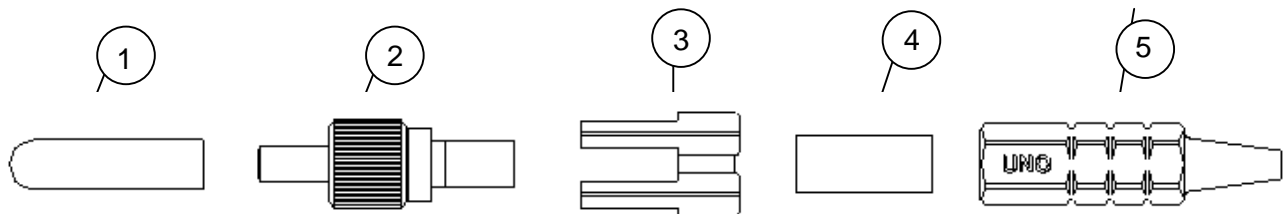
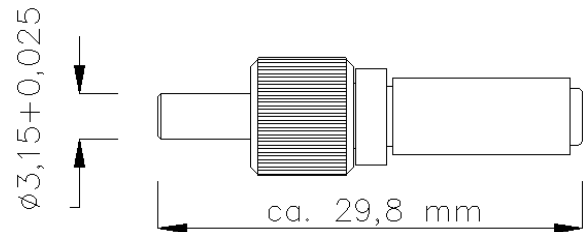


## SL4430-C FSMA Plastic Fiber Optic Connector Glue&Cleave Installation Instructions

### I

#### Introduction

The SL 4430-C FSMA Plastic Fiber Optic Connector is for 200/230µm fibers with 2.5 mm diameter cable jackets. This connector type allows epoxied or/and crimped fixing of the fiber cable.



**Connector Kit Components:**

- Protective Cap (1)
- Connector Body (2)
- Fiber Clamp, opened (3)
- Crimping Sleeve (4)
- Boot (5)

**Recommended Epoxy:** EPO-TEC 353 ND  
EPOXY Technology  
14 Fortuna Drive  
Billerica, MA 01821  
Phone: 978 667-3805  
Fax: 978 663-9782

**Required Tools:**

- Knife
- Ceramic scissors or equivalent (for cutting of Fibers or Kevlar®)
- 0.65mm (22AWG) Wire/Cable strippers
- 230µm fiber stripper
- Hex crimping tool, width across flats 4.95mm (0.195") and 4.3 mm (1.7")
- Cleaving tool or ceramic cutting plate

#### Instructions

NOTE: AVOID TOUCHING BARE FIBER (CLEAR) WITH FINGERS.

For fiber cables without Kevlar® fibers skip associated process steps.

- 1) Slide the boot at least 100mm (4") onto the cable as shown in Figure 1.
- 2) With 0.65mm (22 AWG) wire/cable strippers remove at least 70mm (2.75") in one step of the outer cable jacket (blue or black). Be careful not to cut or damage the fiber cable (black) while cutting outer jacket.
- 3) Cut the Kevlar® strain relief fibers (yellow) to a length of 12mm (0.5") with ceramic scissors (or equivalent).

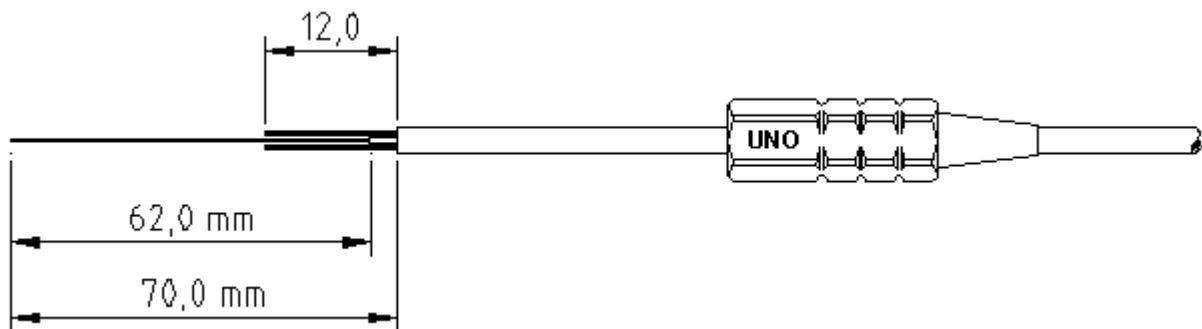


Figure 1: Preparation of the fiber

- 4) As shown in Figure 2 fold back the Kevlar® strain relief fibers (yellow) and slide the crimping sleeve over to get them out of the way.

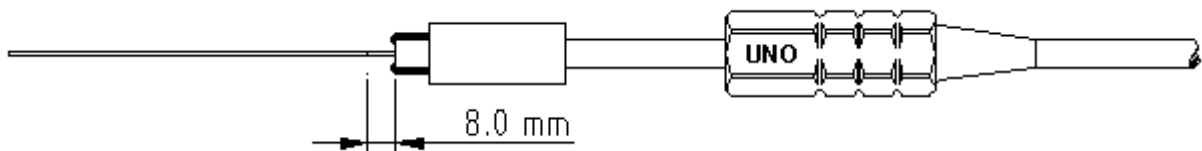


Figure 2: Crimping Sleeve

- 5) Remove the 62-65mm (2.4-2.6") of the fiber buffer (transparent) with the 230µm fiber stripper in several steps careful not to scratch the fiber. Remove remaining buffer material with a fresh paper cloth. Test fiber integrity by bending it down to a radius of 5-10 mm touching only the very tip. If the fiber does not withstand the test repeat procedure from the beginning.
- 6) Close fiber clamp by folding two hinged sides together with one hand. Carefully cylinder end push closed fiber clamp into the connector body. The fiber clamp should be barely seated in the connector body so that the end of the fiber clamp can fit around the outer jacket (blue) of passive cable.
- 7) Grip connector body and fiber clamp with fingers of one hand and grip passive cable with other. Carefully slide the bare fiber into the fiber clamp/connector body. Be careful to line up the bare fiber with the guidance hole/path inside the fiber clamp. If the bare fiber is properly seated up with the guidance hole in the fiber clamp, no force should be required to push the bare fiber into the fiber clamp and through the connector body. Forcing fiber into fiber clamp/connector body will cause bare fiber to break.

- 8) Let some space for the gluing process before moving the connector in the final position.
- 9) Take some epoxy and provide it with a thin stick on the jacket, buffer and 15-20 mm along and round about the bare fiber. Note: Do more than 20 mm because otherwise the epoxy will disturb the final cleaving process. The diamond cleave tool would be expired to some epoxy and the cleave performance would be reduced dramatically.
- 10) Keeping fiber clamp closed, push the bare fiber through the fiber clamp until the further movement is stopped by the outer jacket (blue or black). Properly seated bare fiber will cause the outer jacket (blue or black) to push up against the back of the inside of the fiber clamp. The bare fiber should protrude from the connector ferrule (surface) for several centimeters (as required by the cleaving tool used) and without any epoxy.
- 11) Bring some epoxy on the fiber clamp and push fiber clamp all the way into connector body.
- 12) Place the strain relief fibers (yellow) over the fiber clamp body and slide the crimping sleeve over. Ensure part of crimp connector sleeve is over the outer cable jacket. **DO NOT PUSH CRIMPING SLEEVE SNUG AGAINST BOTTOM RING OF CONNECTOR BODY.**
- 12) Use the large hole (Ø4.95mm or Ø4.95mm) on crimp tool to crimp crimping sleeve firmly on the fiber clamp body. Use middle hole (Ø4.3mm) to crimp lower 5mm of crimp sleeve (part over blue or black cable). Putting the strain relief fibers under the sleeve ensure integrity of the crimp and provides strain relief between crimped connector and fiber optic cable.
- 13) Use cleave tool to cleave off bare fiber sticking outside of connector. Follow cleave tool instructions for proper cleave procedures and take check that no epoxy is in the cleaving zone. If a ceramic cutting plate is used, **lightly** nick one side of bare fiber sticking out of connector where the bare fiber meets the surface of the connector. **DO NOT CUT THE BARE CABLE WITH THE CERAMIC PLATE.** **Light pressure** is all that is needed to properly nick the fiber. After nicking fiber, flick top of bare fiber with finger to break off fiber at the point where it was nicked.
- 14) Look at bare fiber. No bare fiber should protrude from the connector surface. Surface of connector and fiber should appear to be a level plane. Using ceramic plates always leaves a small piece of fiber protruding from the connector. Therefore the **FRONT CONNECTOR SURFACE MUST NOT BE TOUCHED ANY MORE AFTER CLEAVING THE FIBER.** Also cable in-line extensions via connectors and adapters are not possible in that case. **ALWAYS EITHER CONNECT CABLE IMMEDIATELY OR APPLY PROTECTIVE CAP.** For closure inspection use of a 100x microscope with FSMA adapter is recommended.
- 15) Repeat for other side of passive cable. Screw connectors to light power source and light power meter. Transmitted power should be greater than  $-35$  dBm. If not, one or both connectors were put on incorrectly. In this case, attach new connectors.
- 16) If light power source and meter are not available other light source (sunlight, overhead lights, etc.) Place the light source on one connector or hold up one connector to sunlight and look at other connector. Light should come from the connector. Modulation of the source by waving a finger in front of the fiber will enhance visibility. If no light comes through, one or both connectors were put on incorrectly. In this case, attach new connectors. **NEVER LOOK DIRECTLY INTO END WITH MAGNIFYING OPTICAL INSTRUMENTS WHEN LED IS ON – MAY DAMAGE EYES.**