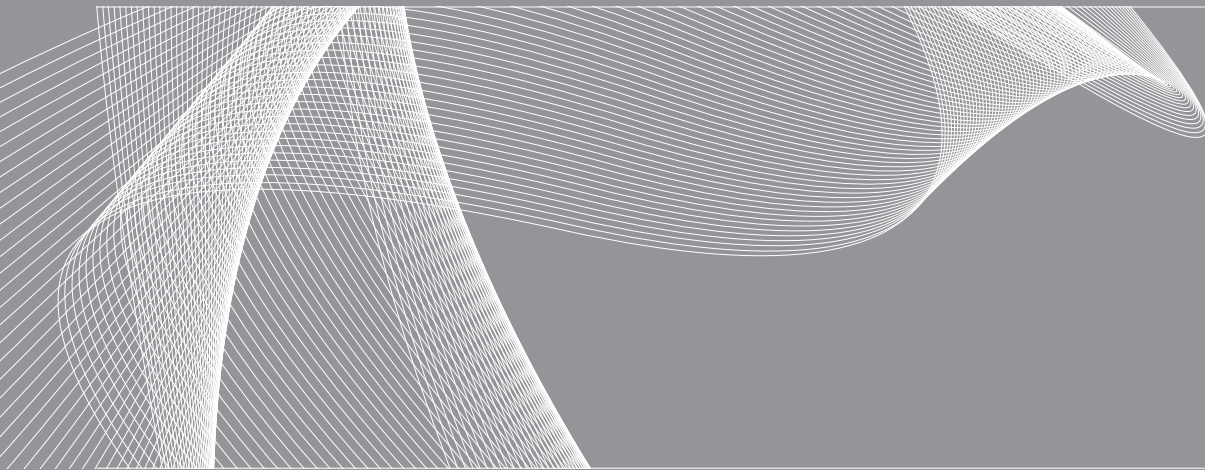# SENKO
SENKO GROUP® Advanced Components

INTERCONNECT
CATALOGUE

SENKO Advanced Components is a recognized leader in the design, manufacturing, sales, marketing and distribution of over 1000 fiber optic products for the global telecom and datacom industries. Our experience in fiber optics dates back to the earliest days of development for this superior communications technology. We currently maintain a number of strategically located manufacturing centers, offices, and warehouses, which serve the demanding requirements of today's rapidly changing fiber optic markets throughout the Americas, Europe, Asia and Asia-Pacific.

SENKO offers its customers a full range of standard products, the technical expertise to liaise with engineers, and the capability to develop customized products for unique applications. We back our products with long-term warranties together with extensive mechanical and environmental testing. Moreover, SENKO is able to provide sourcing, inspection, packaging, and logistic services to manufacturers of high-tech communications systems.

An ISO-9001 registered company, we maintain one of the largest product portfolios of its kind—at a level of quality that is second to none. For more information about SENKO, please visit our website at www.senko.com.
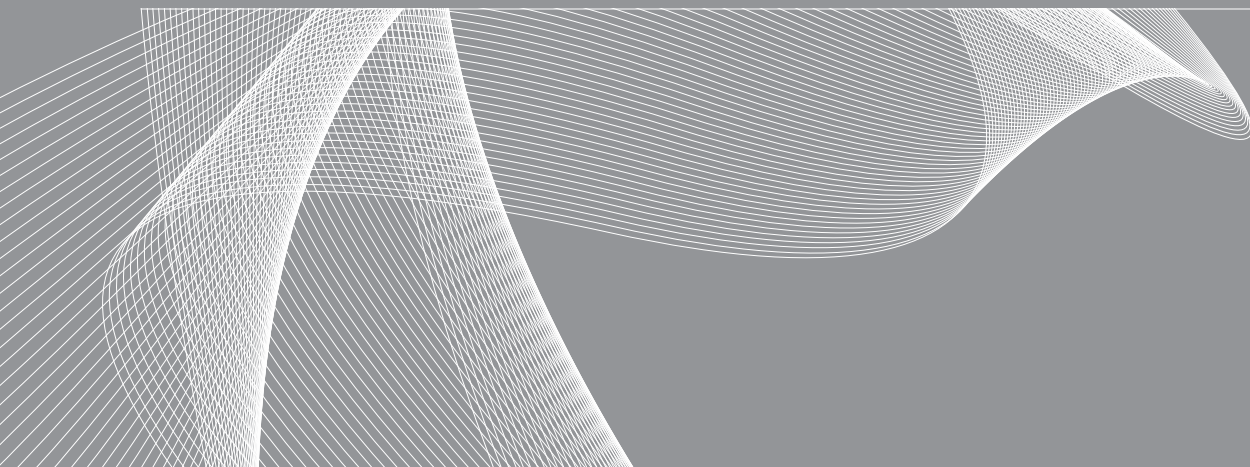
STANDARD CONNECTOR SERIES

SC -PC   Premium Connector   DIN   Connector & Adapter
SC-APC Premium Connector   D4 Connector
SC   Standard Connector   D4 Adapter
SC   Connector Kit   E 2000 Connector
SC   Duplex Clip   E 2000 Lever
SC   XP Fit Plus Connector   E 2000 Crimpset
SC   Simplified   E 2000 Accessories
SC   Crimp Tool   E 2000 Adapters & Frames
SC   Adapter Series   SMA Connector
FC   Premium Connector   SMA Adapter
FC   APC Premium Connector   Connector Boots
FC   Standard Connector
FC   Adapters
ST   Premium Connector
ST   Standard Connector
ST   Adapter

![SENKO logo - SENKO GROUP® Advanced Components]

SC Connector

The SC or Subscription Channel connector uses a push-pull system and have become known as an industry standard connector because of their many advantages.

The SC connector push pull system was originally developed by NTT, and is characterized by an audible click heard when the connector is mated with the adapter, signaling it is locked and preventing rotational misalignment.

Made of mostly plastic components, the SC offers a less expensive option that is just as durable and can be used in a variety of applications including CATV, Active Device Terminiations, LANs, Telecommunication networks and WAN's. The SC connectors are available with single mode physical contact (PC), angled physical contact (APC), and Multi-mode physical contact (PC) ferrules. The SC connector and adapter come in a variety of colors including industry standard blue green, and beige.

SPECIFICATION		SINGLEMODE	MULTIMODE
Insertion Loss	**Premium Connector UPC**	0.08dB Typical	0.15dB
	Premium Connector APC	0.10dBTypical	
	Standard Connector	0.12dBTypical	0.20dB
Return Loss		≥ 55dB typical (PC) ≥ 68dB typical (APC)	
Durability		<0.1dB typical change, 500 matings*	<0.1dB typical change, 500 matings*
Operating Temperature		-40ºC to +75ºC	-40ºC to +75ºC
Ferrule Hole Sizes (Custom sizes available)		126µm +1/-0 Concentricity: ≤ 1µm 125µm +1/-0 Concentricity: ≤ 1µm 125.5µm +1/-0 Concentricity: ≤ 1µm	127µm (MM) 144µm (MM) 230µm (MM)

* Using SM fiber cable assembly. Specifications shown above were obtained using SENKO recommended products and procedures.

SC Premium   1 PC Connector
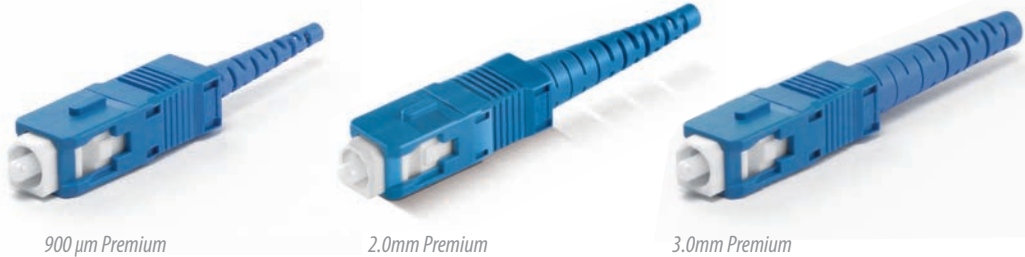
900 µm Premium   *2.0mm Premium*   *3.0mm Premium*

CONNECTOR		FERRULE I.D.		HOUSING		BOOT		BOOT COLOR	
254	Premium	191	SM: 125.5µm	6	Blue	1	3.0mm Cable Standard	1	Blue
		192	SM: 126µm	7	Black	2	900µm Fiber Short	2	Black
		193	SM: 125µm	8	Red	3	2.0mm Fiber	3	Green
		291	MM: 127µm	9	Beige	4	3.0mm Cable Short	4	Red
		292	MM: 230µm			5	2.4mm Cable Short	5	Gray
		293	MM: 144µm			6	2.0mm Cable Short	6	Yellow
						7	**3.0mm Premium (Telcordia)**	7	White
						8	**900µm Premium (Telcordia)**	8	Beige
						9	2.0mm Cable Standard		
						A	**2.0mm Premium (Telcordia)**		
						B	900µm Fiber Boot		

ORDER CODE example:.   **254 - 191 - 671**

SC-APC Premium
1 PC Connector

900 µm Premium *2.0mm Premium* *3.0mm Premium*

FERRULE TYPE		FERRULE I.D.		POLISH		BOOT	
291	Step	191	SM: 125.5µm	1	No Angle	1	3.0mm Cable Standard
294	Conical	192	SM: 126µm	2	8° Pre-Angle	2	900µm Fiber Short
		193	SM: 125µm			3	2.0mm Fiber
						4	3.0mm Cable Short
						5	2.4mm Cable Short
						6	2.0mm Cable Short
						7	**3.0mm Premium (Telcordia)**
						8	**900µm Premium (Telcordia)**
						9	2.0mm Cable Standard
						A	**2.0mm Premium (Telcordia)**
						B	900µm Fiber Boot

ORDER CODE example:. 294 - 191 - 24

SC Standard
1 PC Connector
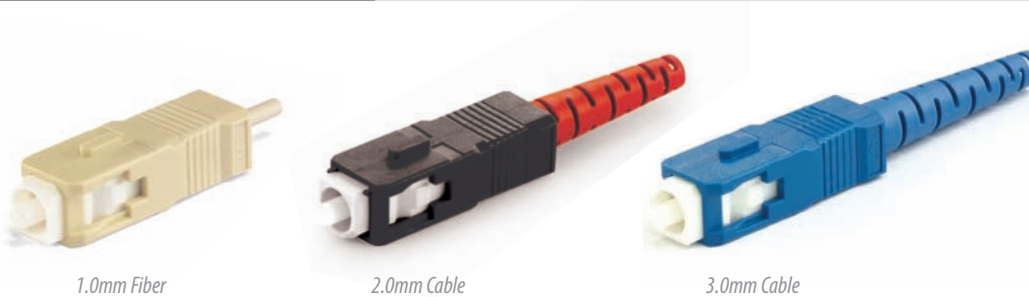
1.0mm Fiber *2.0mm Cable* *3.0mm Cable*

CONNECTOR		FERRULE I.D.		HOUSING		BOOT		BOOT COLOR	
231	Pre-assembled	191	SM: 125.5µm	6	Blue	1	3.0mm Cable Standard	1	Blue
232	Unassembled	291	MM: 127µm	7	Black	2	1.0mm Fiber (Buffer) Boot	2	Black
				9	Beige	9	2.0mm Cable Standard	4	Red
								6	Yellow
								8	Beige

ORDER CODE example:. 231 - 191 - 621

SC Connector Kit — NTT Style

900µm Fiber

2.0mm Cable

3.0mm Cable

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

ORDER CODE example:. **132 - A11 - D1**

SC Duplex Clip

SC Duplex Clip Premium

SC Duplex Clip Standard

CODE		COLOR	
224	SC Duplex Clip for Premium Connector	591	Black
274	SC Duplex Clip for Standard Connector	592	Green
		593	Blue
		594	Beige
		595	Red

ORDER CODE example:. **274 - 595**

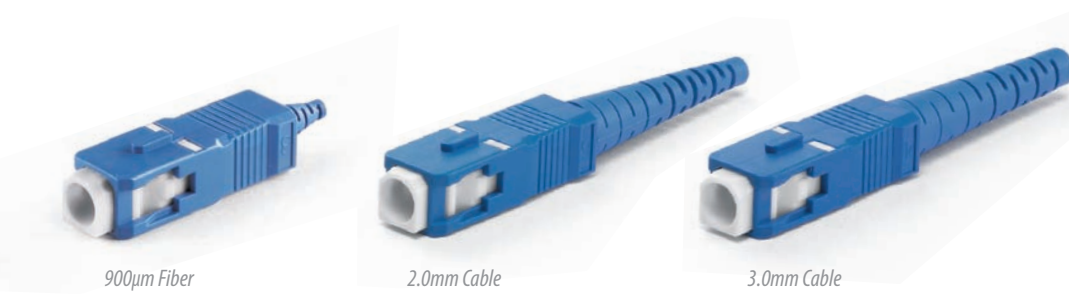## APPLICATIONS

- CATV
- Metro
- Active device termination
- Test equipment
- Telecommunication networks
- Local Area Networks (LANs)
- Data processing networks
- Premise installations
- Wide Area Networks (WANs)
- Industrial, medical & military

FEATURES

- Compliance with Telcordia, TIA/IEA, IEC and JIS
- interface specifications
- Low insertion loss & back reflection*
- 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

Note:
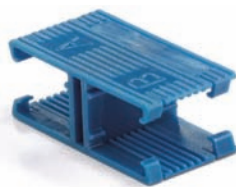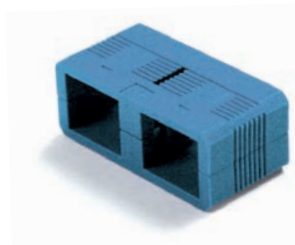*The outer housing will come with a SENKO logo.*

Note:
SC Duplex Clip Premium works only with connectors 254, 291, and 294. The Standard works with all others SC

XP Fit Plus — SC Field Installable Connector

- Data Centers
- LAN
- Telecommunications
- Network Monitoring
- FTTX

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. The XP Fit Plus comes with an assembling jig and fiber holder, making for an accurate alignment and fiber cleave when terminating the connector.

FEATURES

- Mechanical Splice (index matching gel)
- Highly Stable & Reliable
- Perfect Performance
- Compact Package
- RoHS Compliant
- Finished Connector meets UL94-V0 Flammability Rated

ASSEMBLY PROCEDURE
- NO EPOXY
- NO POLISHING

1 - Cutting Fiber

2 - Inserting Fiber

3 - Take out Connector

SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.2dB typical (PC) and 0.3dB typical (APC)	0.1dB typical
Return Loss	55dB typical (PC) 60dB typical (APC)	35dB typical
Durability	<0.1dB typical change, 500 matings*	<0.1dB typical change, 500 matings*
Operating Temperature	-40ºC to +75ºC	-40ºC to +75ºC
Tensile	TIA/EIA 568-B.3	
Intermateability	IEC 61754-4	

* Using SM fiber cable assembly. Specifications shown above were obtained using SENKO recommended products and procedures.

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

STANDARD CONNECTOR SERIES

7

XP Fit Plus — SC Field Installable Connector
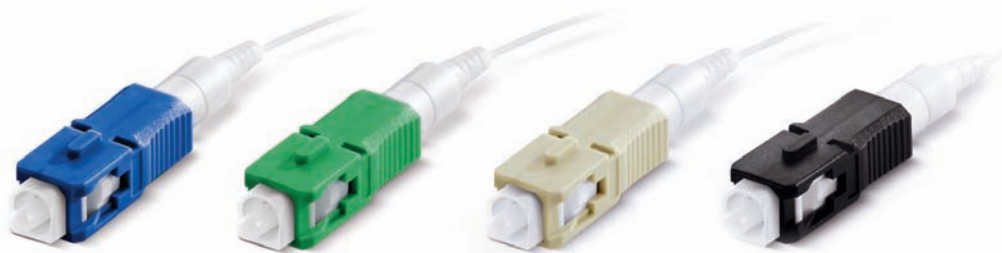
PART NUMBER	DESCRIPTION	HOUSING	BOOT COLOR
318-191-627	XPFit Plus SC Connector SM PC 900µm	Blue	White
318-091-427	XPFit Plus SC Connector SC APC 900µm	Green	White
318-291-727	XPFit Plus SC Connector MM 50/125 900µm	Black	White
318-391-927	XPFit Plus SC Connector MM 62.5/125 900µm	Beige	White
318-491-527	XPFit Plus SC Connector MM 50/125 10G OM3 900µm	Aqua	White

PART NUMBER	DESCRIPTION	HOUSING	BOOT COLOR
318-191-617	XPFit Plus SC Connector SM PC 250µm	Blue	White
318-091-417	XPFit Plus SC Connector SM APC 250µm	Green	White
318-291-717	XPFit Plus SC Connector MM 50/125 250µm	Black	White
318-391-917	XPFit Plus SC Connector MM 62.5/125 250µm	Beige	White
318-491-517	XPFit Plus SC Connector MM 50/125 10G OM3 250µm	Aqua	White

V-Groove Open
Fiber
Inserted Wedge

V-Groove Clamped Closed
Fiber
Extracted Wedge

Index Matching Gel
Pressure Plate
Clamp
Pre-Polished Fiber Stub
V-Groove Plate

SENKO
SENKO GROUP® Advanced Components
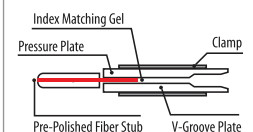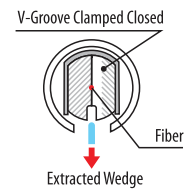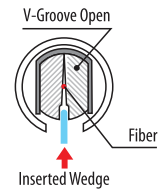
SC Simplified — Connector and Adapter

CONNECTOR CODE	FERRULE		BOOT TYPE		BOOT COLOR	
774	**191**	SM: 125.5µm	**2**	1.0 mm Fiber	**2**	Black
	192	SM: 126µm				
	193	SM: 125µm				

ORDER CODE example:. **774** - **191** - **2 2**

ADAPTER CODE	TYPE		SLEEVE		HOUSING COLOR	
229	**1**	Simplex	**1**	Zirconia Straight Split	**1**	Blue
	2	Duplex	**2**	Phosphor Bronze Sleeve		
	3	8 ways				
	4	10 ways				

ORDER CODE example:. **229** - **111**

Note:
Custom configuration available upon request

SC Crimp Tool

CODE	CONNECTOR TYPE	
CRT	**401**	SC, FC, ST One Piece Connectors
	501	SC Connector Kit

Note:
Other termination tools and accessories are available upon request. Assembly instructions are provided with all connector kit

![SENKO Advanced Components logo]

SC Adapter Series

SENKO offers a broad range of SC adapter that incorporate a hook which performs well under high temperatures, maintaining plug retention strength.

Simplex, duplex and quad adapters are available in plastic, with or without flange, and in horizontal and vertical mount styles. All come with a choice of zirconia split sleeves (diagonal or straight split options available), or with phosphor bronze straight split sleeves. Housing are available in a variety of colors. The SC simplex plastic adapter has an optional shutter. The SC adapter series is also available in a metal housing, with square or rectangular flange types. Custom hook color and mount housings are available.

SPECIFICATION	SINGLEMODE
Insertion Loss	≤ 0.20dB Max for Zr Sleeve ≤ 0.30dB Max for Pb Sleeve (Note: Measured using JDSU meter and Master Jump
Sleeve/Ferrule Withdrawal Force	2.0N ~ 5.9N (200gf ~ 600gf)
Meets GR-326	Sections 3.4 CR3-15 3.4.1 C03-16

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

SC Adapter — Simplex

SC Simplex, w/Flange

SC Simplex, w/Flange

SC Simplex, w/o Flange

CODE		TYPE		COLOR		SLEEVE TYPE		HOOK MATERIAL		SHUTTER	
222	Flange	1	Simplex	0	Blue	1	Zirconia	1	High Tg	N	No Shutter
227	No Flange			1	Green	2	Phosphor Bronze	2	PBT		
				2	Beige			3	PPS		
				3	Black						
				4	Red						
				5	Yellow						
				9	Aqua						
				T	Clear						

ORDER CODE example:.   222 - 1 01 - 1N

SC Adapter

Duplex
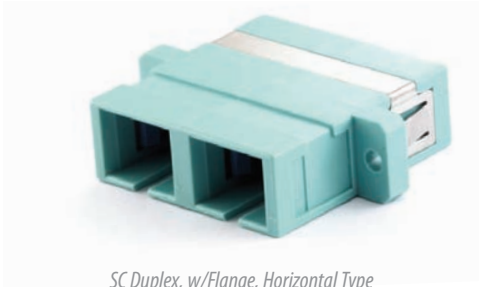
SC Duplex, w/Flange, Horizontal Type
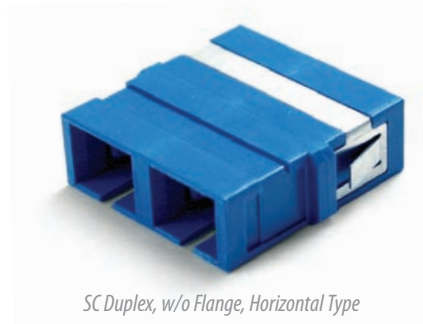
SC Duplex, w/o Flange, Horizontal Type

CODE		TYPE		COLOR		SLEEVE TYPE		HOOK MATERIAL		SHUTTER	
222	Flange	2	Dup. Horizontal	0	Blue	1	Zirconia	1	**High Tg**	N	No Shutter
227	No Flange	3	Dup. Vertical	1	Green	2	Phosphor Bronze	2	PBT		
				2	Beige			3	PPS		
				3	Black						
				4	Red						
				5	Yellow						
				9	Aqua						
				T	Clear						

ORDER CODE example:.   222 - 2 01 - 1N

SC One Piece Adapter

*SC One Piece Adapter
No Weld Type*

*SC One Piece Adapter
No Weld Type*

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	Phosphor Bronze	2	PBT		
				2	Beige						
				3	Black						
				4	Red						
				5	Yellow						
				9	Aqua						
				T	Clear						

ORDER CODE example:.   242 - 1 01 - 1N

APPLICATIONS

- CATV
- Telecommunication networks
- Local Area Networks (LANs)
- Metro networks
- Data processing networks
- Industrial, military and medical

FEATURES

- Compact design
- Telcordia, TIA/IEA, IEC and JIS compliance*
- High precision alignment
- Low insertion and return loss and back reflection*
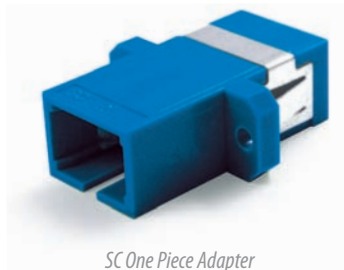- Choice of metal or plastic housing, mount styles & flange options

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

*SC One Piece Adapter*
No Weld Type

*SC Standard Adapter
Welded Type*

SENKO GROUP® Advanced Components

SC Shutter — Internal and External

SENKO offers both an external and internal shutters for adapters to shield potentially harmful light. SENKO's external shutters are made from special materials designed to attenuate a broad range of visible and invisible light, fit easily over existing adapters and provide a guard against debris such as dust and dirt. 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.
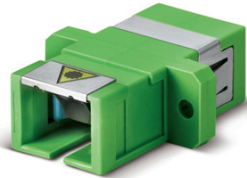
SC Simplex, w/Flange and Internal Shutter *SC Simplex w/o Flange and External Shutter* *SC Duplex, with Internal Shutter*

CODE		TYPE		COLOR		SLEEVE TYPE		HOOK MATERIAL		SHUTTER	
222	Flange	1	Simplex	0	Blue	1	Zirconia	1	**High Tg**	A	Internal Shutter (w/o mark)
227	No Flange	2	Dup. Horizontal	1	Green	2	Phosphor Bronze	2	PBT	B	Internal Shutter (w/mark)
				2	Beige			3	PPS		
				3	Black						
				4	Red						
				5	Yellow						
				9	Aqua						
				T	Clear						

ORDER CODE example:.   222 - 2 01 - 1A

CODE	DESCRIPTION
222-2-0S	External shutter for SC Adapter

SC Metal Adapter

SC Simplex Horizontal Adapter
Rectangular Flange with Metal Housing

SC Duplex Horizontal Adapter
Rectangular Flange with Metal Housing

CODE		HOOK COLOR		SLEEVE	
226	Simplex	1	**High Tg**	01	Zirconia Straight Split
228	Duplex Horizontal	2	Blue (PBT)	02	Phosphor Bronze
		3	Brown (PPS)		

ORDER CODE example:.   226 - 101

![SENKO Advanced Components logo]

FC Connector

Best used in single mode applications and known for exceptionally accurate positioning, the FC or Fixed Connection Connector is designed for use in unstable environments because of their threaded barrel housing which provides a secure connection. As one of the most popular connectors used today its applications include CATV, Active device termination, Telecommunication networks, Metro networks, test equipment, multimedia, industrial, and military applications. SENKO carries three different versions of the FC; FC/APC, FC/PC and FC Connector Kits.

The FC Connector Kit is also available for those who prefer to assemble the FC connector from its component parts.

SPECIFICATION		SINGLEMODE	MULTIMODE
Insertion Loss	Premium Connector	0.08dB Typical	0.15dB Typical
	Standard Connector	0.12db Typical	0.20db Typical
Return Loss		≥ 55dB typical for SM PC ≥ 65dB typical SM PC	
Durability		<0.1dB typical change, 500 matings	<0.1dB typical change, 500 matings
Operating Temperature		-40ºC to +75ºC	-40ºC to +75ºC
Ferrule Hole Sizes (Custom sizes available)		125.5µm +1/-0 (SM) Concentricity: ≤ 1µm 126µm +1/-0 (SM) Concentricity: ≤ 1µm 125µm +1/-0 (SM) Concentricity: ≤ 1µm Custom Sizes	127µm (MM) 144µm (MM) 230µm (MM)

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

FC Premium   1 PC Connector

900 µm Premium   *2.0mm Premium*   *3.0mm Premium*

CODE		FERRULE I.D.		BOOT		COLOR	
351	Nickel Plated Brass Body	101	SM: 125.5µm	1	3.0mm Cable Standard	1	Blue
		102	SM: 126µm	2	900µm Fiber Buffer	2	Black
		103	SM: 125µm	3	2.0mm Fiber	3	Green
		201	SM: 127µm	4	3.0mm Cable Short	4	Red
		202	SM: 230µm	5	2.4mm Cable Short	5	Gray
		203	SM: 144µm	6	2.0mm Cable Short	6	Yellow
				7	3.0mm Premium (Telcordia)	7	White
				8	900µm Premium (Telcordia)	8	Beige
				9	2.0mm Cable Standard		
				A	2.0mm Premium (Telcordia)		
				B	900µm Fiber Boot		

ORDER CODE example:.   351 - 201 - 28

SENKO
SENKO GROUP® Advanced Components

FC-APC Premium — 1 PC Connector

900 µm Premium *2.0mm Premium* *3.0mm Premium*

CONNECTOR		FERRULE I.D.		FERRULE POLISH		BOOT	
292	Step Ferrule	**201**	SM: 125.5µm	**1**	No Angle	**1**	3.0mm Cable Standard
293	Conical Ferrule	**202**	SM: 126µm	**2**	8º Pre-Angle	**2**	900µm Fiber Short
		203	SM: 125µm			**3**	2.0mm Fiber
						4	3.0mm Cable Short
						5	2.4mm Cable Short
						6	2.0mm Cable Short
						7	**3.0mm Premium (Telcordia)**
						8	**900µm Premium (Telcordia)**
						9	2.0mm Cable Standard
						A	**2.0mm Premium (Telcordia)**
						B	900µm Fiber Boot

ORDER CODE example:. **293 - 203 - 16**

FC Standard

900 µm Fiber *2.0mm Cable* *3.0mm Cable*

CODE		FERRULE I.D.		BOOT		BOOT COLOR	
341	Preassembled Key Ring	**101**	SM: 125.5µm	**1**	3.0mm Cable Standard	**1**	Blue
331	Unassembled Key Ring	**201**	MM: 127µm	**2**	900µm Fiber (Buffer) Boot	**2**	Black
				9	2.0mm Cable Standard	**4**	Red
						6	Yellow
						8	Beige

ORDER CODE example:. **341 - 101 - 11**

APPLICATIONS

- CATV
- Metro
- Active device termination
- Test equipment
- Telecommunication networks
- Local Area Networks (LANs)
- Wide Area Networks (WANs)
- Data processing networks
- Premise installations
- Industrial and military

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 94 V-0 boots in a variety of colors
- Telcordia style boots
- Adapters with choice of metal & flange options

Note:
1. *When terminated using SENKO recommended procedures.*
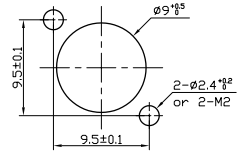2. *Custom configurations available upon request.*

STANDARD CONNECTOR SERIES

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FC Square Adapter

FC Square Adapter, Standard Body

FC Square Adapter, Solid Body

FC Square Adapter, Standard Body

ADAPTER TYPE		SLEEVE		KEYWIDTH	
259	Standard Body - MM/SM	1	Zirconia Straight Split	01	For PC Connector 2.15 +0.05/-0
297	Solid Body - MM/SM	2	Phosphor Bronze	02	For APC Connector 2.05 +/- 0.02

ORDER CODE example:.   **297 - 2 01**

FC Round Adapter

FC Round Adapter, D Style

FC Round Adapter D Style

FC Round Adapter DD Style

CODE		SLEEVE		KEYWIDTH		FLANGE	
253	FC Round Adapter "D" & "DD"	1	Zirconia Straight Split	0	For PC Connector 2.15 +0.05/-0	3	D: Ø8.85mm x 7.95m
		2	Phosphor Bronze	2	For APC Connector 2.05 +/- 0.02	4	DD: Ø9.35mm x 7.65mm

ORDER CODE example:.   **253 - 103**

FC Oval Adapter

FC Oval Adapter, HD Style
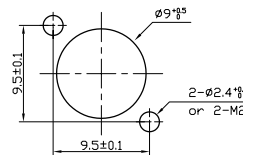
FC Oval Adapter, HD Style

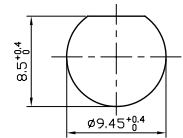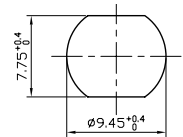| CODE		SLEEVE		KEYWIDTH	
298	FC Oval Adapter "HD"	1	Zirconia Straight Split	01	For PC Connector 2.15 +0.05/-0
		2	Phosphor Bronze	02	For APC Connector 2.05 +/- 0.02

ORDER CODE example:.   **298 - 1 01**

ST Connector

- Local Area Networks (LANs)
- Data Processing Networks
- Premise Installations
- Instrumentation

A straight tip or ST connector is characterized by its quick release bayonet style lock and spring loaded ferrule to hold the fiber. Most commonly used in network applications such as LANs, and Data Processing Networks, they are also found in Premise installations and Instrumentations applications. Horizontally mounted simplex and duplex adapters are available with metal or plastic housings.

- Bayonet style housing for easy termination
- Epoxy and epoxy free versions
- High Precision alignment
- Low insertion and return loss and back reflection

SPECIFICATION		SINGLEMODE	MULTIMODE
Insertion Loss	Premium ST Connector	0.20dB	0.25dB
	Standard ST Connector	0.25dB	0.35dB
Return Loss		≥ 55dB typical for SM PC	
Durability		<0.25dB typical change,500 matings	<0.25dB typical change,500 matings
Operating Temperature		-40ºC to +75ºC	-40ºC to +75ºC
Ferrule Hole Sizes (Custom sizes available)		125.5µm +1/-0 (SM) Concentricity: ≤ 1µm 126µm +1/-0 (SM) Concentricity: ≤ 1µm 125µm +1/-0 (SM) Concentricity: ≤ 1µm Custom	127µm (MM) 144µm (MM) 230µm (MM) Custom

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

ST Premium   1 PC Connector

900 µm Premium   *2.0mm Premium*   *3.0mm Premium*

CODE	FERRULE		BOOT TYPE		BOOT COLOR	
215	101	SM: 125.5µm	1	3.0mm Cable Standard	1	Blue
	102	SM: 126µm	2	900µm Fiber Short	2	Black
	103	SM: 125µm	3	2.0mm Fiber	3	Green
	201	SM: 127µm	4	3.0mm Cable Short	4	Red
	202	SM: 230µm	5	2.4mm Cable Short	5	Gray
	203	SM: 144µm	6	2.0mm Cable Short	6	Yellow
			7	3.0mm Premium (Telcordia)	7	White
			8	900µm Premium (Telcordia)	8	Beige
			9	2.0mm Cable Standard		
			A	2.0mm Premium (Telcordia)		
			B	900µm Fiber Boot		

ORDER CODE example:.   215 - 101 - 35

Note:
Add 1.6 to order code to specify 1.6 mm cable option. Custom configurations available upon request.

![SENKO logo] **SENKO** SENKO GROUP® Advanced Components

ST Standard — 1 PC Connector

900µm Fiber

3.0mm Cable Standard

CODE		FERRULE		BOOT TYPE		BOOT COLOR	
233	ST Standard	101	SM: 125.5µm	1	3.0mm Cable Standard	1	Blue
		201	MM: 127µm	2	900µm Fiber Buffer	2	Black
				9	2.0mm Cable Standard	4	Red
						6	Yellow
						8	Beige

ORDER CODE example:. **233 - 101 - 96**

ST Adapter

ST Adapter, Simplex

ST Adapter, Duplex

CODE		SLEEVE	
216	Simplex Metal Housing	101	Zirconia Straight Split
316	Duplex Horizontal Metal Housing	102	Phosphor Bronze
317	Duplex Horizontal Plastic Housing		

ORDER CODE example:. **316 - 101**

APPLICATIONS

- Local Area Networks (LANs)
- Data Processing Networks
- Premise Installations
- Instrumentation

FEATURES

- Bayonet style housing for easy termination
- Epoxy and epoxy free versions
- High Precision alignment
- Low insertion and return loss and back reflection

![SENKO Advanced Components logo]

DIN Premium

1 PC Connector

SPECIFICATION	SINGLEMODE		MULTIMODE
Ferrule Hole Sizes (Custom sizes available)	125.5µm +1/-0 (SM)	Concentricity: ≤ 1µm	127µm (MM)
	126µm +1/-0 (SM)	Concentricity: ≤ 1µm	144µm (MM)
	125µm +1/-0 (SM)	Concentricity: ≤ 1µm	230µm (MM)
	Custom Sizes		Custom

CODE		FERRULE		BOOT TYPE		BOOT COLOR	
213	DIN Connector PC	101	SM: 125.5µm	1	3.0mm Cable Standard	1	Blue
		102	SM: 126µm	2	900µm Fiber Short	2	Black
		103	SM: 125µm	9	2.0mm Cable Standard	3	Green
		201	MM: 127µm			4	Red
						5	Gray
						6	Yellow
						7	White
						8	Beige

ORDER CODE example:. **213 - 103 - 21**

CODE		FERRULE I.D.		FERRULE POLISH		BOOT	
203	DIN Connector APC Step Ferrule	201	SM: 125.5µm	1	No Angle	1	3.0mm Cable Standard
209	DIN Connector APC Conical Ferrule	202	SM: 126µm	2	8º Pre-Angle	2	900µm Fiber Short
		203	SM: 125µm			9	2.0mm Cable Standard

ORDER CODE example:. **203 - 203 - 11**

DIN Adapter

DIN Adapter

CODE		SLEEVE	
214		101	Zirconia Straight Split
		102	Phosphor Bronze

ORDER CODE example:. **214 - 101**

APPLICATIONS

- CATV & multimedia
- Metro applications, premise installations
- Active device termination
- Test equipment
- Telecommunication networks
- Local & Wide Area Networks (LANs, WANs)
- Data processing networks
- Industrial, medical & military

FEATURES

- Compatible with DIN 47256
- Spring– loaded free floating ferrule piece construction
- Free-floating ceramic ferrule design
- Corrosion resistant body
- Compact design
- Low insertion loss & back reflection*

Note:
1. *When terminated using SENKO recommended procedures.*
2. *Add 1.6 to order code to specify 1.6 mm cable option. Custom configurations available upon request*

D4 Connector

CODE		FERRULE		BOOT TYPE		BOOT COLOR	
272	D4 Crimp Style	102	SM: 126μm	1	3.0mm Cable Standard	1	Blue
		103	SM: 125μm	2	900μm Fiber Short	2	Black
				9	2.0mm Cable Standard	3	Green
						4	Red
						5	Gray
						6	Yellow
						7	White
						8	Beige

ORDER CODE example:. **272 - 102 - 21**

CODE		FERRULE		BOOT TYPE		BOOT COLOR	
271	D4 Crimp Free Connector	102	SM: 126μm	1	3.0mm Cable Short	1	Blue
		103	SM: 125μm			2	Black
						4	Red
						7	White

ORDER CODE example:. **271 - 103 - 17**

D4 Adapter

D4 Adapter

CODE		SLEEVE	
273	D4 Adapter	201	Phosphor Bronze Split

E-2000™ Connector
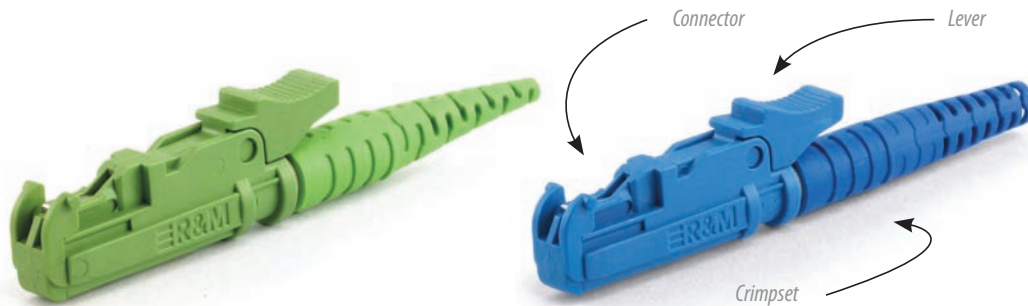
Connector

Lever

Crimpset

E 2000 Connector

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

Note:
1. *Levers with mechanical coding also available*
2. *Each E2000 is made by the following sub components:*
   - *Connector*
   - *Lever*
   - *Crimpset*

INSERTION LOSS	UNIT	TYPICAL	MAX
Multimode	dB	0.2	0.3
Singlemode, PC	dB	0.2	0.4
Singlemode, APC 8°	dB	0.2	0.4
RETURN LOSS	**UNIT**	**TYPICAL**	**MINIMUM**
Singlemode, PC	dB	50	45
Singlemode, APC 8°	dB	80*	60
MECHANICAL PROPERTIES	**UNIT**		
Mating Cycles	n/a	1000	
Temperature Cycling	°C	-25 to +70, 12 cycles	
MATERIALS			
Housing, Protective Cap and Tension Relief	PBT/UL94 V-0		

| CONNECTOR CODE	DESCRIPTION
R304378	Simplex, PC, Multimode, Black
R304379	Simplex, PC, Singlemode, Blue
R305290	Simplex, APC, Singlemode, Green

CONNECTOR LEVER CODE	DESCRIPTION	CONNECTOR LEVER CODE	DESCRIPTION
R304403	White	**R304407**	Orange
R307017	Blue	**R304408**	Red
R304405	Brown	**R309210**	Black
R307018	Green	**R304832**	Yellow
R308035	Violet	**R308034**	Turquoise

CRIMPSET CODE	DESCRIPTION	CRIMPSET CODE	DESCRIPTION
R504383	For Pigtail, Black	**R503992**	For 2.0 ~ 2.2 Cable, Green
R504441	For Pigtail, Blue	**R503290**	F or 2.6 ~ 2.9 Cable, Black
R504126	For Pigtail, Green	**R503442**	For 2.6 ~ 2.9 Cable, Blue
R504374	For 1.7 ~ 2.0 Cable, Black	**R503311**	For 2.6 ~ 2.9 Cable, Green
R504361	For 1.7 ~ 2.0 Cable, Blue	**R306365**	For 2.9 ~ 3.2 Cable, Black
R504270	For 1.7 ~ 2.0 Cable, Green	**R306364**	For 2.9 ~ 3.2 Cable, Blue
R504304	For 1.7 ~ 2.0 Cable, Red	**R306366**	For 2.9 ~ 3.2 Cable, Green
R503973	For 2.0 ~ 2.2 Cable, Black	**R309214**	For 2.9 ~ 3.2 Cable, Red
R504017	For 2.0 ~ 2.2 Cable, Blue		

![SENKO Advanced Components logo]

E-2000 ™ — Compact (Duplex) Accessories
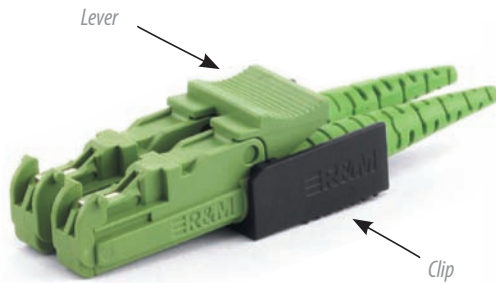
Lever

Clip

E-2000™ Compact APC Connector

E-2000™ Compact MM Connector

COMPACT (RJ) CONNECTOR LEVER AND HOUSING CLIP CODE	DESCRIPTION	COMPACT (RJ) CONNECTOR LEVER AND HOUSING CLIP CODE	DESCRIPTION
R305513	Blue	R305517	Black
R305514	Green	R305518	White
R305515	Orange	R305542	Compact (RJ) Clip for Connector Housing
R309004	Turquoise		

E-2000 ™ — Adapters and Adapter Frames

Adapter Frame

Adapter

E-2000™ APC Simplex Adapter

SIMPLEX ADAPTER CODE	DESCRIPTION
R508019	Black
R504511	Blue
R504541	Green
R517677	Quick mounting clip
R504981	Black without frames
R504831	Blue without frames
R505612	Green without frames

SIMPLEX ADAPTER FRAME CODE	DESCRIPTION
R304410	Blue
R304411	Brown
R304412	Green
R304413	Red
R304414	Black
R304415	Orange
R304416	White
R304833	Yellow
R308036	Violet
R308037	Turquoise

E-2000™ Simplex Adapter Frames
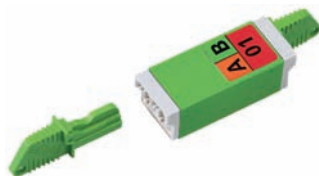
E-2000™ APC Compact Adapter
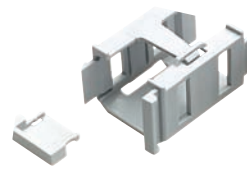
E-2000™ Snap in Frame

COMPACT (RJ) ADAPTER FRAME CODE	DESCRIPTION
R305519	Blue
R305520	Green
R305524	Black
R305521	Orange
R305525	White
R308986	Turquoise

COMPACT (RJ) ADAPTER WITH SNAP IN FRAME CODE	DESCRIPTION
R313001	Adapter and Snap In Frame-PhBr black/black
R313002	Adapter and Snap In Frame-PhBr black/orange
R313010	Adapter and Snap In Frame-PhBr black/turquoise
R313011	Adapter and Snap In Frame-Ceramics blue/blue
R313009	Adapter and Snap In Frame-Ceramics green/white

![SENKO Advanced Components logo]

SMA Connector

CONNECTOR		FERRULE I.D.		BOOT		COLOR	
211	SMA with Hex Nut	201	MM: 127µm	1	3.0mm Cable Standard	1	Blue
		202	MM: 230µm			2	Black
		203	MM: 144µm			3	Green
		204	MM: 245µm			4	Red
		205	MM: 250µm			5	Gray
		206	MM: 360µm			6	Yellow
		207	MM: 460µm			7	White
		208	MM: 240µm			8	Beige
						X	Custom

ORDER CODE example:.   211 - 201 - 11

SMA Adapter

SMA Adapter

CODE		ADAPTER TYPE	
212		101	SMA Adapter

Connector

Boots

CRIMP RING TYPE	CRIMP RING	BOOT	BOOT TYPE	ORDER CODE	BOOT COLOR (X)	
HW-20001 3.0 mm			3.0 mm Cable Standard	HW-20008-0X	1	Blue
HW-20026 2.0 mm			2.0 mm Cable Standard	HW-20053-0X	2	Black
N/A	N/A		900µm Fiber Short	HW-20013-0X	3	Green
N/A	N/A		2.0 mm Fiber	HW-20022-0X	4	Red
HW-2001 3.0 mm			3.0 mm Cable Short Boot	HW-20024-30X	5	Gray
HW-20025 2.4 mm			2.4 mm Cable Short Boot	HW-20024-24X	6	Yellow
HHW-20026 2.0 mm			2.0 mm Cable Short Boot	HW-20024-20X	7	White
HW-20001 3.0 mm			3.0mm Premium (Telcordia) for SC Connector	HW-20036-0X	8	Beige
HW-20001 3.0 mm			3.0mm Premium (Telcordia) for FC and ST Connector	HW-20037-0X		
N/A	N/A		900µm Premium (Telcordia)	HW-20038-0X		
HW-20026 2.0 mm			2.0mm Premium (Telcordia) for SC Connector	HW-20057-0X		
HW-20026 2.0 mm			2.0mm Premium (Telcordia) for FC and ST Connector	HW-20058-0X		
HW-20061 1.6 mm		N/A	1.6 mm Crimp Sleeve	HW-20061		

FEATURES

- Compatible with Pre-Assembled Connector Series SC, FC, SC/APC, FC/APC, DIN, D4

Note:
These boots will only fit the SC, FC, ST, DIN, D4 Premium and Standard connectors
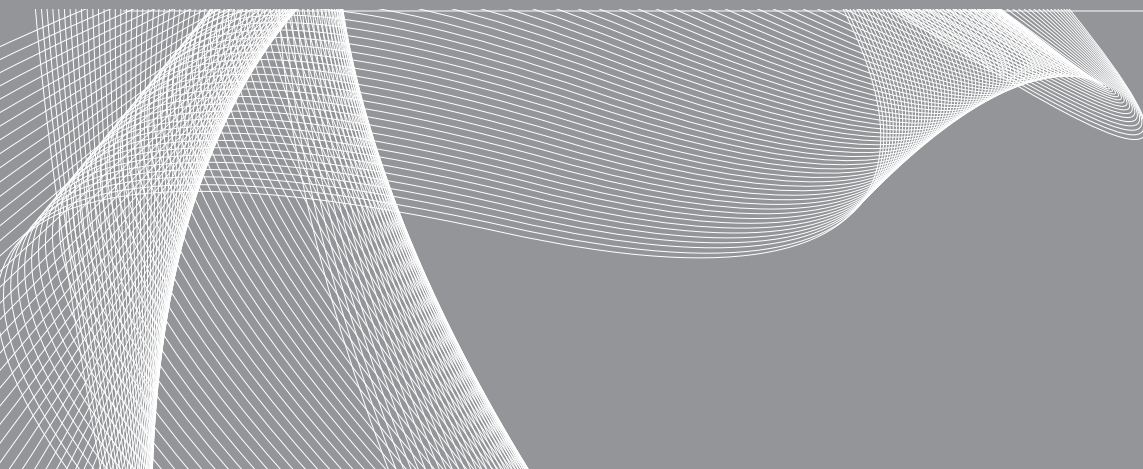
SMALL FORM FACTORS

LC -UPC Unibody
LC-APC   Unibody
LC   Connector
LC   Uniboot
LC   XP Fit Plus Connector
LC   Adapter Series
MU   Connector
MU   Connector Kit
MU   Clip
MU   Crimp Tool
MU   Adapter
MPO   Connector
MPO/MT Ferrule
MPO   Adapter
MPO   Crimp Tool

MT-RJ   Connector
MT-RJ   Adapter
MT-RJ   Ferrule
MT-RJ   Crimp Tool

![SENKO logo](SENKO GROUP® Advanced Components)

LC-UPC Unibody　　Connector

SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.08dB typical UPC 0.10dB typical APC 0.04dB typical Super Low Loss	0.15dB typical
Return Loss	≥55dB typical UPC ≥65dB typical APC	
Durability	< 0.2dB typical change,500 matings	
Operating Temperature	-40 to +75ºC	
Ferrule Hole Sizes	125.5µm +1/-0 Concentricity: ≤ 1µm 126µm +1/-0 Concentricity: ≤ 1µm 125µm +1/-0 Concentricity: : ≤ 1µm	127µm

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

BTW Boot　　　　　*2.0mm Round*　　　　　*2.0mm Round Duplex*

CODE		TYPE		FERRULE I.D.		HOUSING		BOOT		COLOR	
93	LC Unibody	1	Simplex	151	SM 125.5µm	1	SM Blue	1	BTW Boot	1	White
		2	Duplex	152	SM 126µm	2	MM Beige	4	2.0mm Round	2	Blue
				153	SM 125µm			5	2.0mm Boot,SHORT type (L=14mm)	3	Black
				251	MM 127µm			6	3.0mm Boot	4	Yellow
				159	SM 125µm Super Low Loss ferrule 35°					5	Red

ORDER CODE example:.　　931　-　153　-　141

LC-APC Unibody　　Connector

BTW Boot　　　　　*2.0mm Boot Short*　　　　　*3.0mm boot*

CODE		TYPE		FERRULE I.D.		HOUSING		BOOT		COLOR	
93	LC Unibody	1	Simplex	151	SM 125.5µm	3	APC Green	1	BTW Boot	6	Green
		2	Duplex	152	SM 126µm			4	2.0mm Round		
				153	SM 125µm			5	2.0mm Boot,SHORT type (L=14mm)		
				159	SM 125µm Super Low Loss ferrule 35°			6	3.0mm Boot		

ORDER CODE example:.　　931　-　153　-　366

LC Connector

The SENKO LC family of singlemode and multimode connectors, adapters and associated components are manufactured under a worldwide license from OFS. The LC is a small form factor (SFF)connector and is ideal for high density applications. A Behind the Wall (BTW) version is available withshort connector and boot for ultra-compact requirements.

The LC connector has a zirconia ceramic ferrule measuring 1.25mm O.D. and provides optimum insertion and return loss.* The LC connector is used on small diameter mini-cordage (1.6/1.8/2.0mm) as well as 3.0mm cable. LC Connectors are available in pre-assembled or kit (unassembled) formats. The LC connector family is Telcordia, ANSI/EIA/TIA and IEC compliant.

SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.10dB typical	0.20dB typical
Return Loss	≥ 55dB typical for singlemode PC	
Durability	< 0.2dB typical change,500 matings	
Operating Temperature	-40 to +75ºC	
Ferrule Hole Sizes	125.5μm +1/-0 Concentricity: ≤ 1μm 126μm +1/-0 Concentricity: ≤ 1μm 125μm +1/-0 Concentricity: ≤ 1μm	127μm

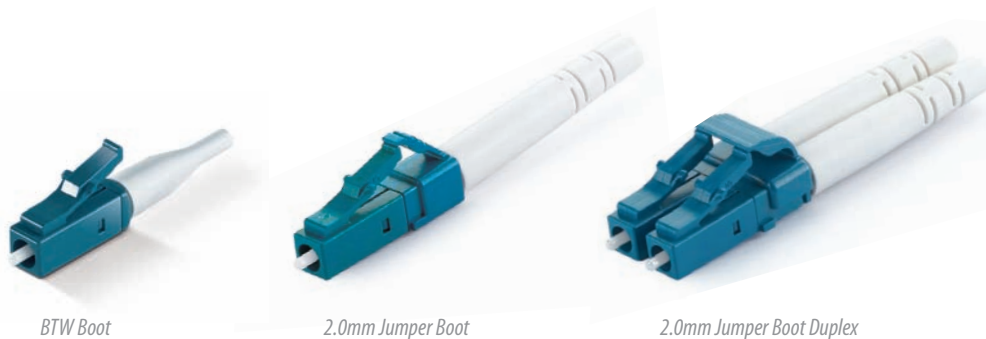Specifications shown above were obtained using SENKO recommended products and procedures.

LC Connector

BTW Boot   2.0mm Jumper Boot   2.0mm Jumper Boot Duplex

CODE		TYPE		FERRULE I.D.		HOUSING		BOOT		COLOR	
91	Pre-Assembled, 1pc	1	Simplex	151	SM 125.5μm 35 degree chamfer	1	SM Blue	1	1.0mm BTW Boot	1	White
92	Unassembled Kit	2	Duplex	152	SM 126μm 35 degree chamfer	2	MM Beige	2	2.0mm Jumper Boot	2	Blue
				153	SM 125μm 35 degree chamfer			6	3.0mm Boot	3	Black
				251	MM 127μm 35 degree chamfer					4	Yellow
				159	SM 125um Low Loss ferrule 35°					5	Red

ORDER CODE example:.   911   -   153   -   121

SENKO
SENKO GROUP® Advanced Components

LC Uniboot · Connector

The SENKO LC Uniboot is unique design that allows a single round duplex fiber 3mm cable to be used for duplex connector. This compact, easy to terminate connector kit has a simple round crimp design and incorporates standard SENKO 900µm LC connectors, so you will experience the normal optical performance of our proven LC design.
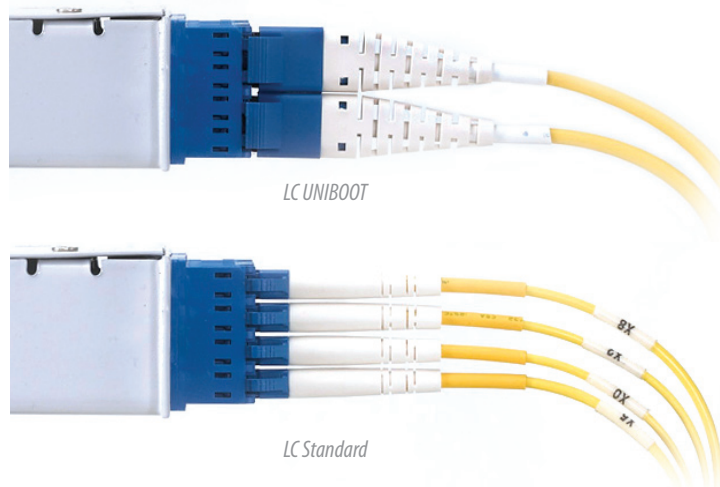
SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.10dB typical	0.20dB typical
Return Loss	≥ 55dB typical for singlemode PC	
Durability	< 0.2dB typical change,500 matings	
Operating Temperature	-40 to +75ºC	
Ferrule Hole Sizes	125.5µm +1/-0 Concentricity: ≤ 1µm 126µm +1/-0 Concentricity: ≤ 1µm 125µm +1/-0 Concentricity: ≤ 1µm	127µm

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

LC UNIBOOT, LC Uniboot assembled

CODE	TYPE
942-251-221	LC Uniboot Conn MM (ID127 µm 35d) White Boot
942-151-121	LC Uniboot Conn SM (ID125.5 µm 35d) White Boot

LC UNIBOOT

LC Standard

APPLICATIONS

- Datacenters
- Gigabit ethernet
- Video
- Active device termination
- Premise installations
- Telecommunications networks
- Multimedia
- Industrial
- Military

FEATURES

- Compact, pull-proof design
- RJ-45 style interface
- Low insertion loss and low back reflection*
- Polarized and color coded (TIA 568-A & ISO 11801)
- UL-rated plastic housing and boot
- High precision alignment

Note:
When terminated using SENKO recommended procedures.

XP Flt Plus — LC Field Installable Connector

APPLICATIONS

- Data Centers
- LAN
- Telecommunications
- Network Monitoring
- FTTX

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. The XP Fit Plus comes with an assembling jig and fiber holder, making for an accurate alignment and fiber cleave when terminating the connector.

FEATURES

- Mechanical Splice (index matching gel)
- Highly Stable & Reliable
- Perfect Performance
- Compact Package
- RoHS Compliant
- Finished Connector meets UL94-V0 Flammability Rated

SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.2dB typical (PC) and 0.3dB typical (APC)	0.1dB typical
Return Loss	55dB typical (PC) 60dB typical (APC)	35dB typical
Durability	<0.1dB typical change, 500 matings*	<0.1dB typical change, 500 matings*
Operating Temperature	-40ºC to +75ºC-	-40ºC to +75ºC
Tensile	TIA/EIA 568-B.3	
Intermateability	IEC 61754-4	

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

Note: The connector performance specifications include an internal mechanical splice.

XP Fit Plus — LC Connector

PART NUMBER	DESCRIPTION	HOUSING	BOOT COLOR
951-191-111	**XPFit Plus LC Connector SM PC 900µm**	Blue	**White**
951-091-311	**XPFit Plus LC Connector SM APC 900µm**	Green	**White**
951-291-811	**XPFit Plus LC Connector MM 50/125 900µm**	Black	**White**
951-391-211	**XPFit Plus LC Connector MM 62.5/125 900µm**	Beige	**White**
951-491-911	**XPFit Plus LC Connector MM 50/125 10G OM3 900µm**	Aqua	**White**

SMALL FORM FACTOR SERIES

27
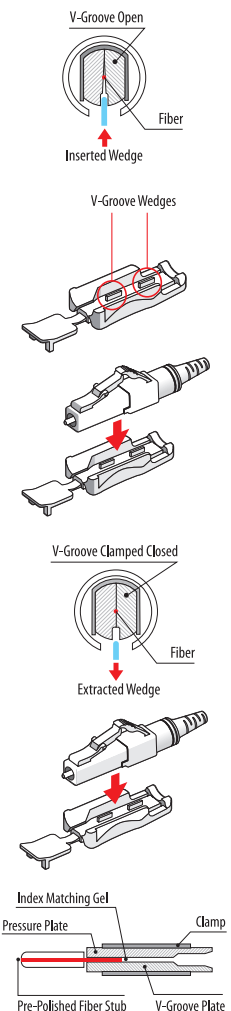
LC Adapter — Standard

LC Adapter Simplex	LC Adapter Simplex	LC Adapter Duplex	LC Adapter Duplex

CODE	TYPE		COLOR		SLEEVE TYPE	
999	1	Simplex	1	Blue	1	Zirconia Straight Split
	2	Duplex	2	Black	2	Phosphor Bronze (SM,MM)
			3	APC Green		
			8	Beige		
			9	Aqua		

ORDER CODE example:. **999 - 191**

LC Adapter — SC Footprint SNR/JUN

LC Quad Adapter, with SC Footprint, with Flange, Junior-Senior	LC Quad Adapter, with SC Footprint, without Flange, Junior-Senior	LC Duplex Aqua Adapter, with SC Footprint, with Flange, Junior-Senior	LC Duplex Adapter, with SC Footprint, without Flange, Junior-Senior

CODE	TYPE		COLOR		SLEEVE TYPE	
999	3	Duplex with Flange	1	Blue	1	Zirconia Straight Split
	4	Duplex with No Flange	2	Black	2	Phosphor Bronze (SM,MM)
	5	Quad with Flange	3	APC Green		
	6	Quad with No Flange	8	Beige		
			9	Aqua		

ORDER CODE example:. **999 - 611**

LC Adapter — Symmetrical with SC Footprint - SNR/SNR

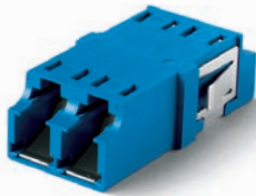| LC Quad Adapter, with SC Footprint, with Flange, Senior-Senior	LC Quad Adapter, with SC Footprint, without Flange, Senior-Senior	LC Duplex Adapter, with SC Footprint, with Flange, Senior-Senior	LC Duplex Adapter, with SC Footprint, No flange, Senior-Senior, Singlemode

CODE	TYPE		COLOR		SLEEVE TYPE	
999	3S	Duplex with Flange	1	Blue	1	Zirconia Straight Split
	4S	Duplex with No Flange	2	Black	2	Phosphor Bronze (SM,MM)
	5S	Quad with Flange	3	APC Green		
	6S	Quad with No Flange	8	Beige		
			9	Aqua		

ORDER CODE example:. **999 - 5S31**

SENKO SENKO GROUP® Advanced Components

LC One Piece Adapter SNR/SNR

SENKO offers both an external and internal shutters for adapters to shield potentially harmful light. SENKO's external shutters are made from special materials designed to attenuate a broad range of visible and invisible light, fit easily over existing adapters and provide a guard against debris such as dust and dirt. 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.

LC One Piece Adapter Duplex, with SC Footprint, without flange, Senior-Senior

LC One Piece Adapter Duplex with Inner Shutter, with SC Footprint, without flange, Senior-Senior

CODE	TYPE		COLOR		SLEEVE TYPE		SHUTTER	
988	3S	Duplex with Flange	1	Blue	1	Zirconia	N	No Shutter
	4S	Duplex with No Flange	2	Black	2	Phosphor Bronze	A	Internal Shutter (w/o mark)
			3	Green	3	Zir Dia.		
			8	Beige				
			9	Aqua				

ORDER CODE example:. | 988 | - | 411 | - | N |

LC One Piece Adapter SNR/JNR

LC One Piece Adapter Duplex with SC Footprint, with Flange, Junior-Senior

LC One Piece Adapter Duplex with SC Footprint, without Flange, Junior-Senior

CODE	TYPE		COLOR		SLEEVE TYPE		SHUTTER	
988	3	Duplex with Flange	1	Blue	1	Zirconia	N	No Shutter
	4	Duplex with No Flange	2	Black	2	Phosphor Bronze	A	Internal Shutter (w/o mark)
			3	Green	3	Zir Dia.		
			8	Beige				
			9	Aqua				

ORDER CODE example:. | 988 | - | 411 | - | N |

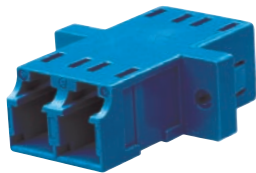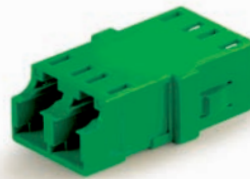*LC One Piece Adapter* **No Weld Type**

LC One Piece Adapter Welded Type

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

![SENKO Advanced Components]

MU Connector

The SENKO family of singlemode and multimode MU connectors and adapters are fully inter-mateable with NTT-MU style products, and are NTT and JIS compliant.* This small form factor connector is approximately half the size of the SC connector, and has a push-pull style design. The connector features a pre-assembled body and precision molded plastic housing, and a free-floating ferrule measuring 1.25mm O.D. held in place with a precision spring.

Housing and boot are made from UL-rated material. The MU-J style connector is the same as the regular MU connector, but without the outer housing and with a very narrow, short boot for 900 micron fiber, ideal for back panel solutions and high-density situations. SENKO MU Connectors are available in pre-assembled or kit (unassembled) formats.

SPECIFICATION	SINGLEMODE	MULTIMODE
Insertion Loss	0.10dB typical	0.15dB typical
Return Loss	≥ 55dB typical for singlemode PC	
Durability	< 0.1dB typical change,500 matings	<0.2dB typical change,500 matings
Operating Temperature	-40 to +75ºC	-40ºC to +75ºC
Ferrule Hole Sizes	126µm +1/-0 Concentricity: ≤ 1µm 125µm +1/-0 Concentricity: ≤ 1µm 125.5µm +1/-0 Concentricity: ≤ 1µm	127µm

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

APPLICATIONS

- CATV
- Video
- Active device termination
- Premise installations
- Telecommunications networks
- Local Area Networks (LANs)
- Data processing networks
- Wide Area Networks (WANs)
- Industrial, medical & military

FEATURES

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

Note:
1. *When terminated using SENKO recommended procedures.*
2. *Custom configurations available upon request.*

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		HOUSING		BOOT TYPE		BOOT COLOR	
510	MU Connector	111	SM: 125.5µm	1	Blue	1	2.0mm cable	1	Blue
		112	SM: 126µm	2	Black	2	1.0mm Fiber	2	Black
		113	SM: 125µm	3	Red	4	1.6mm Cable	3	Green
		211	MM: 127µm	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

ORDER CODE example:.   510 - 111 - 519

MU Connector Kit

MU Kit with 2.0mm Cable boot

MU Kit with 1.0mm Fiber Short Body

CODE		FERRULE		HOUSING		BOOT TYPE		BOOT COLOR	
511	MU kit	**101**	SM: 125.5μm	**5**	Brown	**1**	2.0mm Cable	**9**	Lavender
		102	SM: 126μm	**0**	MU-J	**2**	1.0mm Fiber Long Body		
		103	SM: 125μm			**3**	1.0mm Fiber Short Body		
		201	MM: 127μm						

ORDER CODE example:.   **511 - 103 - 519**

Universal MU Duplex Clip
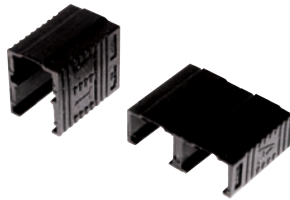
CODE		CLIP TYPE		COLOR	
512		**1**	Vertical	**12**	Black
		2	Horizontal	**15**	Brown

ORDER CODE example:.   **512 - 116**

MU Connector   Crimp Tool
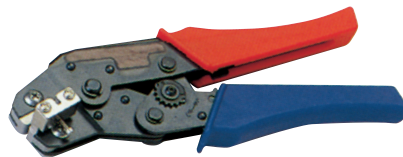
CRIMP TOOL CODE	TYPE	
CRT	**301**	MU Connector
	701	LC/MU Dual Crimp Tool

ORDER CODE example:.   **CRT - 301**

![SENKO Advanced Components logo]

MU Adapter

| Simplex | Duplex | 8-Port |

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

ORDER CODE example:. **MUA - 1PB**

MU Backboard and Package Housing
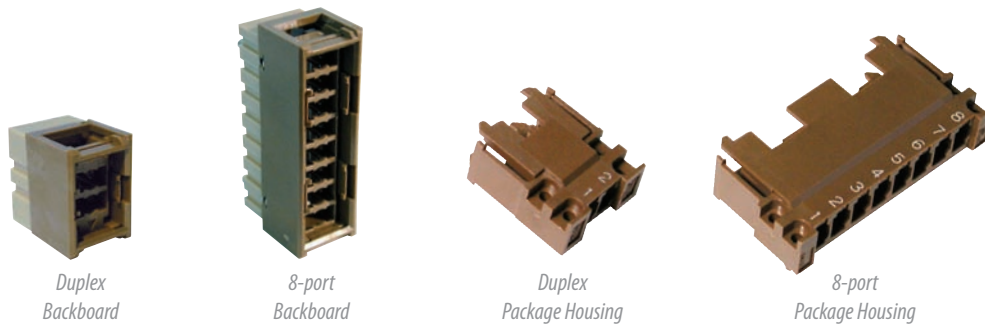
| Duplex Backboard | 8-port Backboard | Duplex Package Housing | 8-port Package Housing |

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

ORDER CODE example:. **MUB - 2 - 1**

CODE	TYPE
MU-SH	MU Sleeve Holder

MU Sleeve Holder

CODE	TYPE
MU-JRT	MU Removal Tool
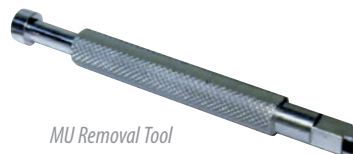
MU Removal Tool

MPO Connector

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. The MPO can be mass terminated in combinations of 4, 8, or 12 fiber ribbon cables. The MPO Adapter comes standard in black.

SPECIFICATION	SINGLEMODE	SINGLEMODE SUPER LOW LOSS	MULTIMODE
Insertion Loss	0.25dB Typical (all fibers) 0.75dB Maximum (single fiber) *	0.1dB Typical (all fibers) 0.35dB Maximum (single fiber) *	0.20dB Typical (all fibers) 0.50dB Maximum (single fiber) *
Return Loss	≥ 55dB (8°Angle Polish)	≥ 55dB (8°Angle Polish)	>25dB
Durability	<0.30dB change 500 matings (per EIA-455-21A)	<0.30dB change 500 matings (per EIA-455-21A)	<0.20dB change 1000 matings (per EIA-455-21A)
Operating Temperature	-40°C ~ +80°C		

* As tested per ANSI/EIA 455-171 Method D3.
* As tested per ANSI/EIA 455-171 Method D1.

MPO Connector

MPO Male Connector Multimode

MPO Female Connector Singlemode Single Mode Low Loss

MPO with Ribbon Fiber Boot Singlemode

CODE		HOOK COLOR		BOOT	
701	Male	1	Green (SM)	1	Ribbon Fiber
702	Female	3	Beige (MM 62.5/125)	2	Ruggedized Cable
		4	Yellow (SM Low Loss)	4	Round Cable
		5	Aqua (OM3 50/125)		

ORDER CODE example:.   **702** - **12**

![SENKO Advanced Components logo]

MPO/MT

CODE		FERRULE TYPE		FERRULE HOLES		MATERIAL	
MT	2	SM Standard for Angle Polish	1	4-Fiber	P	Thermoplastic (PPS)
	3	SM Low Loss for Angle Polish	2	8-Fiber		
	4	MM Flat Polish	3	12-Fiber		
	5	SM Super Low Loss for Angle Polish	5	24-Fiber		

ORDER CODE example:.   **MT** - **2** - **3** - **P**

Note:
1. Low loss and Super Low Loss ferrules are available only for 8 and 12 fiber.
2. 24 Fiber is Thermoset material.
3. Custom configurations available upon request.

MPO   Adapters

MPO Adapter with Flange

MPO Adapter No Flange

ADAPTER CODE		TYPE	
777	Standard	1	Black
778	No Flange		

ORDER CODE example:.   **777** - **1**

Note:
Custom configurations available upon request.

MPO   Crimp Tool

CRIMP TOOL CODE		TYPE	
CRT		601	MPO Connector
		602	MPO Round

Note:
1. Other termination tools and accessories are available upon request.
2. Assembly instructions are provided with all connector kits.

MT-RJ Connector

The singlemode or multimode MT-RJ products available from SENKO are used in two fiber applications and are well suited for high density applications. The MT-RJ connectors utilize precision molded MT ferrules pioneered by NTT, together with precision metal guide pins and precise housing dimensions to ensure fiber alignment when mating.

The MT-RJ is reliable and simple to teminate.The MT-RJ Adapter comes standard in black, with additional colors available upon request. Anoptional MT-RJ Adapter with SC style housing is also available for applications where SC footprintis required.

SPECIFICATION	SM	MM
Insertion Loss	< 0.2dB typical	< 0.25dB typical
Return Loss	≥ 45dB typical	
Durability	< 0.1dB typical change,500 matings	
Operating Temperature	-40 to +75ºC	

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

MT-RJ Connector
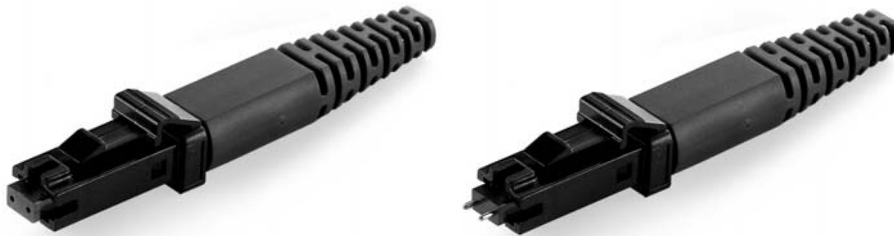
CODE		HOUSING COLOR		BOOT		BOOT COLOR	
801	MT-RJ Female	**1**	Black	**1**	3.0mm Cable Round	**1**	Black
802	MT-RJ Male			**4**	1.8mm Duplex Zip Cable Boot		
				5	2.0mm Duplex Zip Cable boot		

ORDER CODE example:.   **801 - 141**

![SENKO Advanced Components logo]

MT-RJ Adapter

MT-RJ Standard Adapter

MT-RJ Adapter with SC Footprint

ADAPTER CODE		COLOR	
888	Standard	**1**	Black
890	SC Footprint with Flange	**1**	Black
891	SC Footprint with No Flange	**2**	Beige
		3	Blue

ORDER CODE example:.   **891 - 1**

Note:
Custom configurations
available upon request.

MT-RJ Ferrule and Guide Pin

MT-RJ ferrule

PIN CODE	TYPE		MATERIAL	
MTRJ	**S**	Singlemode 126µm	**P**	Thermoplastic (PPS)
MTRJ	**M**	Multimode 126.5µm		

PIN CODE	TYPE		TOLERANCE		MATERIAL	
GP	**2**	MT-RJ	**1**	Multimode	**1**	Stainless Steel
			2	Singlemode		

ORDER CODE example:.   **GP - 23 - 2**

Note:
Custom configurations
available upon request.

MT-RJ Crimp Tool

103 MT-RJ Connector, 3.0 mm and Zip Cables

CRIMP TOOL CODE	TYPE	
CRT	**103**	MT-RJ Connector 3.0mm round and Zip cable

Note:
1. Other termination tools
*   and accessories are*
*   available upon request.*
2. Assembly instructions
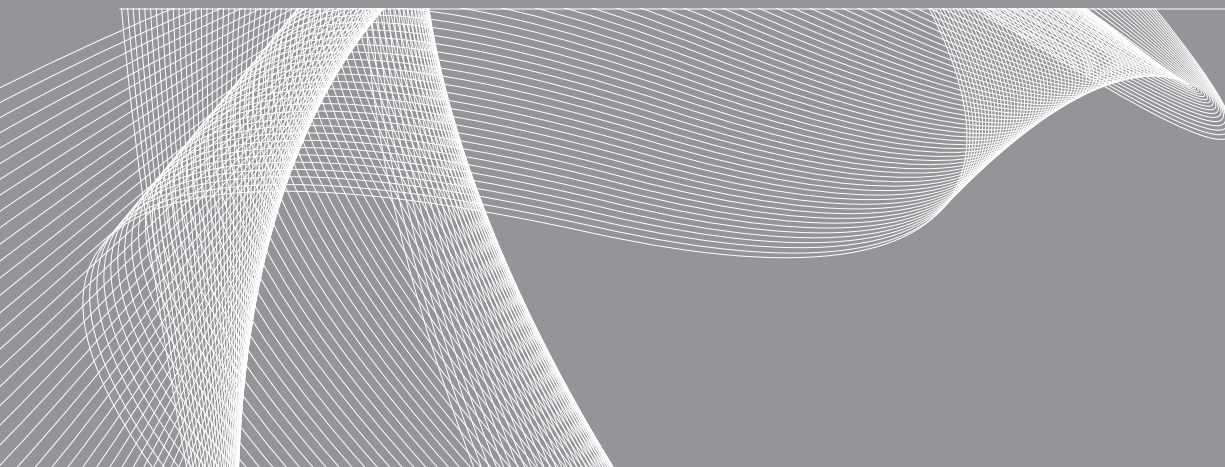*   are provided with all*
*   connector kits.*

SPECIALTY PRODUCTS

Attenuators
Terminators
Hybrid Adapters
Switchable Adapter

SENKO
SENKO GROUP® Advanced Components

Attenuators

SPECIFICATION	
Return Loss	≥ 55dB (UPC) ≥ 65dB (APC)
Attenuation Tolerance	1 to 10dB : ±0.5,11 to 30 dB : ±5%
Operational Wavelengths	1310, 1490, and 1550nm
Operating Temperature	-40 to +75ºC

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

Note:
Custom configurations
available upon request.

FC Attenuator

FC APC Attenuator

LC Attenuator

MU Attenuator

SC Attenuator

SC APC Attenuator

ST Attenuator

CONNECTOR		TYPE		ATTENUATION LEVEL		ATTENUATION TOLERANCE	
ATN	Dope Fiber Attenuators	4 32	SC APC	01	1dB	1	Premium
		5 32	FC APC	02	2dB		
		6 32	SC UPC	03	3dB		
		7 32	FC UPC	04	4dB		
		8 32	ST UPC	05	5dB		
		13 32	MU SPC	06	6dB		
		14 32	MU UPC	07	7dB		
		15 32	LC UPC	08	8dB		
				09	9dB		
				10	10dB		
				12	12dB		
				15	15dB		
				20	20dB		
				25	25dB		

ORDER CODE example:. **ATN - 632 - 04 - 1**

Terminators

- DWDM upgrade ports
- Network system receiver open ports
- Dark fiber upgrade ports

SENKO fiber optic terminators use doped fiber designs or other proprietary designs to eliminate unwanted back-reflection. The terminators are available in FC and SC with SPC, UPC or APC polishes, and also in small form factor design including LC and MU with SPC and UPC Polishes.

FEATURES

- Metal-ion doped fiber (continuous)
- High durability
- Custom configurations

SPECIFICATION	
Return Loss	≥ 55dB (UPC) ≥ 65dB (APC)
Operating Temperature	-40 to +75ºC

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	2	Off-set
	3	ST				
	4	LC				
	5	MU				

ORDER CODE example:.   **TRM - 1 - 3 - 2**

SPECIALTY PRODUCTS SERIES

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![SENKO logo] **SENKO**
SENKO GROUP® Advanced Components

LC-MU Hybrid — Adapter

CODE	ADAPTER STYLE		SLEEVE	
M90	1	Simplex	01	Zirconia
			02	Phosphor Bronze

ORDER CODE example:. **M90 - 102**

Note:
Custom configurations available upon request.

LC-SC Hybrid — Adapters
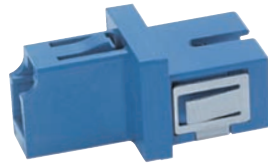
CODE		STYLE		COLOR		SLEEVE	
990	LC-SC	1	Simplex	1	Blue	3	Zirconia

ORDER CODE example:. **990 - 113**

Note:
Custom configurations available upon request.

SC-ST Hybrid — Adapters

SC-ST Simplex Adapter with Rectangular Flange
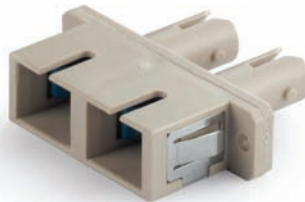
SC-ST Duplex Adapter, with Flange

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)			02	Phosphor Bronze
288	Rectangular Flange, Duplex (metal)				
289L	Rectangular Flange, Duplex, Blue* (plastic)				
289T	Rectangular Flange, Duplex, Beige* (plastic)				

ORDER CODE example:. **288 - 102**

Note:
1. All adapters listed above are made with metal housing with the exception of the 289 Series, which is made with polymer housing.
2. Custom configurations available upon request.
*3. * For No Flange option, add NF to order code. Available for 289L and 289T adapters only.*

![SENKO Advanced Components]

FC-SC Hybrid — Adapters
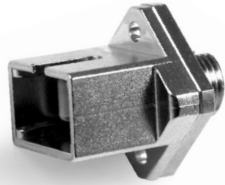
FC-SC Adapter with square flange

FC-SC Adapter with rectangular flange

CODE		KEY WIDTH		SLEEVE	
282	Square Flange	1	For PC Connector: 2.15+0.05/-0	0 1	Zirconia Straight Split
285	Rectangular Flange	2	For APC Connector: 2.05 +/- 0.02	02	Phosphor Bronze

ORDER CODE example:.   **282 - 101**

Note:
Custom configurations available upon request.

FC-ST Hybrid — Adapters

FC-ST Adapter with square flange

FC-ST Adapter with rectangular flange

CODE		KEY WIDTH		SLEEVE	
284	Square Flange	1	For PC Connector: 2.15+0.05/-0	0 1	Zirconia Straight Split
287	Rectangular Flange			02	Phosphor Bronze

ORDER CODE example:.   **284 - 101**

Note:
Custom configurations available upon request.

Switchable Adapter

Assembled Unit   *SC Insert*

Assembled Unit   *ST Insert*   *FC Base*

Assembled Unit   *FC Insert*
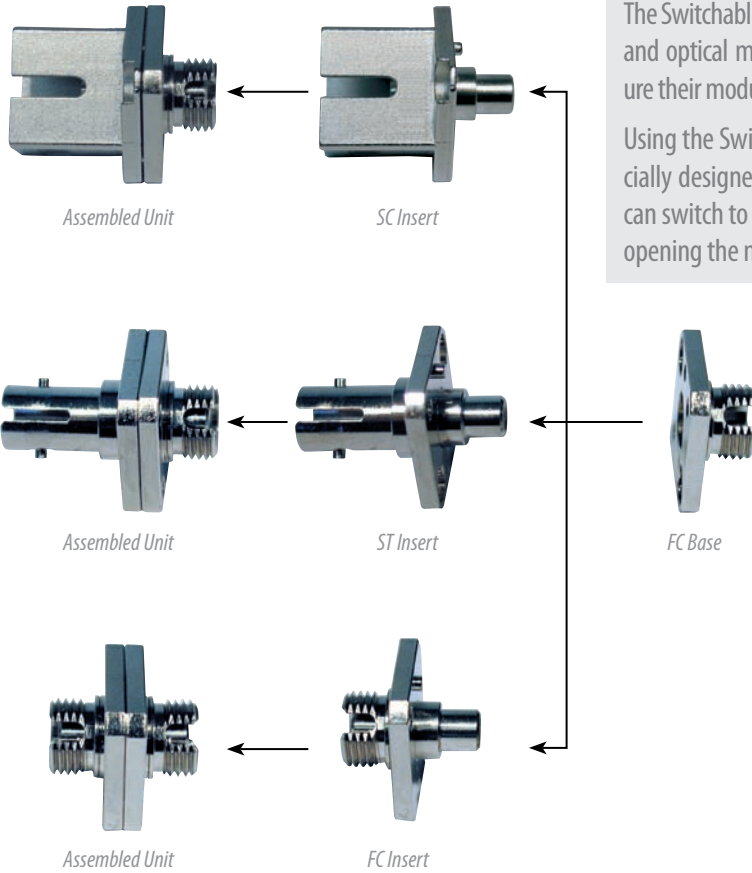
The Switchable Adapter allows test equipment and optical module manufacturers to configure their modules for one adapter type (FC).

Using the Switchable Adapter base, and specially designed adapter inserts, the end user can switch to ST, SC or FC connectors without opening the module to replace the adapter.

APPLICATIONS

- Telecommunications networks
- Metro networks
- CATV Networks
- Fiber optic test & measurement equipment

FEATURES

- Switchable adapter interface, eliminating need for hybrid cable assemblies
- Easy to clean and maintain
- High precision alignment
- Low insertion loss*

CONFIGURATIONS

- 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

Note:
When following SENKO recommended procedures.
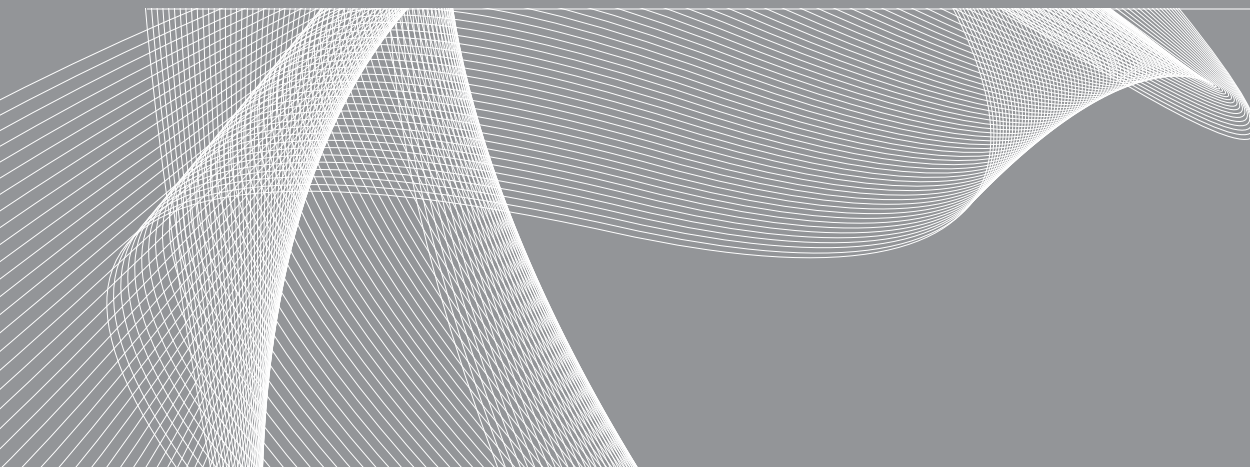
EASY TO CLEAN AND MAINTAIN

The Switchable Adapter allows the end user to properly clean and maintain both connectors on each side of the bulkhead, as well as the adapter sleeve, without removing the entire adapter from the panel.

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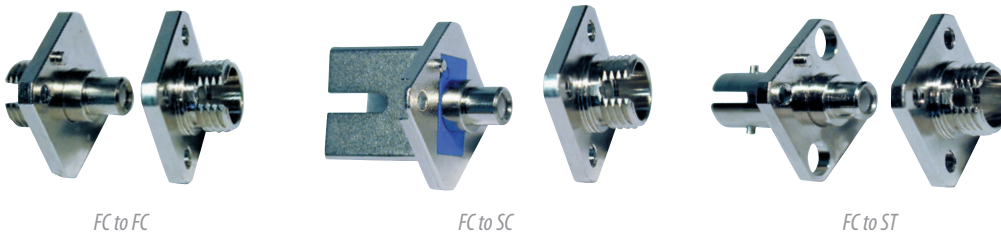
CODE		SLEEVE CODE		KEY WIDTH CODE	
321	FC to FC Switchable Adapter	1	Zirconia Straight Split	01	For PC Connector 2.15 +0.05/-0
322	FC to ST Switchable Adapter	2	Phosphor Bronze	02	For APC Connector 2.05 ±0.02
323	FC to SC Switchable Adapter				

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

Connector & Adapter Subcomponents

Zirconia Ferrules SC-APC and FC-APC
Zirconia Ferrules SC and FC Singlemode
Zirconia Ferrules SC and FC Multimode
Zirconia Ferrules LC and MU Singlemode
Zirconia Ferrules ST Singlemode and Multimode
Zirconia Ferrules LC and MU Multimode
Zirconia Sleeves
Phosphor Bronze Sleeves
Phosphor Bronze Adapter Sleeves

SENKO
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Zirconia Ferrules — SC-APC and FC-APC

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
C	SC & FC Connectors	S	Singlemode	AS	APC Step	125	125µm	NN	N o Flange
				AC	APC Conical	1255	125.5µm	FA	APC Flange*
						126	126µm		*Flange key width 1.35mm

ORDER CODE example:.   **CSAS - 125 - NN**

Zirconia Ferrules — SC and FC Singlemode

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
C	SC & FC Connectors	S	Singlemode	PC	Pre-dome	125	125µm	NN	N o Flange
						1255	125.5µm	F4	4 Slot Flange
						126	126µm		

ORDER CODE example:.   **CSPC - 125 - NN**

APPLICATIONS

- High performance fiber optic connectors used in environments requiring durability after repeated matings, low insertion loss and low back reflection
- Fiber stub
- SC, FC, ST, D4, MU, LC, DIN and other fiber optic connectors
- Singlemode and multimode

FEATURES

- High performance and durability
- Low insertion loss*
- Low back reflection*
- A PC type with various endface configurations, as well as pre-angled endface for quick polishing and ultra l ow back-reflection
- Standard and custom configuration-

Note:
1. When following SENKO recommended procedures.
2. Custom length, inner and outer diameter dimensions available upon request
3. *0.5µm concentricity also available.

![SENKO Advanced Components logo]

Zirconia Ferrules   SC and FC Multimode

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
C	SC & FC Connectors	M	Multimode	PC	Pre-dome	127	127µm	NN	N o Flange
						144	144µm	F4	4 Slot Flange
						230	230µm		

ORDER CODE example:.   CMPC - 127 - NN

Zirconia Ferrules   LC and MU Singlemode

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
M	MU Connectors	S	Singlemode	FL	Flat	125	125µm	NN	No Flange
L	LC Connectors					1255	125.5µm	FM	MU Flange
						126	126 µm	FL-35	LC Flange

ORDER CODE example:.   LSFL - 126 - FL-35

Zirconia Ferrules — LC and MU Multimode

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
M	MU Connectors	**M**	Multimode	**FL**	Flat	**126**	127µm	**NN**	No Flange
L	LC Connectors					**144**	144µm	**FM**	MU Flange
								FL-35	LC Flange

ORDER CODE example:. **LMFL - 126 - FL-35**

Zirconia Ferrules — ST Singlemode and Multimode

For ST Singlemode Connector ø 2.499mm No flange

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

CONNECTOR		TYPE		ENDFACE		ID		FLANGE	
T	ST	**S**	Singlemode	**PC**	Pre-dome	**125**	125µm	**NN**	N o Flange
		M	Multimode			**126**	126µm		
						127	127µm		

ORDER CODE example:. **TSPC - 125 - NN**

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 stylesor 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	

Note:
When following SENKO recommended procedures.

Zirconia Sleeves

For LC and MU Adapters
Straight Split and High
Performance Diagonal Split

For SC and FC Adapters
Straight Split and High
Performance Diagonal Split

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

ORDER CODE example:. **ZRD - 25 - 114**

SLEEVE CODE		INNER DIAMETER		LENGTH	
ZRS	Straight Split Sleeve	12	(1.25)mm	680	6.8mm
ZRD	Diagonal Split Sleeve				

ORDER CODE example:. **ZRS - 12 - 680**

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. Custom configurations available upon request.dimensions available upon request.

Phosphor Bronze Sleeves

Metal split sleeves are used in adapters for aligning the connector ferrule. They are manufactured for both singlemode and multimode applications. The high quality phosphor bronze material delivers a spring-like property which ensures a strictly controlled withdrawal force of 200 to 600 grams. Tolerance specifications are also well controlled, resulting in a typical insertion loss of 0.1dB* or less.

SPECIFICATION	ST	SC, FC	D4	LC
Material	Phosphor Bronze C5210H			
Withdrawal Force	200gf~600gf			100gf~300gf
Insertion Loss	Max 0.5dB,typical 0.1dB or better			
Outer Diameter	(3.08)mm		(2.48)mm	(1.62)mm
Inner Diameter	(2.48)mm		(1.98)mm	(1.25)mm
Length	10.1 ±0.1mm	11.4 ±0.1mm	10.4 ±0.1mm & 9.88 ±0.1mm	6.8 ±0.1mm
Slit Width	Max 0.5mm			Max 0.2mm
Chamfer	2 x 0.1 +0.1/-0			

Phosphor Bronze   Adapter Sleeve

For SC and FC Adapters

For D4 Adapter

For LC and MU Adapters

SLEEVE CODE	INNER DIAMETER	LENGTH
PBS Adapter Sleeve	**25** (2.48)mm	**101** 10.1mm ST
		114 11.4mm SC & FC

ORDER CODE example:.   **PBS - 25 - 114**

SLEEVE CODE	INNER DIAMETER	LENGTH
PBS Phosphor Bronze	**20** (1.98)mm	**104** 10.4mm
		988 9.88mm

ORDER CODE example:.   **PBS - 20 - 988**

SLEEVE CODE	INNER DIAMETER	LENGTH
PBS Phosphor Bronze	**12** (1.25)mm	**680** 6.80mm

ORDER CODE example:.   **PBS - 12 - 680**
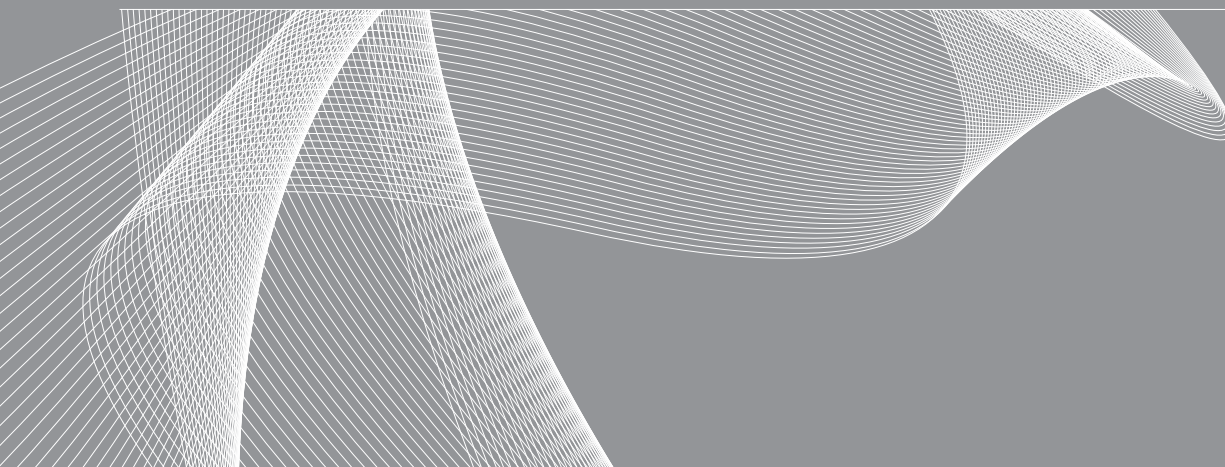
POLISHING SYSTEMS

APC 8000 High Volume Polisher
Polishing Fixture Package
Polishing Rubber Pads
Polishing Films

APC-8000 — High Volume Polisher

The APC-8000 features a superior fixture-to-platten locking mechanism and other design enhancements to give the user consistent polishing results at high production volumes. The fixture-to-platten locking mechanism confines motion to vertical plane, eliminating horizontal movement that may cause damage to the fiber. Polishing results are consistent and yield end face geometry exceeding GR-326-CORE standards*. In addition, the user can polish as little as three connectors at a time without the need to use additional dummy connectors to completely fill the fixture.

The polisher also features an improved safety cover assembly which forms an enclosure around the fixture to confine water within the polishing area. A labyrinth seal platten sits on top of a one-piece water tray for collecting polishing runoff. As a result, the machine does not require frequent maintenance and lubrication, and the polishing procedure is effective and hassle-free. Like previous models, the APC-8000 features a dual concentric drive motion for multi-axis polishing, but features a wider range of speeds available to the user for greater control over polishing cycle and throughput. Polishing can be done at higher speeds without compromising quality.

The APC-8000's expanded software capabilities and safety features make it easy and safe to use. It features a step-by-step automated guidance system, a sensor switch that prevents operation when the cover is open, an onscreen warning system, and an emergency stop button with a key-operated release. The software stores up to 35 recipes, with 10 polishing steps per recipe. The APC-8000 is a free-floating fixture polisher for polishing industry standard, small form factor and multifiber connectors. New fixtures will hold between 12 and 48 connectors or ferrules, depending on connector type. Fixtures from previous models (APC-7000 and APC-9000) may be adjusted for full compatibility with the APC-8000. Please contact a SENKO representative for more information.

FIXTURE-TO-PLATTEN LOCKING MECHANISM
- Fixture incorporates 3 locator posts which mate firmly with slots in the safety cover assembly during locked position
- Locking mechanism confines motion to a vertical plane, eliminating unwanted horizontal motion
- Offers consistent polishing results even at high platten speeds
- User can polish as little as three connectors at a time

SAFETY FEATURES
- CE Approval
- Sensor detects when cover is open and prevent operation.
- Emergency stop button with key-operated release
- Machine does not operate unless fixture posts are aligned with cover and fixture is in contact with rubber pad and platten
- Polishing machine stalls if it senses an obstruction between the fixture and the platten before the 3 locator posts are in place

ORDER CODE example:.   APC-8000

POLISHING SYSTEM — Polishing Fixture Packages

FC Fixture

MT Fixture

LC Fixture

PRODUCT NUMBER	POLISHING FIXTURE	PACKAGES POSITIONS	NOTE
MU-1.25-24-8	MU One-piece Connector Fixture	24	
LC-1.25-24-8	LC One-piece Connector Fixture	24	
UPC-1.25-36-8	LC/MU Locking Ferrule Fixture	48	
UPC-2.5-24-8	2.5mm UPC Locking Ferrule Fixture	36	SC/FC/E2000-UPC/SC
UPC-LF-8	Universal Loading Fixture		
E-2000-APC-12-8	APC Ferrule Fixture	12	
SC-APC2.5-18-X	SC/APC One-piece, 2.5mm	18	(X) Specify ferrule tip during order
FC-APC2.5-18-X	FC/APC One-piece, 2.5mm	18	(X) Specify ferrule tip during order
SC-UPC2.5-18-8	SC/UPC One-piece, 2.5mm	18	
SC-UPC2.5-18-8	SC/UPC One-piece, 2.5mm	18	
FC-UPC-2.5-18-8	FC/UPC One-piece, 2.5mm	18	
ST-UPC2.5-18-8	ST/UPC One-piece, 2.5mm	18	
SMA-12-8	SMA Fixture, only for 1-piece connectors	12	For critical ferrule end-length applications
MT-12-8	MT Fixture	12	
AMT-12-8	Angled MT Fixture	12	

POLISHING SYSTEM — Polishing Rubber Pads

All rubber pad consumables are certified for hardness and parallelism. Pads are available with durometer specifications and color coding found below.

PRODUCT NUMBER	COLOR	DESCRIPTION
RUG55.0-90	Black	5"X5mm 90 duro
RUG55.0-85	Grey	5"x5mm 85 duro
RUG55.0-80	Green	5"x5mm 80 duro
RUG55.0-75	Brown	5"x5mm 75 duro
RUG55.0-70	Violet	5"x5mm 70 duro
RUG55.0-65	Dark Blue	5"x5mm 65 duro
RUG55.0-60	Blue	5"x5mm 60 duro
RUG55.0-55	Rust	5"x5mm 55 duro
RUG55.0-50	Red	5"x5mm 50 duro
RUG55.0-45	Burgundy	5"x5mm 45 duro
RUG55.0-40	Orange	5"x5mm 40 duro

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

ORDER CODE example:. **RUG55.0-90**

POLISHING SYSTEM

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.

APPLICATION

- Industry standard fiber optic connectors
- Ferrules
- Epoxy removal, grinding, fine polish and cleaning

FEATURES

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

COMPATIBILITY

Films are compatible with the following connector styles:
- LC-UPC, LC-APC
- MU-UPC
- SC-UPC, SC-APC
- FC-UPC, FC-APC
- ST-UPC
- E2000-UPC, E2000-APC

ORDER CODE (POLISHING FILMS)

PRODUCT NUMBER	DESCRIPTION	DIAMETER
LFC010-XN	Silicon Carbide, 30μm	(X) Specify 4" or 5"
LFC030-XN	Silicon Carbide, 15μm	(X) Specify 4" or 5"
LFC050-XN	Silicon Carbide, 9μm	(X) Specify 4" or 5"
LFD050-X	Diamond, 9um	(X) Specify 4" or 5"
LFD100-X	Diamond, 6μm	(X) Specify 4" or 5"
LFD200-X	Diamond, 3μm	(X) Specify 4" or 5"
LFD250-X	Diamond, 1μm	(X) Specify 4" or 5"
LFD300-X	Diamond, 0.5μm	(X) Specify 4" or 5"
LFOS01-XN	UPC Final Polishing Film	(X) Specify 4" or 5"
LFF500-5N	Cleaning Film	5 inches

ORDER CODE (MT POLISHING FILMS)

PRODUCT NUMBER	DESCRIPTION
LFC010-5NP	PSA Type, Silicon Carbide, 30μm
LFC030-5NP	PSA Type, Silicon Carbide, 15μm
LFC200-5NP	PSA Type, Silicon Carbide, 3μm
LFFC200-5NP	PSA Type, Flocked Silicon Carbide, 3μm
LFFA0250-5NP	PSA Type, Flocked Aluminum Oxide, 1μm
LFFA0300-5NP	PSA Type, Flocked Aluminum Oxide, 0.5μm
LFFC0300-5NP	PSA Type, Flocked Cerium Oxide, 0.5μm
LFF500-5N	Non-PSA Type Buffing Film
LSS-1	Colloidal Silica Suspension

ORDER CODE example:.   **LFC010-XN**

POLISHING FILMS — Longlife Diamond Series

**LongLife Series
(LFD01-5N & LFD03-5N)**
The LongLife Diamond Series is used to grind and polish the connector endface to a smooth surface as illustrated in the figures below (please refer to Polishing-1 and Polishing-2).

PRODUCT	PARTICLE SIZE	BASE MATERIAL THICKNESS
LFD03-5N	3.0µm	75.0µm
LFD01-5N	1.0µm	75.0µm

APC SERIES (SENKO)

POLISHING PROCESS	FILM	TIME	FLUID	GRAM FORCE PER CONNECTOR	RPM
Adhesive Removal	LFC030-5N	30sec	None	120	100
Polishing-1	LFD03-5N	30sec	Water	210	150
Polishing-2	LFD01-5N	90sec	Water	210	150
Finishing	LFOS-01-05	120sec	Water	210	150

POLISHING FILM ORDER CODE: LONGLIFE SERIES

PRODUCT NUMBER	DESCRIPTION
LFC030-5N	Silicon Carbide Epoxy Removal Film (15µm), 5 Inch diameter
LFD06-5N	Diamond Polishing Film (6µm) 5 Inch diameter
LFD03-5N	Diamond Polishing Film (3µm) 5 Inch diameter
LFD01-5N	Diamond Polishing Film (1µm) 5 Inch diameter
LFF500-5N	Cleaning Film — 5 Inch diameter
LFD06-6X6N	Diamond Polishing Film (6µm) — 6 x 6 Inch square
LFD03-6X6N	Diamond Polishing Film (3µm) — 6 x 6 Inch square
LFD01-6x6N	Diamond Polishing Film (1µm) — 6 x 6 Inch square

ORDER CODE example:.   **LFD06-5N**

POLISHING FILMS

FOS-01 Final Polish Series

FOS-01 Series

Polishing Layer

Polyester Film (75µm)

Final Polishing Film, FOS-01   • *US. Patented*

FOS-01 is a highly efficient final polishing film manufactured using an advanced coating technology. This superior polishing film is 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	FOS-01
Particle Size	< 0.1µm
Coating weight (g/m2)	6.0
Film surface roughness (µm)	0.15
Polisher	All SENKO APC Series Polishers
Return loss (dB)	< - 55 dB
Fiber height (nm)	0~50
Radius of curvature (mm)	10~25
Apex offset (µm)	< 50

POLISHING FILM ORDER CODE: FOS-01 AND LFD SERIES

PRODUCT NUMBER	DESCRIPTION
LFOS-01-5N	UPC Final Polishing Film, 5 Inch diameter
LFOS-01-6x6	UPC Final Polishing Film — 6 x 6 Inch square

ORDER CODE example:.   **LFOS-01-5N**
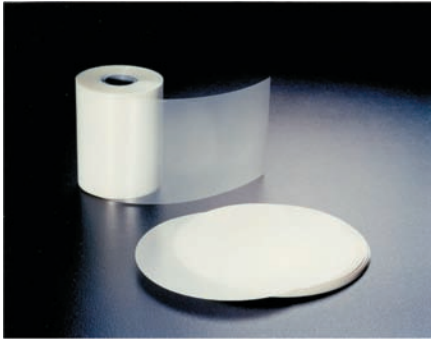
APPLICATION

- Industry standard fiber optic ceramic connectors
- Ceramic ferrules
- UPC final polish

FEATURES

- Easy to use
- Clean (slurry-free) work environment
- Simplified polishing process
- Polishes without scratching, ideal for connectors used in high performance applications
- Special binder containing ultra-fine polishing particles <0.1µm in size
- Excellent uniformity of particle deposition

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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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