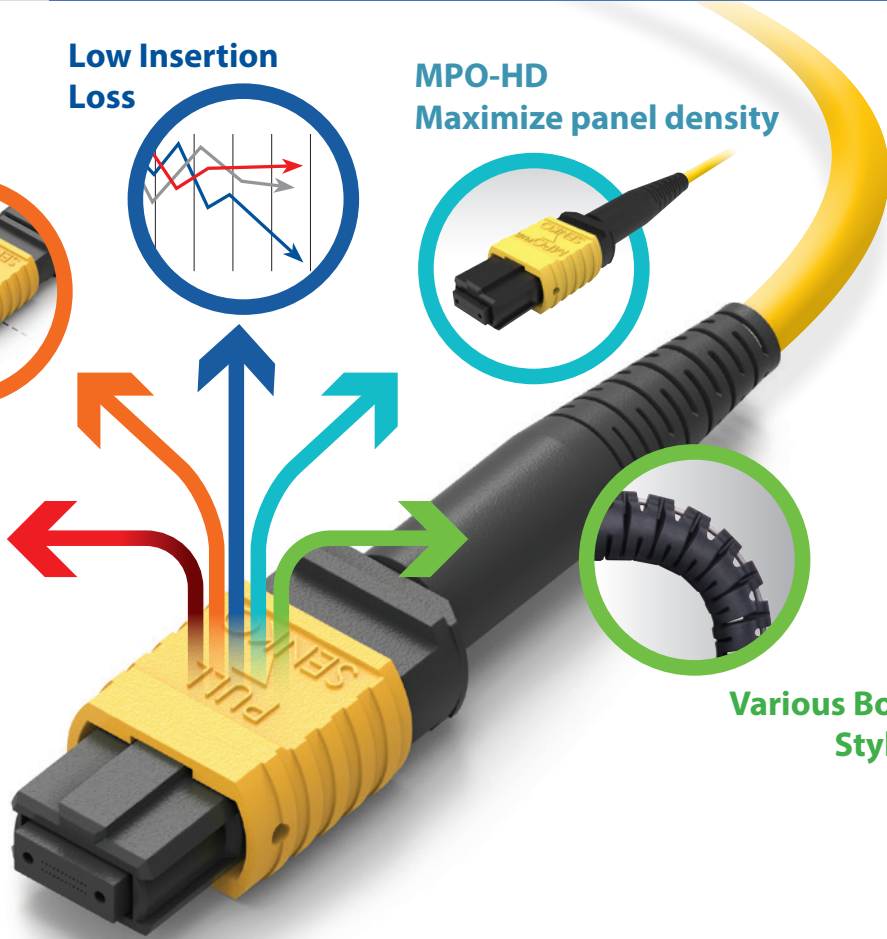
MPO-HD
Maximize panel density



IP-MPO
Weatherproof
Connector



Various Boot Styles



**New MPO Plus:
More Features compared
to Conventional MPO**

- Lower Insertion loss on SM Typical 0.1dB
- Lower Insertion loss on MM Typical 0.08dB
- Meets and exceeds Telcordia GR-1435
- Removable Housing
- Metal Pin Holder
- Oval Spring
- 20N Spring for 24F MM Ferrule
- Spring Push with Slit for easier assembly
- MPO Plus Premium Mini for High Density Application
- Flex angle boot and other boot styles
- IP-MPO Outdoor rated IP-68 housing
- Stackable MPO Adapter

MPO Premium Mini
HIGH-DENSITY CONNECTOR



MAXIMIZE
PANEL
DENSITY

IP-MPO
WEATHERPROOF CONNECTOR



MPO
FLEX ANGLE BOOT



BEND
ANY
ANGLE

MPO
ADAPTERS



Features:

- High precision guide pins for exact alignment
- Compact design, up to 24 fiber ribbons
- IEC 61754-7 Compliant*
- Telcordia GR-1435-CORE compliant*
- Polishing does not require diamond film

MPO+PLUS®

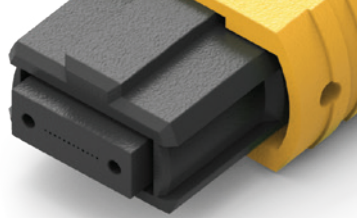
MT FERRULE

The MPO connector offers up to 24 times the density of standard connectors, providing significant space and cost savings. MPO Connectors utilize precision molded MT Ferrules, with metal guide pins and precise housing dimensions to ensure fiber alignment when mating. MPO Connector housing are available in

Green (for SM) Yellow (for SM Super Low loss), Beige (for MM) and Aqua (for OM3 Fiber). Ferrule available in 4, 8, 12 and 24 fiber hole configuration. Ferrules are available for SM Standard, SM Super Low Loss, MM Standard and MM Low Loss. Boots are available for Ribbon Cable, Ribbon fiber, Round boot and the patent SENKO Flex angle boot.

TYPE	DESCRIPTION	IL MAX	IL TYPICAL	BACK REFLECTION
------	-------------	--------	------------	-----------------

SM Super Low Loss
MT Ferrule

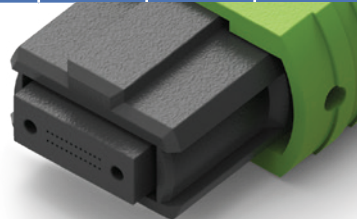


SLS-12	Super Low Loss SM 12 Fiber	0.25dB	0.10dB	60dB
SLS-8	Super Low Loss SM 8 Fiber	0.25dB	0.10dB	60dB
Operating Temperature		-40°C ~ +85°C		

Note: 1. All numbers are only achievable when using SENKO recommended reference jumper, splicing process and testing method
2. SM Low Loss Max IL 0.25dB to be 95% of all fiber
3. To use SM Low Loss Guide Pin

TYPE	DESCRIPTION	IL MAX	IL TYPICAL	BACK REFLECTION
------	-------------	--------	------------	-----------------

SM Standard
MT Ferrule



SM-24	SM Standard 24 Fiber	1.0dB	0.25dB	60dB
SM-12	SM Standard 12 Fiber	0.70dB	0.20dB	60dB
SLS-8	SM Standard 8 Fiber	0.70dB	0.20dB	60dB
Operating Temperature		-40°C ~ +85°C		

Note: All numbers are only achievable when using SENKO recommended reference jumper, splicing process and testing method

MPO FLAT RIBBON CABLE
Single Mode

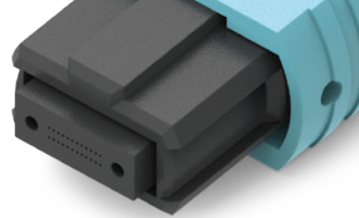


MPO BARE RIBBON FIBER
Multi Mode



TYPE	DESCRIPTION	IL MAX	IL TYPICAL	BACK REFLECTION
------	-------------	--------	------------	-----------------

MM Super Low Loss
MT Ferrule

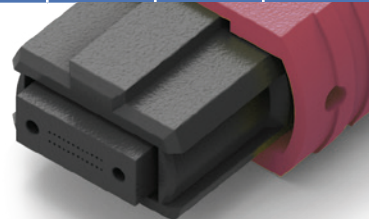


SLM-24	Super Low Loss MM 24 Fiber	0.35dB	0.15dB	25dB
SLM-12	Super Low Loss MM 12 Fiber	0.25dB	0.08dB	25dB
SLM-8	Super Low Loss MM 8 Fiber	0.25dB	0.08dB	25dB
Operating Temperature		-40°C ~ +85°C		

Note: 1. All numbers are only achievable when using SENKO recommended reference jumper, splicing process and testing method
2 MM Low Loss Max IL 0.25dB to be 95% of all fiber
3. To use SM Guide Pin

TYPE	DESCRIPTION	IL MAX	IL TYPICAL	BACK REFLECTION
------	-------------	--------	------------	-----------------

MM Standard
MT Ferrule



MM-32	MM Standard 32 Fiber	0.60dB	0.25dB	25dB
MM-16	MM Standard 16 Fiber	0.60dB	0.20dB	25dB
MM-24	MM Standard 24 Fiber	0.50dB	0.20dB	25dB
MM-12	MM Standard 12 Fiber	0.50dB	0.15dB	25dB
MM-8	MM Standard 8 Fiber	0.50dB	0.15dB	25dB
Operating Temperature		-40°C ~ +85°C		

Note: All numbers are only achievable when using SENKO recommended reference jumper, splicing process and testing method

MPO BARE RIBBON SHORT
SUPER LOW LOSS
Single Mode



MPO ROUND 3mm BOOT
Multi Mode



Kit with Ferrule

MPO PLUS STANDARD CONNECTOR

MPO PLUS[®]



PATENT PENDING DESIGN



MPO Green with Flat Ribbon Cable Boot



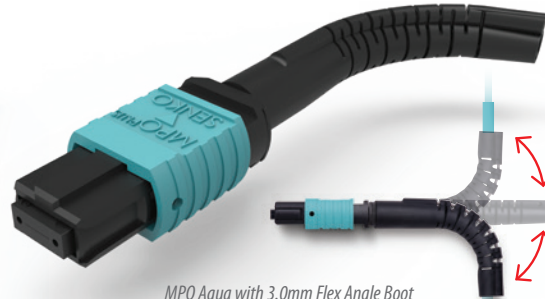
MPO Yellow with Bare Ribbon Short Boot



MPO Beige with Bare Ribbon Boot



MPO Violet with 3.0mm Boot



MPO Aqua with 3.0mm Flex Angle Boot

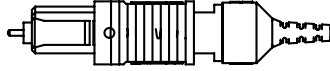
4F ~ 24F TYPE	GENDER/PIN		FERRULE TYPE		FIBER COUNT		HOUSING COLOR		BOOT/CABLE		
702F	F	Female	SS	SM Standard	04	4F	Y	SM Low Loss Yellow	01	Bare Ribbon Fiber	Bare Ribbon Boot
	M	Male	SL	SM Super Low Loss	08	8F	G	SM Green	02	Bare Ribbon Fiber	Bare Ribbon Short Boot
			MS	MM Standard	12	12F	V	MM OM4 Heather Violet	11	Flat Ribbon Cable	Flat Ribbon Cable Boot
			ML	MM Super Low Loss	24	24F	A	MM OM3 Aqua	21	2.0mm Round	2.0mm Boot with Crimp
							T	MM Beige	22		2.0mm Boot without Crimp
							B	MM Black	31	3.0mm Round	3.0mm Boot
									32		3.0mm Flex Angle Boot
									41	3.6mm Round	3.6mm Boot
									42		3.6mm Flex Angle Boot
									51	Other Round	4.5mm Round Boot
									52		5.0mm Round Boot
									53		5.5mm Round Boot

702F - F - MS12 - A31 ORDER CODE example

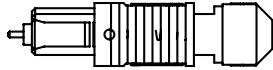
- Note:**
1. Custom configurations available upon request.
 2. Please visit Senko.com/mposelect for other combinations.
 3. 3.8mm and 4.0mm boot option available.

Ribbon Boots

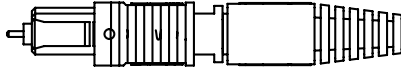
01 Bare Ribbon



02 Bare Ribbon Short

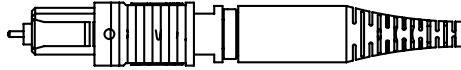


11 Flat Ribbon Cable

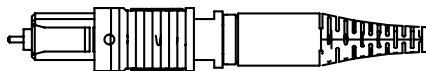


2.0mm Round Boots

21 2.0mm Boot with Crimp

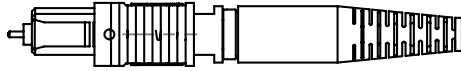


22 2.0mm Boot without Crimp

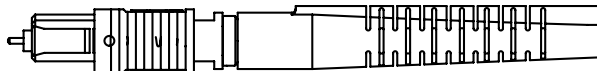


3.0mm Round Boots

31 3.0mm Boot

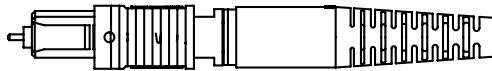


32 3.0mm Flex Angle

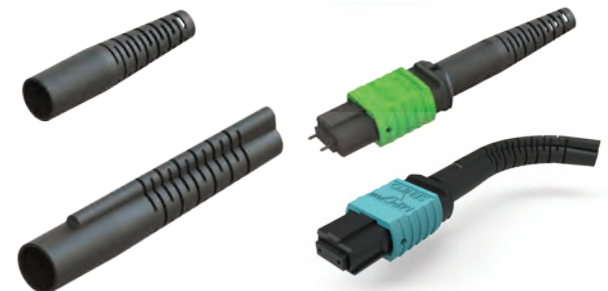
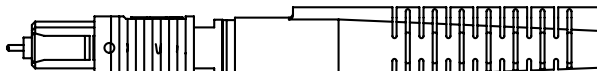


3.6mm Round Boots

41 3.6mm Boot

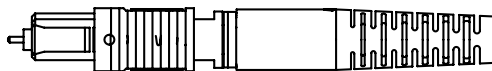


42 3.6mm Flex Angle



4.5/5.0/5.5 Round

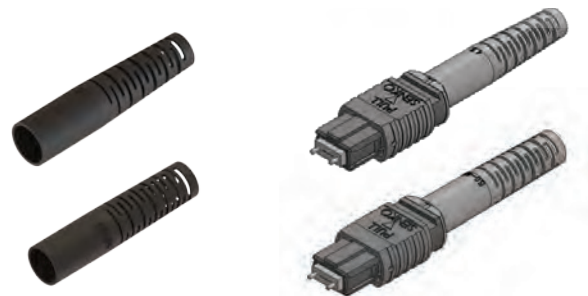
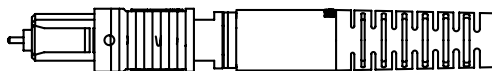
51 4.5mm Boot



52 5.0mm Boot



53 5.5mm Boot



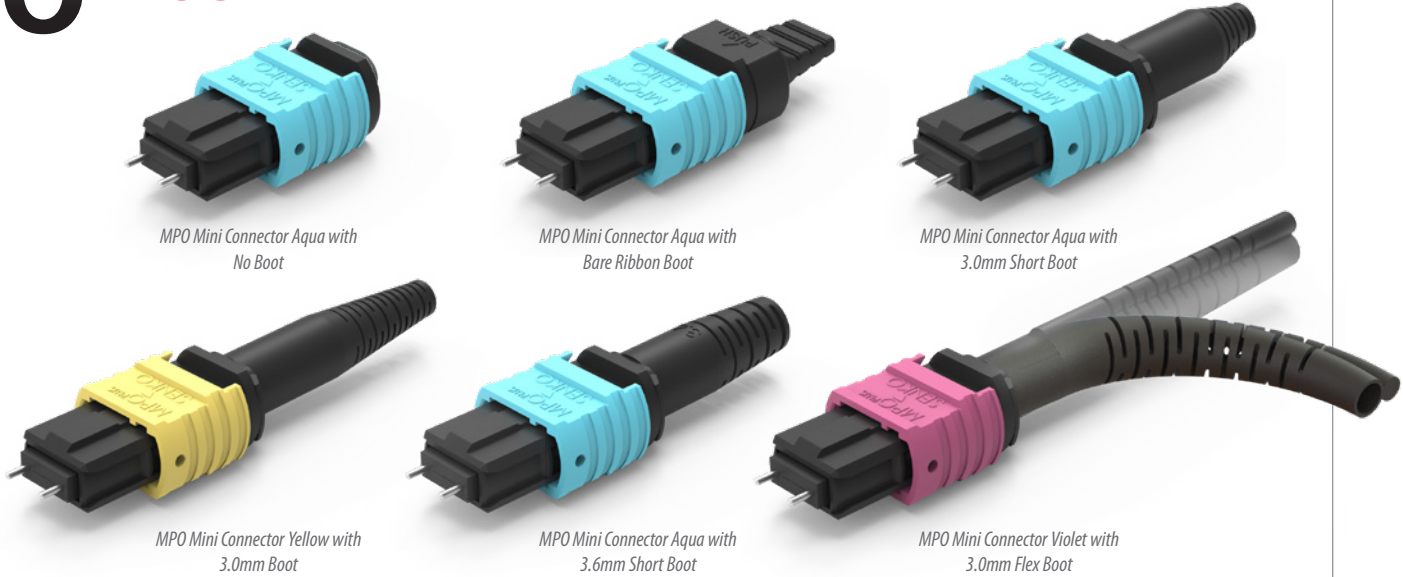
Note: When using Flex Angle Boot, always maintain the proper bend radius per the cable manufacturer's specification.

MPO PLUS PREMIUM MINI CONNECTOR

MPO+PLUS®



senko.com/patents



MPO Mini Connector Aqua with No Boot

MPO Mini Connector Aqua with Bare Ribbon Boot

MPO Mini Connector Aqua with 3.0mm Short Boot

MPO Mini Connector Yellow with 3.0mm Boot

MPO Mini Connector Aqua with 3.6mm Short Boot

MPO Mini Connector Violet with 3.0mm Flex Boot

MPO MINI	GENDER/PIN		FERRULE TYPE		FIBER COUNT		HOUSING COLOR		BOOT/CABLE	
703F	G	Female	SS	SM Standard	04	4F	Y	SM Low Loss Yellow	00	Bare Ribbon Fiber
		Gender Changeable	SL	SM Super Low Loss	08	8F	G	SM Green	01	Bare Ribbon Boot
			MS	MM Standard	12	12F	V	MM OM4 Heather Violet	21	2.0mm Round
			ML	MM Super Low Loss	24	24F	A	MM OM3 Aqua	22	2.0mm Boot with Crimp
							B	MM Black	22	2.0mm Boot without Crimp
									32	3.0mm Round
									A1	3.0mm Flex Angle Boot
									A1	3.0mm Boot (GR Metal Back Post)
									33	3.0mm Short Boot
									42	3.6mm Round
									42	3.6mm Flex Angle Boot
									46	3.6mm Short Boot
									51	4.5mm Round Boot
									52	Other Round
									52	5.0mm Round Boot
									53	5.5mm Round Boot

703F - G - SS12 - G33 ORDER CODE example

- Note:**
1. Custom configurations available upon request.
 2. Gender changeable pins sold separately. Two pins required for one MPO connector. See P.51 for details.
 3. MPO-HD push pull tab option sold separately.
 4. Please visit Senko.com/mposelect for other combinations.
 5. 3.8mm and 4.0mm boot option available.
 6. GR-1435 certified on 12 Fiber SM Super Low Loss with A1 boot and metal back post only.

MPO PLUS PREMIUM MINI PUSH PULL TAB

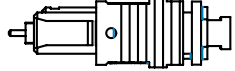



TYPE	
703-HDPP-34-W	MPO Plus Mini Push Pull Tab 34mm White
703-HDPP-50-W	MPO Plus Mini Push Pull Tab 50mm White
703-HDPP-64-W	MPO Plus Mini Push Pull Tab 64mm White

703-HDPP-50-W ORDER CODE example


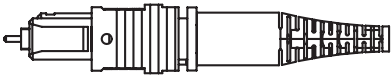
- Note:**
1. Gender Changeable Tool available - see P.51 for details.
 2. Push Pull tab can be used with the MPO Plus Premium Mini 12/24F.

Ribbon Boots

- 00 Bare Ribbon 
- 01 Bare Ribbon Short 

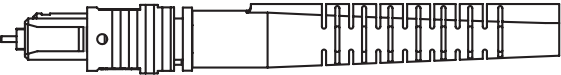
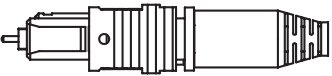
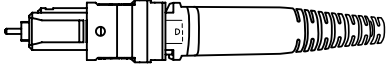


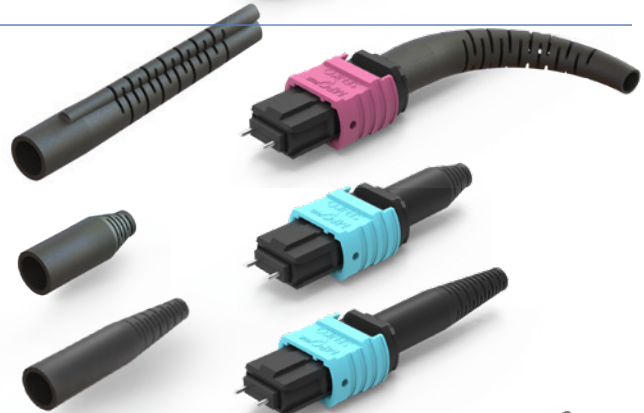
2.0mm Round Boots

- 21 2.0mm Boot with Crimp 
- 22 2.0mm Boot without Crimp 


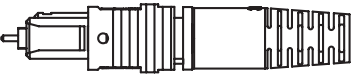


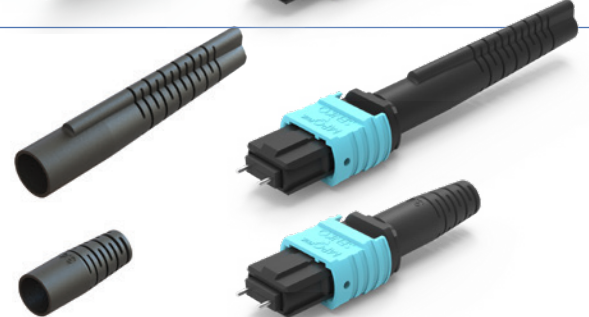
3.0mm Round Boots

- 32 3.0mm Flex Angle 
- 33 3.0mm Short 
- A1 3.0mm Boot 


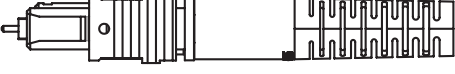



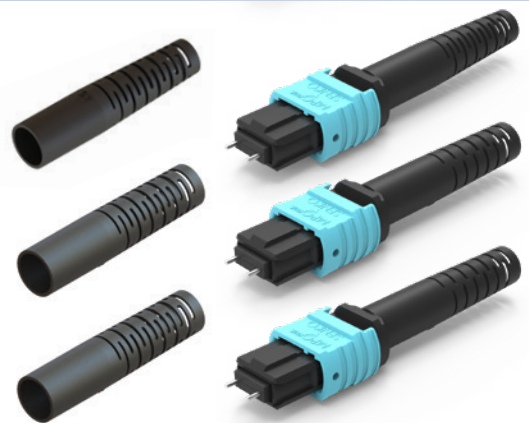
3.6mm Round Boots

- 42 3.6mm Flex Angle 
- 46 3.6mm Short 



4.5/5.0/5.5 Round

- 51 4.5mm Boot 
- 52 5.0mm Boot 
- 53 5.5mm Boot 



Note: When using Flex Angle Boot, always maintain the proper bend radius per E-3.4 the cable manufacturer's specification.

16F / 32F Type

MPO PLUS STANDARD & PREMIUM MINI CONNECTOR

MPO+PLUS®



senko.com/patents



MPO Mini Connector Aqua with 3.0mm Short Boot



MPO Mini Connector Aqua with 3.6mm Short Boot



MPO Mini Connector Aqua with 4.5mm Boot



16 Fibers MPO Connector with 3.6mm Flex Angle Boot



16 Fibers MPO Connector with Bare Ribbon Boot



16 Fibers MPO Connector with 3.6mm Boot

16/32TYPE		GENDER/PIN		FERRULE TYPE		FIBER COUNT		HOUSING COLOR		BOOT/CABLE		
712F	Standard	F	Female	SS	SM Standard	16	16F	Y	SM Low Loss Yellow	01	Bare Ribbon Fiber	Bare Ribbon Boot
713F	Mini	M	Male	SL	SM Super Low Loss	32	32F	G	SM Green	02	Bare Ribbon Fiber	Bare Ribbon Short Boot
				MS	MM Standard			V	MM OM4 Heather Violet	31	3.0mm Boot	3.0mm Boot
				ML	MM Super Low Loss			A	MM OM3 Aqua	32		3.0mm Flex Angle Boot
								T	MM Beige	33		3.0mm Short Boot
								B	MM Black	41		3.6mm Boot
										42	3.6mm Boot	3.6mm Boot
										46		3.6mm Flex Angle Boot
										51	Other Round	3.6mm Short Boot
										52		4.5mm Round Boot
										53		5.0mm Round Boot
												5.5mm Round Boot

712F - F - MS16 - A31 ORDER CODE example

- Note:**
1. Custom configurations available upon request.
 2. Please visit Senko.com/mposelect for other combinations.
 3. 3.8mm and 4.0mm boot option available.

MPO PLUS LATCH CONNECTOR

MPO-PLUS[®]



MPO Latch Connector
with 3.0mm Short Boot



MPO Latch Connector
with Bare Ribbon Boot



MPO Latch Connector
with Flex Angle Boot

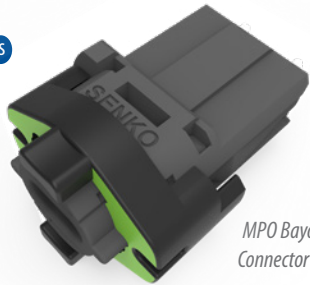
MPO LATCH	GENDER/PIN		FERRULE TYPE		FIBER COUNT		HOUSING COLOR		BOOT/CABLE		
704F	F	Female	SS	SM Standard	04	4F	B	MM Black	00	Bare Ribbon Fiber	Bare Ribbon "No" Boot
	M	Male	SL	SM Super Low Loss	08	8F			01	Bare Ribbon Fiber	Bare Ribbon Boot
	G	Female	MS	MM Standard	12	12F			21	2.0mm Round	2.0mm Boot without Crimp
		Gender Changeable (pin sold separately)	ML	MM Super Low Loss	24	24F			22	2.0mm Round	2.0mm Boot with Crimp
									32	3.0mm Round	3.0mm Flex Angle Boot
									33	3.0mm Round	3.0mm Short Boot
									41	3.6mm Round	3.6mm Boot
									42	3.6mm Round	3.6mm Flex Angle Boot
									46	3.6mm Round	3.6mm Short Boot
									51	Other Boot	4.5mm Boot
									52	Other Boot	5.0mm Boot
									53	Other Boot	5.5mm Boot

704F - M - SS12 - B32 ORDER CODE example

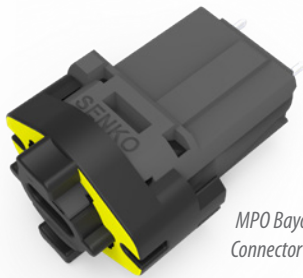
- Note:**
1. Custom configurations available upon request.
 2. Gender changeable pins sold separately. Two pins required for one MPO connector.
 3. Please visit Senko.com/mposelect for other combinations.
 4. 3.8mm and 4.0mm boot option available.
 5. Requires use of MPO Plus Polarity Changeable adapter.

MPO PLUS BAYONET CONNECTOR

MPO+PLUS®



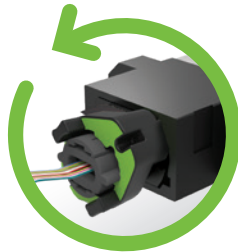
MPO Bayonet Connector 12F



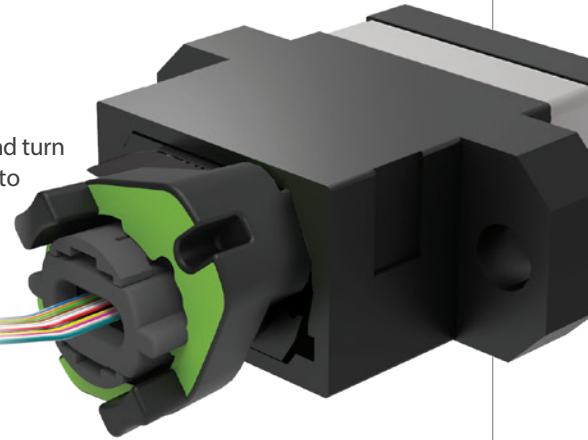
MPO Bayonet Connector 16F



Plug in Connector and turn Bayonet **clockwise** to **ENGAGE**



To remove Connector turn Bayonet **counter clockwise** to **DISENGAGE**



BAYONET	GENDER/PIN	FERRULE TYPE	FIBER COUNT	HOUSING COLOR	BOOT/CABLE
705F	F Female	SS SM Standard	04 4F	Y SM Low Loss Yellow	00 No Boot
	M Male	SL SM Super Low Loss	08 8F	G SM Green	
		MS MM Standard	12 12F	V MM OM4 Heather Violet	
		ML MM Super Low Loss	24 24F	A MM OM3 Aqua	
				T MM Beige	
				B MM Black	
				M Lime Green	

705F - M - SS12 - G00 ORDER CODE example

Note: Custom configurations available upon request.

BAYONET	GENDER/PIN	FERRULE TYPE	FIBER COUNT	HOUSING COLOR	BOOT/CABLE
715F	F Female	SL SM Super Low Loss	16 16F	Y SM Low Loss Yellow	00 No Boot
	M Male	MS MM Standard	32 32F	G SM Green	
				V MM OM4 Heather Violet	
				A MM OM3 Aqua	
				T MM Beige	
				B MM Black	
				M Lime Green	

715F - M - SS12 - G00 ORDER CODE example

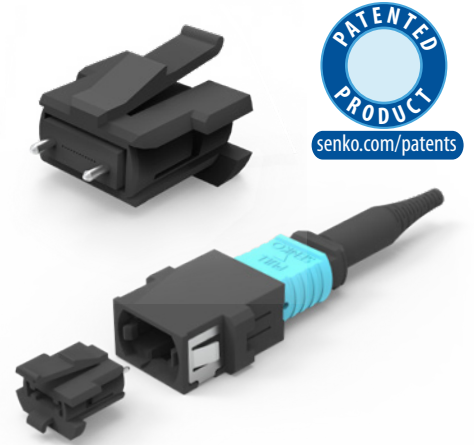
Note: Custom configurations available upon request.

MPO PLUS MICRO LATCH CONNECTOR

MICRO	GENDER/PIN		FERRULE TYPE		FIBER COUNT	
706F	F	Female Pin Clamp	SS	SM Standard	04	4F
		M	Male Pin Assembly	SL	SM Super Low Loss	08
			MS	MM Standard	12	12F
			ML	MM Super Low Loss	24	24F

706F F SS12 ORDER CODE example

Note: Requires use of MPO Plus Polarity Changeable adapter.



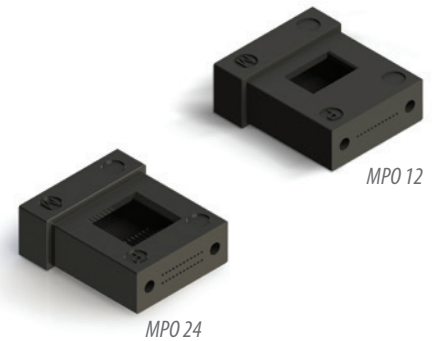
MPO PLUS MT FERRULE

MT FERRULE	TYPE		FERRULE TYPE		FIBER COUNT		
MT	01	MT Ferrule for MPO	SS	SM Standard	04	4F	2
		02	MT Style Ferrule Thin Type	SL	SM Super Low Loss	08	
			MS	MM Standard	12	12F	
			ML	MM Super Low Loss	24	24F	
			SR	Master	16	16F	

MT - 01 - SL12 - 2 ORDER CODE example

Note: Super Low Loss Ferrules are available only for 12 fiber.

MPO+PLUS®



MPO PLUS DUST SHUTTER ADAPTER

ADAPTER FLANGE		ADAPTER COLOR		SHUTTER
7D7	Flange	1	Black	A
7D8	No Flange	2	Aqua	
7WA	MPO 16/32F, Flange	3	Heather Violet	
7WB	MPO 16/32F, No Flange	8	Lime	
		K	Gray, Aligned Key	

7D7 - 1A ORDER CODE example



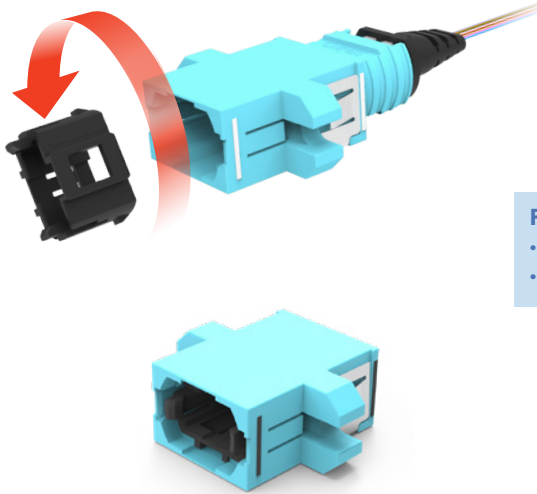
Features:

- Unique twin door shutter closes to prevent any ingress of contamination
- 100% automatic shutter mechanism means one handed connection
- No dust cap required on shutter side
- Standard MPO foot print
- Available in black, violet, aqua, lime, green and gray
- Easy identification of SM, OM3, OM4, OM5
- Fully meets GR-1435 mechanical and environmental requirements
- Combine with LC and SC inner shutter adapter for protected plug and play solution
- IEC compliant
- Compatible with Senko MPO+ and HD connectors

MPO PLUS POLARITY CHANGEABLE ADAPTER



senko.com/patents



ADAPTER FLANGE		ADAPTER COLOR	
773	Flange (Standard Flange)	1	Black
774	No Flange (Reduced Flange)	2	OM3 Aqua
7W3	MPO 16/32F, Standard Flange	3	OM4 Heather Violet
7W4	MPO 16/32F, No Flange	K	Gray Aligned Key

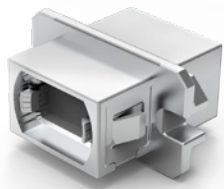
773 - 1 ORDER CODE example

Note: 1. Polarity changeable feature recommended for non-angled ferrules only.
2. RMT-609 tool required for polarity change.

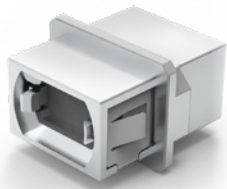
Features:

- One-piece design
- Flange and Non-Flanged Types
- Regular and Reversed Key Options

MPO PLUS METAL ADAPTER



MPO Adapter EMI with Internal Shutter



MPO Adapter EMI No Flange

ADAPTER FLANGE		ADAPTER COLOR		SHUTTER	
7M7	Flange (Standard Flange)	1	Regular Key	None	No Shutter
7M8	No Flange (Reduced Flange)	K	Aligned Key	A	Inner Shutter

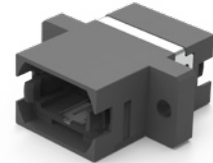
7M7 1 A ORDER CODE example

Features:

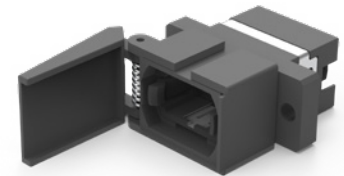
- One-piece design
- Flange and Non-Flanged Types
- Superior shielding effectiveness
- Protects against dust, provides eye safety and reduces EMI when no connector is installed

MPO PLUS SC FOOTPRINT ADAPTER

ADAPTER FLANGE		ADAPTER COLOR	
775	Flange (Standard Flange)	1	Black
776	No Flange (Reduced Flange)	2	OM3 Aqua
7W5	MPO 16/32F, Standard Flange	3	OM4 Heather Violet
7W6	MPO 16/32F, No Flange	K	Gray Aligned Key



MPO Adapter SC Footprint with Flange



MPO Adapter SC Footprint with Shutter**

Note: **External shutter sold separately - part number 775-OSHU-01

775 - 1 ORDER CODE example

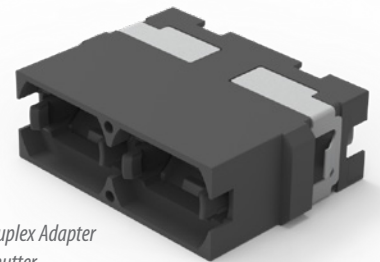
Features:

- One-piece outer body design
- Flange and Non-Flanged Types
- Regular and Reversed Key Options
- SC Footprint
- External shutter option

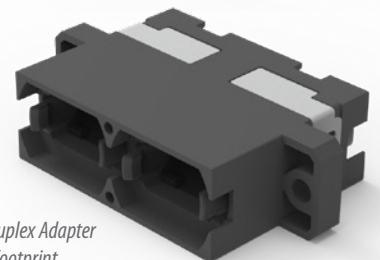
MPO PLUS SC FOOTPRINT DUPLEX ADAPTER

ADAPTER FLANGE		ADAPTER COLOR		SHUTTER	
7A5	Flange (Standard Flange)	1	Black	None	No Shutter
7A6	No Flange (Reduced Flange)	K	Gray (Aligned Key)	A	Shutter
7B5	MPO 16/32F (Standard Flange)				
7B6	MPO 16/32F (Reduced Flange)				

7A5 - 1 - A ORDER CODE example



MPO Duplex Adapter with Shutter SC DX Footprint No Flange



MPO Duplex Adapter SC DX Footprint With Flange

Features:

- Unique twin door shutter closes to prevent any ingress of contamination
- 100% automatic shutter mechanism
- Laser and IP5X dust protection
- SC duplex footprint
- Compatible with standard MPO connectors
- Micro Latch MPO compatible on rear side 12/24F Center Key and 16/32F Offset Key options

MPO PLUS 90° STACKABLE ADAPTER



senko.com/patents



Top Adapter Simplex



Center Adapter Duplex



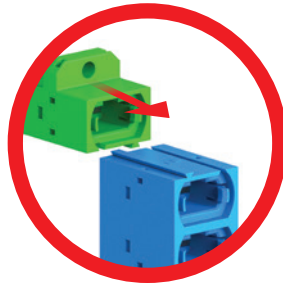
Center Adapter Simplex



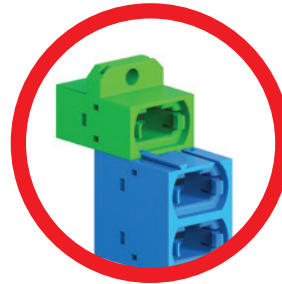
Bottom Adapter Simplex

STACKABLE ADAPTER	STYLE	SHAPE	ADAPTOR COLOR	SHUTTER
780	MPO Stackable	1 90° Type	T Top Adapter Simplex	1 Black
			B Bottom Adapter Simplex	2 OM3 Aqua
			1 Center Adapter Simplex	3 OM4 Heather Violet
			2 Center Adapter Duplex	K Gray Aligned Key
				None No Shutter
				A Inner Shutter

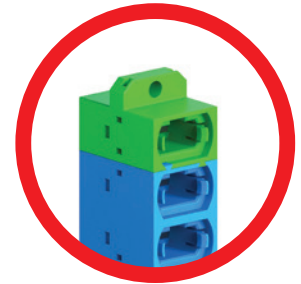
780 1T 1A ORDER CODE example



1 Insert Adapter



2 Slide Adapter



3 Finish

MPO PLUS 45° STACKABLE ADAPTER



senko.com/patents



Top Adapter Simplex



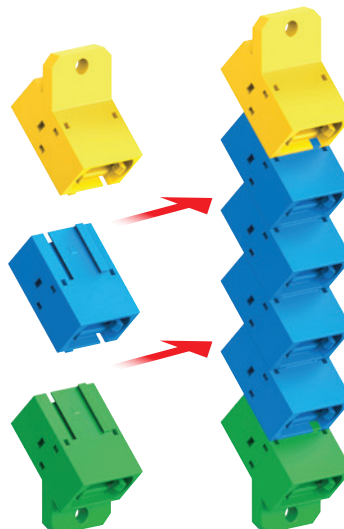
Center Adapter Duplex



Bottom Adapter Simplex

STACKABLE ADAPTER	STYLE	SHAPE	ADAPTOR COLOR	SHUTTER
780	MPO Stackable	2 45° Type	T Top Adapter Simplex	1 Black
			B Bottom Adapter Simplex	2 OM3 Aqua
			1 Center Adapter Simplex	3 OM4 Heather Violet
				K Gray Aligned Key
				None No Shutter
				A Inner Shutter

780 2T 1A ORDER CODE example



Use the 45° angled flange to create a staggered array to assist with fiber management in densely populated panels.

MPO PLUS TOOLS

TYPE

RBN-601 MPO Plus Ribbonizer Tool

RBN-601 ORDER CODE example

TYPE

RMT-603 MPO Plus Disassemble Tool

RMT-603 ORDER CODE example

TYPE

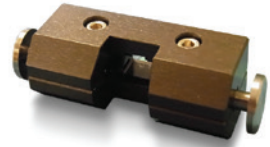
RMT-604 Gender Changeable Pin Assembly/Removal Tool

RMT-604 ORDER CODE example

TYPE

RMT-609 MPO Polarity Changeable Adapter Tool

RMT-609 ORDER CODE example



MPO PLUS CRIMP TOOL

TYPE

CRT-605 Crimp Tool for MPO Plus Connector (Oval)

CRT-606 Crimp Tool for MPO Plus 3.0 - 5.5mm round crimp (for thick jacket crimp)

CRT-607 Crimp Tool for MPO Plus 3.0 - 5.5mm round crimp

CRT-607 ORDER CODE example



MPO PLUS GENDER CHANGEABLE PIN

GUIDE PIN CODE

701-PIN-G MPO Gender Changeable Pin

TYPE

MM-02 MM Pin (Premium, Mini, Latch Series)

SM-02 SM Pin (Premium, Mini, Latch Series)

LL-02 Low Loss Pin (Premium, Mini, Latch Series)

32MM-01 MM Pin (Premium 32F/16F)

32SM-01 SM Pin (Premium 32F/16F)

32LL-01 Low Loss Pin (Premium 32F/16F)

701-PIN-G-SM-02 ORDER CODE example

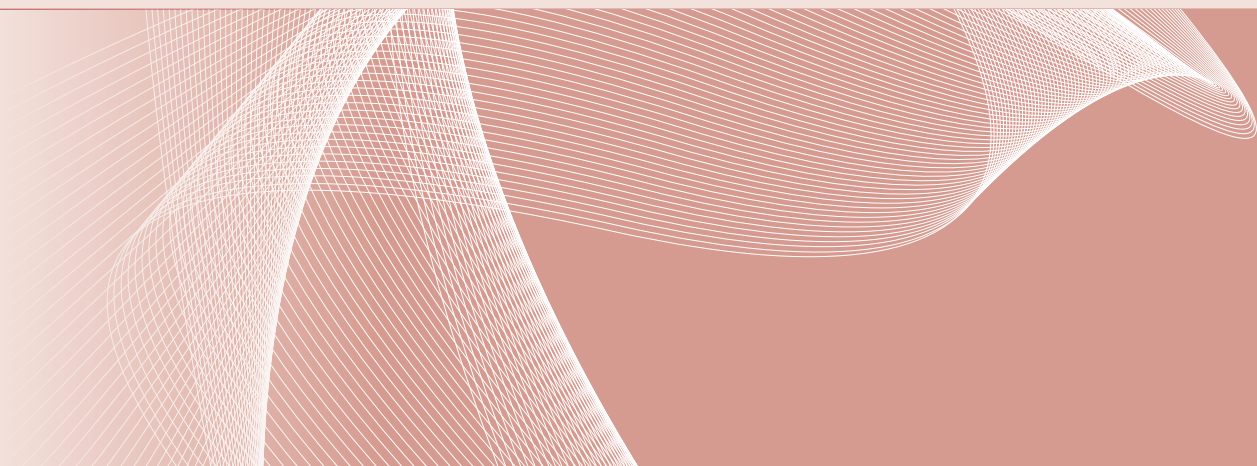
Note: 1. Two Gender Changeable pins required for one MPO connector.

2. Gender changeable pins can be used with MPO-Plus Premium Mini and MPO-Plus Latch connector.



STANDARD CONNECTOR SERIES
SMALL FORM FACTORS
SPECIALTY PRODUCTS
FERRULES AND SLEEVES
POLISHING SYSTEMS

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pg. 23
pg. 61
pg. 73
pg. 79



SPECIALTY PRODUCTS

Q-XP Connector SC	pg. 62
XP Fit Plus Connector SC	pg. 63
XP Fit Uni SC	pg. 64
XP Fit Plus Connector LC	pg. 65
XP Fit Plus Termination Kit	pg. 66
XP Fit Plus Connector Tools	pg. 66
Premium Attenuators	pg. 67
Terminators	pg. 68
LC-HD Loopback	pg. 69
MPO Loopback	pg. 69
Inline Attenuator	pg. 70
Switchable Adapter	pg. 71

Field Installable

Q-XP PREMIUM SC CONNECTOR

Q-XP is SENKO's highest performing field installable connector. This GR-1081 tested connector provides Telecom grade performance while yielding maximum mechanical and optical characteristics.

SPECIFICATION	SINGLEMODE
For Q-XP Fit	Typical
Insertion Loss	≤ 0.25dB
Return Loss	≥65dB
Durability	<0.1dB change, 500 matings
Operating Temperature	-40°C to +75°C
Storage Temperature	-40°C to +85°C
Tensile	TIA/EIA 568-C.3
Intermateability	IEC 61754-4



- Highlight:**
- No Polishing
 - No Crimp Tools
 - No Adhesives
 - No expensive fusion splicer

Note: Specifications shown above were obtained using SENKO recommended products and procedures.



Q-XP Fit SC Connector

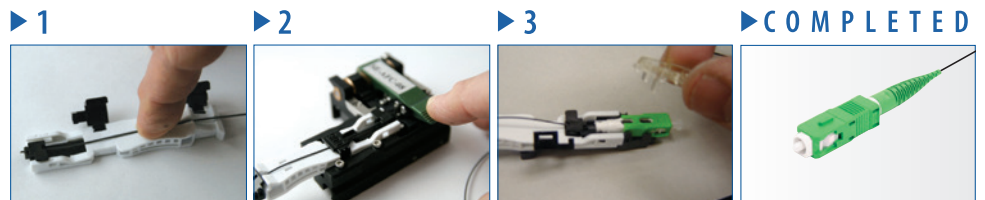
CODE	FERRULE TYPE	OUTER HOUSING	BOOT TYPE	BOOT COLOR
QXP	091 SM: APC	4 Green	1 900µm	3 Green
			2 1.65mm	
			3 2.0mm	
			4 3.0mm	

QXP 091 413 ORDER CODE example

- Note:**
1. The connector performance specifications include an internal mechanical splice
 2. Typical specification values are at 23°C ±5°C

Features:

- Mechanical Splice (index matching gel)
- Highly Stable & Reliable
- RoHS Compliant
- GR-1081 completed
- Termination under 3 minutes
- Finished Connector meets UL94-V0 Flammability Rated
- 92% yield
- TIA/EIA 568-C.3 Compliant



XP FIT PLUS SC CONNECTOR

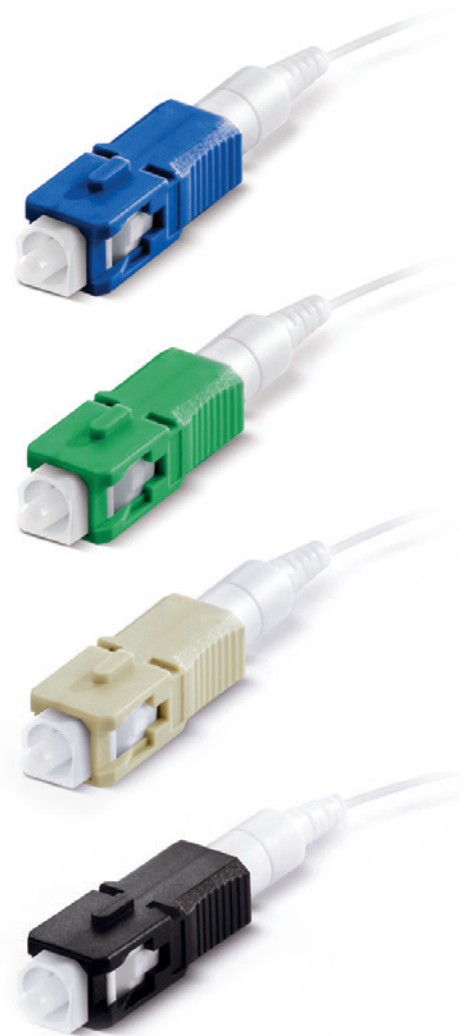
Field Installable

The XP Fit Plus is a pre-polished, pre-assembled connector compatible with the standard SC connector. In place of epoxy, an internal mechanical grip gently but effectively holds the fiber in place and can be installed in under

two minutes. Without polishing or adhesives, the XP Fit Plus makes field installations quick and easy, eliminating the need for epoxy curing and hand polishing at the work site.

SPECIFICATION	SINGLEMODE	MULTIMODE
For XP Fit Plus SC	Typical	
Insertion Loss	0.2dB (PC) and 0.3dB (APC)	0.1dB
Return Loss	55dB (PC) 60dB (APC)	35dB
Durability	<0.1dB change, 500 matings	
Operating Temperature	-40°C to +75°C	
Tensile	TIA/EIA 568-C.3	
Intermateability	IEC 61754-4	

Note: Specifications shown above were obtained using SENKO recommended products and procedures.



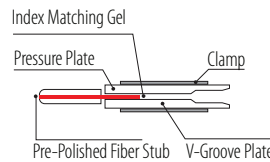
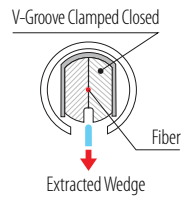
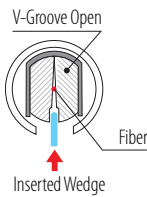
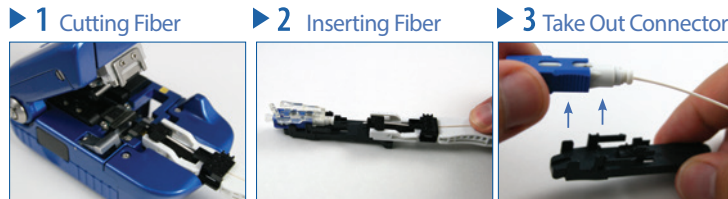
PART NUMBER	DESCRIPTION	HOUSING	BOOT COLOR
318-191-627	XPFit Plus SC Connector SM: PC 900µm/250µm 120pack*	Blue	White
318-091-427	XPFit Plus SC Connector SC: APC 900µm/250µm 120pack*	Green	White
318-291-727	XPFit Plus SC Connector MM: 50/125 900µm/250µm 120pack*	Black	White
318-391-927	XPFit Plus SC Connector MM : 62.5/125 900µm/250µm 120pack*	Beige	White
318-491-527	XPFit Plus SC Connector MM: 50/125 10G OM3900µm/250µm 120pack*	Aqua	White
318-091-452	XPFIT Plus SC Connector SC: APC Drop Cable 120pack*		

318-191-627 ORDER CODE example

- Note:**
1. 12 pack available. Add -12 to existing part number
 2. Typical specification values are at 23°C ±5°C
 3. The connector performance specifications include an internal mechanical splice

ASSEMBLY PROCEDURE

- NO EPOXY
- NO POLISHING

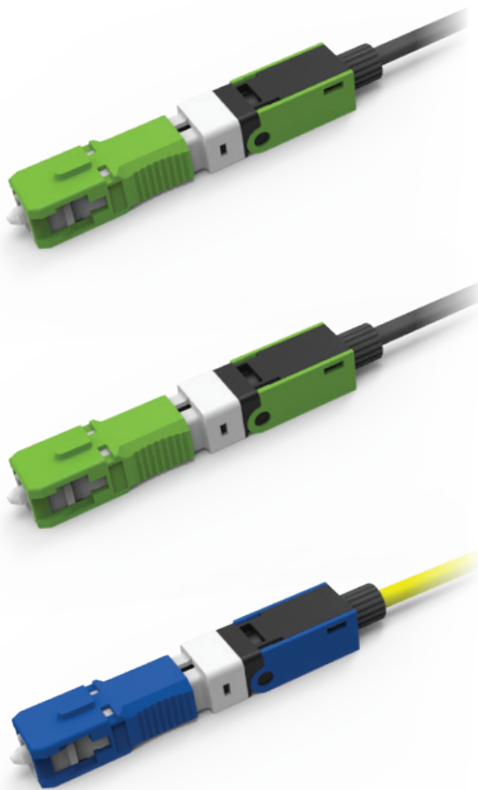


XP Fit Plus SC Field Installable Connector

Field Installable

XP FIT UNI SC

The XP Fit Uni SC is a pre-polished, pre-assembled connector compatible with the standard SC connector. The universally designed cable jacket clamping feature allows for various cordage types to be terminated using just one connector. In addition, an internal mechanical grip gently but effectively holds the fiber in place without the need for adhesives. The XP Fit Uni SC makes field installations quick and easy, while reducing the need for multiple connector kits for different applications.



SPECIFICATION

XP Fit UNI SC

Applicable Fiber	Indoor Cable/Drop Cable	
Size	1.6x2mm and 2x3mm (Drop Cable) 2mm, 3mm 250/900µm (Indoor Round Cable)	
Intermateability	SC (IEC61754-4)	
Polishing	PC/APC	
Operating Temperature	-40 ~ +75°C	
	SM PC	SMC APC
Insertion Loss dB (against Master Plug)	Typical ≤ 0.2	Typical ≤ 0.3
Return Loss (against Master Plug)	Typical ≥ 50 (Min. ≥ 40)	Typical ≥ 55 (Angled Cleaver ≥ 60)
Tensile IEC 61300-2-6	3N for coated fiber and 10N for round cord and rectangular cable	

PART NUMBER	DESCRIPTION	COLOR
319-191-6	XP Fit Uni SC Connector	Blue
319-091-4	XP Fit Uni SC/APC Connector	Green

319-191-6 ORDER CODE example

Note: Specifications shown above were obtained using SENKO recommended products and procedures

Features:

- Mechanical Splice (index matching gel)
- Highly Stable & Reliable
- RoHS Compliant
- Termination Under 3 Minutes
- Finished Connector Meets UL94-V0 Flammability rated
- IEC Compliant

XP Fit Uni SC
Field Installable
Connector

Termination under 2 minutes

- ▶ 1 Connector preparation
- ▶ 2 Drop cable preparation
- ▶ 3 Cleaving of the fiber
- ▶ 4 Connector termination
- ▶ 5 Testing



XP FIT PLUS LC CONNECTOR

The XP Fit Plus is a pre-polished, pre-assembled connector compatible with the standard LC connector. In place of epoxy, an internal mechanical grip gently but effectively holds the fiber in place and can be installed in under

two minutes. Without polishing or adhesives, the XP Fit Plus makes field installations quick and easy, eliminating the need for epoxy curing and hand polishing at the work site.

SPECIFICATION	SINGLEMODE	MULTIMODE
For XP Fit Plus LC	Typical	
Insertion Loss	0.2dB (PC)	0.1dB
Return Loss	55dB (PC)	35dB
Durability	<0.1dB change, 500 matings	
Operating Temperature	-40°C to +75°C	
Tensile	TIA/EIA 568-C.3	
Intermateability	IEC 61754-20	

*Note: * Specifications shown above were obtained using SENKO recommended products and procedures.*



PART NUMBER	DESCRIPTION	HOUSING	BOOT COLOR
951-191-111	XPFit Plus LC Connector SM: PC 900µm/250µm 120pack*	Blue	White
951-291-411	XPFit Plus LC Connector MM: 50/125 900µm/250µm 120pack*	Black	White
951-391-211	XPFit Plus LC Connector MM : 62.5/125 900µm/250µm 120pack*	Beige	White
951-491-511	XPFit Plus LC Connector MM: 50/125 10G OM3 900µm/250µm 120pack*	Aqua	White

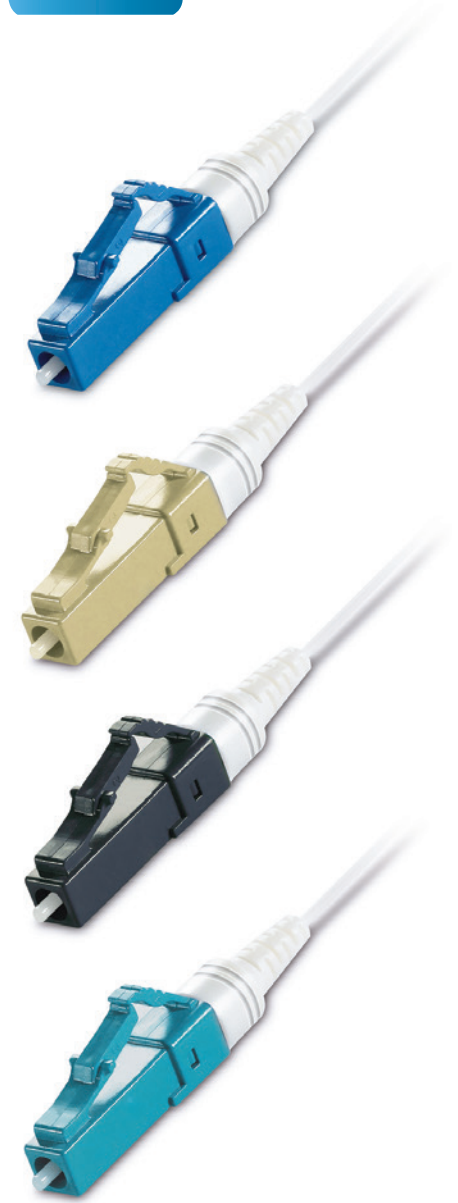
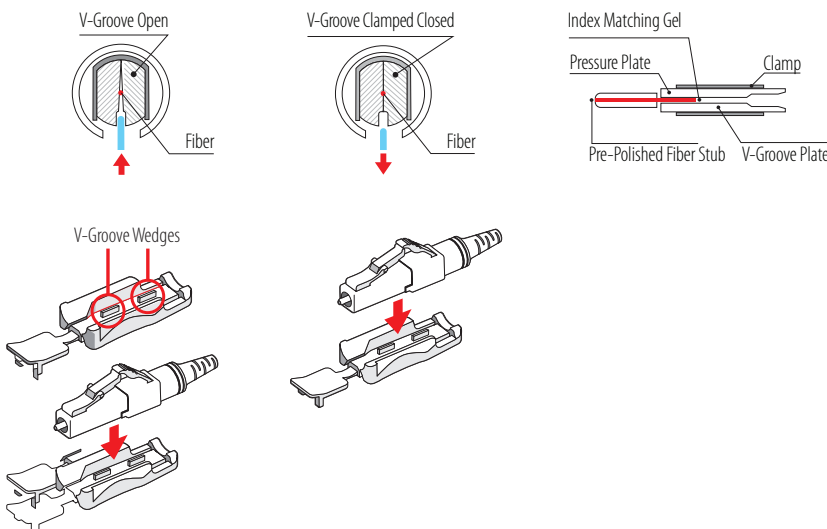
951-191-111 ORDER CODE example

Note: The connector performance specifications include an internal mechanical splice

Note*: 1. 12 pack available. Add -12 to existing part number
2. Typical specification values are at 23°C ±5°C

Features:

- Mechanical Splice (*index matching gel*)
- Highly Stable & Reliable
- Perfect Performance
- Compact Package
- RoHS Compliant
- Finished Connector meets UL94-V0 Flammability Rated
- TIA/EIA 568-C.3 Compliant



XP Fit Plus LC Field Installable Connector

XP FIT PLUS TERMINATION KIT

The Connector Installation Tool Kit contains everything needed for installation of the SC and LC XP FIT PLUS connectors. No epoxy,

polishing film, or other consumables are required, and there is no need to plug into electrical outlets, allowing installers to get in and out of installation sites quickly.



**Easy installation
in under 2 minutes**



ORDER CODE	DESCRIPTION
XPF-P-F	XP Fit Field Installation Kit with Flat Cleaver - Premium
XPF-S-F	XP Fit Field Installation Kit with Flat Cleaver- Standard
XPF-P-A	XP Fit Field Installation Kit with Angled Cleaver

Content for XP Fit Field Installation Kit with Flat Cleaver - Premium - XPF-P-F	SENKO PN
Jacket and 250µm Fiber Stripper + 125µm Buffer Remover	AFT-T-223-S
Thermal Buffer Removal Tool	AFT-T-TBR
Replacement Blade Set	AFT-T-TBR-R
Precision Cleave Tool (Flat) - Premium	AFT-T-CL-SMT
Lint Free Dry Wipes	AFT-A-KW
Fiber Optic Cleaning Pen	AFT-A-EWP
Kevlar Scissors	AFT-T-KS
Fiber Disposal Unit	AFT-A-FU
Fine Permanent Marker Pen	AFT-A-PMB
Fiber Checker	AFT-G-FC
2.5mm to 1.25mm Adapter	AFT-G-CAC
Launch Cables	XPF-TEST-KIT
Soft Case	AFT-A-CS-XP

Content for XP Fit Field Installation Kit with Flat Cleaver- Standard - XPF-S-F	SENKO PN
Precision Cleave Tool (Flat) - Standard	AFT-T-CL-04

Note: The contents of this Kit are the same as the XPF-P-F, with substitution of Standard Precision Flat Cleaver

Content for XP Fit Field Installation Kit with Angled Cleaver - XPF-P-A	SENKO PN
Precision Cleave Tool (Angled)	SE-AFC-08

Note: The contents of this Kit are the same as the XPF-P-F, with substitution of Precision Angled Cleaver



Premium Cleaver Flat



Standard Cleaver Flat



Precision Cleaver Angled

Features:

- Fast installation to Minimize onsite labour costs
- Easy operation
- Compatible with conventional LC & SC connectors and adapters
- Quick assembly in under 2 minutes
- No adhesive or polishing required
- Compact tool without electric power

XP FIT PLUS CONNECTOR TOOLS

The XP Fit Plus Connectors are supplied in conjunction with specific tools for easy termination in the field.

TYPE	ITEM NUMBER
LC version	XPF-LCB-900-FH
SC version	XPF-SCB-900-FH

XPF-SCB-900-FH ORDER CODE example



PREMIUM ATTENUATORS

SENKO's Premium Attenuators are GR 910 certified by Expor Laboratories (SC APC and LC UPC). The Premium Attenuator passed all required mechanical testing including the extended life 5,000 hour environmental testing, and the solid body LC Attenuator has a stronger

design for greater mechanical strength. The Compact LC Housing reduces the overall length, while the wavelength independent premium fiber allows a wide range of usage including existing PON Network.

SPECIFICATION

For Attenuators

Return Loss	≥ 55dB (UPC) ≥ 65dB (APC)
Attenuation Tolerance	1 to 10dB : ±0.5, 11 to 30 dB : ±5% (for 3 wavelength)
Operational Wavelengths	1310 ± 40nm, 1490 ± 20nm, 1550 ± 40nm
Operating Temperature	-40 to +75°C
Maximum Power	500mw

Note: For full wavelength type (1270 ~ 1650) Attenuation tolerance will be 1db to 10db 0.7db and 11db to 30db ±10%.

CODE		TYPE	ATTENUATOR LEVEL		ATTENUATOR TOLERANCE	
ATN	Dope Fiber Attenuators	432 SC / APC	01	1dB	1	Premium
		532 FC / APC	02	2dB		
		632 SC / UPC	03	3dB		
		732 FC / UPC	04	4dB		
		832 ST / UPC	05	5dB		
		1432 MU / UPC	06	6dB		
		1532 LC / UPC	07	7dB		
		1732 LC/APC	08	8dB		
			09	9dB		
			10	10dB		
			12	12dB		
			15	15dB		
			20	20dB		
			25	25dB		

ATN - 632 - 04 - 1 ORDER CODE example

Note: Custom configurations available upon request

Features:

- SC and LC GR910 Certified
- Dope Fiber Technology
- Wide Operating Wavelength (1270 ~ 1650)
- Low Back Reflection
- High Durability over High Power
- One piece housing construction including LC & MU for better side load performance
- Metal-ion doped fiber (continuous)
- Attenuation levels ranging from 1dB to 30dB

SC Attenuator



SC APC Attenuator



FC Attenuator



FC APC Attenuator



ST Attenuator



LC Attenuator



MU Attenuator



TERMINATORS

SENKO fiber optic terminators use doped fiber designs to eliminate unwanted back-reflection. The terminators are available in FC and SC with

UPC or APC polishes, and also in small form factor design including LC and MU with APC and UPC Polishes.

SPECIFICATION

For Terminators

Return Loss	≥ 55dB (UPC) ≥ 65dB (APC)
Operating Temperature	-40 to +75°C
Operating Wavelength	1250-1650
Maximum Power	500mw

Note: Specifications shown above were obtained using SENKO recommended products and procedures.



FC Terminator



SC Terminator



ST Terminator



MU Terminator



LC Terminator

CODE	TYPE	POLISH	DESIGN
TRM	1 SC	2 UPC	1 Doped fiber
	2 FC	3 APC	
	3 ST		
	4 LC		
	5 MU		

TRM - 1 - 3 - 1 ORDER CODE example

Note: Custom configurations available upon request

Features:

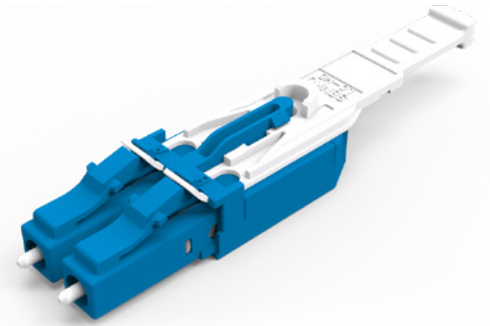
- Dope Fiber Technology
- Wide Operating Wavelength
- Low Back Reflection
- High Durability over High Power

LC-HD LOOPBACK

Senko's Loopback is designed to provide a media of return patch for a fiber optic signal; typically it is used for fiber optic testing applications or network restorations. For the testing applications, the loopback signal is used for diagnosing a problem. Sending a loopback test to network equipment, one at a time, is a technique for isolating a problem.

SPECIFICATION

Return Loss	≥ 55dB (SM-UPC)	≥ 65dB (SM-APC)	
Attenuation Tolerance	0dB type - Max 0.5dB	1dB - 5dB ±0.5dB	6dB - 20dB ±10%
Operational Wavelengths	SM: 1310 / 1550 ±40nm	MM: 850 / 1300 ±40nm	
Operating Temperature	-40° to 75°C		
Maximum Power	500mw		



LC Loopback SM Blue

TYPE		HOUSING COLOR/FIBER TYPE		ATTENUATION*	
LPB-LCHD	LC-HD Loopback	A	APC Green	A	Attenuator
		S	SM Blue	00	0dB +0.5dB/-0dB
				05	5dB +/-0.5dB
				10	10dB +/-10%
				20	20dB +/-10%

LPB - LCHD - SA05 ORDER CODE example

*Note: Other values available upon request

MPO LOOPBACK

SPECIFICATION

IL for 0dB Type MPO Loopback Connector

Low Loss Type	Max 0.75dB
Standard Type	Max 1.50dB
Attenuation	1 ~ 10dB: ± 1dB 11 ~ 20dB: ± 10%

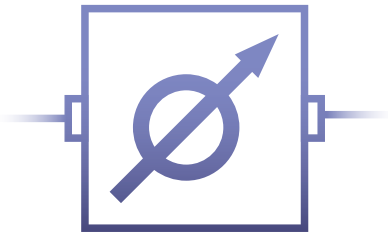


MPO Loopback

CODE		HOUSING COLOR/FIBER TYPE		HOUSING COLOR/FIBER TYPE		"FIBER COUNT (WHEN 12F MT BEING USED IN 8F)"		PIN TYPE		ATTENUATION		CHANNEL TYPE	
LPB-MPO	MPO Loopback	11	Green (SM)	22	SM 8F Standard	(None)		(None)	Female Pin	(None)	0dB	S	Standard Channel Setting
		32	Beige (MM OM2 50/125)	32	SM 8F Low Loss	08	12F MT use 8 Channel	M	Male Pin	01	1dB	Q	QSFP Channel Setting
		41	Yellow (SM LL / SM)	23	SM 12F Standard					~	~		
		52	Aqua (MM OM3 50/125)	33	SM 12F Low Loss					20	20dB		
		62	Heather Violet (MM OM4 50/125)	25	SM 24F Standard								
				35	SM 24F Low Loss								
				42	MM 8F, Flat								
				43	MM 12F, Flat								
				44	MM 12F, Flat Low Loss								
				45	MM 24F, Flat								

LPB - MPO - 1123 - S ORDER CODE example

INLINE ATTENUATOR



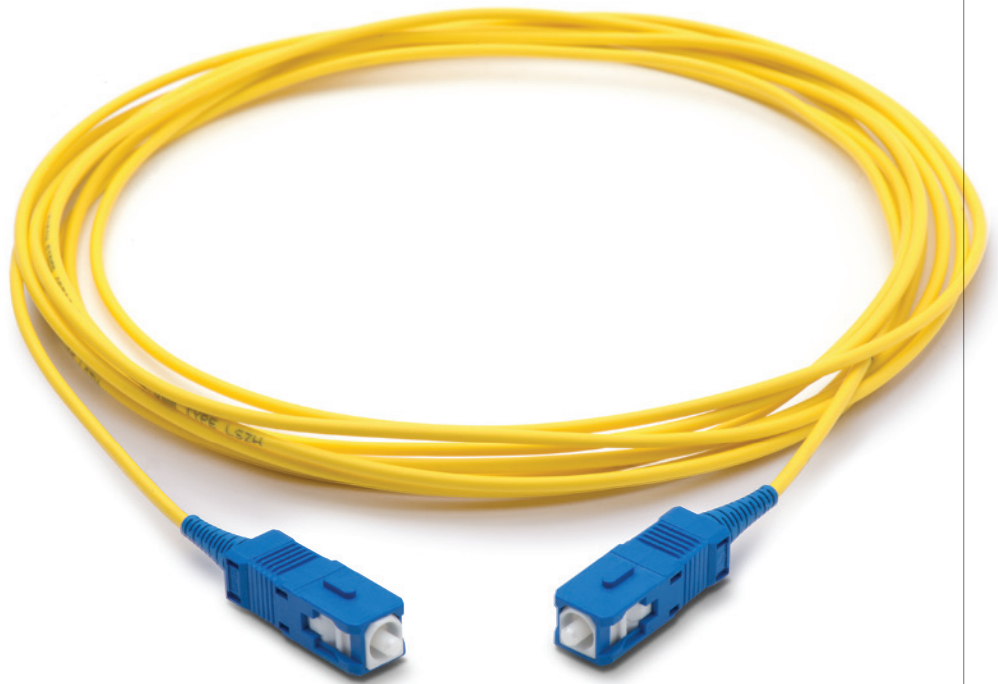
The Senko in-line optical attenuator is integrated into a standard connectorized fiber optic jumper cable.

Senko's Inline Attenuator is designed for easy handling as it works as a jumper. Compared to adding the FIXED attenuator to a normal jumper overall length will become shorter and will be more stable as a product. The Inline Attenuator is constructed all of fiber (no air

gap utilized) and is Telcordia Compliant for Endface Geometry and mechanical strength. With no protected fiber splice area on the cable (It looks like a standard jumper), Senko's Inline Attenuator is easy to handle and environmentally stable.

SPECIFICATION

Return Loss	>55(UPC) >65 (APC)	Tested at 1310nm and 1550nm
Attenuation	1 to 10±1 11 to 25±10%	Tested at 1310nm and 1550nm



SC Inline Attenuator Jumper Style Patch Cord

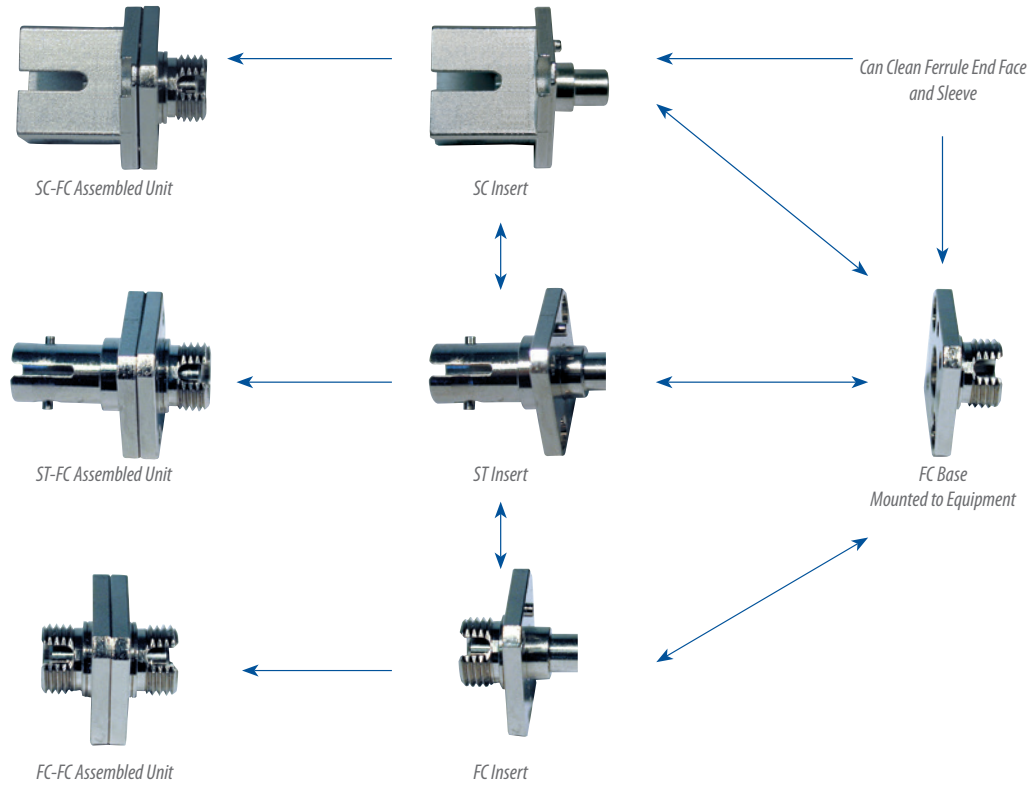
TYPE		CONNECTOR TYPE		dB		CABLE TYPE		LENGTH	
ATN-IN	Inline Attenuator SM	SCU	SC/UPC Both Side	01	1dB	W009	900µm White	001M	1 Meter
		SCA	SC/APC Both Side	02	2dB	Y020	2mm Yellow		
		LCU	LC/UPC Both Side	03	3dB				
		LCA	LC/APC Both Side	04	4dB				
		SCULCU	SC/UPC - LC/UPC	05	5dB				

ATN-IN - SCULCU - 05 - Y020 - 001M ORDER CODE example

Features:

- Compact Design
- Custom colors available
- Custom assemblies available
- Variable Range 0-20dB

SWITCHABLE ADAPTER



EASY SWITCHING ADAPTER INTERFACE

The switchable adapter allows test equipment and optical module manufactures to easily change the output adapter interface from FC to ST.

For FC and SC, PC type and APC type are available.

EASY TO CLEAN

While changing the adapter interface the Switchable Adapter allows the end user to properly clean both the end face of the jumper on both of the adapters as well as the adapter sleeve without removing the entire adapter from the panel.

ADAPTER CONFIGURATION

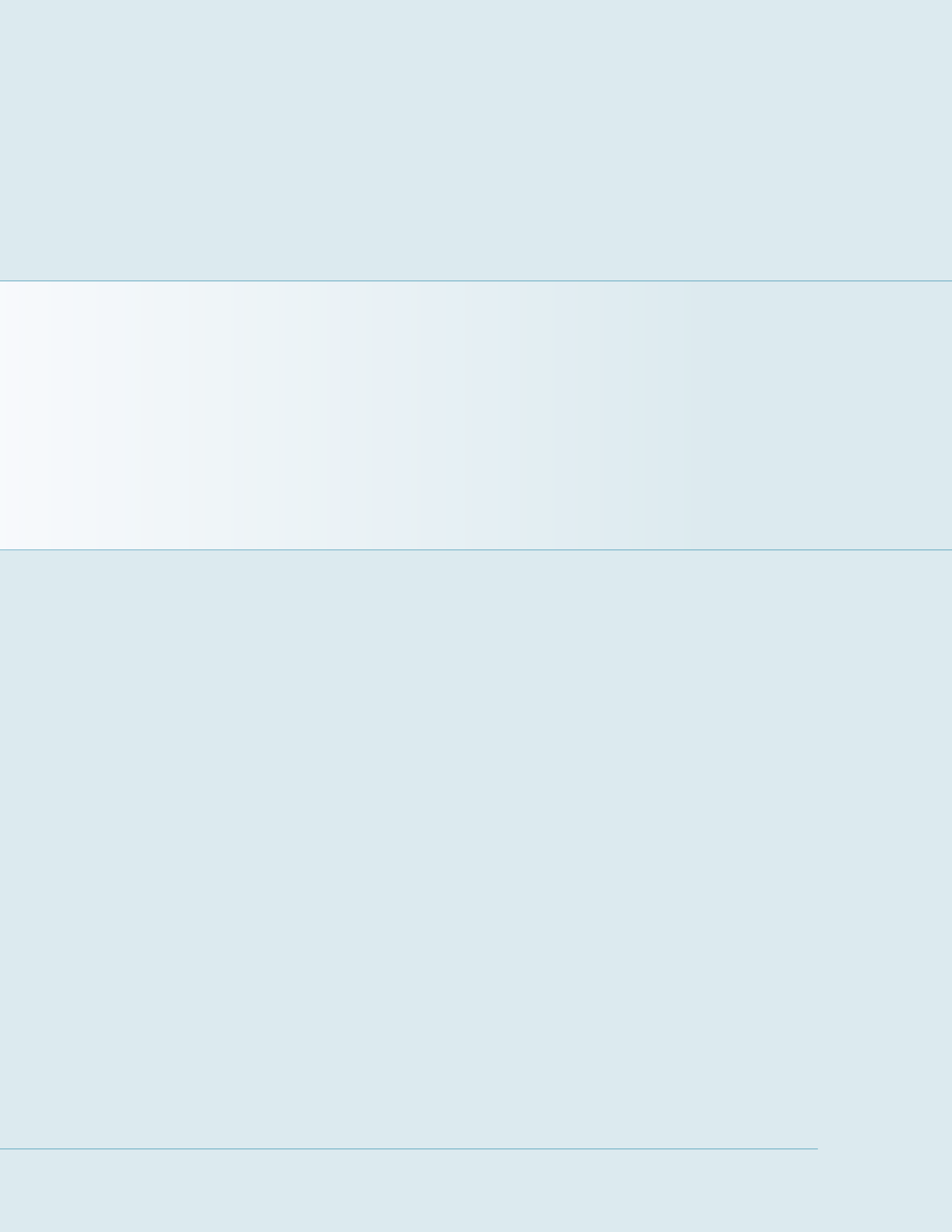
- FC PC to FC PC
- FC APC to FC APC
- FC PC to SC PC
- FC APC to SC APC
- FC PC to ST PC

CODE	SLEEVE CODE	KEY WIDTH CODE
321 FC to FC Switchable Adapter	1 Zirconia Straight Split	01 For PC Connector 2.15 +0.05/-0
322 FC to ST Switchable Adapter	2 Metal Straight Split	02 For APC Connector 2.05 ±0.02
323 FC to SC Switchable Adapter		

321-102 ORDER CODE example

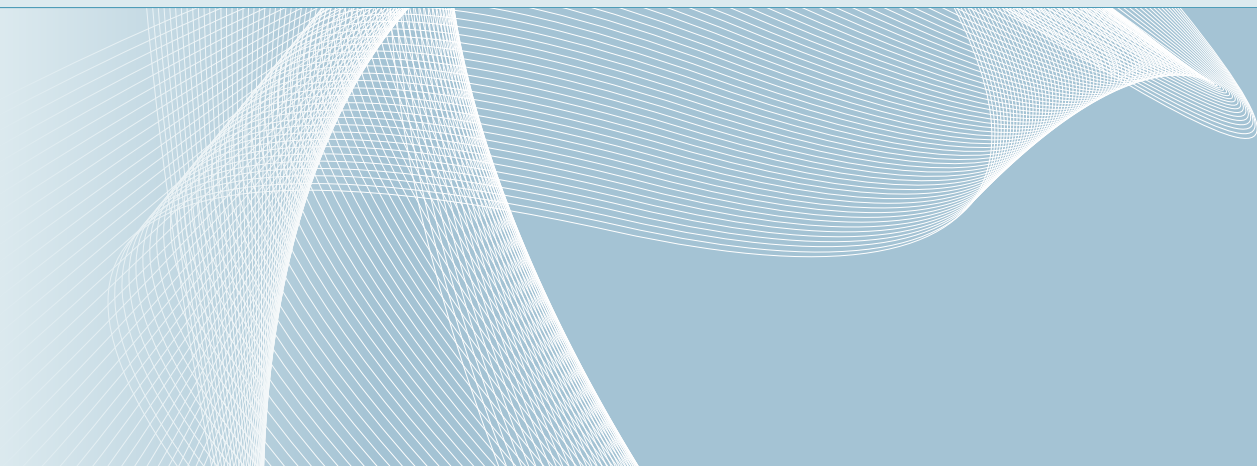
CODE	PART NUMBER	SLEEVE	KEY WIDTH
FC Switchable Adapter Insert	UA-50007-101	Zirconia	2.15/2.20
FC APC Adapter Insert	UA-50007-102	Zirconia	2.03/2.07
ST Switchable Adapter Insert	UA-50008-101	Zirconia	
SC PC Switchable Adapter Insert	UA-50009-101	Zirconia	
SC APC Adapter Insert	UA-50009-102	Zirconia	

UA-50007-101 ORDER CODE example



STANDARD CONNECTOR SERIES
SMALL FORM FACTORS
SPECIALTY PRODUCTS
FERRULES AND SLEEVES
POLISHING SYSTEMS

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FERRULE AND SLEEVES

Zirconia Ferrules SC-APC and FC-APC	pg. 74
Zirconia Ferrules SC and FC Singlemode	pg. 74
Zirconia Ferrules SC and FC Multimode	pg. 75
Zirconia Ferrules ST Singlemode and Multimode	pg. 75
Zirconia Ferrules LC and MU Multimode	pg. 76
Zirconia Ferrules LC and MU Singlemode	pg. 76
Zirconia Sleeves	pg. 77

SC-APC and FC-APC

SC/FC APC ZIRCONIA FERRULE

SPECIFICATION

For Zirconia Ferrules SC-APC and FC-APC

Material	Zirconia
Concentricity (Standard)	Singlemode ≤ 1 micron
Inner Diameter Tolerance	Singlemode $+1/-0$ micron
Outer Diameter Tolerance	Singlemode ± 0.5 micron
Length Tolerance (No flange)	10.5 ± 0.05 mm
V-Groove	$60/90 \pm 5$ degrees

Note: When following SENKO recommended procedures



Step Zirconia Ferrule
SC-APC and FC-APC



Cone Zirconia Ferrule
SC-APC and FC-APC

CONNECTOR	TYPE	END FACE	ID	FLANGE
C SC & FC Connectors	S Singlemode	AS APC Step	125 125 μ m	NN No Flange*
		AC APC Conical	1255 125.5 μ m	FA APC Flange*
			126 126 μ m	*Flange key width 1.35mm

CSAS - 1255 - NN ORDER CODE example

- Note:** 1. Custom length, inner and outer diameter dimensions available upon request
2. *0.5 μ m concentricity also available

Features:

- High performance and durability
- Low insertion loss
- Low back reflection
- Standard and custom configuration
- APC type with various endface configurations, as well as pre-angled endface for quick polishing and ultra low back-reflection

SC and FC Singlemode

SC/FC SM UPC ZIRCONIA FERRULE

SPECIFICATION

For Zirconia Ferrules SC and FC Singlemode

Material	Zirconia
Concentricity (Standard)	Singlemode ≤ 1 micron
Inner Diameter Tolerance	Singlemode $+1/-0$ micron
Outer Diameter Tolerance	Singlemode ± 0.5 micron
Length Tolerance (No flange)	10.5 ± 0.05 mm
Spherical Radius (Pre-Dome)	$20 + 5/-10$
V-Groove	$60/90 \pm 5$ degrees

Note: When following SENKO recommended procedures



Zirconia Ferrule
SC Singlemode



Zirconia Ferrule SC
Singlemode No Flange

CONNECTOR	TYPE	END FACE	ID	FLANGE
C SC & FC Connectors	S Singlemode	PC Pre-dome	125 125 μ m	NN No Flange
			1255 125.5 μ m	F4 4 Slot Flange
			126 126 μ m	

CSPC - 1255 - NN ORDER CODE example

SC/FC MM PC ZIRCONIA FERRULE

SC and FC Multimode

SPECIFICATION

For Zirconia Ferrules SC and FC Multimode

Material	Zirconia
Concentricity (Standard)	Multimode ≤ 4 micron
Inner Diameter Tolerance	Multimode +4/-0 micron
Outer Diameter Tolerance	Multimode ±1 micron
Length Tolerance (No flange)	10.5 ±0.1mm
Spherical Radius (Pre-Dome)	20 + 5/-10
V-Groove	60/90 ±5 degrees

Note: When following SENKO recommended procedures



Zirconia Ferrule
SC and FC Multimode

CONNECTOR	TYPE	END FACE	ID	FLANGE
C SC & FC Connectors	M Multimode	PC Pre-dome	127 127µm	NN No Flange
			144 144µm	F4 4 Slot Flange
			230 230µm	

CMPC - 127 - NN ORDER CODE example

Note: Custom length, inner and outer diameter dimensions available upon request



Zirconia Ferrule
SC and FC Multimode No Flange

ST SM/MM ZIRCONIA FERRULE

ST Singlemode and Multimode

SPECIFICATION	SINGLEMODE	MULTIMODE
---------------	------------	-----------

For Zirconia Ferrules ST

Material	Zirconia	
Concentricity (Standard)	≤1 micron	≤ 4 micron
Inner Diameter Tolerance	+1/-0 micron	+4/-0 micron
Outer Diameter Tolerance	±0.5 micron	±1 micron
Length Tolerance (No flange)	12.7 +/- 0.05	12.70 +/-0.1
Spherical Radius (Pre-Dome)	20 + 5/-10	
V-Groove	60/90 ±5 degrees	

Note: When following SENKO recommended procedures



For ST Singlemode Connector
ø 2.499mm No Flange

CONNECTOR	TYPE	END FACE	ID	FLANGE
T ST	S Singlemode	PC Pre-dome	125 125µm	NN No Flange
	M Multimode		126 126µm	
			127 127µm	

TSPC - 125 - NN ORDER CODE example

LC and MU Singlemode

LC/MU SM ZIRCONIA FERRULE

SPECIFICATION

For Zirconia Ferrules LC and MU Singlemode

Material	Zirconia
Concentricity (Standard)	Singlemode ≤1 micron
Inner Diameter Tolerance	Singlemode +1/-0 micron
Outer Diameter Tolerance	Singlemode ±0.5 micron
Length Tolerance (No flange)	6.5 ±0.5mm (MU) 6.5 ±0.7mm (LC)
V-Groove	60/90 ±5 degrees



Zirconia Ferrule
LC Singlemode



Zirconia Ferrule
MU Singlemode

Note: When following SENKO recommended procedures

CONNECTOR	TYPE	END FACE	ID	FLANGE
M MU Connectors	S Singlemode	FL Flat	125 125µm	NN No Flange
L LC Connectors			1255 125.5µm	FM MU Flange
			126 126µm	FL LC Flange

LSFL - 126 - FL ORDER CODE example

LC and MU Multimode

LC/MU MM ZIRCONIA FERRULE

SPECIFICATION

For Zirconia Ferrules LC and MU Multimode

Material	Zirconia
Concentricity (Standard)	Multimode ≤4 micron
Inner Diameter Tolerance	Multimode +4/-0 micron
Outer Diameter Tolerance	Multimode ±1 micron
Length Tolerance (No flange)	6.5 ±0.5mm (MU) 6.5 ±0.7mm (LC)
V-Groove	60/90 ±5 degrees



Zirconia Ferrule
LC Multimode



Zirconia Ferrule
MU Multimode

Note: When following SENKO recommended procedures

CONNECTOR	TYPE	END FACE	ID	FLANGE
M MU Connectors	M Multimode	FL Flat	127 127µm	NN No Flange
L LC Connectors			144 144µm	FM MU Flange
				FL LC Flange

LMFL - 127 - FL ORDER CODE example

Note: Custom length, inner and outer diameter dimensions available upon request

ZIRCONIA SLEEVES

Zirconia sleeves and tubes are precision manufactured according to strict quality and performance standards. They are available for singlemode and multimode applications. Reliable mating is assured with strictly controlled

dimensions and withdrawal force. Standard styles for FC include SC, FC, ST, D4, LC and MU, with custom designs also available. Diagonal split sleeves are available for superior durability requirements. Tubes are also available.

SPECIFICATION	ST	SC, FC	LC, MU
Material	Zirconia		
Withdrawal Force	200gf~600gf		100gf~250gf
Insertion Loss	Max 0.5dB, 0.1dB typical or better		
Durability	<0.02dB deviation after 1000 matings, <0.02dB after temperature cycle test		
Outer Diameter	3.2 ±0.02mm		1.62 ±0.01mm
Inner Diameter	(2.49)mm		(1.246)mm
Length	10.1 ±0.1mm	11.4 ±0.1mm	6.8 + 0/-0.1mm
Slit Width	Max 0.5 ±0.01mm		Max 0.2 ±0.01mm
Chamfer	2 x R0.1		

For Zirconia Sleeves ST, SC, FC, LC and MU

Note: When following SENKO recommended procedures

SLEEVE CODE	INNER DIAMETER	LENGTH
ZRS Straight Split Sleeve	25 (2.49)mm	101 10.1mm ST
		114 11.4mm SC & FC

ZRS - 25 - 114 ORDER CODE example

- Note:** 1. Outer and inner diameter dimensions in () are to be considered as references, which shall be adjusted to the required withdrawal force as specified
2. Custom configurations and dimensions available upon request

SLEEVE CODE	INNER DIAMETER	LENGTH
ZRS Straight Split Sleeve	12 (1.25)mm	680 6.8mm for LC/MU

ZRS - 12 - 680 ORDER CODE example

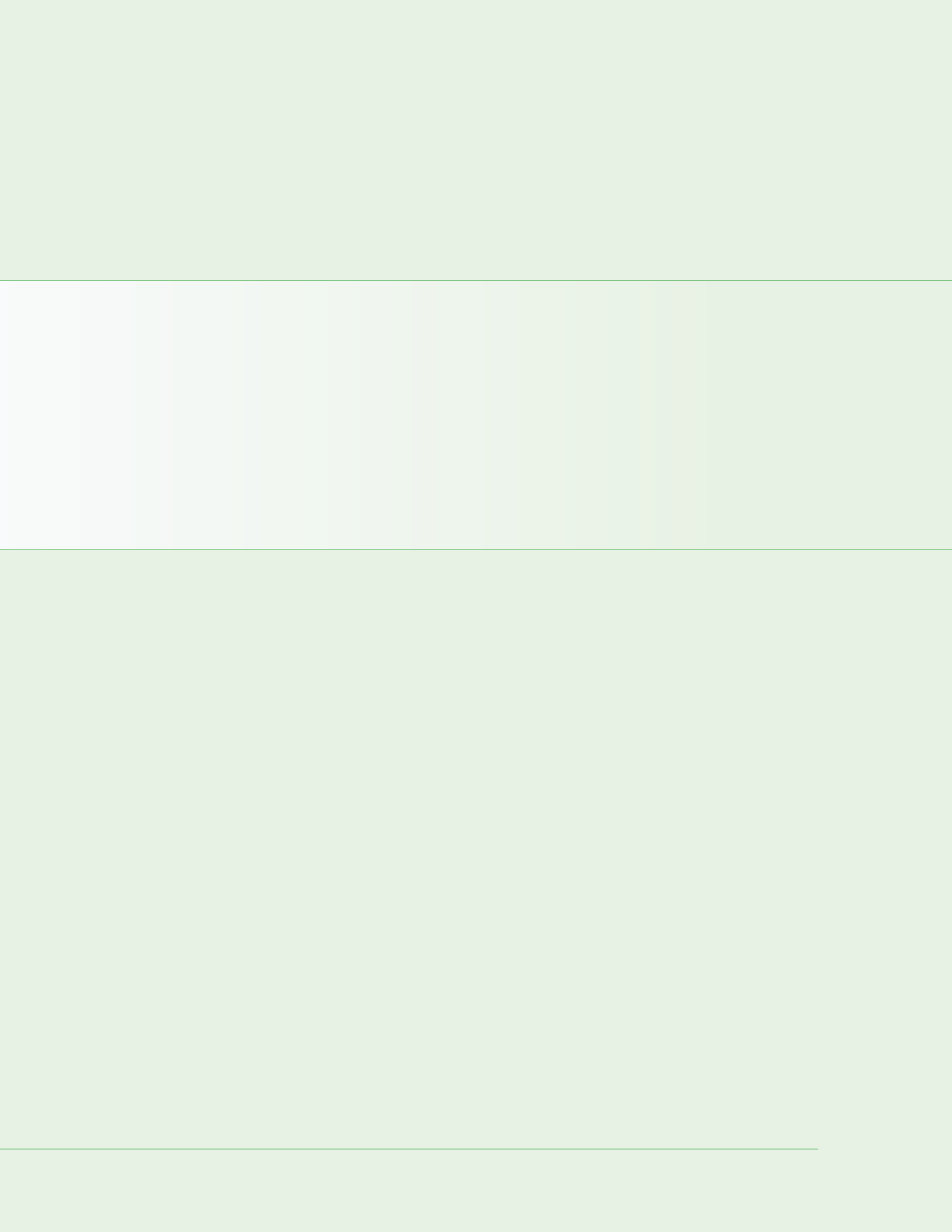
- Note:** 1. Outer and inner diameter dimensions in () are to be considered as references, which shall be adjusted to the required withdrawal force as specified
2. Zirconia tubes also available
3. Custom configurations and dimensions available upon request



For LC and MU Adapters Straight Split

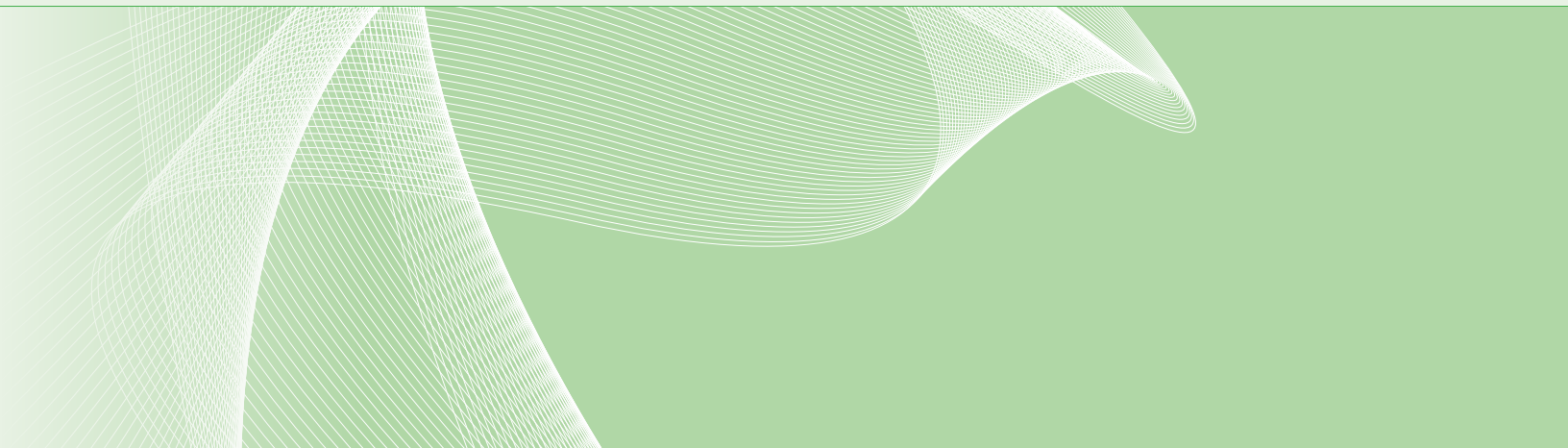


For SC and FC Adapters Straight Split



STANDARD CONNECTOR SERIES
SMALL FORM FACTORS
SPECIALTY PRODUCTS
FERRULES AND SLEEVES
POLISHING SYSTEMS

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POLISHING SYSTEMS

Polishing Rubber Pads	pg. 80
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Microscopes	pg. 83

RUBBER POLISHING PADS

All rubber pads are certified for hardness and parallel flatness. Pads are available with durometer specifications and color coding for ease of identification.



Polishing Rubber Pads

Features:

- Long lasting
- Varying durometers for every application
- Color coded for quick identification
- Ideal parallel flatness

SPECIFICATION

For Polishing Rubber Pads

Thickness	0.5mm ~ 5.5mm
Parallelism	± 0.05mm
Durometer	40 ~ 90
Durometer Tolerance:	± 2.5

Note: 4.8mm, 4.9mm thicknesses and custom types available upon request.

PART NUMBER	COLOR	DESCRIPTION
RUGNG55.0-90	Black	5" x 5mm 90 Duro
RUGNG55.0-85	Grey	5" x 5mm 85 Duro
RUGNG55.0-80	Green	5" x 5mm 80 Duro
RUGNG55.0-75	Brown	5" x 5mm 75 Duro
RUGNG55.0-70	Violet	5" x 5mm 70 Duro
RUGNG55.0-65	Dark Blue	5" x 5mm 65 Duro
RUGNG55.0-60	Blue	5" x 5mm 60 Duro
RUGNG55.0-55	Rust	5" x 5mm 55 Duro
RUGNG55.0-50	Red	5" x 5mm 50 Duro
RUGNG55.0-45	Burgundy	5" x 5mm 45 Duro
RUGNG55.0-40	Orange	5" x 5mm 40 Duro

RUGNG55.0-90 ORDER CODE example

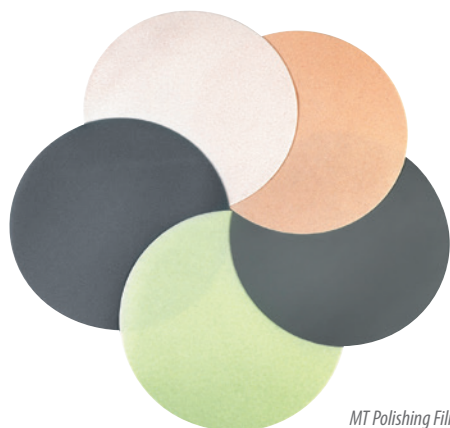
Polishing Films

POLISHING FILMS

SENKO Polishing Films are available with surface textures and particle density to suit the end user's performance requirements. Films are lot tested for quality, consistency and longevity. A range of films are available for epoxy removal, grinding, fine polish and cleaning of industry standard fiber optic connectors and ferrules.

Features:

- Consistent particle deposition
- Various film diameters
- Various particle sizes



MT Polishing Films

POLISHING FILMS PART NUMBER	DESCRIPTION	DIAMETER
LFSIC-300-X0R-N	Silicon Carbide, 30.0µm	(X) Specify 4" or 5"
LFSIC-150-X0R-N	Silicon Carbide, 15.0µm	(X) Specify 4" or 5"
LFSIC-090-X0R-N	Silicon Carbide, 9.0µm	(X) Specify 4" or 5"
LFDA-090-X0R-N	Diamond, 9.0µm	(X) Specify 4" or 5"
LFDA-060-X0R-N	Diamond, 6.0µm	(X) Specify 4" or 5"
LFDA-030-X0R-N	Diamond, 3.0µm	(X) Specify 4" or 5"
LFDA-010-X0R-N	Diamond, 1.0µm	(X) Specify 4" or 5"
LFPOS-000-X0R-N	UPC Final Polishing Film	(X) Specify 4" or 5"
LFCL-000-X0R-N	Cleaning Film	5 inches

MT POLISHING FILMS PART NUMBER	DESCRIPTION
LFSIC-300-50R-P	PSA Type, Silicon Carbide, 30.0µm
LFSIC-150-50R-P	PSA Type, Silicon Carbide, 15.0µm
LFSIC-030-50R-P	PSA Type, Silicon Carbide, 3.0µm
LFSC-030-50R-P	PSA Type, Flocked Silicon Carbide, 3.0µm
LFFAO-010-50R-P	PSA Type, Flocked Aluminum Oxide, 1.0µm
LFFAO-005-50R-P	PSA Type, Flocked Aluminum Oxide, 0.5µm
LFFCO-005-50R-P	PSA Type, Flocked Cerium Oxide, 0.5µm
LSS-1	Colloidal Silica Suspension

LFSIC-300-50R-P ORDER CODE example

POLISHING FILMS

FOS-01 Final Polish Series

Final Polishing Film, FOS-01 is a highly efficient final polishing film formulated using ultra-fine particles which are uniformly deposited on a polyester film surface, without irregular height protrusions. FOS-01 is specifically designed for

polishing fiber optic connector ferrules used in high performance applications.

SPECIFICATION

For FOS-01

Particle Size	< 0.1µm
Coating Weight	6.0g/m ²
Film Surface Roughness	0.15µm
Polisher	All SENKO APC Series Polishers
Return Loss	< - 55dB
Fiber Height	0~50nm
Radius of Curvature	10~25mm
Apex Offset	< 50µm

Note: U.S. Patented

Features:

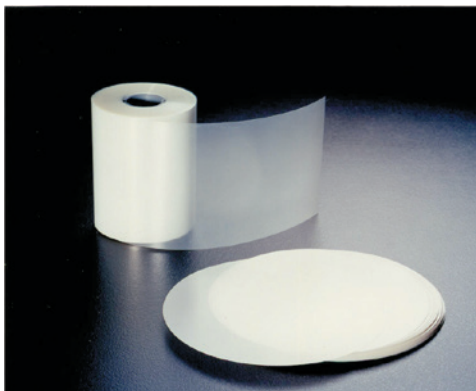
- Easy to use
- Clean slurry-free work environment
- Used for high performance applications
- Ultra-fine polishing particles < 0.1µm
- Excellent uniformity



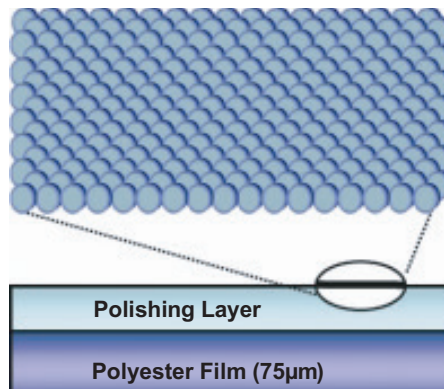
FOS-01 Series

POLISHING FILM FOS-01	DESCRIPTION
LFFOS-000-50R-N	UPC Final Polishing Film, 5 Inch Diameter
LFFOS-000-60S-N	UPC Final Polishing Film — 6 x 6 Inch Square

LFFOS-000-50R-N ORDER CODE example



FOS-01 Series



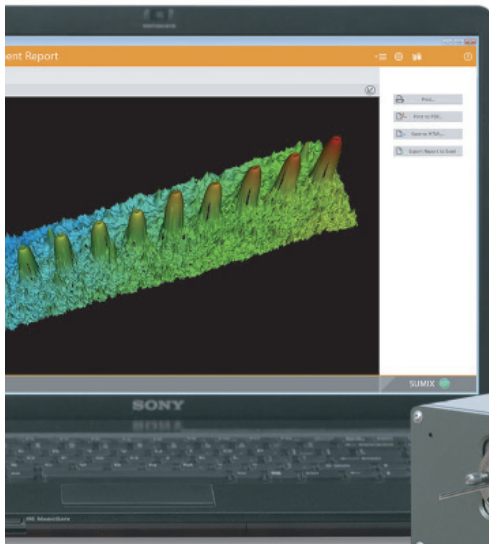
Geometry Measurements

SUMIX INTERFEROMETERS

3D MICROSCOPY
INTERFEROMETERS



for Fiber Optic Connector Surface Inspection



Sumix interferometers are designed to be utilized for detailed measurements of end face geometry and inspection of fiber optic ferrules, patch cords, pigtails or bare fiber. It is possible to follow test criteria laid out by IEC and Telcordia or your own custom standards. Results are stored into a database and can be accessed for report generation and measurement traceability. Sumix interferometers combine high-resolution and accurate measurements with a modern software suite for ease-of-use and production efficiency.

Features:

- Single and Multi-fiber connectors
- Autofocus
- Automated PASS/FAIL verdict
- Detailed 2D/3D surface profiles
- Scratch detection
- Connects to tablets or laptops
- High resolution optics
- Database storage
- One-click operation
- Large field of view

LIST OF CONNECTORS SUPPORTED

Optimal for Connectors	MAX-QS+	MAX-QM-B+	MAX-Quantum	WIZ-QS-110
	Single fiber and MT-RJ	Single and multi-fiber	Single and multi-fiber	Single fiber
ST, FC, SC (PC and APC)	○	○	○	○
MU, LC (PC and APC)	○	○	○	○
E2000™ (PC and APC)	○	○	○	○
MIL-ST (M83522/16)	○	○	○	○
MIL-ST (83522)	○	○	○	○
M29504/14 (MIL-PRF-29504/14)	○	○	○	○
SMA 905	○	○	○	
MT-RJ (PC and APC)	○	○	○	
MT12 - MT72 (PC and APC)		○	○	
MT16, MT32 (PC and APC)			○	
MTP®/MPO (PC and APC)		○	○	
MTP®/MPO (12-72 fiber and 16-32 fiber; PC and APC) with testing guide hole parallelism			○	

SPECIFICATION				
Lateral Resolution	1.1µm	2.2µm	1.47µm	2.5µm
Measurement Time*	2 sec (PC)	3 sec (MT12) 1 sec (Single Fiber)	7 sec (MT12) 1.4 sec (Single Fiber)	1.8 sec
Field of View	1.1 x 0.9mm	5.6 x 3.5mm	6.0mm x 4.4mm	1.2 x 0.9mm
Measurement Mode	Phase Shift and White Light			
Anomalies Detection	Yes	No	Yes	No
Microscopy Mode	Yes	No	Yes	No
Power Supply	External, USB 3.0 Cable, 12 V DC Power Adapter			
Weight	3.9 kg (8.6 lbs)	3.8 kg (8.4 lbs)	4.8 kg (10.6 lbs)	3.9 kg (8.6 lbs)
Dimensions (H x W x L)	103 x 137 x 183mm (4.06 x 5.39 x 7.2 in)	103 x 137 x 183mm (4.06 x 5.39 x 7.2 in)	181 x 213 x 117mm (7.13 x 8.39 x 4.61 in)	150 x 120 x 90mm (5.9 x 4.72 x 3.5 in)

* Measurement time may vary depending on computer performance and connector end face shape.

E2000 is a trademark of Diamond SA
MTP is a registered trademark of US Conec Ltd.
CS is a registered trademark of Senko Advanced Components Inc.

SUMIX MICROSCOPE

End Face Inspection



Connector end face inspection is a critical step in manufacturing facilities and field installations. Various studies have indicated that contaminated connectors are the leading cause of network failures. With the Sumix MANTA inspection scope, testing is made simple with

one button PASS/FAIL analysis of a wide range of connectors. With its wide field of view and software analysis, the Manta is the perfect tool to locate scratches, defects and contamination for multi-fiber assemblies for both bulkheads and connectors ends.

Features:

- Single and Multi-fiber connectors
- Automated PASS/FAIL verdict
- High-resolution optics
- Reinforced stainless steel housing
- One button testing
- Autofocus
- Extended working distance

SPECIFICATION	SMX-MANTA-W+	SMX-MANTA+
Primarily Designed for Inspection of	Single Fiber, Multi-Fiber and SMA Connectors	Single Fiber, Multi-Fiber and SMA Connectors
Compatible with	Desktop PC, Laptop, Tablet	Desktop PC, Laptop, Tablet
Field of View	4.1 x 3.0mm	2.4 x 1.8mm
Defect Size Detection	0.75µm	0.75µm
Optical Resolution	1.8µm	1.8µm
Magnification	260x	290x
Focus	Autofocus	Autofocus
Camera Type	Digital, USB 3.0	Digital, USB 3.0
Power Source	USB 3.0 Port of PC	USB 3.0/2.0 Port of PC
Cable	USB 3.0, Detachable	USB 3.0, Detachable
Dimensions (H x W x L)	70 x 28 x 246mm (2.52 x 1.1 x 9.17 in)	64 x 28 x 233mm (2.52 x 1.1 x 9.17 in)
Weight	435g (0.96 lbs)	425g (0.94 lbs)
External Test Button	Yes	Yes
Housing Material	Aluminum Body and Stainless Steel Barrel	Aluminum Body and Stainless Steel Barrel



SENKO Advanced Components, Incorporated is a recognized global leader in the design, production, sales, marketing and distribution of over 1000 fiber optic products. It is headquartered in Boston, Massachusetts, USA and is the fiber optic division of the Japan based SENKO Group.

The SENKO Group is a family of companies serving clients in the Electronic / Electrical, Telecom / Fiber Optic, and Automotive / Industrial industries. We continually expand our product line to suit your business needs, both through innovations in product design and via international partnerships. Our top quality products are backed with superior technical support and logistic services provided by our worldwide facilities.



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