

CORNING

MU Connectors Termination Procedure

Series: 727-NNNN-NNNN

D	Update address and fax number	10/26/2018
C	Initial Release	
Version	Revision History Summary	Issue Date

**SERIES 727-NNNN-NNNNN
MU CONNECTORS
TERMINATION PROCEDURE VERSION C**

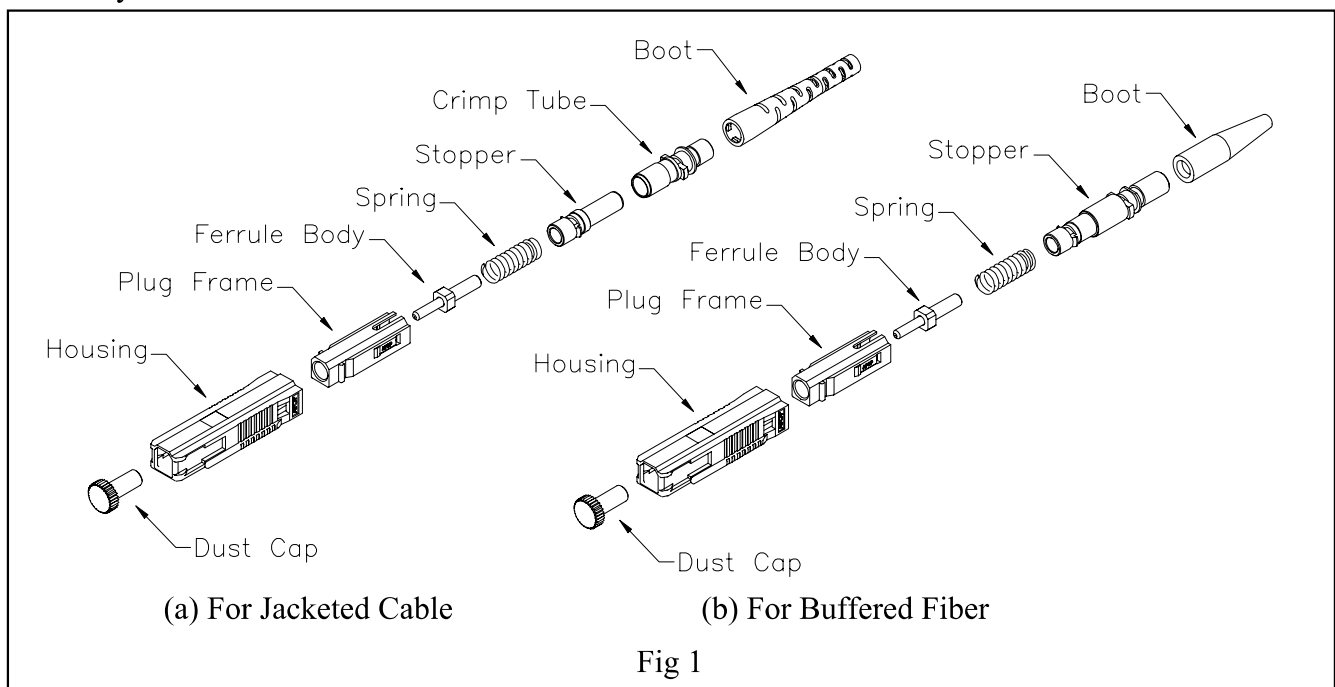


I INTRODUCTION

This termination procedure is prepared for 727 series MU connectors. Please read this procedure thoroughly before starting assembly.

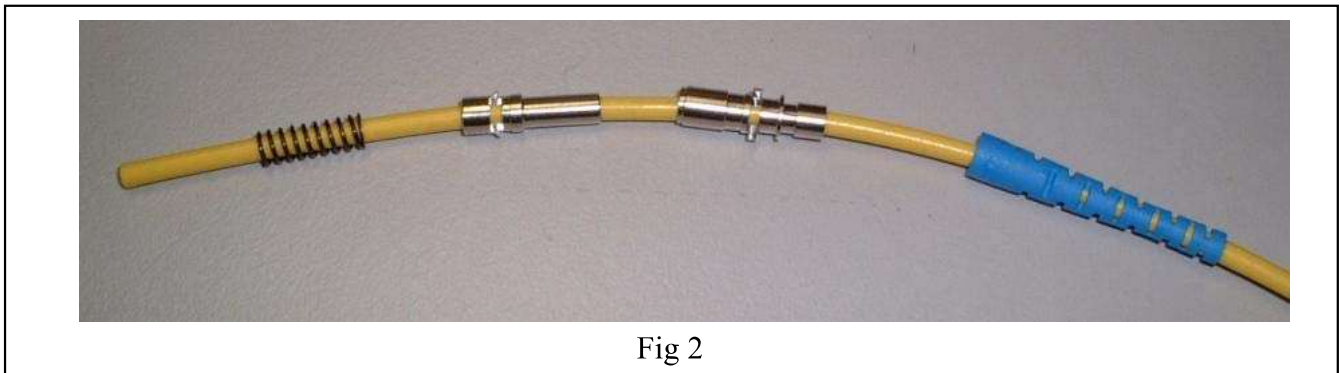
II DESCRIPTION

Fig. 1 shows the structure of Series 727-NNNN-NNNNN MU connector, which consists of Housing, Dust Cap, Plug Frame, Ferrule Body, Spring, Stopper, Crimp Tube and Boot. Connectors for different cables/fibers may vary slightly by boots or crimp tubes. Follow the following steps to make MU Cable Assembly.



Step 1 Slide Boot, Crimp Tube, Stopper and Spring onto the Cable shown in Fig. 2.

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

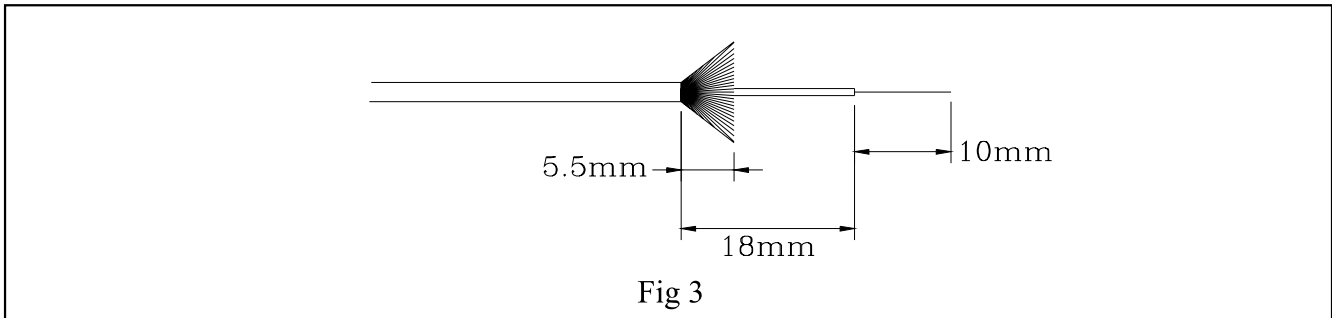


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Step 2 Use Jacket Stripper to cut cable jacket. Kevlar cutter to cut the strength member (Kevlar). See Fig. 3 for the correct dimensions.

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



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 MU Dimension Template.

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 ferrule body by using a needle or syringe.

Step 6 Insert bare fiber carefully into the epoxy-filled ferrule body. Slightly rotating the connector will help the fiber to get through the ferrule. See Fig 4.

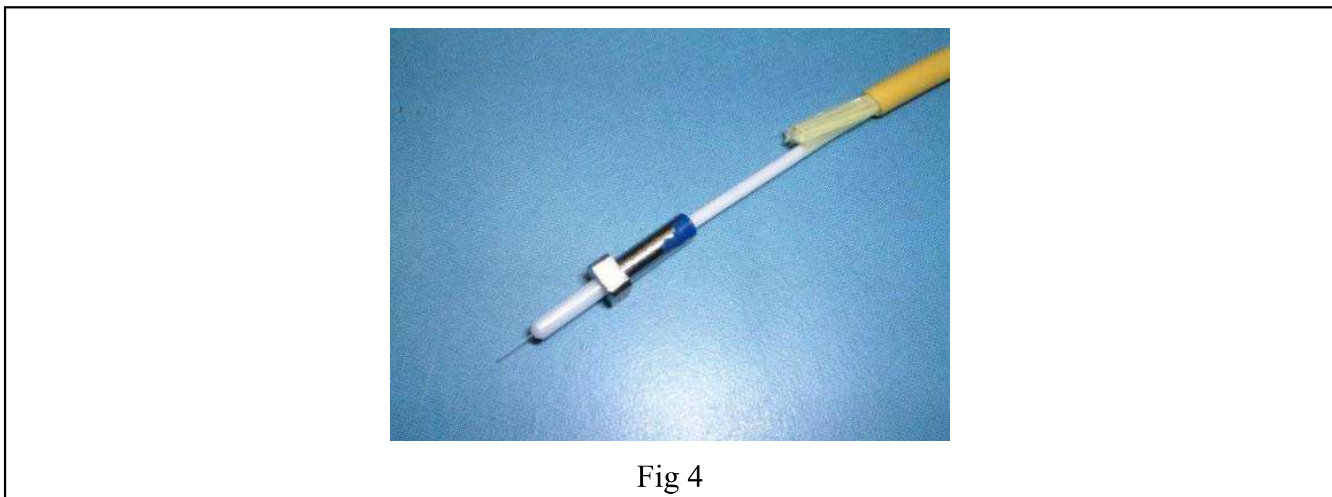


Fig 4

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 Carefully mount the connector onto the curing fixture and place that into curing oven.

Step 9 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 10 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.

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.*

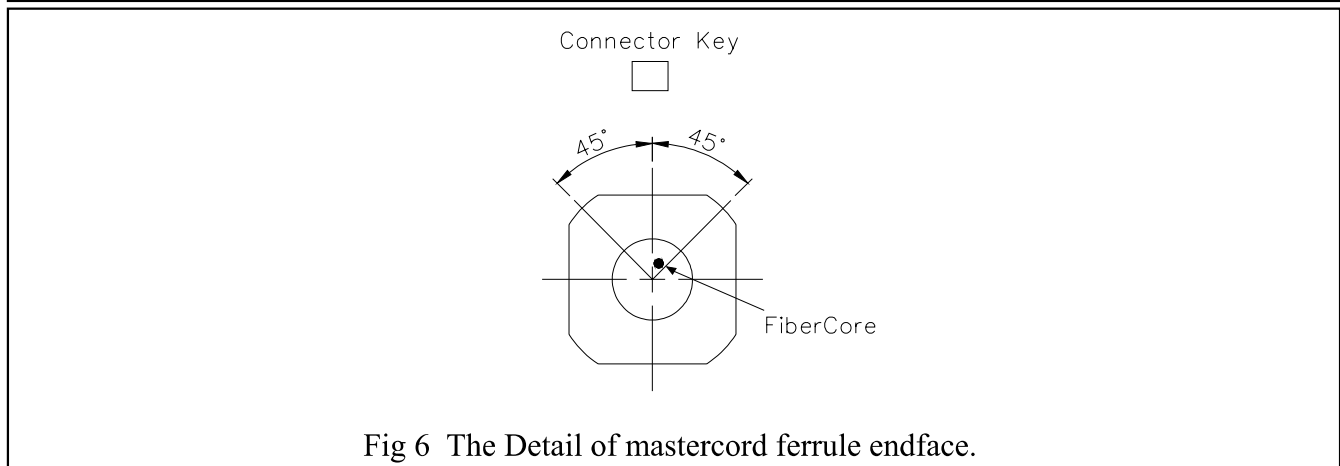
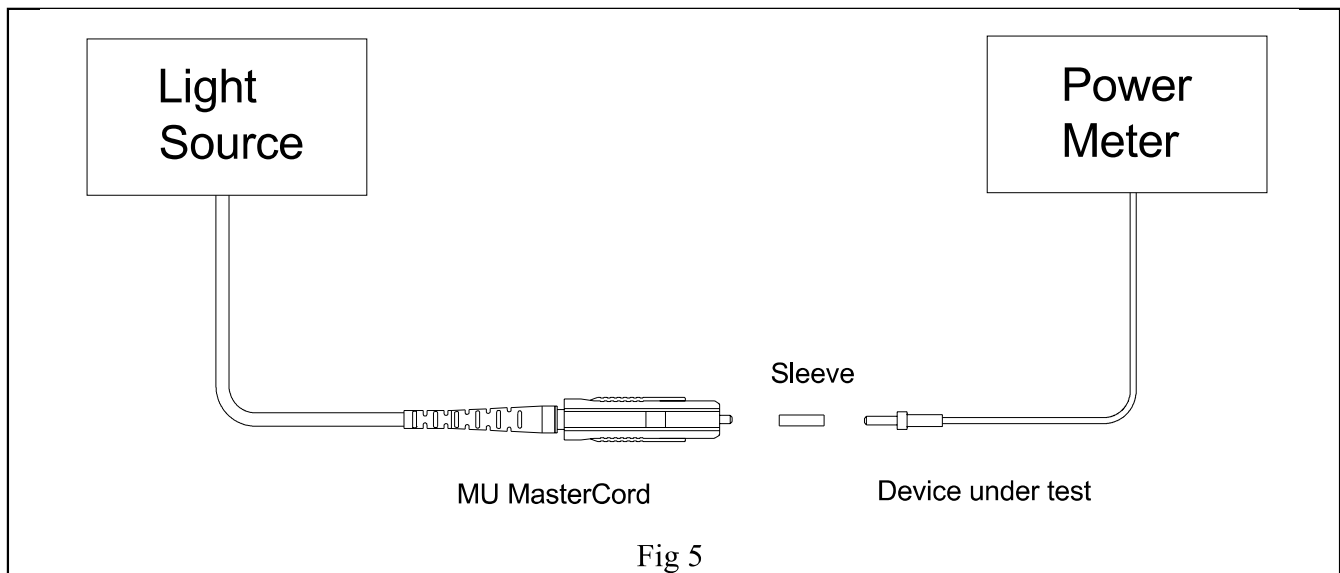
Step 11 Polish the end of connector by applying light pressure on the connector and move the connector polishing jig by an 8-figure motion until the polishing traces caused by protruded fiber disappear.

Step 12 Repeat the previous step with a 9 μm , 3 μm , 1 μm and 0.3 μm polishing paper respectively.

Step 13 Clean ferrule end and use a X200 microscope to inspect the end surface of the ferrule.

Step 14 Setup the light source, master cord, and power meter as fig. 5 shown.

Note: *The position of the fiber core in MU MasterCord ferrule endface must be in the region of +45~-45 degrees as the fig 6 shown.*



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Step 15 Insert the ferrule body to the split sleeve. Connect the master cord and ferrule body as the fig. 5 shown, and make sure the flat surface of ferrule body is facing the same direction with connector key.

Step 16 Read the power meter value. Pull off the ferrule body from the sleeve, turn the ferrule body 90 degrees as fig 7 shown. Reinsert it onto the sleeve, and read the power meter value.

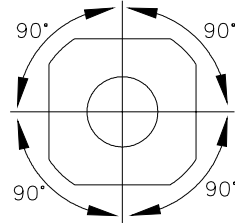


Fig 7

Step 17 Read the power meter value for all four directions of the flat surface of ferrule body. Mark the flat surface of the ferrule body which has the minimum insertion loss. See fig 8.

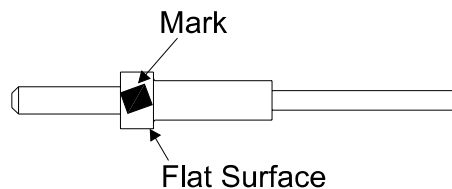


Fig 8

Step 18 Move the Spring and Stopper near to the ferrule body. Use tweezers to draw out Kevlar from the end of the Stopper.

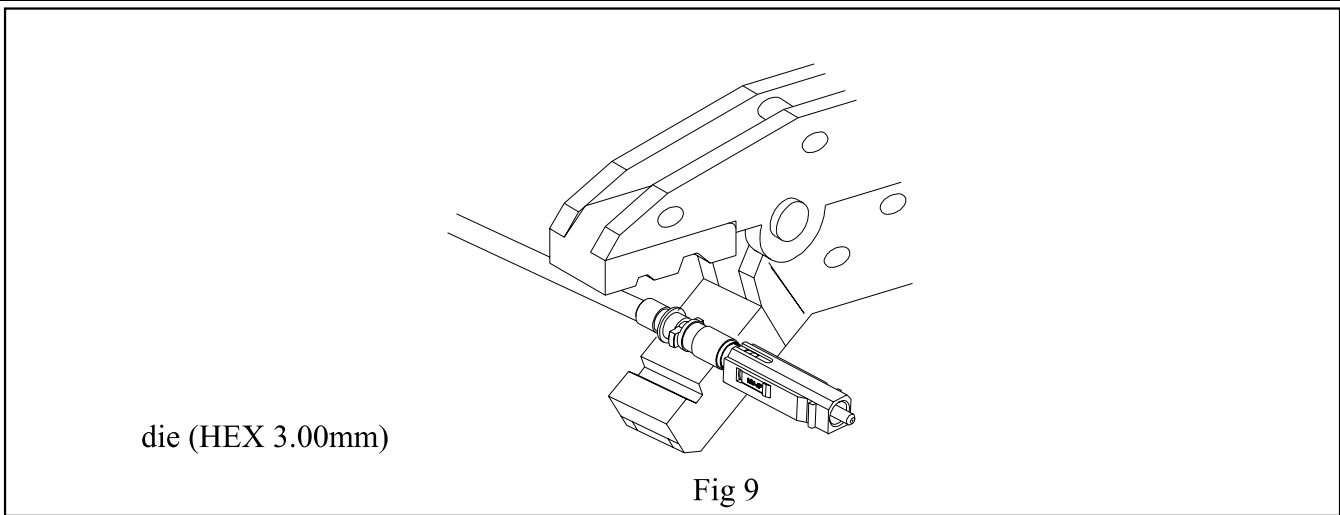
Step 19 Align the mark on the ferrule with the chamfer side of the plug frame and insert the ferrule into the frame.

Step 20 Fit the protrusion of Stopper to the fitting hole of Plug Frame with a rotation to fit the grooves of Stopper into the slot of Plug Frame.

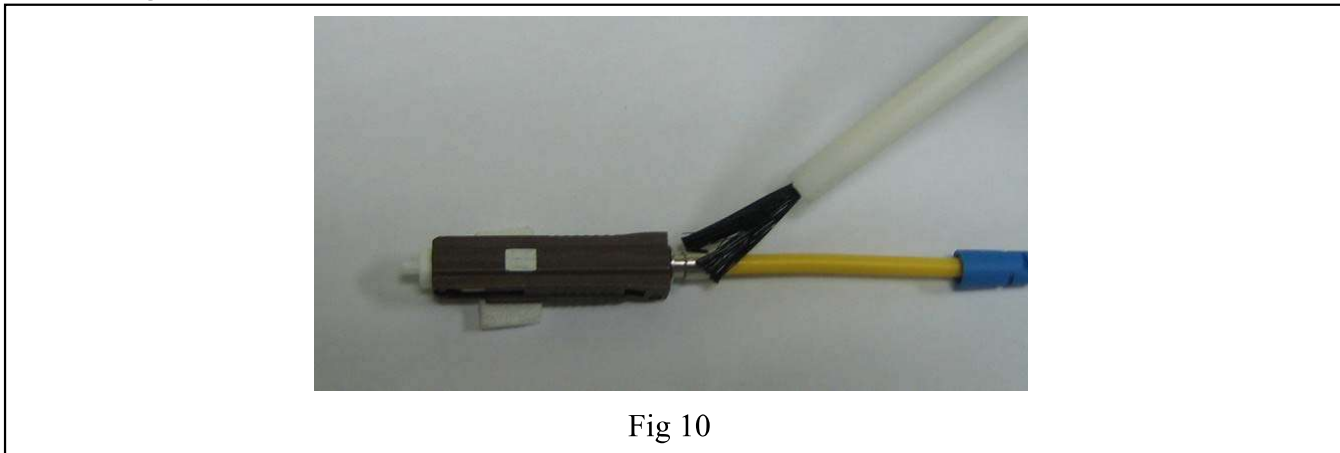
Step 21 Put Kevlar uniformly along the Stopper and push the Crimp Tube to the right position.

Step 22 Crimp the tube by the crimping tool. (See Fig. 9)

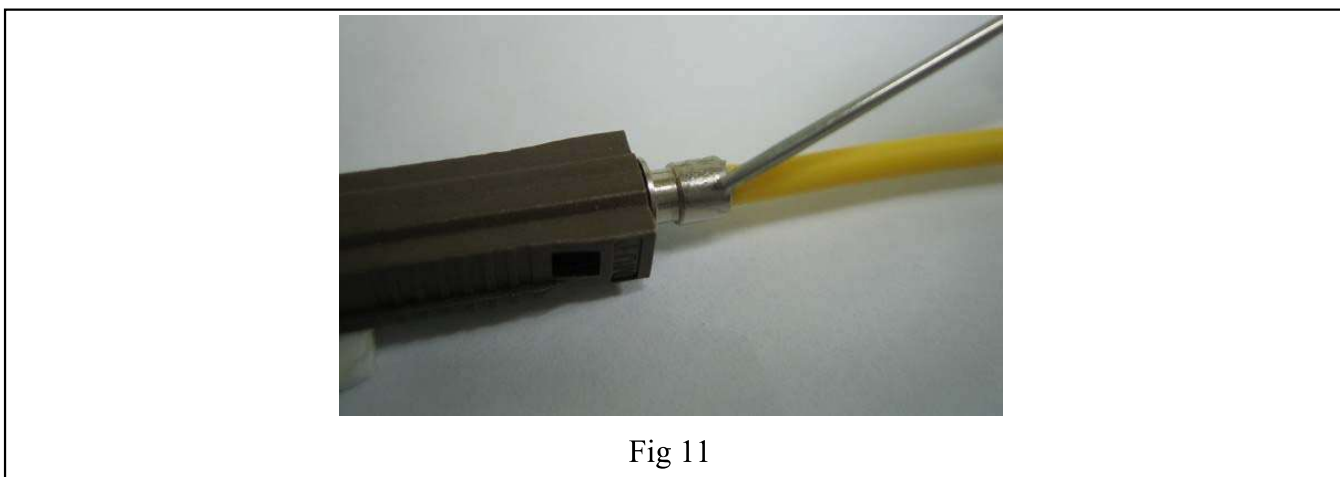
Note: For Buffered Fiber termination, skip this step.



Step 23 Insert the Housing into the subassembly and clean the surface of Stopper by LOCTITE 770. (See Fig. 10)



Step 24 Spread LOCTITE 406 on the Stopper (See Fig. 11) and push the Boot to cover the Stopper.



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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
FIBER SCRIBER
MICROSCOPE X200
CRIMPING TOOL(MU)
POLISHING TOOL(MU)
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