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.

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 adaptors 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 adaptor 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 adaptors. The low profile Senko LC-HD, together with it’s pull tab allow LC adaptors to be stacked with absolutely no vertical space.
LC-HD SERIES

CONVENTIONAL RACK

6 PACK SPACING
17.4 mm (0.69 in)

HIGH DENSITY RACK

10 PACK LC-HD SPACING
60% increase in density
9.4 mm (0.37 in)

A gentle pull on the tab will disengage it from extremely dense fiber optic panels.

The pull tab also has the perfect location provided to affix a connector label.

The LC-HD SERIES is RoHS, Reach SVHC and UL 94 V-0 compliant.

The LC-HD duplex Push-Pull Tab is a Push-Pull Tab designed for the LC-HD Switchable Connector. This Push-Pull tab option allows the LC-HD Switchable Connector to be pushed and pulled form the Push Pull Tab instead of the connector, maximizing its effectiveness in high density applications.

The LC-HD 900µm Mini Boot is a 900µm boot designed for BTW (Behind the Wall) applications. It is part of the LD-HD series, made specifically for high density applications.

The LC-HD BTW Push-Pull Tab is a pull tab option designed for the LC-HD Connector with 900µm MINI BOOT for BTW (Behind The Wall) applications.

The LC-HD 2mm DUPLEX Mini Boot eliminates the need of the Duplex clip, simplifies the assembly process while makes the connector stronger.

The LC-HD Duplex Finger Clip allows the LC-HD Duplex Connectors to be removed using a latch option, instead of a pull tab option.
The combination of Senko’s new MPO-HD’s low profile and innovative pull tab allow adaptors to be stacked with virtually no vertical space required.

**Easy to release trigger connector**

The Senko MPO-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.

**Dense Application**

Because the Senko MPO-HD Connector can be removed using a simple pull tab, it eliminates the need for finger access to the MPO connectors release mechanism, in dense applications.

**Stackable adapters**

The low profile Senko MPO-HD, together with it’s Pull Tab allow MPO adaptors to be stacked with absolutely no vertical space.
A loopback signal can easily diagnose a problem

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.

Senko Fiber optic loopbacks are made with a compact design, and they are compliant with fast ethernet, fiber channel, ATM and Gigabit ethernet.
SENKO introduces the new LC Right Angle Clip. The boot clip is a feature for use with Senko’s LC 1.6mm or 2.0mm Mini Boots. This unique and compact “clam shell” design provides a protected right angle bend in any preferred direction.

The LC Right Angle Clip is made to be flexible, yet strong enough to hold the LC 2mm Mini Boot at a right angle without issue. As an added benefit the boot clip can be utilized with connectors already deployed to improve cable management.

<table>
<thead>
<tr>
<th>Boot Type</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC Conventional Boot</td>
<td>79.3</td>
</tr>
<tr>
<td>LC MINI Boot</td>
<td>65.4</td>
</tr>
<tr>
<td>LC w/ Flex Angle Boot</td>
<td>52.3</td>
</tr>
<tr>
<td>LC w/ 90 Degree Boot</td>
<td>50</td>
</tr>
<tr>
<td>LC w/ 50 Degree Boot</td>
<td>48.4</td>
</tr>
<tr>
<td>LC + MINI Boot + Right Angle Clip</td>
<td>41</td>
</tr>
</tbody>
</table>
SENKO introduces a new LC 2mm 90° Boot. SENKO’s 90° boot reduces boot protrusion from panel. SENKO’s 90° boot controls the forces and bend radius enough to survive stress tests without significantly increasing insertion loss as described in Telcordia’s GR-326 testing requirements.
Incorporating the SENKO LC connector yields exceptionally low insertion loss for Singlemode applications and provides connector color coding options in Multimode applications for differentiation of OM3 or OM4 constructions.

Introducing the SENKO IP-SERIES, an effective and low cost connector for harsh environmental applications.

**IP-SERIES**

**IP-LC**

**IP-MPO**

**IP-LCXP**

**IP-SC**

**IN-LINE ADAPTOR**

FOR SIMPLE EXTENSION OF CABLE

New line of IP 68 Connectors exceed ODVA requirements

The SENKO IP-LC Connector is designed to exceed the requirements of ODVA, the connectors meet IP68 environmental sealing ratings and are the ideal choice for a low cost/easy to use solution in Industrial, Fiber to the Antenna (FTTa), or any other harsh environmental applications.

Simple bayonet locking system

The IP-LC Connector is designed according to the IEC 61076-3-106 interface standard, which allows mating to other similar mechanical locking systems.

Low Insertion Loss

Incorporating the SENKO LC connector yields exceptionally low insertion loss for Singlemode applications and provides connector color coding options in Multimode applications for differentiation of OM3 or OM4 constructions.
The LC Duplex Switchable Uniboot can be disassembled in the field without special tools.

Easy to take apart

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.

More compact design

The 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.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>For LC Uniboot</th>
<th>SINGLEMODE</th>
<th>MULTIMODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss</td>
<td>0.10dB</td>
<td>0.20dB</td>
</tr>
<tr>
<td>Return Loss</td>
<td>≥ 55dB typical (PC)</td>
<td></td>
</tr>
<tr>
<td>Durability</td>
<td>&lt;0.20dB change 500 matings</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C ~ +75°C</td>
<td></td>
</tr>
<tr>
<td>Ferrule Hole Sizes</td>
<td>125.5 µm +1/-0 Concentricity: ≤ 1µm</td>
<td>127 µm</td>
</tr>
<tr>
<td></td>
<td>126 µm +1/-0 Concentricity: ≤ 1µm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>125 µm +1/-0 Concentricity: ≤ 1µm</td>
<td></td>
</tr>
</tbody>
</table>
Senko’s Q-XP Field Installable Connector redefines “easy to use”

High performance

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.

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

Specifications

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

Note: Specifications shown above were obtained using SENKO recommended products and procedures.
XP Fit Plus SC and LC Installation kit

The Connector Installation Tool Kit contains everything needed for installation of the SC and LC XP Fit Plus connector styles. No epoxy, polishing film, or other consumables are required, and there is no need for electrical power, allowing installers to get in and out of installation sites quickly.

Specifications

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>SINGLEMODE</th>
<th>MULTIMODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>For XP Fit Plus</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>0.20dB (PC)</td>
<td>0.10dB</td>
</tr>
<tr>
<td></td>
<td>0.3dB (APC)</td>
<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>≥ 55dB (PC)</td>
<td>≥ 35dB</td>
</tr>
<tr>
<td></td>
<td>≥ 60dB tPC</td>
<td></td>
</tr>
<tr>
<td>Durability</td>
<td>&lt;0.10dB change 500 matings</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C ~ +75°C</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Intermatebility</td>
<td>IEC 61754-4</td>
<td></td>
</tr>
</tbody>
</table>

Installation in under 2 minutes

The XP Fit Plus is a pre-polished, pre-assembled SC connector that uses index matching gel. An internal mechanical grip, gently but effectively holds the fiber in place and can be installed in under 2 minutes. Without polishing or adhesives the XP Fit Plus makes on site installations quick and easy, removing the need for epoxy curing and hand polishing at the work site.

Precision alignment

The XP Fit Plus SC Field Installable Connector is a perfect fit for your fiber optic projects.
MATED PAIRS
Each LC Secure connector will mate only with same color LC adapter

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.

Network Security

The Senko LC Keyed system offers mechanical network security for organizations desiring to segregate networks due to privacy or security concerns.

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>SINGLEMODE</th>
<th>MULTIMODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>For LC Keyed</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>0.08dB (UPC)</td>
<td>0.15dB</td>
</tr>
<tr>
<td></td>
<td>0.10dB (APC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.04dB (Super Low Loss)</td>
<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>≥ 55dB typical (UPC)</td>
<td>≥ 65dB typical (APC)</td>
</tr>
<tr>
<td>Durability</td>
<td>&lt;0.20dB change 500 matings</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C ~ +75°C</td>
<td></td>
</tr>
</tbody>
</table>
Senko has conducted a third party GR-910 testing program on its SC APC and LC UPC Attenuator to insure it’s highest quality and long term reliability.

**Product Features**

- **Tested under the strictest conditions**
  - The GR-910 testing was performed by Experior Laboratories. The test results show that the attenuators met all of the material, environmental (including tests up to 5,000 hours) and mechanical testing requirements. The wavelength independent attenuator (wavelength range 1270 to 1650), and the high power resistance design allows customer to use the attenuator for all purpose.

- **Features**
  - Test to GR-910 Experior Laboratories, a Verizon certified Independent Test Laboratory
  - Wavelength independent premium fiber
  - High Optical Power Capacity (up to 500mw)
  - Ruggedized and compact LC Unibody design
  - Ruggedized SC metal housing

### Specifications

**For SC-APC and LC-UPC Attenuators**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return Loss</td>
<td>55dB (UPC), 65dB (APC)</td>
</tr>
<tr>
<td>Attenuator Tolerance</td>
<td>1 to 10dB +/- 0.5dB, 11 to 30dB +/- 5%</td>
</tr>
<tr>
<td>Operational Wavelength</td>
<td>1310 +/- 40nm, 1490 +/- 20nm, 1550 +/- 40nm</td>
</tr>
<tr>
<td>Max Power</td>
<td>500mw</td>
</tr>
</tbody>
</table>

Attenuators are available in: SC UPC, SC APC, LC UPC, LC APC, FC UPC, FC APC, ST UPC and MU UPC.
SENKO’s Flex-angle boot controls the force and bend radius enough to survive stress tests without significantly increasing insertion loss.

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.

Bend in any direction

Reduces boot protrusion from panel

74.8
57.6

Traditional Boot

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

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

**Less protrusion than conventional boots**

Traditional Boot

50° Angle Boot

Flex Angle Boot

**Straight to 90°**

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.

**LC 50° angle boot**

The 50° Angle boot is 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.

The 50° Angle boot also provides a fixed angle positioning of 50° for better cable management, and is made of RoHS material and UL94-V0 rated type.
FTTX FIBERVIEW Inspection Probe

WE'RE ON YOUR WAY HOME
Fiber To The Home (FTTH) Components By SENKO

Central Office Building

1490nm
1310nm
1550nm

WDM Coupler

Video 1550nm
Voice, Data Downstream 1490nm
Voice, Data Upstream 1310nm

Cable
Optical Fiber

12.4 Miles 24 Km Max

Splitter

OA

FTTP PON Architecture
Senko Advanced Components, Inc has conducted third party ITL Telecordia GR 1209 and GR 1221 testing to Verizon’s TPR 9427 Issue 4 in order to ensure the highest quality and performance of the PLC Splitters. Senko’s PLC Splitters have been assessed to the reliability test procedures criteria specified in Section 6 of GR 1209 and GR 1221 Core requirements for passive optical components. These criteria simulate the challenging conditions encountered by optical connector assemblies over the lifetime of service in indoor or outdoor applications.

Senko’s PLC Splitters were found to be compliant with the requirement specified in TPR 9427 and applicable Verizon FOC Memos, and by meeting the reliability test procedures criteria of GR 1221 Core, assurance is provided that Senko’s splitter assembly is a reliable design and will provide reliable service over its lifetime.
Senko has developed a modular “kit” approach to inspection and cleaning, which can be tailored to different applications.
**PLC SPLITTERS**

Planar Lightwave Circuit (PLC) splitter modules feature compact packaging and stable optical parameters.

**WDM PRODUCTS**

Experience ultra low insertion loss, super thermal stability, and unparalleled reliability.

**PLUG & PLAY SOLUTIONS**

NEW High Density, MPO Plug & Play module
SEIKO ADVANCED COMPONENTS, INC.

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USA WEST 1-858-623-3300
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