

Field Installable Connector and Field Polishing Tool
User Manual
Version 1.0

Introduction

The Field Polishing Tool is a manual polisher for the Field Installable Connector, where the bare fiber is clamped and protruded from the Connector.








Field Polishing Tool

Specifications

- Field Polishing Tool:
 - Size: 75mm x 60mm x 58mm
 - Weight: 0.21kg
 - Operation: Manual drawstring
- Optical Performance:
 - Insertion Loss: $\leq 0.3\text{dB}$ (SM), $\leq 0.2\text{dB}$ (MM)
 - Return Loss: $\geq 50\text{dB}$ (PC), $\geq 65\text{dB}$ (for APC), $\geq 25\text{dB}$ (for MM)

Toolkits and Components

			
SC/PC Field Installable Connector		SC/APC Field Installable Connector	
			
Cable Holder	Butting Tool	Loupe	Carrying Case
			
Field Polishing Tool	D film (for APC polish)	CeO film (for 1st PC polish)	ADS film (for finish PC polish)

			
Cable Stripper	Fiber Stripper	Fiber Cleaver	Kevlar Cutter

 **CAUTION**

1. Use only the genuine Field Installable Connector.
2. Use only the genuine polishing films.
3. Do not disassemble or modify.
4. Do not drop.
5. Avoid water, heat, dust, chemicals except for alcohol.

Check before Using

1. Outlook

Check the outlook without defect, crack, and dirt.

2. Operation

- 1) Open the head cover at the open position, check smooth action.
- 2) Check the outlook of the polishing plate and pad without defect and dirt.
- 3) Pull the ring of the drawstring about 60cm slowly until the red mark appears on the drawstring, check smooth pulling and the normal plate action of the rotation and the revolution.
- 4) Release the ring, check smooth rewind of the drawstring and the normal plate rotation.
- 5) Close the head cover from the open position to the lock position, check smooth action.



 **CAUTION**

Do not pull the ring of the drawstring with closing the head cover, or the polishing pad may be damaged by the inside of the head cover with plate rotation.

Polishing Films

D film: for the APC polishing, life time is 4.

CeO film: for the 1st PC polishing, life time is 4.

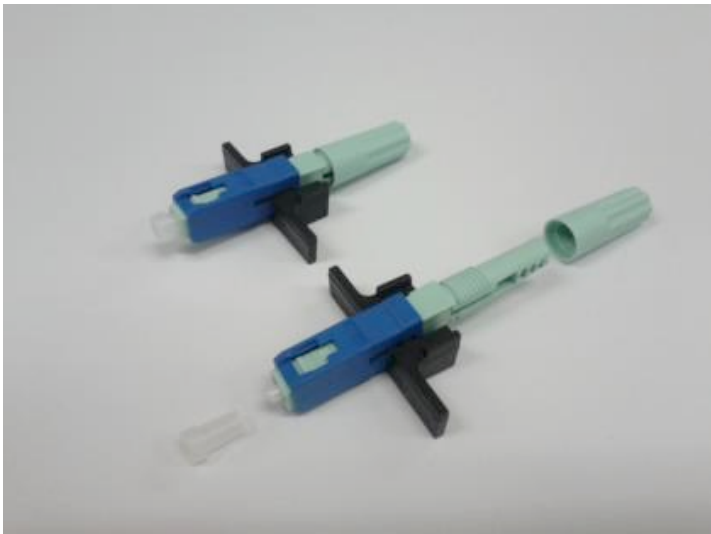
ADS film: for the finish PC polishing, life time is 4.

Assembling Procedure

1. Preparation of Field Installable Connector

Choose the blue one for SC/PC, the green one for SC/APC

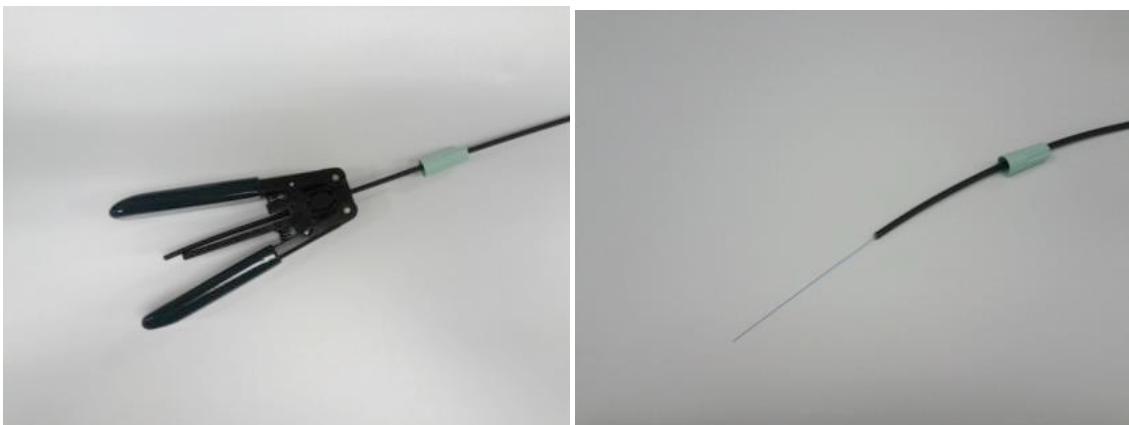
Take off the ferrule cap and the boot cap.



2. Preparation of the cable

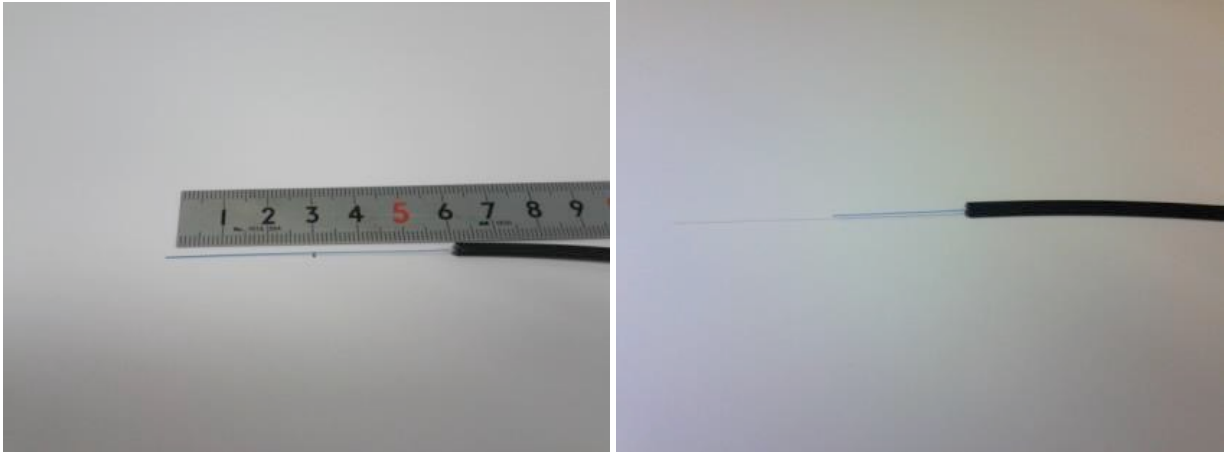
Pass the cable through the boot cap.

Remove the outer jacket and the tension member over 60mm.

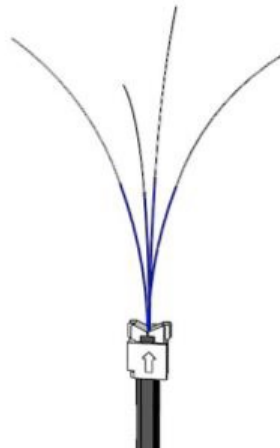


Mark the position of 30+0/-1mm from the outer jacket end.

Remove the fiber jacket from the mark.



Bend the fiber about 90 degrees in four directions and check if the fiber is break. (Screening test)



Set the fiber to the cable holder and but the outer jacket end to the groove end of the cable holder.

Cleave the fiber, with butting the cable holder end to the groove end of the fiber cleaver.

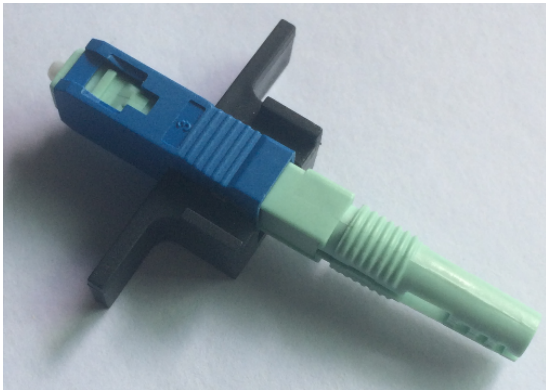
The length of the bare fiber results in from 12.9mm to 13.9mm.

If not, redo from the beginning of the section 2.

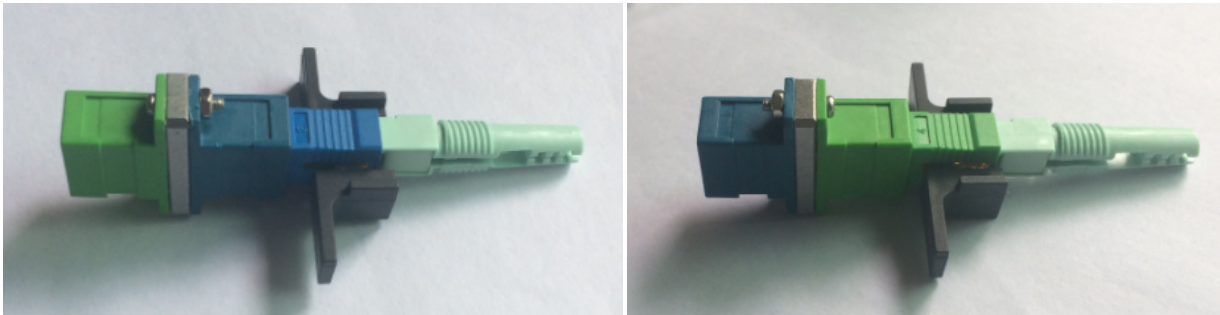


3. Assembling the fiber to the Field Installable Connector

Set the clutch tool at the end of the root side to open the clutch.

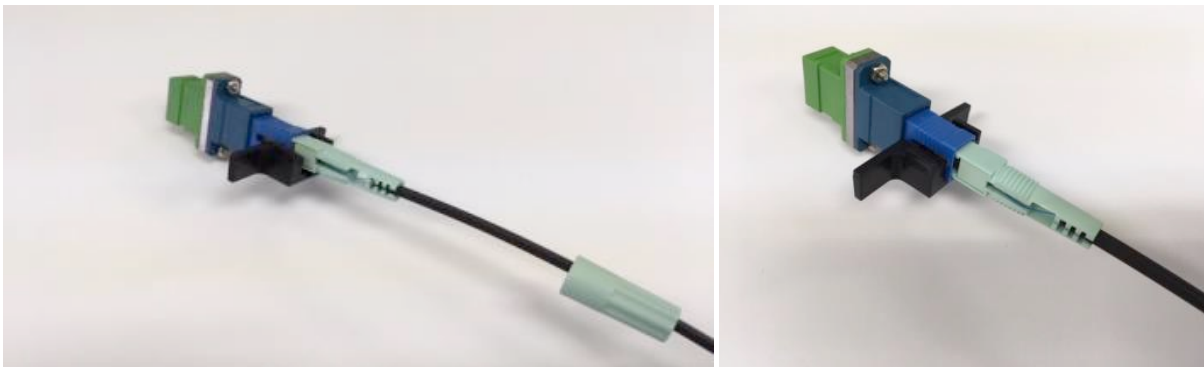


Set the butting tool to the Connector, with the blue side for SC/PC and the green side for SC/APC.



Pass the fiber through the Connector until the outer jacket butts the clamper end.

Set the clutch tool at the end of the top side to clamp the fiber clutch.

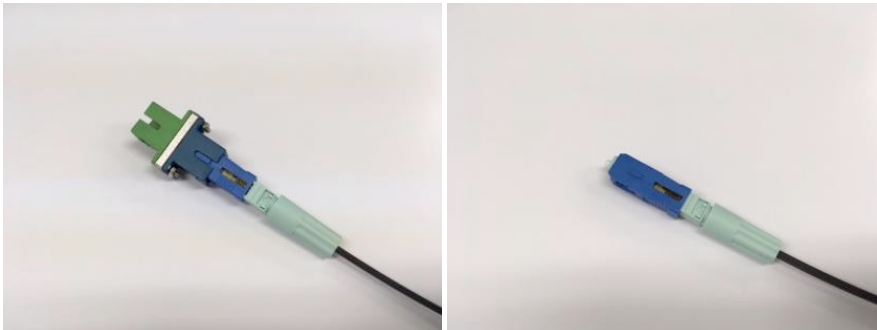


Screw the boot cap to clamp the cable.

Before clamping, check the bending of the fiber and adjust the cable position if the bending is over the parts.

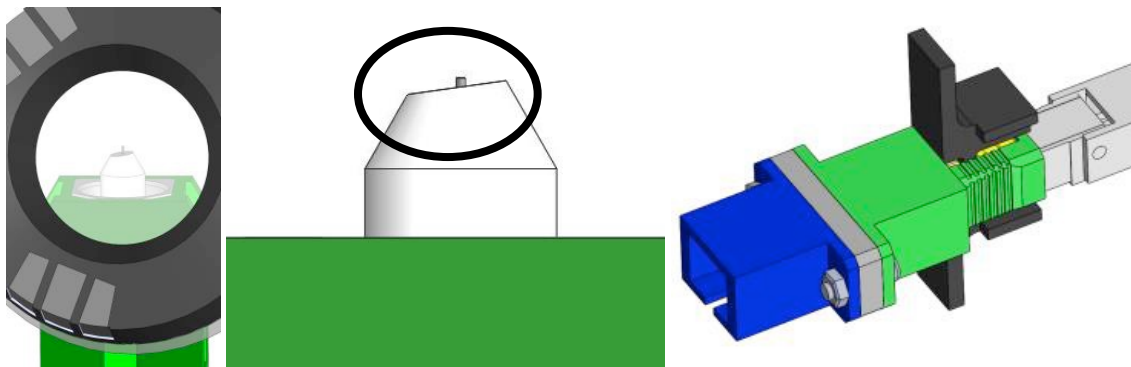


Remove the clutch tool and the butting tool.



Use loupe for checking if the fiber protrudes about 0.08mm from the end of the ferrule.

If not, set the clutch tool again at the end of the top side to the opposite side to release the fiber, and redo from the beginning of the section 3.



Polishing

- 1) Open the head cover of the polisher at the open position.
- 2) Clean the pad by the cleaning paper with the alcohol.
- 3) Set the polishing film on the pad, and push the film to the pad with the cleaning paper to stick each other.

For SC/PC, polishing is twice, the first is CeO film and the second is ADS film.

For SC/APC, polishing is once; the film is D film only.



Setting polishing film



Pushing film to stick



CAUTION

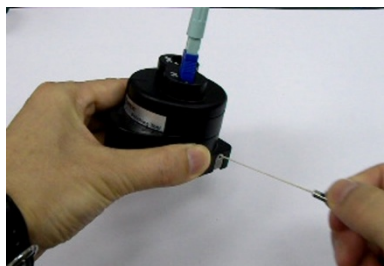
Do not use water. The processes are dry. Do not overwrap the plural films.

- 4) Close the head cover and turn to the lock position.
- 5) Set the Field Installable Connector.
Set the SC/PC Connector to the port PC.
Set the SC/APC Connector to the port APC.



Setting the Connector

- 6) Pull the ring of the drawstring about 60 cm slowly until red mark appears on the string.



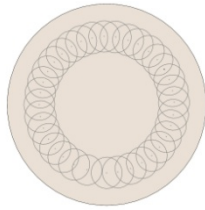
Pulling the Drawstring until Red Mark



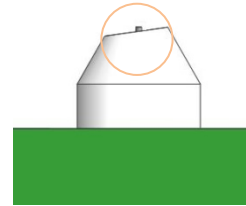
CAUTION

Do not pull the ring without the Connector nor the polishing film, or the pad may be damaged.

- 7) Release the ring and the drawstring is retract automatically.
- 8) Open the head cover with the Connector.
- 9) Clean the end face of the ferrule by the cleaning paper with the alcohol.
- 10) Remove the polishing film or rotate the film under life time of 4.
- 11) Go to step 2) after the 1st PC polishing, or remove the Connector.
- 12) Check the scratch of the polishing trajectory on the film. Normal action shows the same one shown in the figure.
- 13) Use loupe for checking if the fiber protrudes about 0.01mm.
- 14) If either check points are NG, pull out the Connector and reset the fiber and polish again.



Normal trajectory



Normal fiber protrusion