

RECOMMENDED Procedure

Lynx-CustomFit Splice On-Connector (SOC)

Sumitomo Electric Lightwave Corp.

Phone: 919-541-8100

Toll Free: 800-358-7378

Web: www.sumitomoelectric.com

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1.0 General

This document describes the procedure for installation of the Lynx-CustomFit Splice-On Connector 4.8mm cordage solutions UPC & APC.

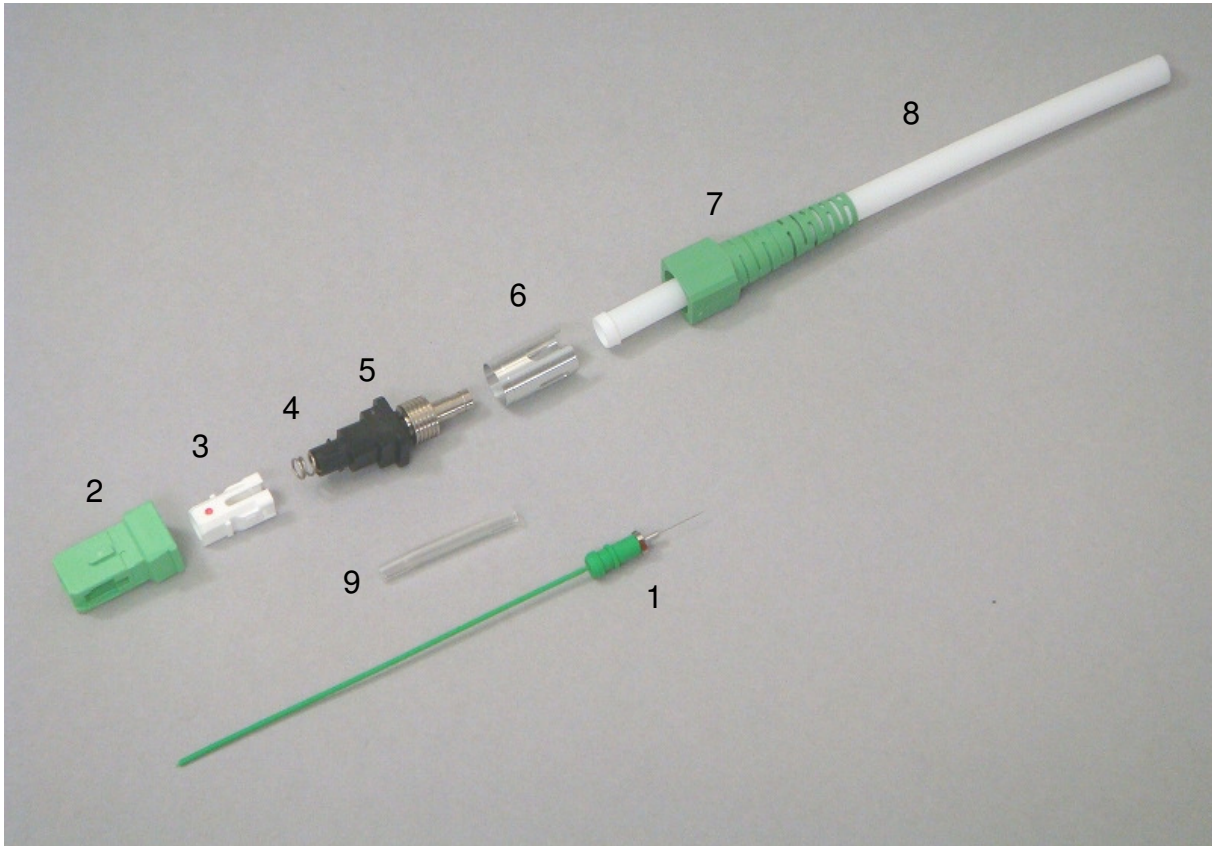
2.0 Safety Precautions

1. Please read and follow all fusion splicer manufacturers' recommended procedures concerning splicer operation and precautions.
2. Safety glasses should be worn when handling bare optical fiber.
3. Never look into the end of a microscope or optical cable connected to an optical output device that is operating. Laser radiation is invisible, and direct exposure can severely injure the human eye.
4. Alcohol is flammable, causes irritation and is harmful if swallowed or inhaled. Keep alcohol away from heat, sparks, skin, and avoid contact with eyes.

3.0 Specifications

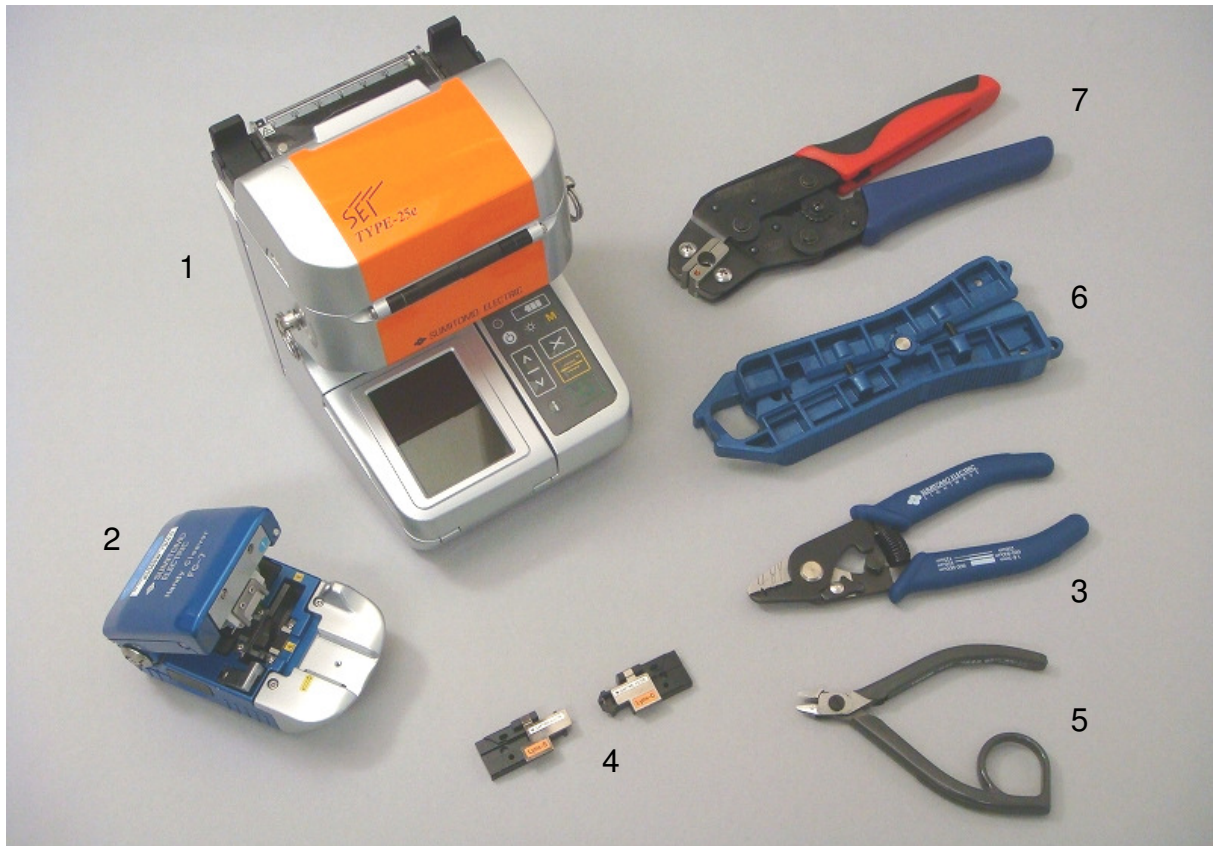
Fiber Type	SMF; MMF 50 & 62.5 μ m	
Coating Diameter	4.8mm	
Connector Type	SC	
Polishing	UPC	APC
Insertion Loss	<0.30 dB	<.30 dB
Return Loss	> 40 dB	>60 dB
Color	Blue	Green

4.0 SOC Components



1	Ferrule Subassembly with Dust Cap	
2	Outer Housing	
3	Inner Housing	
4	Spring	
5	Rear Housing	
6	Crimp Ring	
7	Strain Relief (Boot)	
8	Protection Tube	
9	Fiber Protection Sleeve	

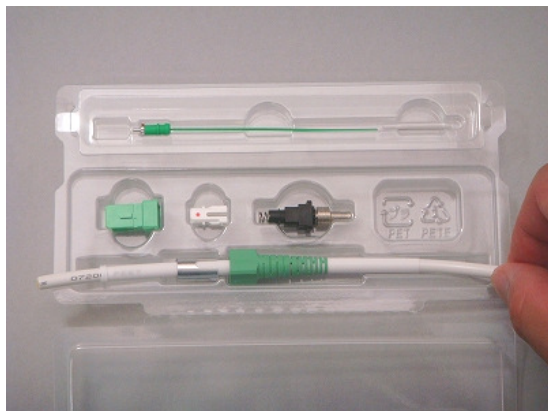
5.0 Required Tools



1	Fusion Splicer	
2	Fiber Optic Cleaver	
3	Fiber Optic Strippers	
4	Connector Holder & Cordage Holder	
5	Kevlar Snips	
6	4.8mm Cordage Slitter	
7	Sumitomo Electric SOC Crimp Tool (4.8mm die)	

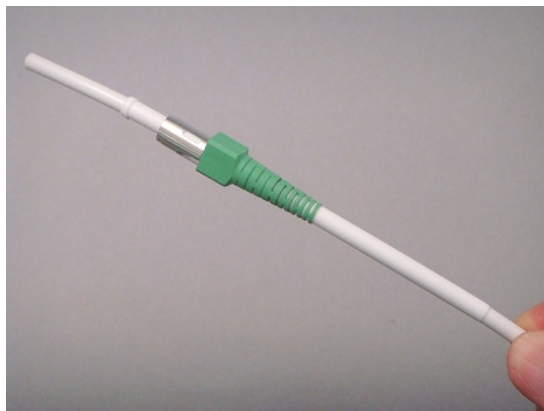
6.0 Procedure

1

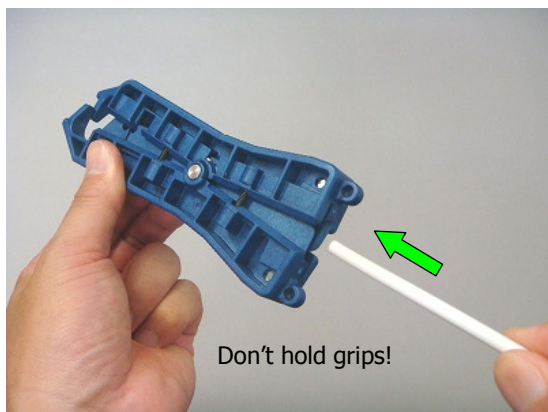


Open housing-side Covering.
Insert the cordage through assembly parts.

2

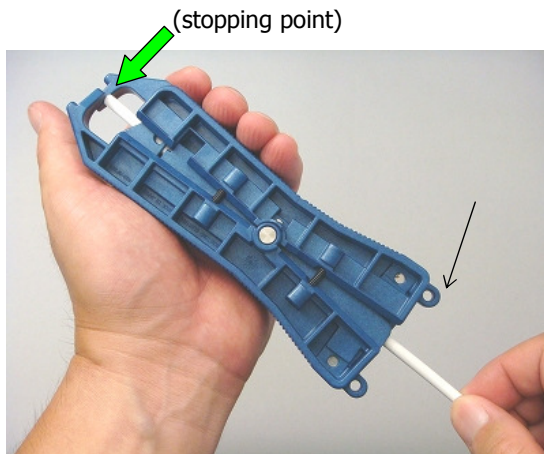


3



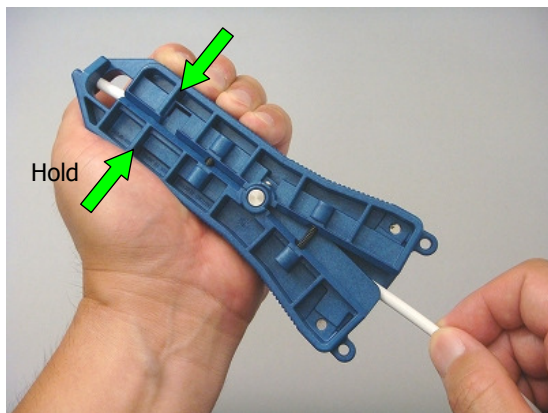
Insert Cordage into square hole of slit.

4



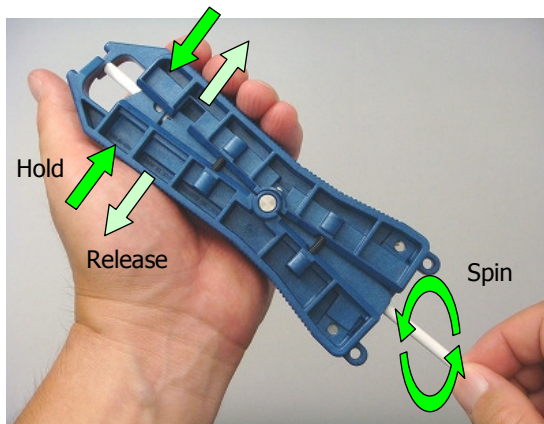
Insert Cordage until it reaches stopping point.

5

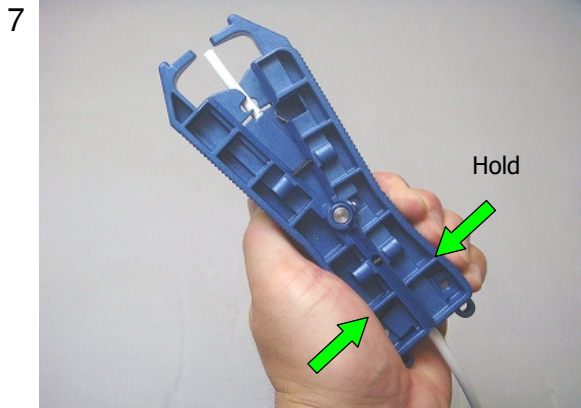


Squeeze the front-side of slit.

6



Release the front-side grips.
→ Spin the cordage.
→ Hold and release slit again.
→ Spin cordage again. (Repeat several times.)



Hold the back end of slitter.



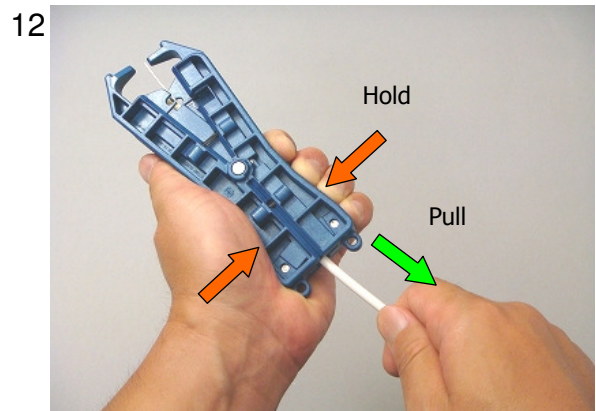
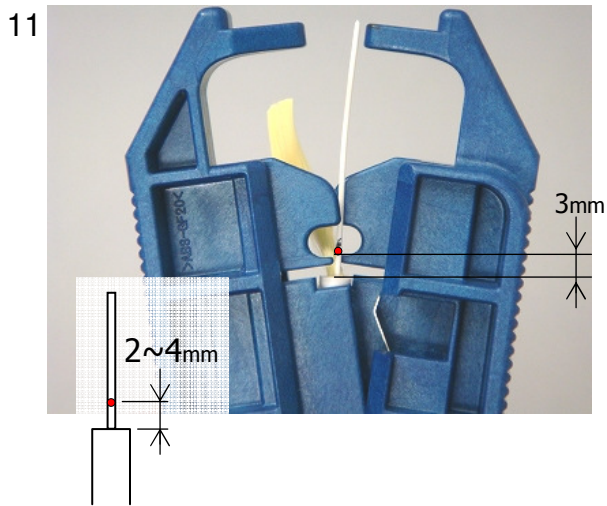
Remove and discard excess sheathing.



Pull the Kevlar and fiber to remove excess slack from inside cordage.
Pull Kevlar to the side.

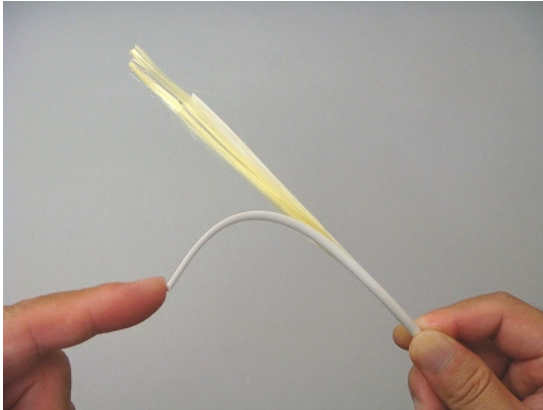


Using the hole of the tool as a gauge, mark the fiber .
This mark represents the ending strip point and reference point for the holder edge.



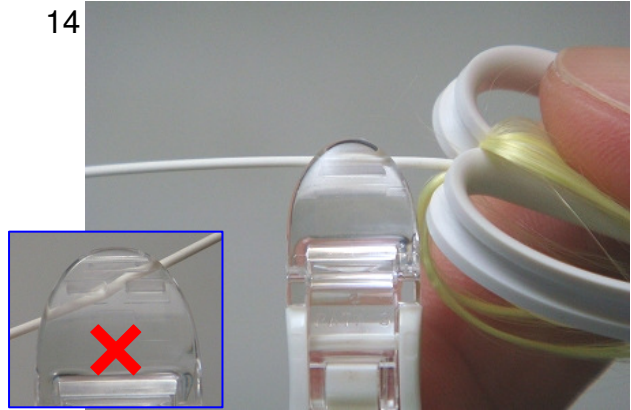
While gripping the slitter, pull the cordage slitting the jacket in the process.

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Fold the Kevlar and sheathing back tape maybe used to secure cordage.

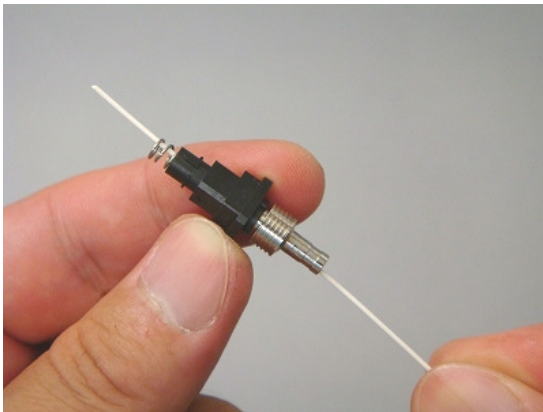
14



For semi-tight **Loose Buffer** 900um fiber use fiber clip near the slit end. Press the clip with fingers. **CAUTION** : Do not cross clip fiber within clip.

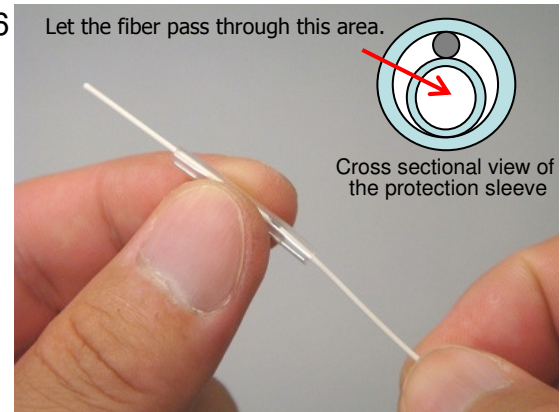


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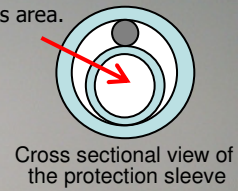


Insert the fiber through the rear-housing.

16

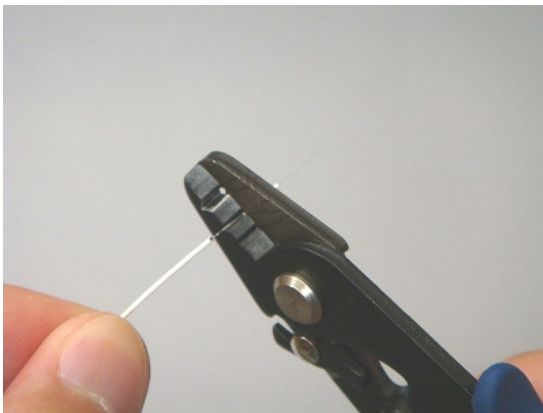


Let the fiber pass through this area.



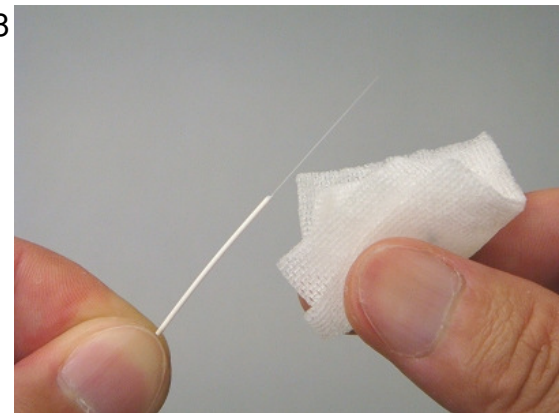
Insert the fiber through the protection sleeve.

17



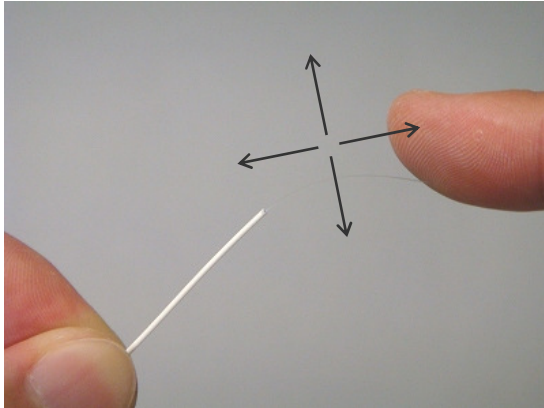
Strip the fiber coating to the marked point.

18



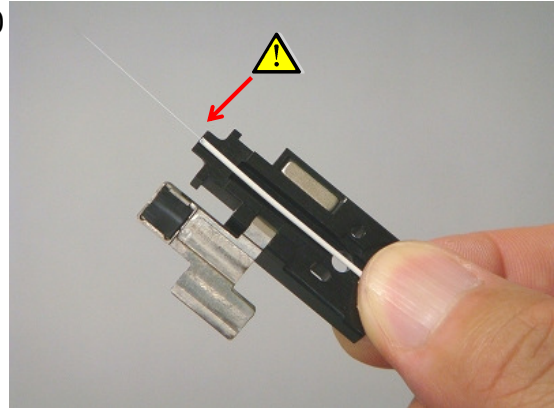
Clean the fiber.

19



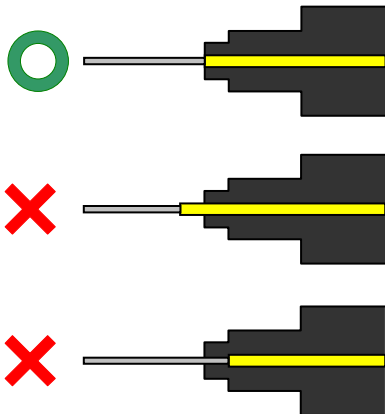
Check for fiber breaks by gently snapping the end back and forth.

20



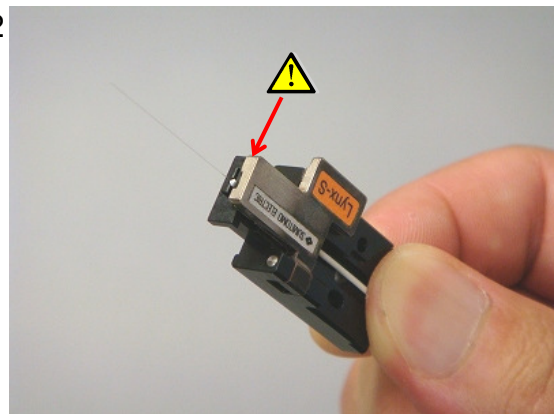
Set the fiber into the holder curl-side down.

21



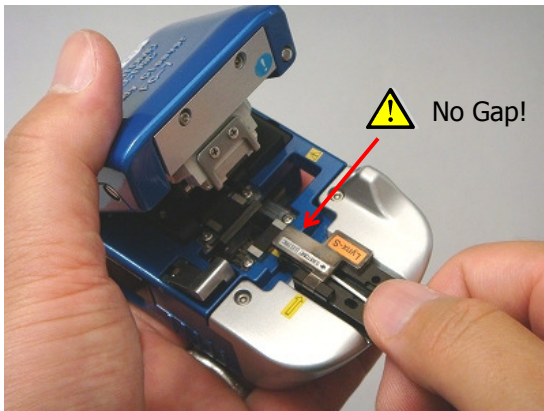
The 900 micron coating should be even with the edge of the holder.

22



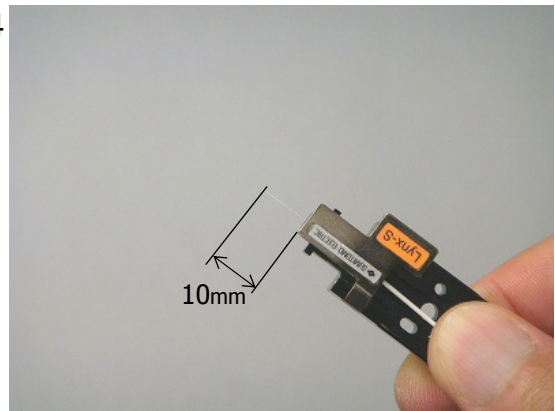
Check fiber position.

23

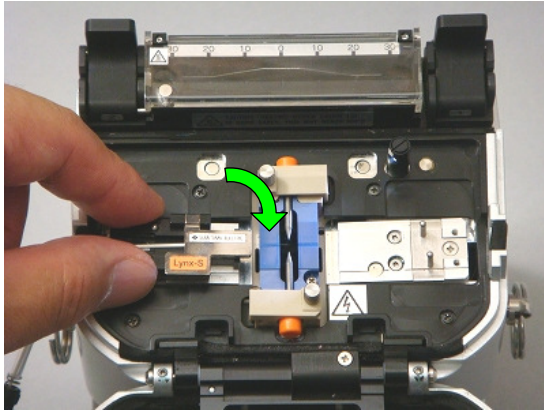


Set the fiber holder into the fiber cleaver. Slide the front tip of the holder until it touches cleaver. Close the cover of the cleaver, cutting the glass fiber.

24

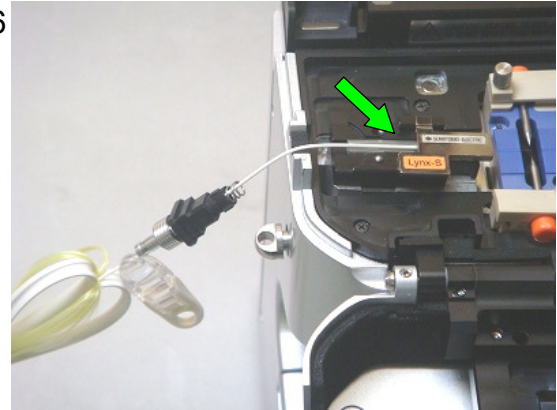


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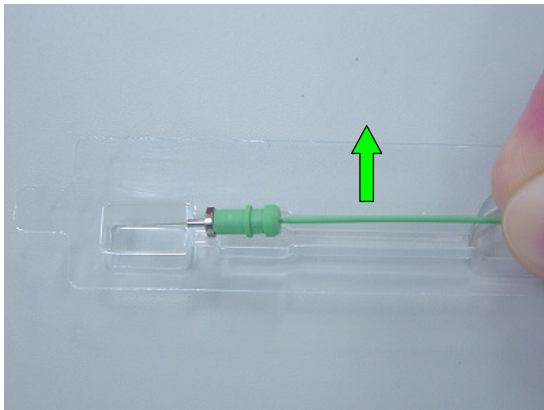
Place the holder in from behind the V-groove.

26



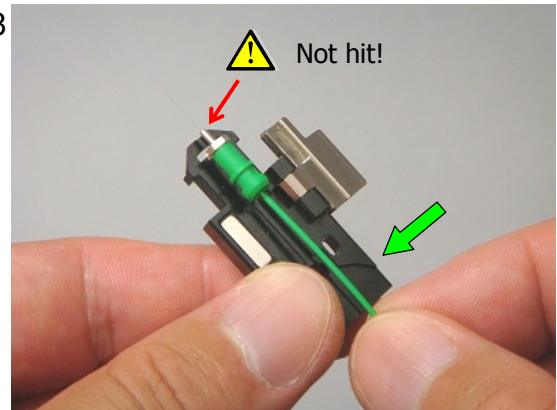
Put protection sleeve into holder.

27



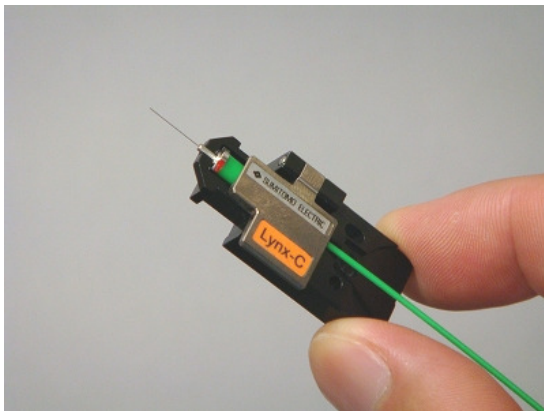
Remove the ferrule side covering of the package.
(Open just before using the ferrule subassembly.)

28



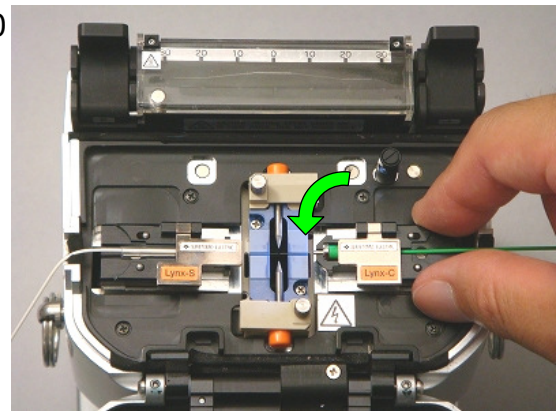
Set the ferrule subassembly into holder.
CAUTION : Ensure that the glass fiber does not hit the holder.

29



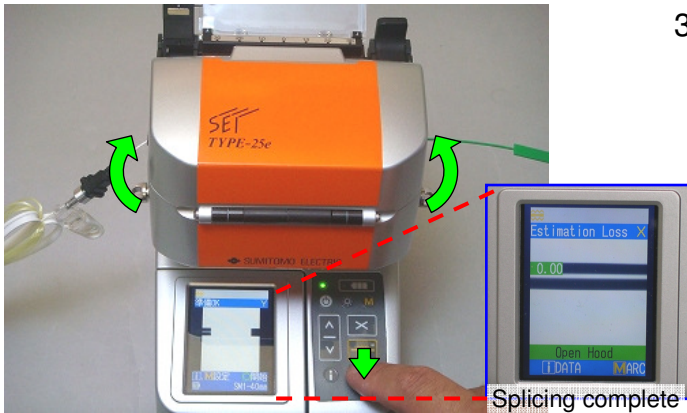
Close the cover.

30



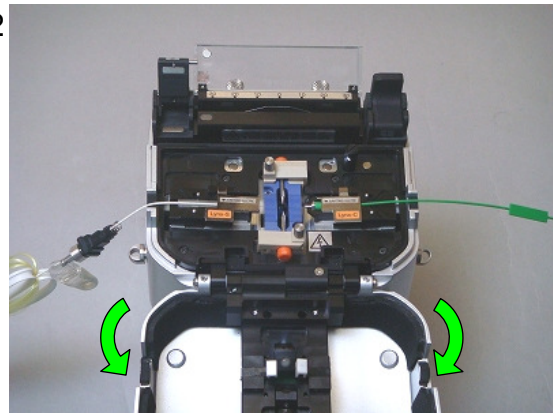
Set the holder in from behind the V-groove.

31



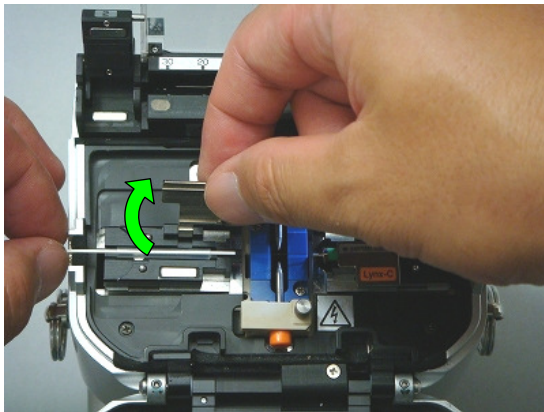
Close the splicer's hood.
After spatter, the carbon coated SOC fiber is identical to standard SMF. Complete the splice

32



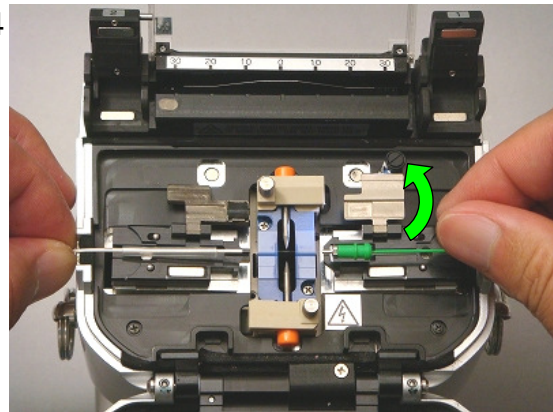
Open the splicer's hood.

33



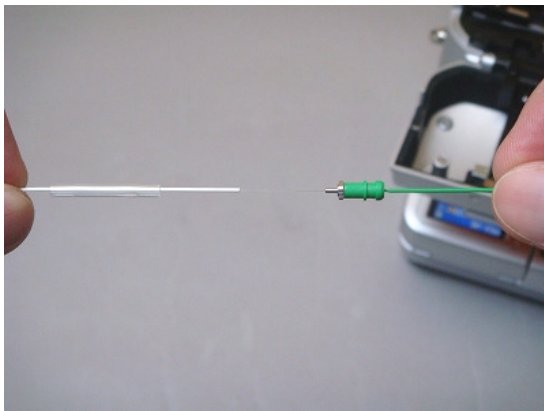
Open the 900um holder first.

34

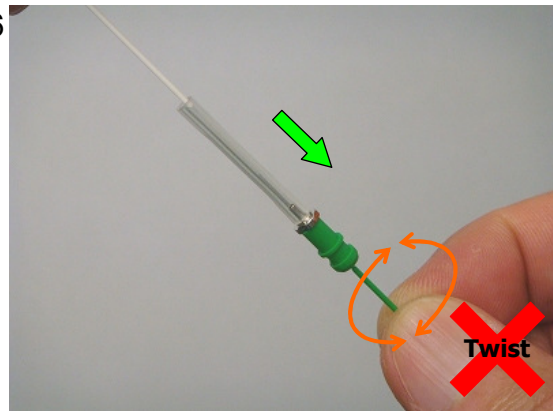


Open the ferrule holder.
Remove the fiber from the splicer while maintaining tension on assembly to prevent bending.

35



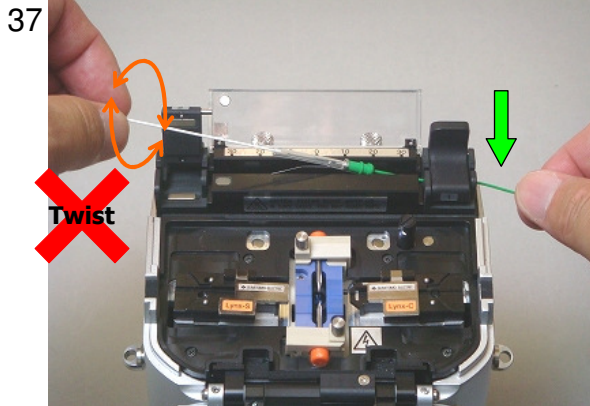
36



Move the protection sleeve into position.
Slide the sleeve by slanting the fiber.

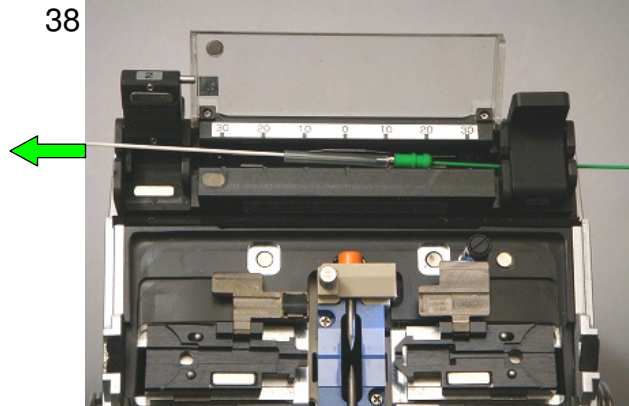


CAUTION : Don't twist the ferrule or fiber.

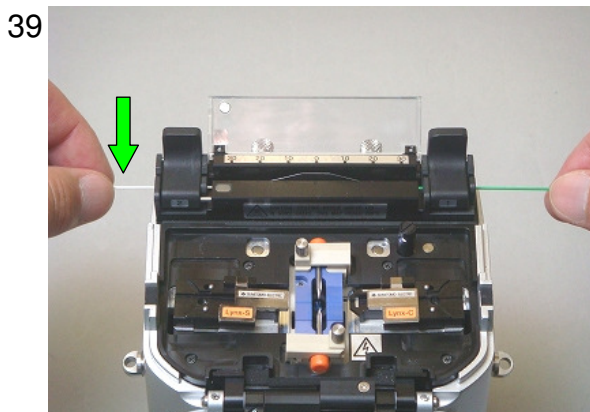


Set the protection sleeve in the center of the heater.
Load the assembly into the right-side clamp first.

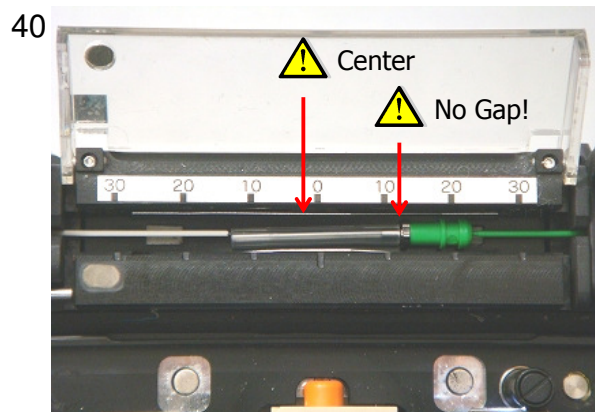
CAUTION : Don't twist the ferrule subassembly or fiber.



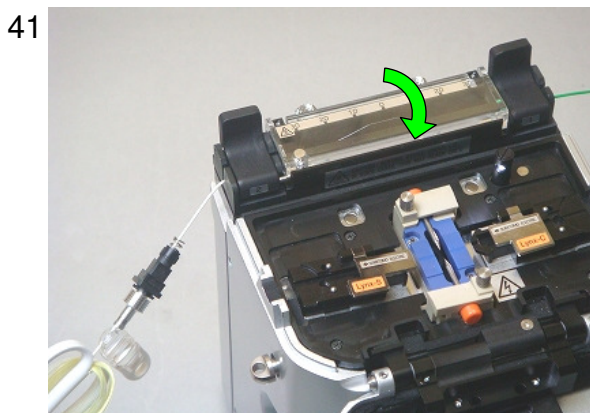
Pull the fiber from the left.



Load fiber into the left-side clamp.



Make sure that there is no gap between sleeve and ferrule subassembly. Use 60mm heater setting to ensure proper shrinkage.



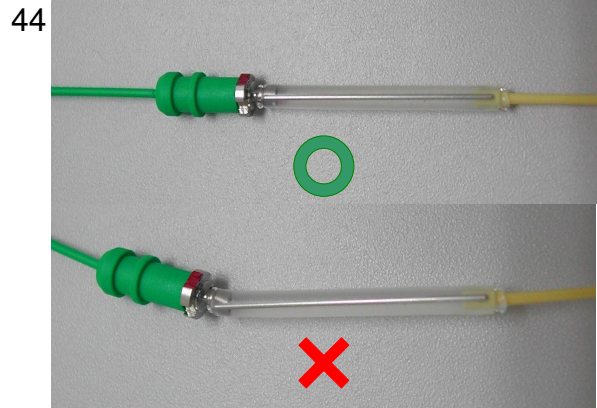
Close the cover of the heater.



Push the heating button of the splicer.

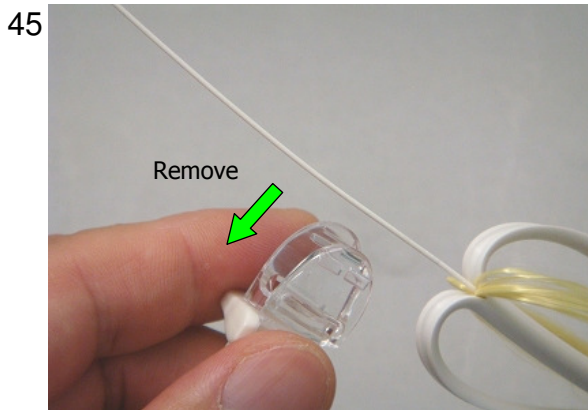


With the 60mm setting, the protection sleeve should shrink completely. If necessary, use a second heater cycle.

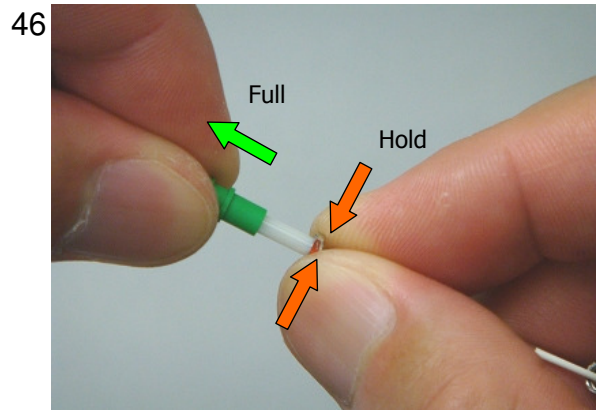


Allow an additional minute for the protection sleeve to cool. If the assembly bends repeat the heater cycle .

CAUTION : Be careful not to bend the stub or the sleeve. In case that they are bent, heat the sleeve again. Don't make them straight by force.



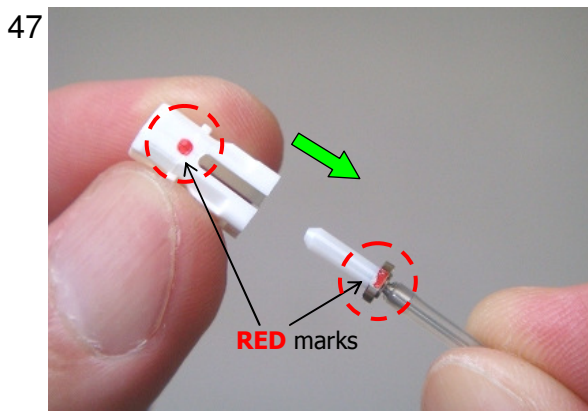
Open and remove the clip.



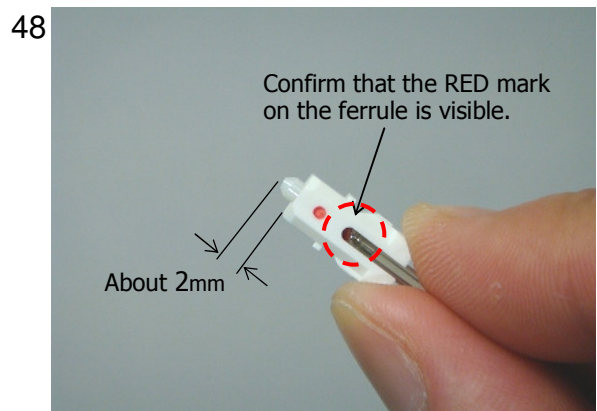
Holding the flange (metal screw), take off the dust cap.



CAUTION : Don't pull fiber protection sleeve, this action could break the fiber.

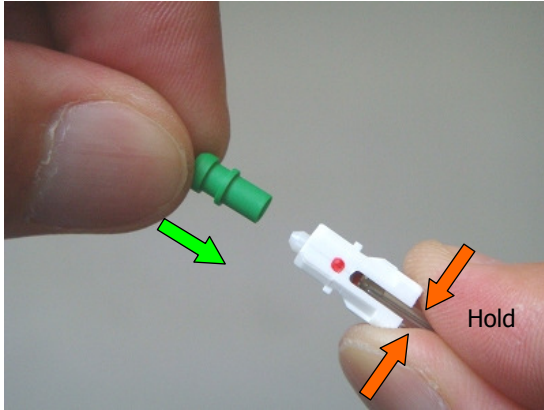


Align the red marks with each other, during the assembly of APC connectors.



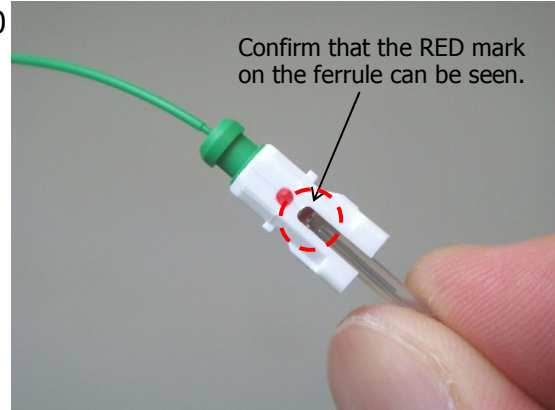
Loosely press the ferrule subassembly into the notched housing.

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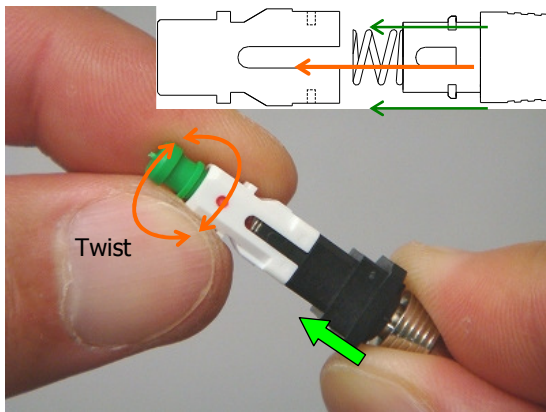


Gently press the dust cap onto the ferrule.
The dust cap is being used as a temporary holder.

50

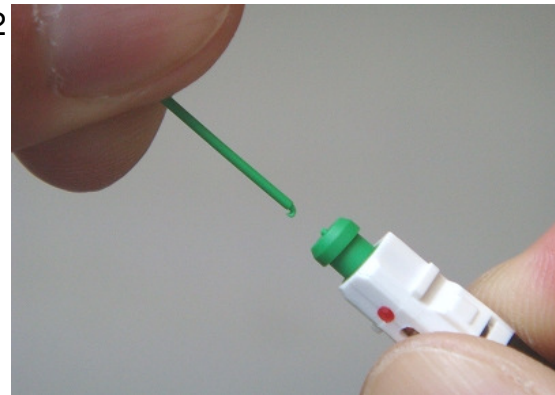


51



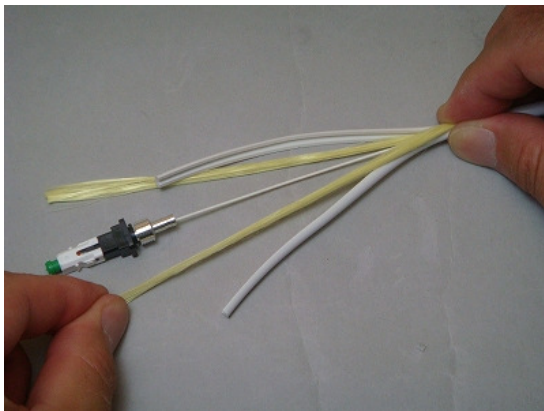
Align the groove and slide the inner housing over the rear housing until the components lock together.

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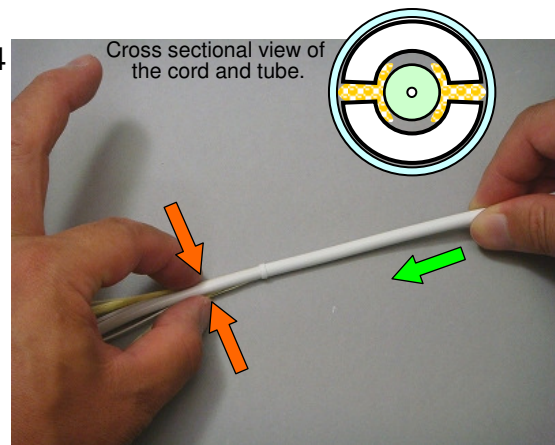
Twist and snap the string from the dust cap.

53

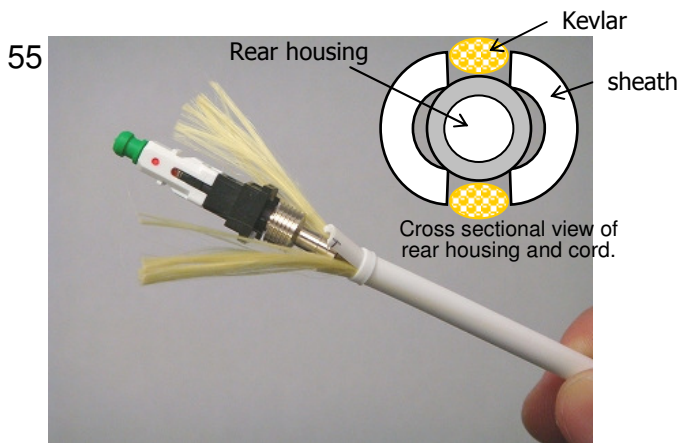


Divide the Kevlar into two tight bundles.

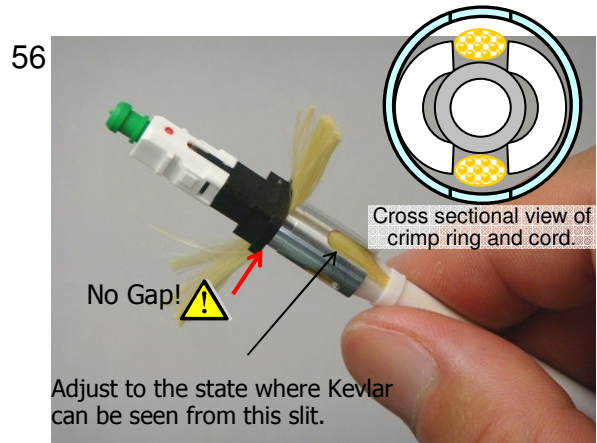
54



Spread the sheath and Kevlar around the rear housing. While maintaining the position of the sheath and Kevlar, slide the protection tube down 1/4 inch above near of housing.

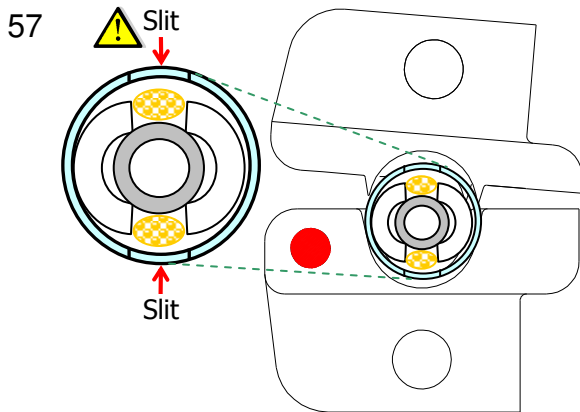


Adjust the sheath and Kevlar to the above state.



Adjust to the state where Kevlar can be seen from this slit.

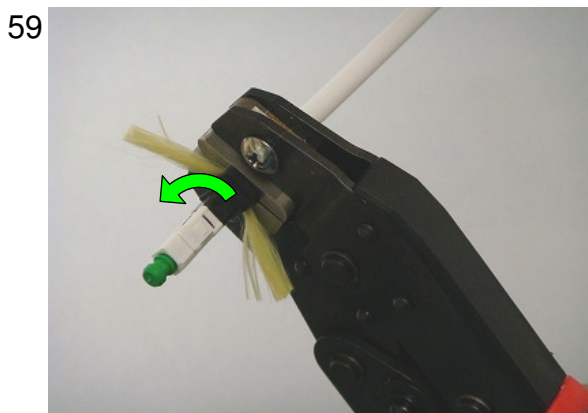
Slide the crimp ring over the protection tube keeping sheath and Kevlar split.



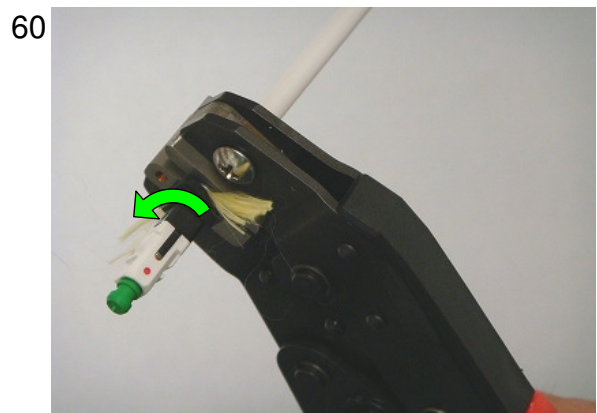
Set the connector plug onto the crimp tool.
CAUTION : Turn and set the slit of crimp ring upwards.



Crimp the crimp ring with the crimp tool.
CAUTION : Be careful not to crimp the black part of the rear housing.

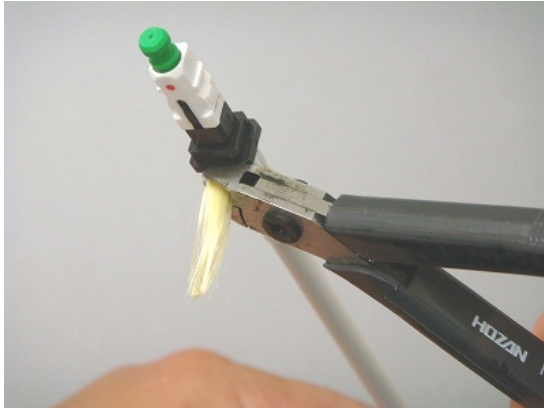


Rotate the connector by 90 degrees, and crimp again.



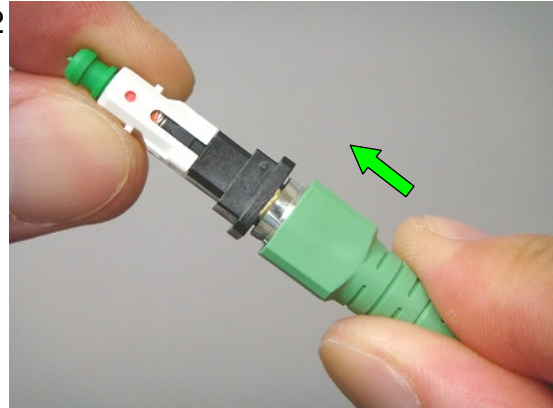
Rotate the connector by 90 degrees, and crimp again (total 3 times).

61



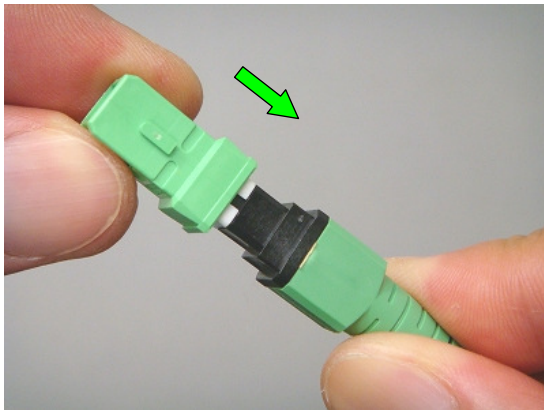
Cut off the excess Kevlar using snips.

62



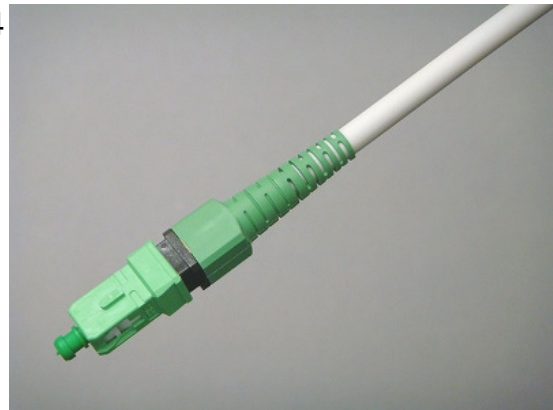
Slide the boot over the crimp ring.
Align the position of boot with rear housing.

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Align the notch of the outer housing with the notch of inner housing. Slide the outer housing until it stops.

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COMPLETE!