

# CORNING

## **LC (PC & APC) Connectors Termination Procedure**

**Series: 721-NNN0-NNN0N**

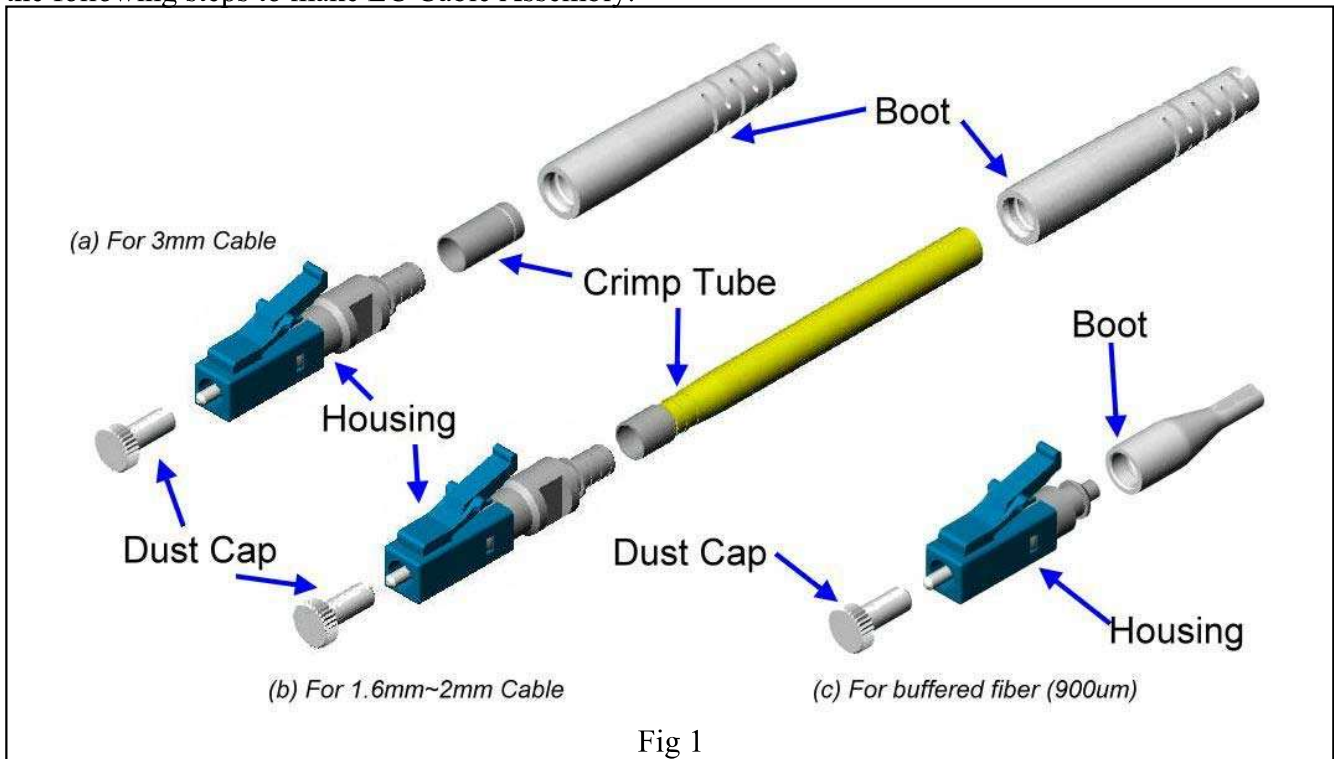
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| I       | Update address and fax number | 10/26/2018 |
| H       | Initial Release               |            |
| Version | Revision History Summary      | Issue Date |

**I INTRODUCTION**

This termination procedure is prepared for 721 series LC connectors. Please read this procedure thoroughly before starting assembly.

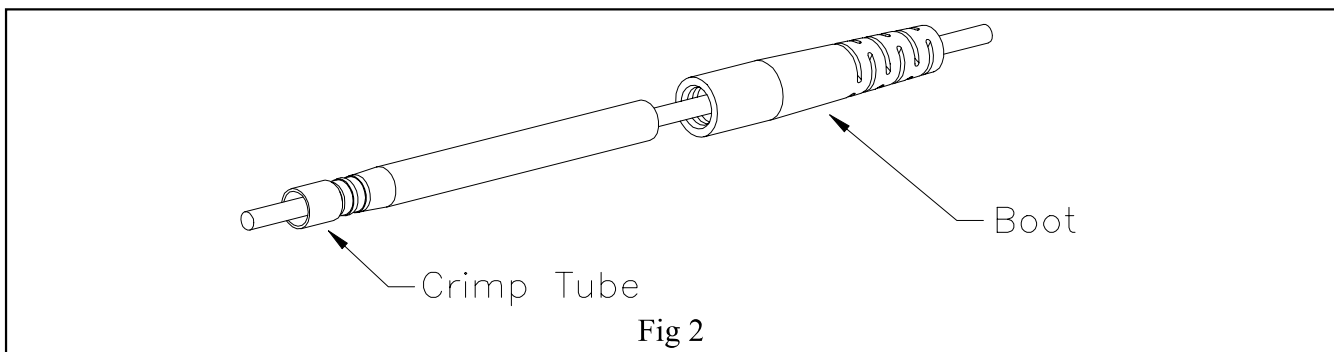
**II DESCRIPTION**

Fig. 1 shows the structure of Series 721-N1N0-NNN0N LC connector, which consists of Housing, Dust Cap and Boot. Connectors for different cables/fibers may vary slightly by boots or crimp tubes. Follow the following steps to make LC Cable Assembly.



**Step 1** Slide Boots, Crimp Tubes onto the Cable shown in Fig. 2.

**Note:** Do not use crimp tube and boot for buffer fiber type. Use 900um type boot instead.



**Step 2** Use Jacket Stripper to cut cable jacket. Kevlar cutter to cut the strength member (Kevlar). See

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Fig. 3 for the correct dimensions.

**Note:** In case of buffered fiber termination, skip this step.

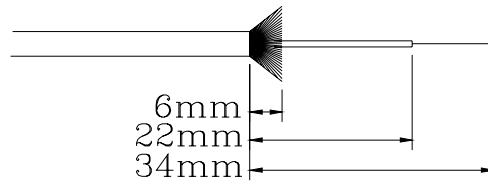


Fig 3

**Step 3** Use Buffer Stripper to remove the required length of buffer and use alcohol and lens wiper to clean the bare fiber. See Fig. 3 for the correct dimensions or use the LC Dimension Template.

**Note:** These are actual dimensions.

**Step 4** Have the epoxy ready according to the manufactures instructions and put part of the mixed epoxy into a small container. The rest of epoxy should be stored in the freezer for latter use.

**Step 5** Apply a couple of drops of the epoxy to the inside of connector body (in the inner plastic tube) by using a needle or syringe.

**Note:** Do not apply any epoxy to bond the connector body to the fiber and inner plastic tube.

**Step 6** Insert bare fiber carefully into the epoxy-filled connector. Slightly rotating the connector will help the fiber to get through the ferrule.

**Step 7** Slide the fiber gently in and out of ferrule to form the epoxy bead on the end of ferrule. Or, apply a drop of epoxy on ferrule endface to form the epoxy bead around fiber.

**Step 8** Slide crimp tube over kevlar and connector body up to stop as Fig 4 shown. Be sure that kevlar is between the crimp tube and connector body.

**Note:** Skip step 8 and step 9 for buffered fiber termination.

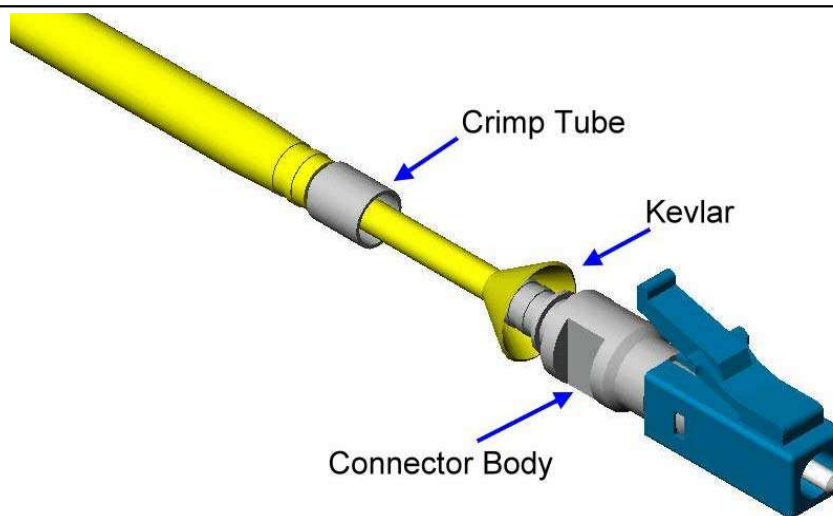


Fig 4

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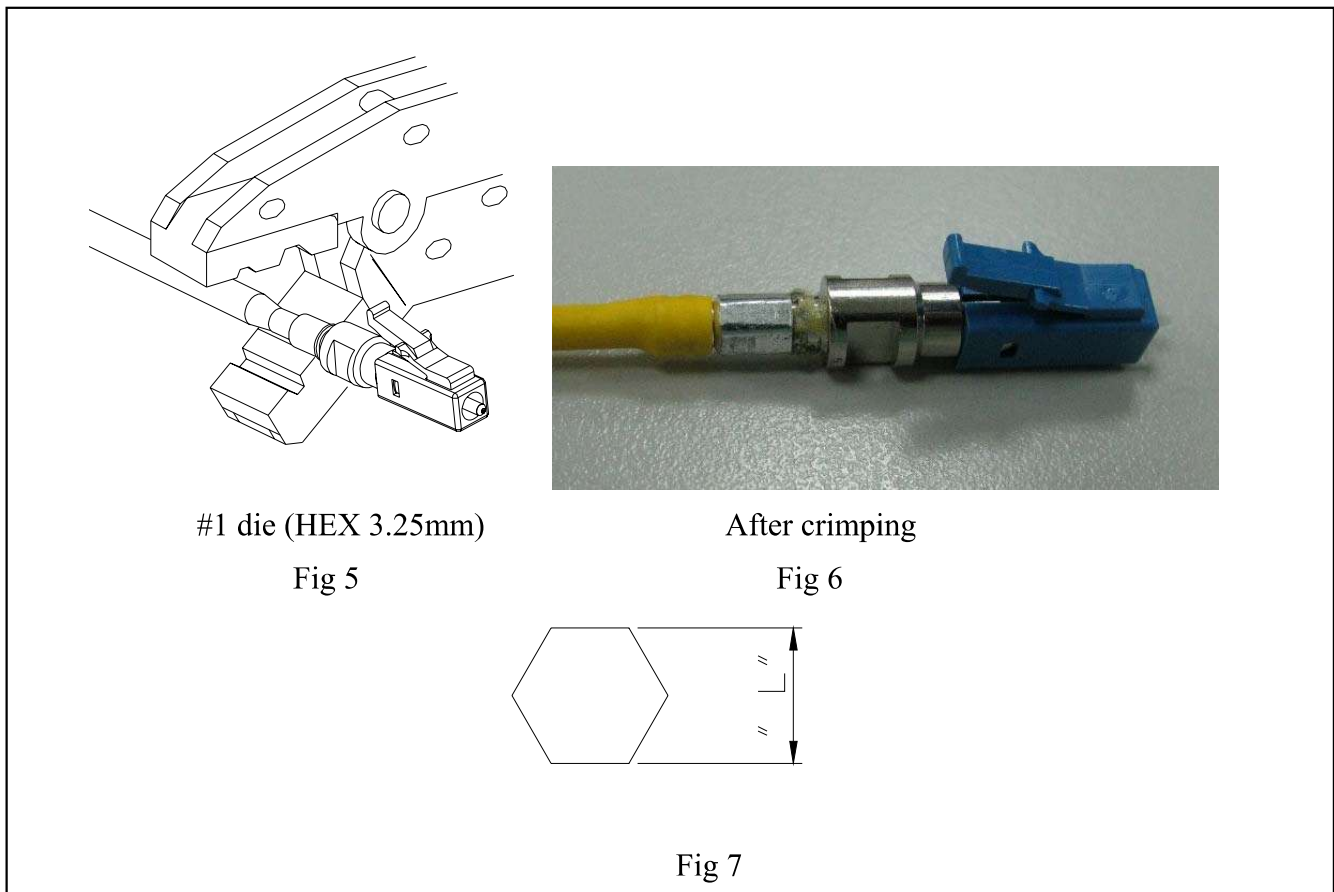


**Step 9** For 1.6-2mm assembly, crimp the crimp tube with #1 die first and use heat gun to shrink the heat shrink tubing. The die length is 5.5mm. After crimping, the crimp tube will be a hexagon as fig 6 shown.

For 3mm assembly, crimp the crimp tube with the same #1 die.

*Note: If the jacket is easy to get loose, apply glue on the end of the crimp tube and jacket to prevent jacket from coming out.*

*Note: After crimping, the crimp tube hexagon dimension "L" of Fig 7 must be 3.25~3.35mm. This will make sure the jumper can pass straight pull test. If not, please check the crimping tool.*



#1 die (HEX 3.25mm)  
Fig 5

After crimping  
Fig 6

Fig 7

**Step 10** Slide the boot over the crimp tube and carefully mount the connector onto the curing fixture and place that into curing oven.

**Step 11** Remove the fixture from the connector after epoxy is fully cured. Use a fiber scribe to score the protruded fiber slightly at the point where the fiber and epoxy bead meet. Gently push the tip of fiber until the fiber separates.

*Note: (a) Do not break the fiber directly when the fiber is scored.*

*(b) Fiber shall be scored again if fiber is not broken by light push on the tip of fiber.*

**Step 12** Use alcohol and lens wiper to clean the polishing pad and polishing tool and place a 16 μm polishing paper on the polishing pad and mount the connector onto suitable polishing fixture.

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**Note:** Polishing Machine manufacturers offer different polishing procedures. Please refer to its own manuals for proper polishing process. Also, this polishing procedure is for reference only. Cable assembly makers should develop its own polishing process.

**Step 13** Polish the end of connector by applying light pressure on the connector and move the connector polishing jig by an 8-figure motion until the polishing traces caused by protruded fiber disappear.

**Step 14** Repeat the previous step with a 9µm, 3µm, 1µm and 0.3µm polishing paper respectively.

**Step 15** Clean connector end and use a X200 microscope to inspect the end surface of the connector.

**III REQUIRED TOOLS AND MATERIALS**

**Note:** Most Tools and Consumable material are standard and can be purchased through its own manufacturers or distributors.

| TOOLS                             |
|-----------------------------------|
| JACKET STRIPPER                   |
| KEVLAR CUTTER                     |
| BUFFER STRIPPER                   |
| DIMENSION TEMPLATES(LC ONE-PIECE) |
| FIBER SCRIBER                     |
| MICROSCOPE X200                   |
| CRIMPING TOOL(LC)                 |
| POLISHING TOOL(LC)                |
| POLISHING PAD                     |
| HEAT BLOWER                       |
| CONSUMABLE ITEMS                  |
| EPOXY                             |
| POLISHING PAPER 16 µm             |
| POLISHING PAPER 9 µm              |
| POLISHING PAPER 3 µm              |
| POLISHING PAPER 1 µm              |
| POLISHING PAPER 0.3 µm            |
| LENS WIPER                        |
| SYRINGE                           |