PANDUIT

SC Opti-Crimp Multimode Fiber Optic Connector

Part Numbers: FSCMM**, FSCMM2.0**, FSCMM50**, FSCMM502.0**, FSCDMM, FSCDMM50

INSTALLATION INSTRUCTIONS **FS069**

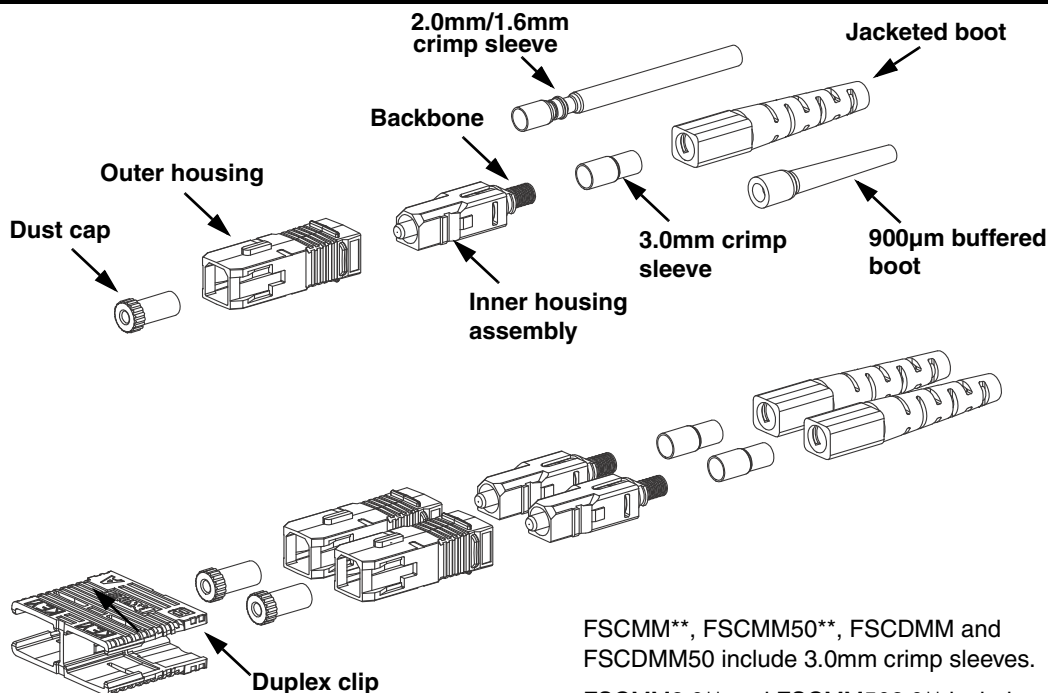## READ ALL INSTRUCTIONS COMPLETELY BEFORE PROCEEDING
COMPONENT IDENTIFICATION

CONNECTOR ASSEMBLY

SIMPLEX →
FSCMM**
FSCMM50**
FSCMM2.0**
FSCMM502.0**

DUPLEX →
FSCDMM
FSCDMM50

FSCMM**, FSCMM50**, FSCDMM and FSCDMM50 include 3.0mm crimp sleeves.

FSCMM2.0** and FSCMM502.0** include 2.0mm/1.6mm crimp sleeves.

ITEMS REQUIRED FOR TERMINATION

| ITEM	PART NUMBER	DESCRIPTION
1	FVFLY	Visual Fault Locator
2	FVFLPCY	VFL Patch Cord
3	CST-115	Fiber Cable Jacket Stripper
4	FALC	Alcohol Bottle (empty)
5	FBFSP	Fiber Buffer Stripper
6	FCRP5	Universal Crimp Tool (hex sizes: .048, .100, .128, .151, .190)
7	FJQCVR	Fiber Cleaver
8	FGLS	Safety Glasses
9	FKS	Strength Member (Aramid Fiber) Cutters
10	FSTY	Safety Stickers for fiber scraps
11	FSWB-C	Cleaning Swabs
12	FWP-C	Cloth Wipes
13	PFX-0	Indelible Ink Marking Pen
14	--	Isopropyl Alcohol (Reagent Grade, 90% minimum concentration; not available from Panduit)
15	FLPT	Crimp Tool (For 2.0mm/1.6mm terminations only)
16	FHSCT	110VAC/60Hz Heat Shrink Curing Tool (For 2.0mm/1.6mm terminations only)
	FHSCT-W	230VAC/50Hz Heat Shrink Curing Tool (For 2.0mm/1.6mm terminations only)
OPTIONAL	FS091*	SC Opti-Crimp Connector Stripping Template
OPTIONAL	FJQCVRB	Replacement Blade for Fiber Cleaver

* Denotes revision letter.

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For Technical Support: www.panduit.com/resources/install_maintain.asp

SAFETY PRECAUTIONS

1. SAFETY GLASSES

<u>WARNING:</u> **IT IS STRONGLY RECOMMENDED THAT SAFETY GLASSES BE WORN WHEN HANDLING BARE OPTICAL FIBER. THE BARE FIBER IS VERY SHARP AND CAN EASILY DAMAGE THE EYE.**
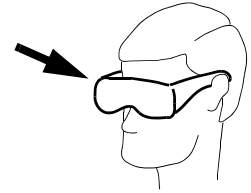
2. ISOPROPYL ALCOHOL

<u>WARNING:</u> **ISOPROPYL ALCOHOL IS FLAMMABLE. CONTACT WITH THE ALCOHOL CAN CAUSE IRRITATION TO THE EYES. IN CASE OF CONTACT WITH THE EYES, FLUSH WITH WATER FOR AT LEAST 15 MINUTES. ALWAYS USE ISOPROPYL ALCOHOL WITH PROPER LEVELS OF VENTILATION. IN CASE OF INGESTION, CONSULT A PHYSICIAN IMMEDIATELY.**
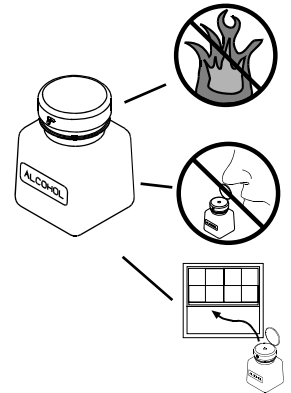
3. DISPOSAL OF BARE FIBERS

<u>WARNING:</u> **PICK UP AND DISCARD ALL PIECES OF BARE FIBER WITH STICKY TABS. DO NOT LET CUT PIECES OF FIBER STICK TO CLOTHING OR DROP IN THE WORK AREA WHERE THEY ARE HARD TO SEE AND CAN CAUSE INJURY.**
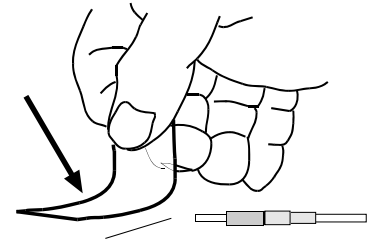
4. LASER LIGHT PROTECTION

<u>WARNINGS:</u>
- **LASER LIGHT CAN BE INVISIBLE. THE INVISIBLE LIGHT IS POWERFUL ENOUGH TO DAMAGE YOUR EYES. THE FVFLY VISUAL FAULT LOCATOR CONTAINS A CLASS II LASER PRODUCT THAT HAS A VISIBLE RED LASER. UNDER NORMAL CORRECT OPERATION, THE FVFLY VISUAL FAULT LOCATOR IS SAFE TO THE HUMAN BODY.**
- **NEVER LOOK INTO THE PATH OF THE FVFLY VISUAL FAULT LOCATOR OR ANY OTHER LASER BEAM.**
- **NEVER LOOK INTO THE END OF A FIBER WHICH MAY HAVE ANY VISUAL FAULT LOCATOR, OR ANY OTHER LASER, COUPLED TO IT.**
- **DIRECT EYE CONTACT WITH LASER BEAM MAY CAUSE SERIOUS EYE INJURY AND SHOULD BE AVOIDED AT ALL COSTS. IF DIRECT EYE EXPOSURE HAS BEEN SUSPECTED, SEEK MEDICAL ATTENTION IMMEDIATELY.**
- **NEVER LAUNCH ANY VISUAL FAULT LOCATOR INTO ACTIVE EQUIPMENT OR MICROSCOPE. MAKE SURE THAT THE END OPPOSITE THE FVFLY VISUAL FAULT LOCATOR IS NOT CONNECTED TO ANY ELECTRONICS OR ACTIVE EQUIPMENT DURING TERMINATION.**

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure. Tampering with the visual fault locator or any labels in any way may also result in injury and voids warranty.

DANGER

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS II LASER
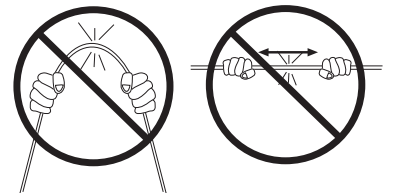
5. CABLE HANDLING

<u>WARNING:</u> **FIBER OPTIC CABLE CAN BE DAMAGED BY EXCESSIVE PULLING, TWISTING, CRUSHING OR BENDING STRESSES. CONSULT THE APPROPRIATE SPECIFICATION SHEETS AS PROVIDED BY YOUR CABLE VENDOR. ANY DAMAGE MAY DECREASE OPTICAL PERFORMANCE.**
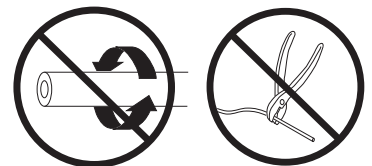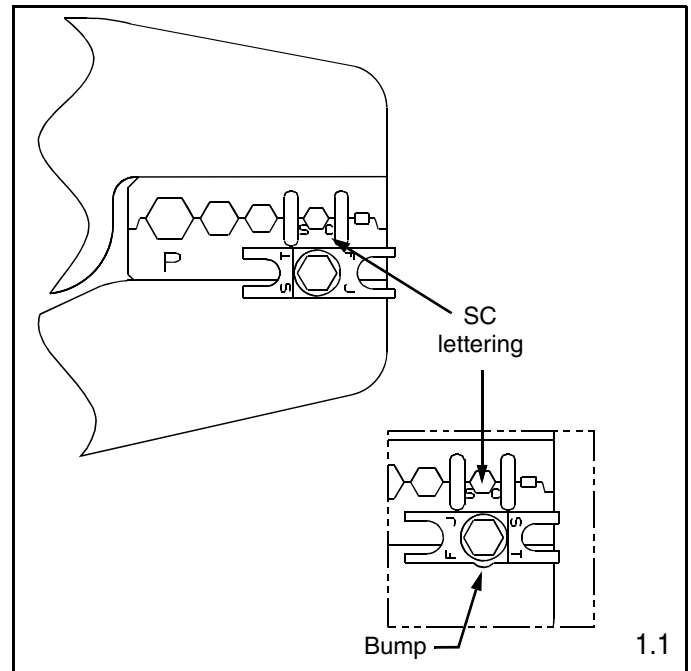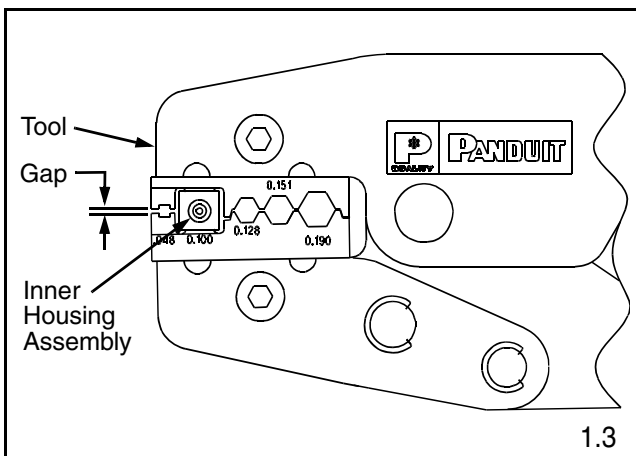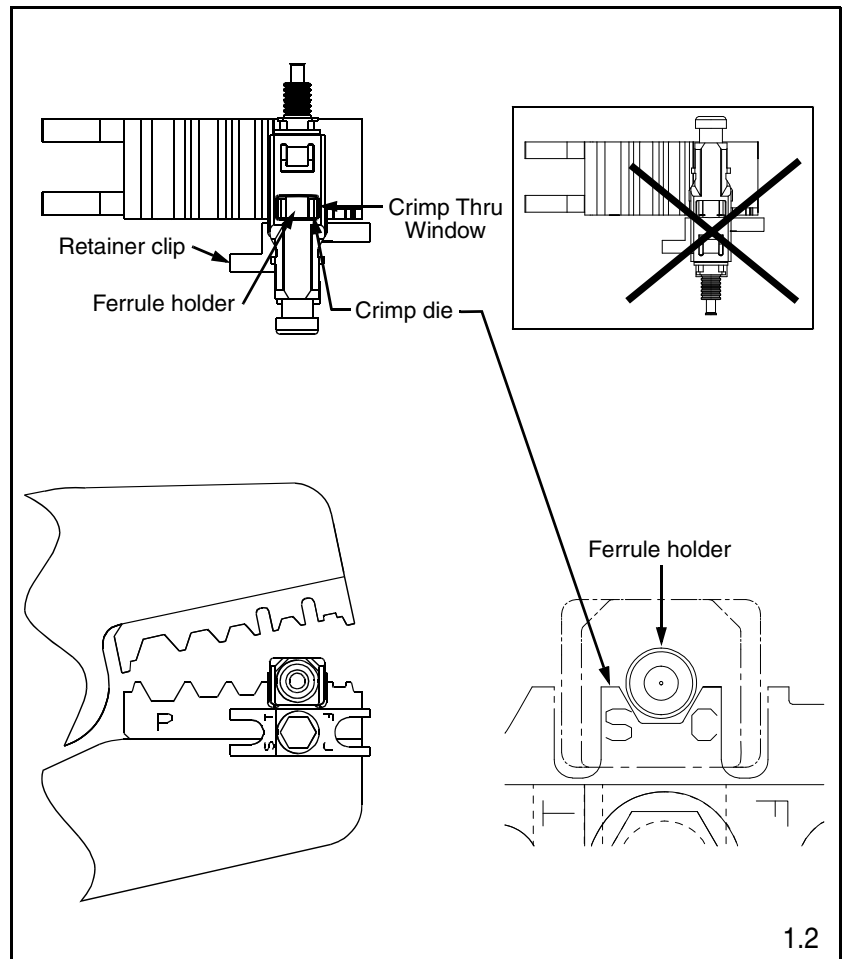
900µm Tight-Buffered Fiber Termination

1.   LOADING INNER HOUSING ASSEMBLY INTO FCRP5 CRIMP TOOL

1.1   **IMPORTANT: TOOL MUST HAVE A "P" ON THE LOWER CRIMP DIE (SEE FIGURE 1.1), IF NOT, PLEASE CONTACT TECHNICAL SUPPORT.** Pull ferrule assembly retainer clip away from tool and rotate the clip until the "SC" lettering on the crimp die is visible. Release clip.
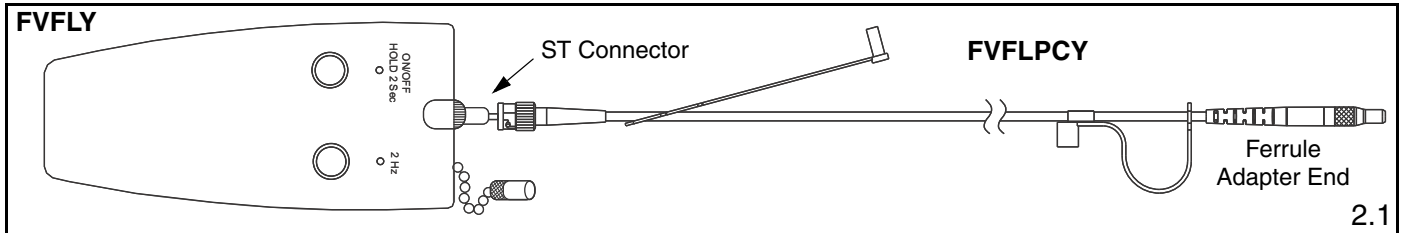
Note: Some clips have a small bump on one side. If there is a bump on the clip, be sure to align the clip so that when the "SC" lettering is visible, the bump is facing away from the crimp dies and the "FJ" lettering is pointing towards the handle of the tool.

1.2   Remove the dust cap from the metal end (rear) of the inner housing assembly. Place the inner housing assembly onto the .100" hex crimp pocket (die size numbers are on crimp die on the opposite side) of the FCRP5 crimp tool. Locate the inner housing assembly so that the crimp die pocket passes through the crimp thru window and onto the ferrule assembly. When loaded, the "SC" lettering on the crimp die should straddle the ferrule holder.

1.3   Partially close the tool to contain the inner housing assembly. **DO NOT CRIMP THE FERRULE HOLDER.**

2. CONNECTING FVFLY TO INNER HOUSING ASSEMBLY

2.1

2.1   Verify that Visual Fault Locator (FVFLY) is "OFF" (green LED is off). Remove the metal dust cap from the FVFLY. Remove the dust cap from ST Connector on the Visual Fault Locator Patch Cord (FVFLPCY) and insert the ST Connector into the output end of FVFLY until the ferrules touch. Remove the dust cap from the Ferrule Adapter end of the FVFLPCY.

Note: NEVER rotate the FVFLPCY when mated to the FVFLY or another connector. This will cause damage to the FVFLPCY, the FVFLY and the connector.

Ferrule Adapter End of FVFLPCY

2.2

2.2   Remove the dust cap from the connector ferrule in the FCRP5 Crimp Tool. Mate the Ferrule Adapter end of the FVFLPCY to the connector ferrule.

Note: The connector ferrule assembly and the ferrule contained in the Ferrule Adapter should touch.

2.3   Turn the FVFLY "on" by pressing & holding the ON/OFF button for 2-3 seconds. Note that when the FVFLY is switched "on", the connector ferrule glows red. Place the tool, FVFLY and FVFLPCY down gently on a clean surface. Be careful not to damage the ferrule assembly.
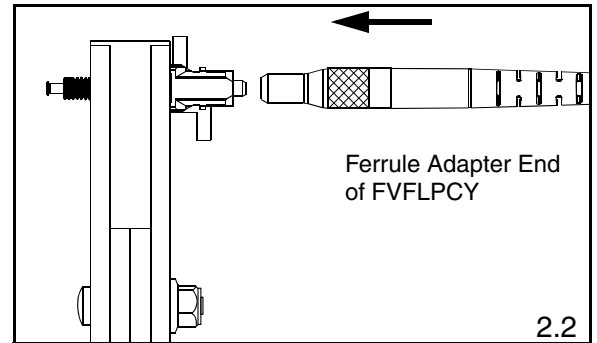
3. STRIPPING 900µm TIGHT-BUFFERED FIBER

3.1   Insert the fiber end through the small end of the boot. Slide the boot back out of the way.

3.2   Following the stripping dimensions, use the marking pen to place a mark 1.18" (30mm) from the end and place an insertion mark 0.53" (13.5mm) back from the first mark.

3.1

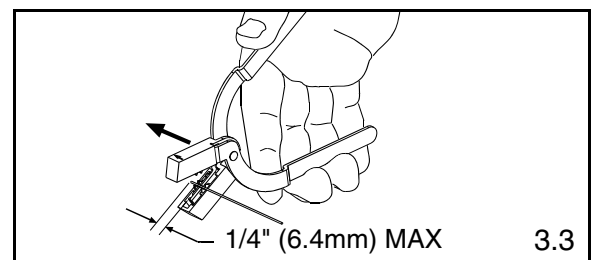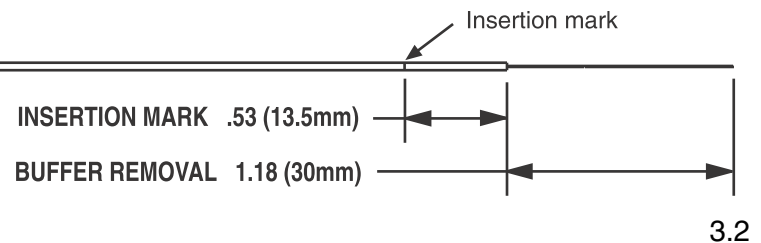3.3   Use the buffer stripper provided to strip the buffer to the buffer removal mark.
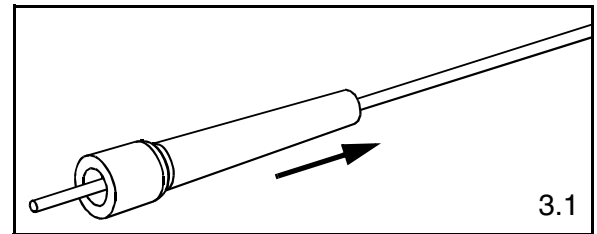
BUFFER STRIPPING GUIDELINES:

- Panduit recommends that you remove no more than 1/4" (6.4mm) of buffer at a time to avoid breaking the fiber. Refer to cable manufacturer's buffer stripping guidelines for specific recommendations.

- Hold the buffer stripper such that the arrow on the tool points in the direction of buffer removal.

- Noting the location of the tool's blades, position the fiber in the tool's V-notches. Squeeze the handles firmly, and pull tool in the direction of the arrow on the tool.

- Clean the buffer stripper blades after each strip by holding the handles open, pulling the casings back away from the blades, and letting them snap back against the blades.

900µm TIGHT-BUFFERED STRIPPING DIMENSIONS

IMPORTANT! **Due to printing variations, use a rigid scale for stripping dimensions, or the appropriate Panduit laminated template.**

Insertion mark

INSERTION MARK   .53 (13.5mm)

BUFFER REMOVAL   1.18 (30mm)

3.2

1/4" (6.4mm) MAX   3.3

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4. CLEAVING 900µm TIGHT-BUFFERED FIBER

4.1 **IMPORTANT: INSPECT CLEAVER TO ENSURE THAT IT IS CLEAN AND IN GOOD WORKING CONDITION. CLEAN OR REPLACE IF NECESSARY.** Clean bare fiber using an isopropyl alcohol (90% minimum concentration) soaked lint-free wipe. The fiber should be free of all coating and residue. To prevent contamination, do not set fiber down or allow it to touch anything after cleaning.

4.2 Hold the cleaving tool in your hand and depress the Fiber Clamp lever to raise the fiber clamp. Insert the end of the fiber into the V-groove and under the fiber clamp. Release the fiber clamp lever when the end of the buffer is located at the 10mm mark (±0.5mm).

4.3 **This is a critical step for obtaining a successful termination.** Gently hold the buffered fiber against the groove in the base plate, using the thumb and forefinger of your free hand. With your other thumb, **gently** push down on the housing until the ceramic blade contacts the fiber and the end of the housing contacts the rubber coating on the base plate. **Do not cut the fiber with the ceramic blade. Release the housing so that the blade is no longer contacting the fiber.**

4.4 Holding the tool in one hand, and holding the fiber against the base plate, bend down the base plate until the fiber breaks. To prevent contamination, do not set fiber down or allow it to touch anything after cleaning.

IMPORTANT: DO NOT CLEAN FIBER AFTER CLEAVING. REPLACE THE CERAMIC BLADE IN THE CLEAVING TOOL AFTER EVERY 1000 CLEAVES, OR IF INSTALLATION YIELD DECREASES. REPLACEMENT BLADE (FJQCVRB) IS AVAILABLE.

4.1

Housing · Fiber Clamp · Fiber Clamp Lever · Baseplate

4.2

AFTER CLEAVING .39 (10mm)

10mm

4.4

4.3
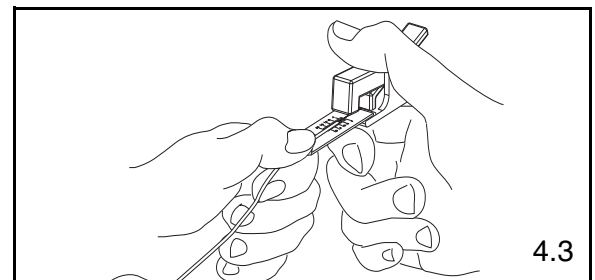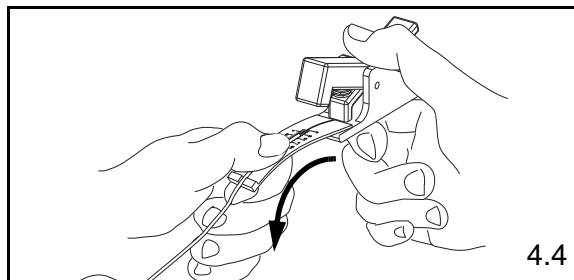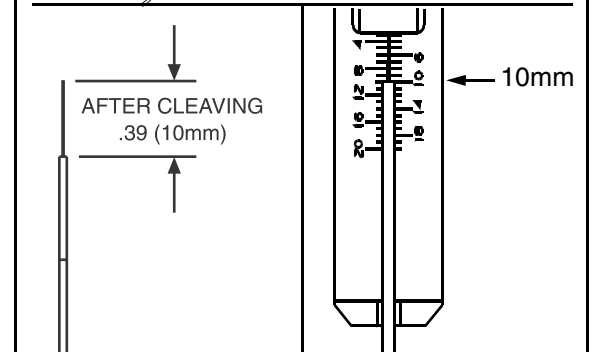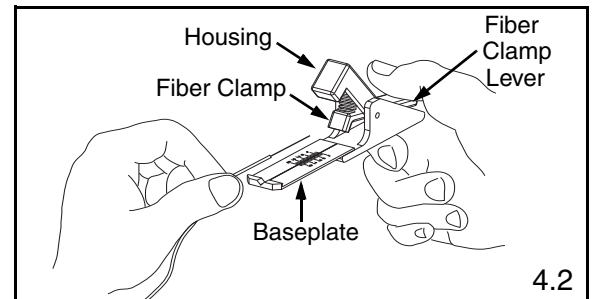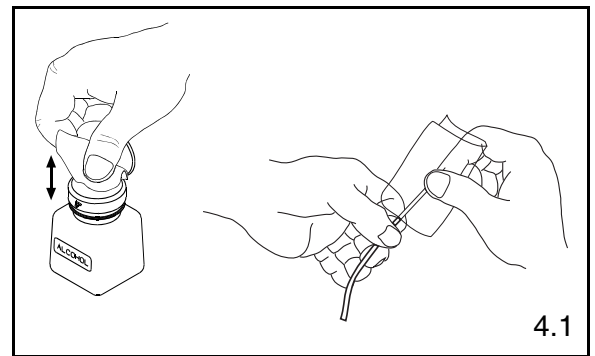
5. CRIMPING 900µm TIGHT-BUFFERED FIBER

The FVFLY verifies optical continuity only. Optical performance can only be verified by performing a link loss test or connector loss test using an optical test set or an OTDR.

5.1 Pick up the crimp tool containing the ferrule assembly. Carefully insert the fiber into the inner housing assembly using constant light pressure, as your middle finger stabilizes your hand against the tool. **Excessive force during insertion may break fiber.** The fiber should be guided in straight, not at an angle. Once the buffer has entered the inner housing assembly, grip the buffer 1" behind the insertion mark. Hold the crimp tool near the end of the handles for better mechanical advantage during crimping.

Red Glow · Insertion Mark · Ferrule Adapter End of FVLPCY

5.1
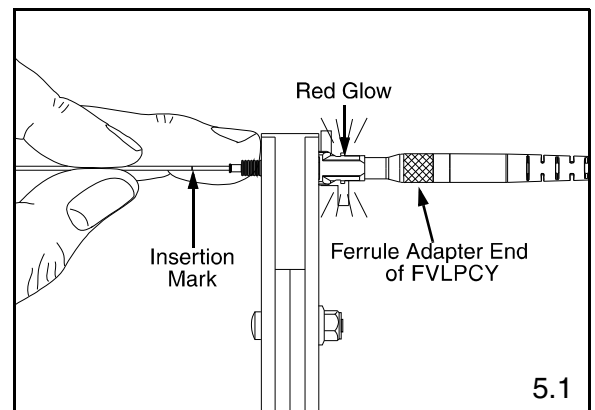
5.2 **This is a critical step for obtaining a successful termination.** Add forward light pressure. (A slight bow in the fiber behind the inner housing assembly will maintain pressure between the fiber end face and the pre-polished fiber. An excessive kink in the buffer behind the inner housing assembly may prevent the fiber end face from contacting the pre-polished fiber.) **Notice that the red glow of the ferrule has diminished so that it is barely noticeable or disappears.** This identifies that the cleaved end of the field fiber is in face-to-face contact with the pre-polished fiber end inside the ferrule assembly. The insertion mark is used as an additional visual aid to verify proper insertion depth. When the red glow diminishes, the insertion mark should be even with the back edge of the inner housing assembly.

    Note: If the red glow has not diminished or diminishes only slightly (and the insertion mark is not even with the back edge of the inner housing assembly), then face-to-face contact has not yet occurred. Withdraw the field fiber slightly and rotate it while re-inserting. Do not rotate the fiber after it has bottomed out against the pre-polished fiber stub. If, after re-inserting, there is still a substantial glow at the ferrule then the fiber cleave may not be optimal. Return to section 3 on Page 4.

5.3 While maintaining light pressure and verifying that the red glow is barely noticeable, crimp the inner housing assembly **one time**. Squeeze handles together until the controlled cycle mechanism releases and handles open. At this point, the red glow should still be diminished.

5.4 Being careful not to pull on the fiber, remove the inner housing assembly by holding the assembly, not the fiber, from the .100" hex crimp pocket. Place buffer crimp area of the inner housing assembly (smallest diameter, see illustration on page 1) in the .048" crimp pocket.

5.5 Crimp the buffer crimp area **one time**. Squeeze handles together until the controlled cycle mechanism releases and the handles open.

    Note: Do not crimp on flared area of inner housing assembly.

5.6 Switch the FVFLY to the "OFF" position and remove the Ferrule Adapter end of the FVFLPCY patch cord from the connector. Set the Panduit Crimp Tool, FVFLY, and patch cord down carefully on a clean surface.
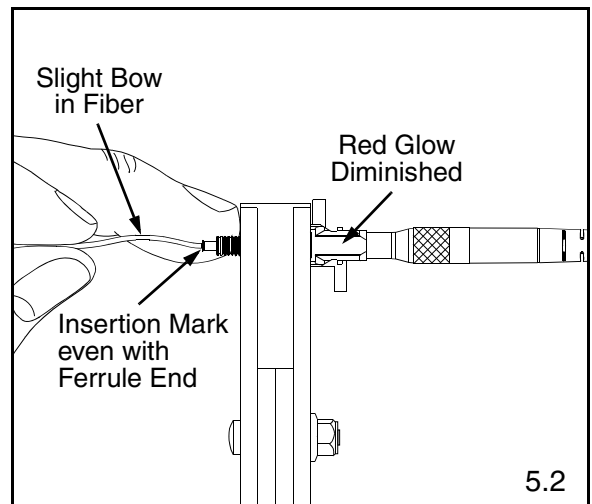
5.7 Remove fiber from cleaving tool. Depress the fiber clamp lever to release the fiber so that the fiber scrap can be removed and properly disposed.

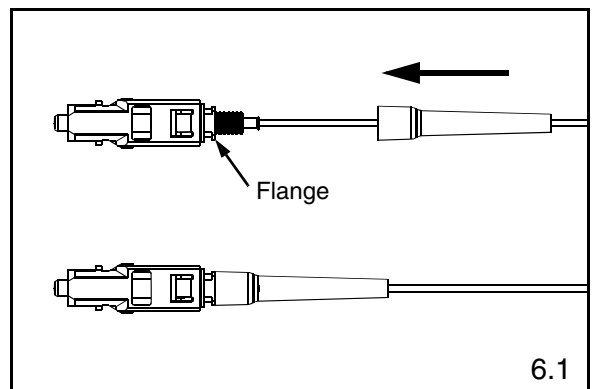# 6.   ASSEMBLING CONNECTOR AND BOOT

6.1 Push the boot forward onto the grooved area of the backbone until it is against the flange.

6.2 Align the chamfers on the front of the inner housing assembly with the chamfers at the front of the outer housing.
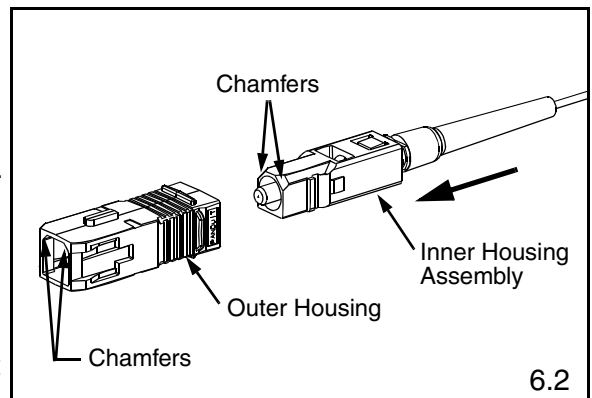
6.3 Push the inner housing assembly into the outer housing assembly until it snaps into place. Once in place the outer housing should be able to move freely back and forth over the inner housing and boot. Clean the ferrule end face with an alcohol soaked wipe, and then a dry wipe. Place dust cap over the ferrule end.
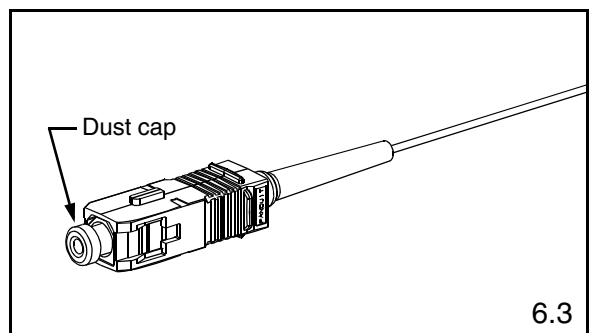

Slight Bow in Fiber

Red Glow Diminished

Insertion Mark even with Ferrule End

5.2

Flange

6.1

Chamfers

Inner Housing Assembly

Outer Housing

Chamfers

6.2

Dust cap

6.3

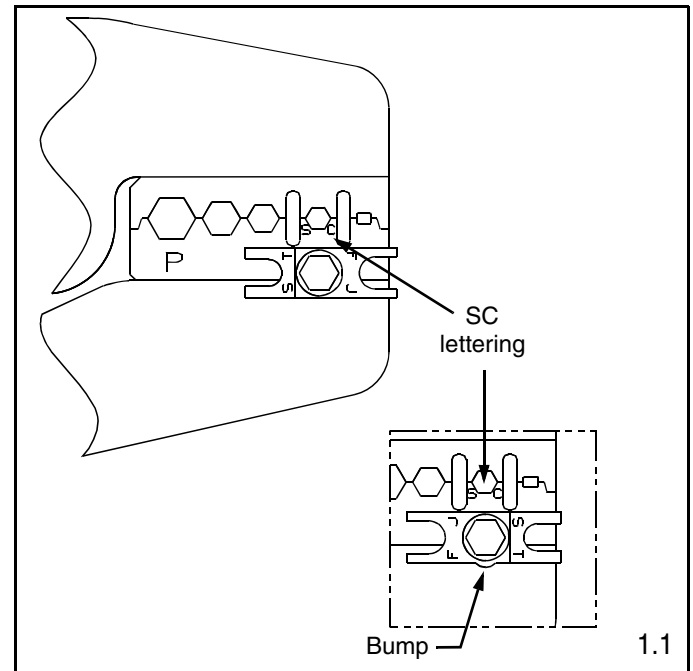*For Technical Support: www.panduit.com/resources/install_maintain.asp*
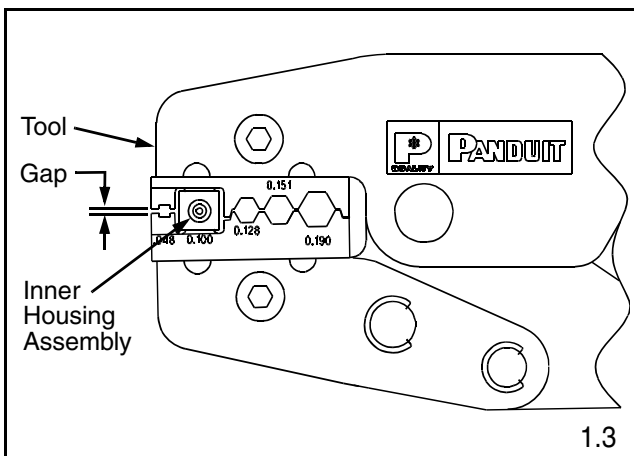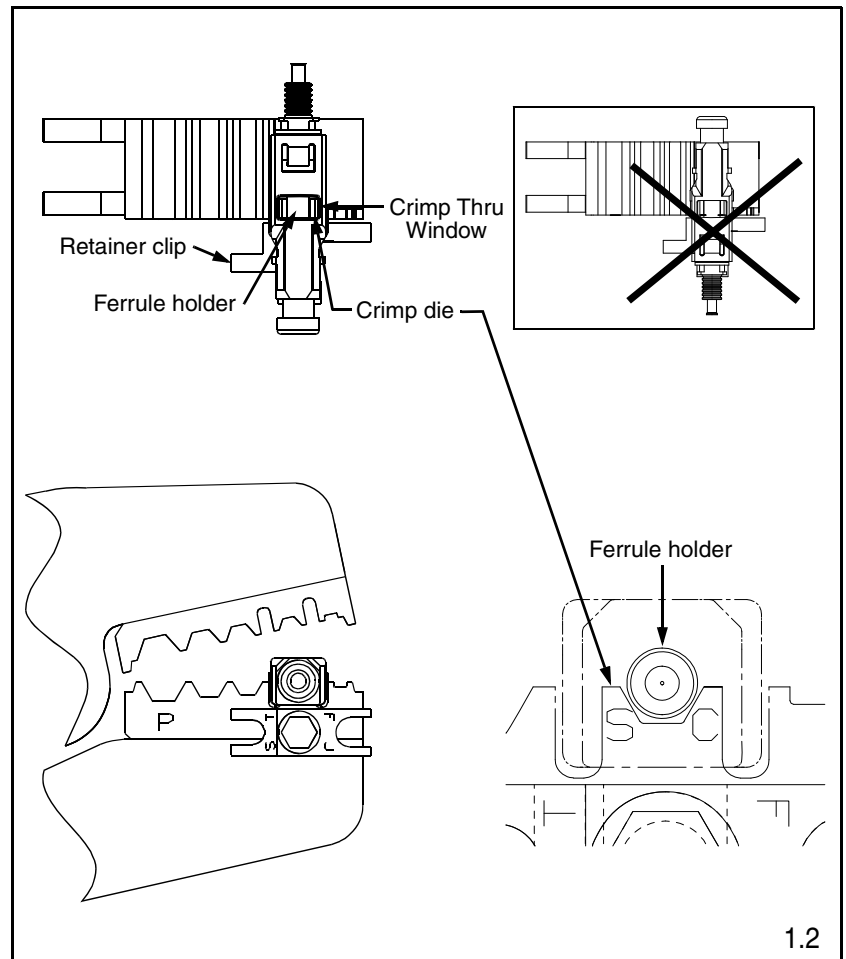
Jacketed Cable Termination

1. LOADING INNER HOUSING ASSEMBLY INTO FCRP5 CRIMP TOOL

1.1 **IMPORTANT: TOOL MUST HAVE A "P" ON THE LOWER CRIMP DIE (SEE FIGURE 1.1), IF NOT, PLEASE CONTACT TECHNICAL SUPPORT.** Pull ferrule assembly retainer clip away from tool and rotate the clip until the "SC" lettering on the crimp die is visible. Release clip.
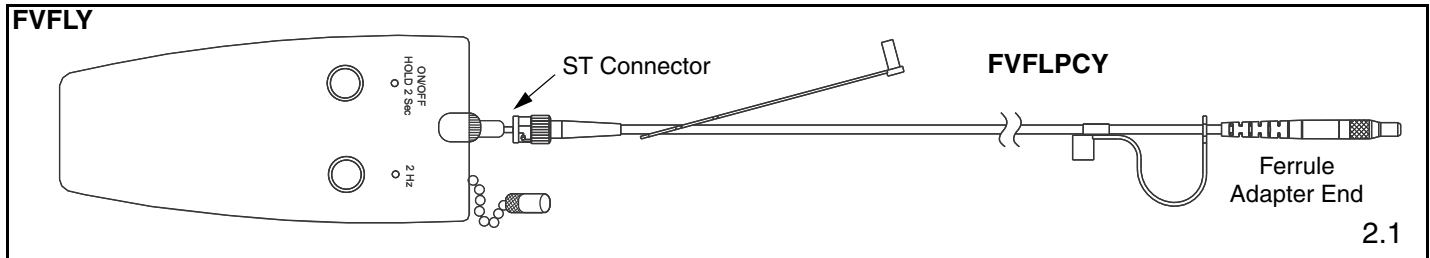
Note: Some clips have a small bump on one side. If there is a bump on the clip, be sure to align the clip so that when the "SC" lettering is visible, the bump is facing away from the crimp dies and the "FJ" lettering is pointing towards the handle of the tool.

1.2 Remove the dust cap from the metal end (rear) of the inner housing assembly. Place the inner housing assembly onto the .100" hex crimp pocket (die size numbers are on crimp die on the opposite side) of the FCRP5 crimp tool. Locate the inner housing assembly so that the crimp die pocket passes through the crimp thru window and onto the ferrule assembly. When loaded, the "SC" lettering on the crimp die should straddle the ferrule holder.

1.3 Partially close the tool to contain the inner housing assembly. **DO NOT CRIMP THE FERRULE HOLDER.**

2. CONNECTING FVFLY TO INNER HOUSING ASSEMBLY

**FVFLY**

ST Connector

FVFLPCY

Ferrule
Adapter End

2.1

2.1 Verify that Visual Fault Locator (FVFLY) is "OFF" (green LED is off). Remove the metal dust cap from the FVFLY. Remove the dust cap from ST Connector on the Visual Fault Locator Patch Cord (FVFLPCY) and insert the ST Connector into the output end of FVFLY. Remove the dust cap from the Ferrule Adapter end of the FVFLPCY.

Ferrule Adapter End
of FVFLPCY

2.2

Note: NEVER rotate the FVFLPCY when mated to the FVFLY or another connector. This will cause damage to the FVFLPCY, the FVFLY and the connector.

2.2 Remove the dust cap from the connector ferrule in the FCRP5 Crimp Tool. Mate the Ferrule Adapter end of the FVFLPCY to the connector ferrule.

Note: The connector ferrule assembly and the ferrule contained in the Ferrule Adapter should touch.

2.3 Turn the FVFLY "on" by pressing & holding the ON/OFF button for 2-3 seconds. Note that when the FVFLY is switched "on", the connector ferrule glows red. Place the tool, FVFLY and FVFLPCY down gently on a clean surface. Be careful not to damage the inner housing assembly.
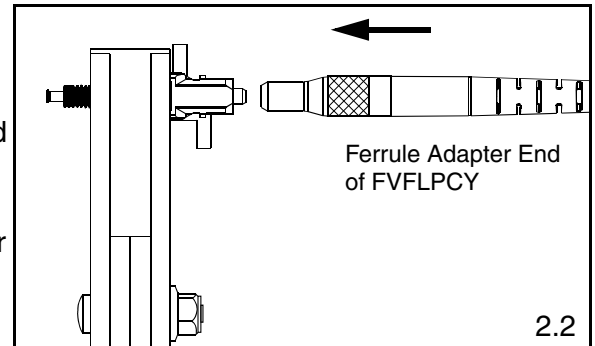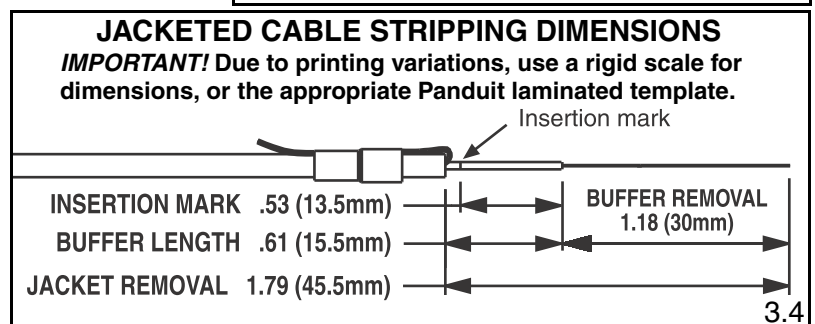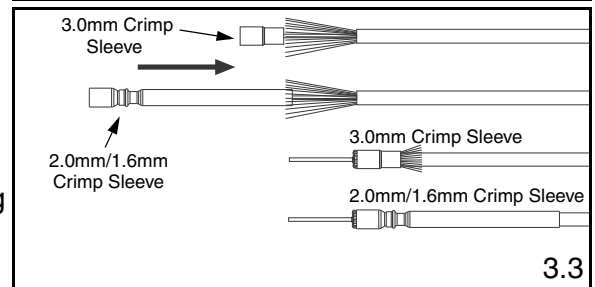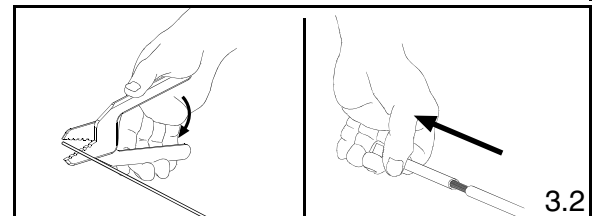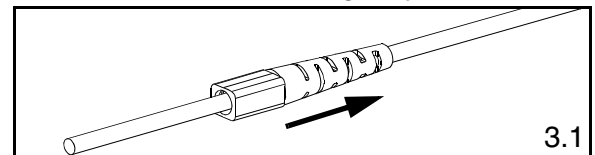
3. STRIPPING JACKETED CABLE

3.1

3.1 Insert fiber end through the small end of the appropriate boot for your specific cable type. Slide the boot back out of the way.

3.2 To reduce wear on the jacket stripper blades, do not slide the blades along the aramid yarn. Instead, use the tool to cut through the jacket, then pull off the jacket by hand. **For 3.0mm jacketed fiber**, use the third hole (marked "1.3mm" or #16AWG) from the tip of the jacket stripper. **For 2.0mm/1.6mm jacketed fiber**, use the first hole (marked ".80mm" or #20AWG) from the tip of the jacket stripper.Using the cable jacket stripper, strip the required length of the jacket off of each fiber according to the stripping dimensions.

3.2

3.0mm Crimp
Sleeve

2.0mm/1.6mm
Crimp Sleeve

3.0mm Crimp Sleeve

2.0mm/1.6mm Crimp Sleeve

3.3

3.3 Insert fiber through the smaller end of the crimp sleeve. Use the crimp sleeve to fold the aramid yarn back over the jacket, holding it out of the way.
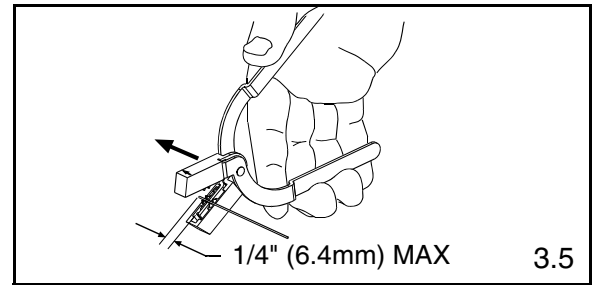
3.4 Following the stripping dimensions, use the marking pen to mark the buffer 0.61" (15.5 mm) from the edge of the jacket. Place an insertion mark 0.53" (13.5 mm) back from the first mark. Mark the buffer length by placing a mark on the buffer at the edge of the jacket.

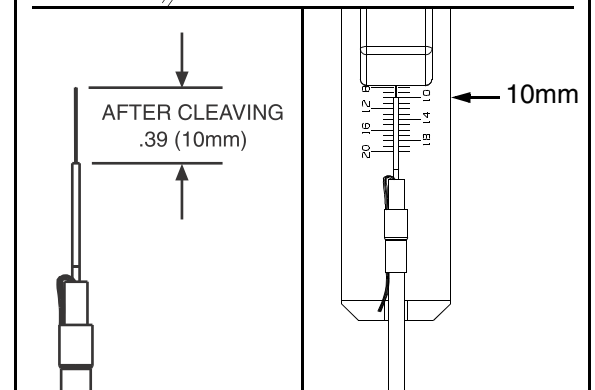3.5 Use the buffer stripper provided to strip the buffer to the buffer length mark (See page 9).

JACKETED CABLE STRIPPING DIMENSIONS
IMPORTANT! **Due to printing variations, use a rigid scale for dimensions, or the appropriate Panduit laminated template.**

Insertion mark

INSERTION MARK	.53 (13.5mm)
BUFFER LENGTH	.61 (15.5mm)
JACKET REMOVAL	1.79 (45.5mm)

BUFFER REMOVAL
1.18 (30mm)

3.4

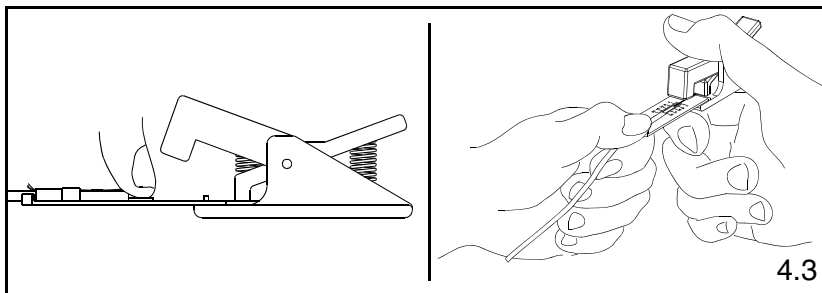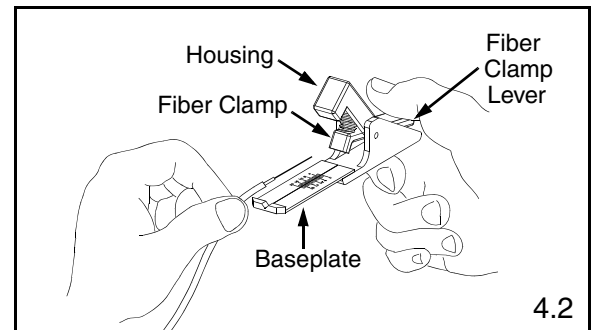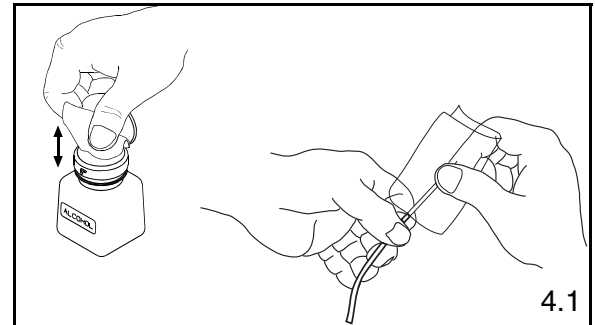*For Technical Support: www.panduit.com/resources/install_maintain.asp*

BUFFER STRIPPING GUIDELINES:

- Panduit recommends that you remove no more than 1/4" (6.4mm) of buffer at a time to avoid breaking the fiber. Refer to cable manufacturer's buffer stripping guidelines for specific recommendations.
- Hold the buffer stripper such that the arrow on the tool points in the direction of buffer removal.
- Noting the location of the tool's blades, position the fiber in the tool's V-notches. Squeeze the handles firmly, and pull tool in the direction of the arrow on the tool.
- Clean the buffer stripper blades after each strip by holding the handles open, pulling the casings back away from the blades, and letting them snap back against the blades.
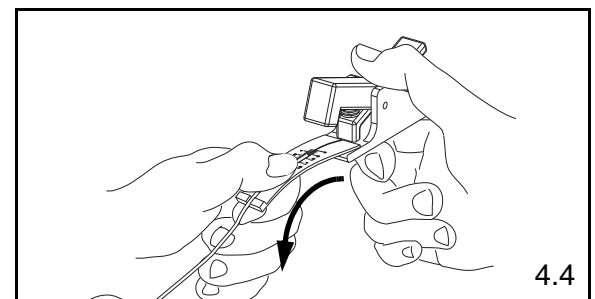

1/4" (6.4mm) MAX   3.5

4. CLEAVING JACKETED CABLE FIBER

4.1 **IMPORTANT: INSPECT CLEAVER TO ENSURE THAT IT IS CLEAN AND IN GOOD WORKING CONDITION. CLEAN OR REPLACE IF NECESSARY.** Clean bare fiber using an isopropyl alcohol (90% minimum concentration) soaked lint-free wipe. The fiber should be free of all coating and residue. To prevent contamination, do not set fiber down or allow it to touch anything after cleaning.

4.2 Hold the cleaving tool in your hand and depress the Fiber Clamp lever to raise the fiber clamp. Insert the end of the fiber into the V-groove and under the fiber clamp. Release the fiber clamp lever when the end of the buffer is located at the 10mm mark (±0.5mm).

4.3 **This is a critical step for obtaining a successful termination.** Gently hold the buffered fiber against the groove in the base plate, using the thumb and forefinger of your free hand. With your other thumb, **gently** push down on the housing until the ceramic blade contacts the fiber and the end of the housing contacts the rubber coating on the base plate. **Do not cut the fiber with the ceramic blade. Release the housing so that the blade is no longer contacting the fiber.**

4.1

Housing   Fiber Clamp Lever   Fiber Clamp   Baseplate

4.2

AFTER CLEAVING .39 (10mm)   10mm

4.3

4.4 Holding the tool in one hand, and holding the fiber against the base plate, bend down the base plate until the fiber breaks. To prevent contamination, do not set fiber down or allow it to touch anything after cleaning.

IMPORTANT: DO NOT CLEAN FIBER AFTER CLEAVING. REPLACE THE CERAMIC BLADE IN THE CLEAVING TOOL AFTER EVERY 1000 CLEAVES, OR IF INSTALLATION YIELD DECREASES. REPLACEMENT BLADE (FJQCVRB) IS AVAILABLE.

4.4

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5. CRIMPING JACKETED CABLE

The FVFLY verifies optical continuity only. Optical performance can only be verified by performing a link loss test or connector loss test using an optical test set or an OTDR.

Eliminating the movement of the buffer inside the jacket is critical to a successful termination. This is achieved by pinching the jacket tightly against the buffer.

IMPORTANT: SOME FIBER OPTIC CABLES HAVE STIFF (HARD) JACKET MATERIAL THAT MAY PREVENT THE JACKET FROM BEING PINCHED WELL ENOUGH TO ELIMINATE BUFFER MOVEMENT RELATIVE TO THE JACKET. THE INABILITY TO STOP THIS MOVEMENT (PISTONING OF THE BUFFERED FIBER) MAY CAUSE YOUR INSTALLATION YIELD TO DECREASE.
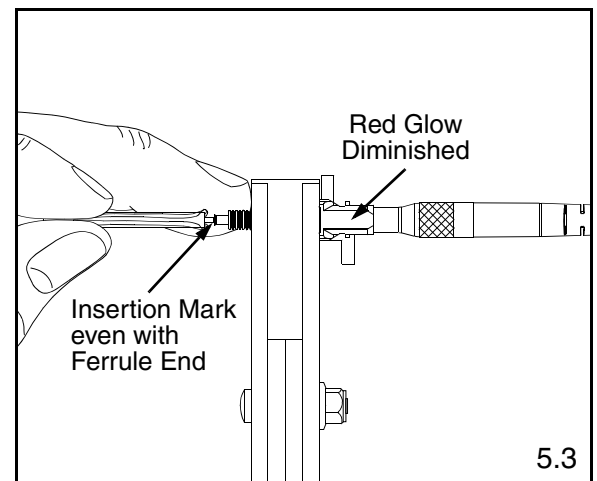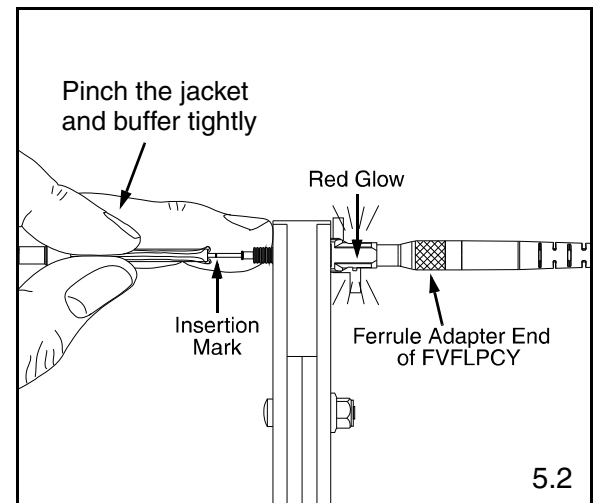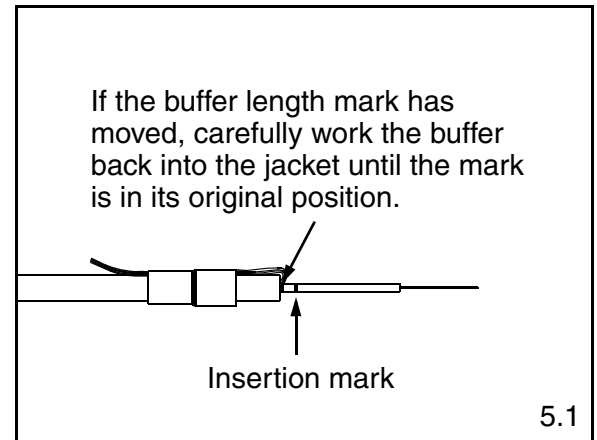
5.1 Check the location of the buffer length mark to make sure it is at the edge of the jacket. If necessary, carefully work the fiber back in until the mark is at the edge of the jacket.

5.2 Pick up the crimp tool containing the inner housing assembly. Carefully insert the fiber into the inner housing assembly using constant light pressure, as your middle finger stabilizes your hand against the tool. **Excessive force during insertion may break fiber.** The fiber should be guided in straight, not at an angle. Once the buffer has entered the inner housing assembly, slide the crimp sleeve back approximately 1-1/4", and **grip the cable by pinching the jacket and buffer tightly 1" behind the insertion mark so that buffer will not slide into jacket**. Hold the crimp tool near the end of the handles for better mechanical advantage during crimping.

5.3 **This is a critical step for obtaining a successful termination.** Add light forward pressure to the fiber. (An excessive kink in the buffer behind the inner housing assembly may prevent the fiber end face from contacting the pre-polished fiber.) **Notice that the red glow of the ferrule has diminished so that it is barely noticeable or disappears.** This identifies that the cleaved end of the field fiber is in face-to-face contact with the pre-polished fiber inside the ferrule assembly. The insertion mark is used as an additional visual aid to verify proper insertion depth. When the red glow diminishes, the insertion mark should be even with the back edge of the inner housing assembly.

Note: If the red glow has not diminished or diminishes only slightly (and the insertion mark is not even with the back edge of the inner housing assembly), then face-to-face contact has not yet occurred. Withdraw the field fiber slightly and then rotate it while re-inserting. **Do not rotate the fiber after it has bottomed out against the pre-polished fiber stub.** If, after re-inserting, there is still a substantial red glow at the ferrule the fiber cleave may not be optimal. Return to section 3 on Page 8.

5.4 While maintaining light pressure and verifying that the red glow is barely noticeable, crimp the inner housing assembly **one**

If the buffer length mark has moved, carefully work the buffer back into the jacket until the mark is in its original position.

Insertion mark

5.1

Pinch the jacket and buffer tightly

Red Glow

Insertion Mark

Ferrule Adapter End of FVFLPCY

5.2

Red Glow Diminished

Insertion Mark even with Ferrule End

5.3

time. Squeeze handles together until the controlled cycle mechanism releases and the handles open. At this point, the red glow should still be diminished.

5.5 Being careful not to pull on the fiber, remove the inner housing assembly by holding the assembly, not the fiber, from the .100" hex crimp pocket. Place buffer crimp area of the inner housing assembly (smallest diameter, see illustration on page 1) in the .048" crimp pocket.

5.6 Crimp the buffer crimp area **one time**. Squeeze handles together until the controlled cycle mechanism releases and the handles open.

Note: Do not crimp on flared area of inner housing assembly.

5.7 Switch the FVFLY to the "OFF" position and remove the Ferrule Adapter end of the FVFLPCY patch cord from the connector. Set the Panduit Crimp Tool, FVFLY, and patch cord down carefully on a clean surface.

5.8 The fiber jacket should nearly touch the rear of the inner housing assembly.

Note: Do not press the cable jacket forward to touch the rear of the ferrule assembly. There should be a gap between the jacket and inner housing assembly.

Slide the crimp sleeve back, freeing the aramid yarn. Trim the aramid yarn even with or slightly behind the flange. Flare the aramid yarn evenly around the perimeter of the grooved area of the backbone. **For 2.0mm/1.6mm jacketed cable**, use tweezers for best results. Slide the crimp sleeve over the ferrule assembly until it stops, trapping the aramid yarn between the crimp sleeve and the ribbed area of the ferrule assembly.

Note: The crimp sleeve will not touch the shoulder.

5.9 **For 3.0mm jacketed cable:** Make sure the crimp sleeve is seated against the first flange of the backbone, crimp the large end of the crimp sleeve using a .151" hex of the FCRP5 Universal Crimp Tool. Using the .128" hex of the crimp tool, crimp the small end of the crimp sleeve over the cable jacket.

5.10 **For 2.0mm/1.6mm jacketed cable:** Align the front edge of the crimp sleeve with the front recessed edge of the die pocket of the FLPT crimp tool.
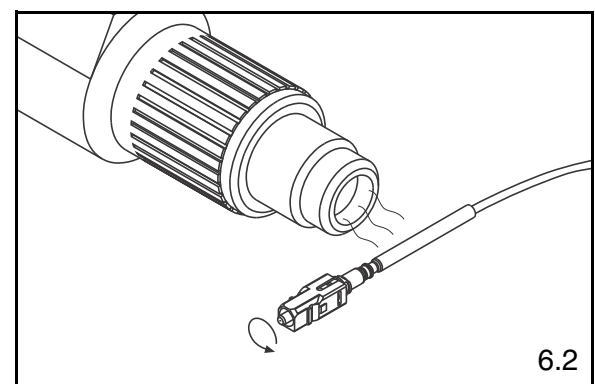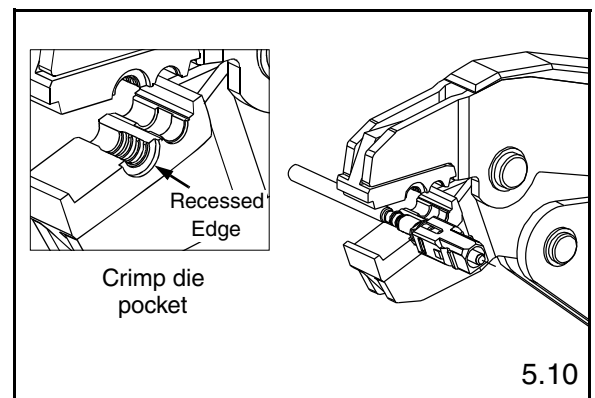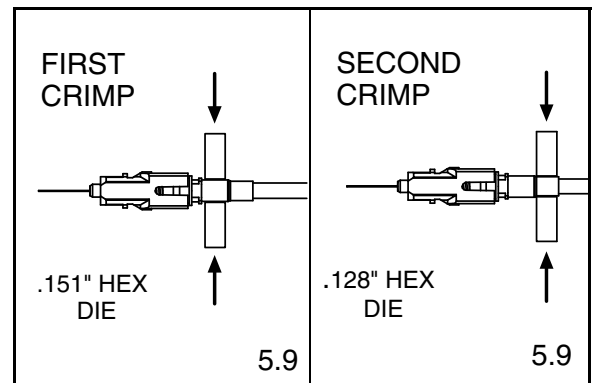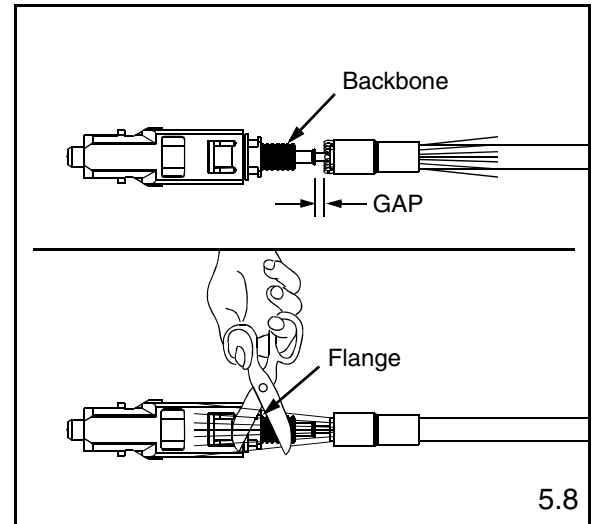
Note: The front recessed edge of the crimp die pocket is the side with the ribs. Make sure the crimp sleeve is seated against the backbone and crimp the crimp sleeve.

5.11 Remove fiber from cleaving tool. Depress the fiber clamp lever to release the fiber so that the fiber scrap can be removed and properly disposed.

6. CURING HEAT SHRINK TUBING
For 2.0mm/1.6mm jacketed cable only.

6.1 Turn the heat adjustment knob of the heat shrink curing tool so the white line is centered in the notch.

6.2 Turn heat shrink curing tool "on". (The temperature of the hot air stream at the nozzle should be 220°F - 240°F)

Backbone

GAP

5.8

Flange

FIRST CRIMP

.151" HEX DIE

5.9

SECOND CRIMP

.128" HEX DIE

5.9

Recessed Edge

Crimp die pocket

5.10

6.2

For Technical Support: www.panduit.com/resources/install_maintain.asp

6.3   Hold onto the connector and support the cable.

6.4   Bring the heat shrink tubing into the hot air stream. Hold the heat shrink tubing about 1/2" away from the nozzle. Rotate the connector for 20-30 seconds so that the heat shrink tubing is completely cured onto the jacket.

6.5   Remove the connector from the hot air stream.

6.6   Turn heat shrink curing tool "off".
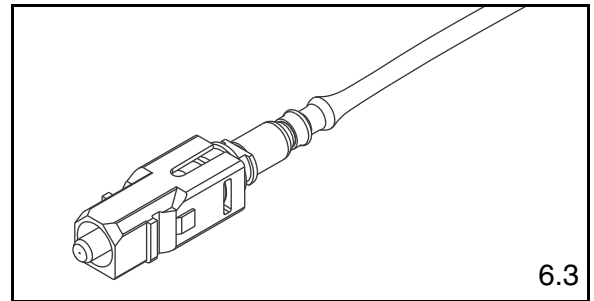
7. ASSEMBLING CONNECTOR AND BOOT

7.1   Align the boot so that the first set of slots are aligned with the crimp thru window on the inner housing assembly. Slide the boot over the crimp sleeve and onto the back-bone. Push the boot over the flange towards the shoulder. The boot should snap in place onto the flange.

Note: The boot must be oriented correctly in order to ensure smooth connector movement when the outer housing is installed.

7.2   Align the chamfers on the front of inner housing assembly with the chamfers at the front of the outer housing.

7.3   Push the inner housing assembly into the outer housing until it snaps into place. Once in place the outer housing should be able to move freely back and forth over the inner housing and boot. Clean the ferrule end face with an alcohol soaked wipe, and then a dry wipe. Place dust cap over the ferrule end.
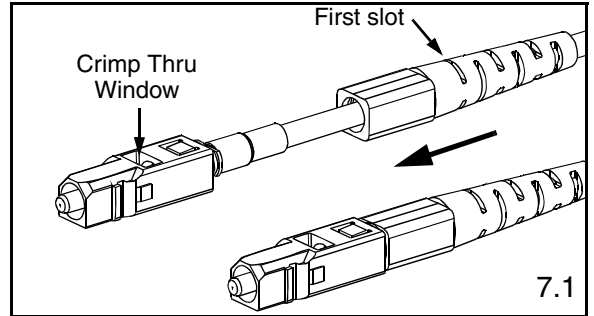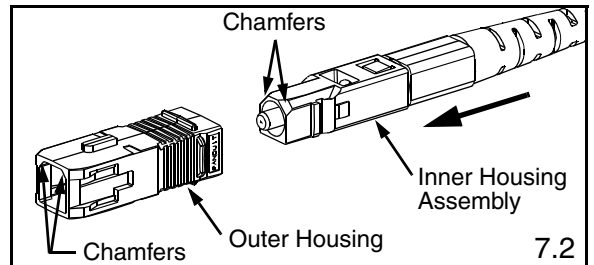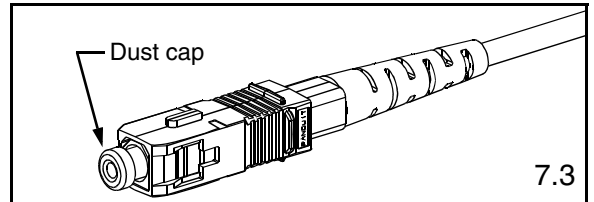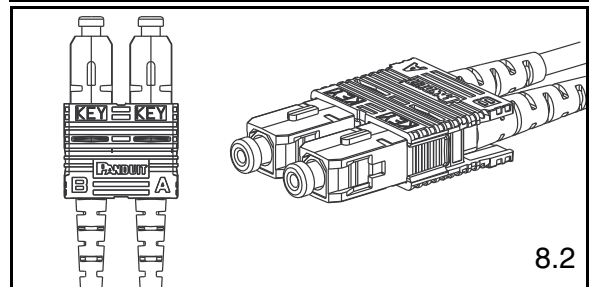
8. ATTACHING DUPLEX CLIP

8.1   Orient the connector as shown with the connector key facing upward in the same direction as the 'A', 'B' and 'KEY' markings on the duplex clip. Insert the connector into one side of the clip on a slight angle and rotate into place. The upper and lower legs of the clip slide over the connector and "snap" when the connector is in place. The connector is fully seated once the top and bottom connector flanges are inside of the rectangular slots in the clip.
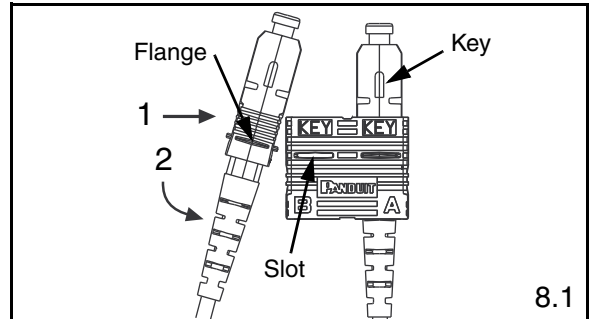
8.2   Repeat this procedure for the other connector, completing the duplexing step.

Note: When making cable assemblies, be sure to follow the correct 'A->B' polarity cross-over between connectors.