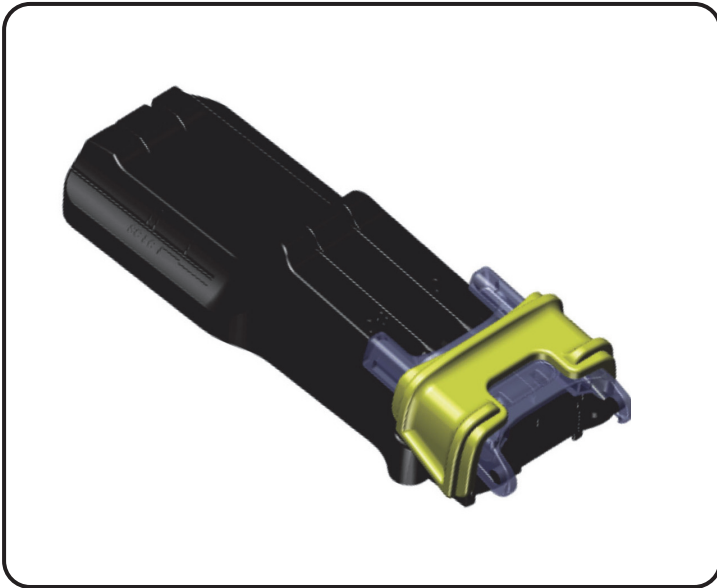


# LightBow™ Termination Tool Instructions



**Tools Required**

(A) Cleaver (B) Marker (C) Buffer Stripper, (D) Termination Tool (E) Strip Template (F) Alcohol Wipe

or

SC

LC

Place either the SC or LC connector into designated pocket. Ensure two oval VFL windows are facing up as shown.

1

1

2

click

Close activation cuff. A "click" will indicate activation

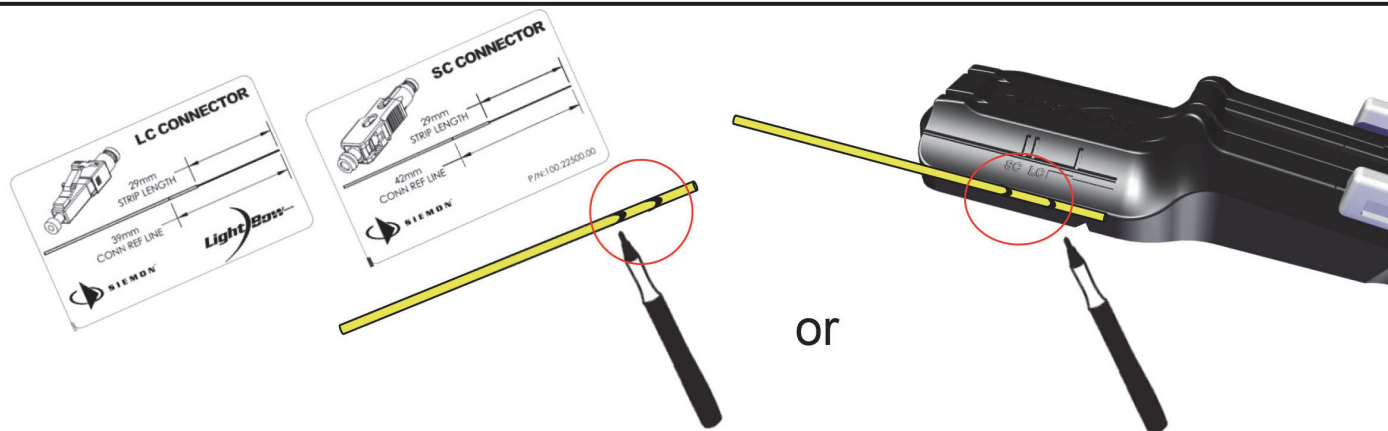
Slide activation lock cuff forward..

3

Install the boot by sliding the narrow end first down the fiber until it is out of the way

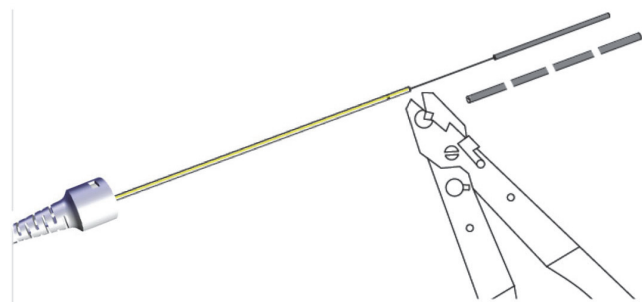
4

# LightBow™ Termination Tool Instructions



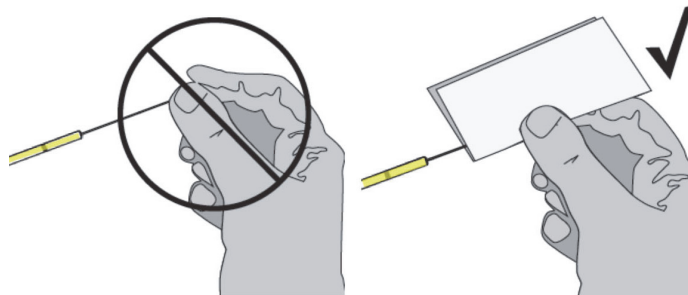
5

Locate the template card provided and follow the guide for the specific connector being terminated. The card depicts proper strip lengths for both SC and LC connectors. With the end of the fiber placed even with the end point shown on the template card, mark the strip length as shown. Also place the additional reference line mark indicated to be used as a visual aid during the insertion step.



6

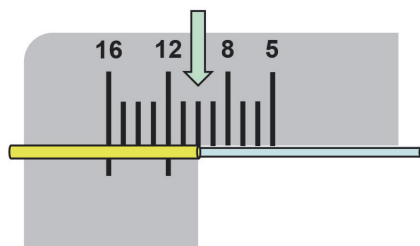
Remove the section of buffer coating up to the first mark using a buffer stripper. To avoid breaking the fiber, remove the buffer in several small sections. Carefully inspect each fiber after stripping to verify the buffer coating is also removed. Sometimes mistaken to be the fiber cladding, this coating must be completely removed or the fiber will not fit into the connector.



7

Clean the bare fiber with two passes of a 99% reagent grade isopropyl alcohol wipe, being careful not to touch the fiber after it is cleaned. Also be careful not to remove the reference mark.

**NOTE: ALWAYS USE 99% REAGENT GRADE ISOPROPYL ALCOHOL FOR CLEANING. DO NOT WIPE EXCESS PROTECTIVE COATING REMAINS FROM THE FIBER WITH YOUR FINGERS AFTER STRIPPING. OILS FROM YOUR FINGERS CAN TRANSFER TO THE RUBBER PADS OF THE CLEAVER REDUCING THE EFFECTIVENESS OF THE CLAMP ARM RESULTING IN A POOR CLEAVE.**



Note: Buffer edge to 10mm mark on cleaver.

8

## Refer to Cleaver Instructions

9

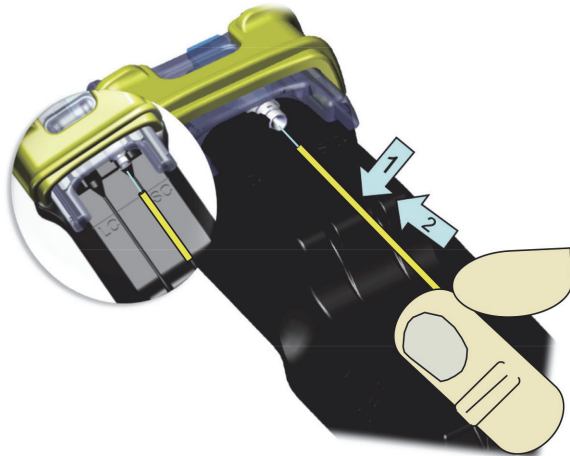
# LightBow™ Termination Tool Instructions



10

Remove the freshly cleaved fiber without contaminating the end face. The fiber is now ready for insertion into the connector.

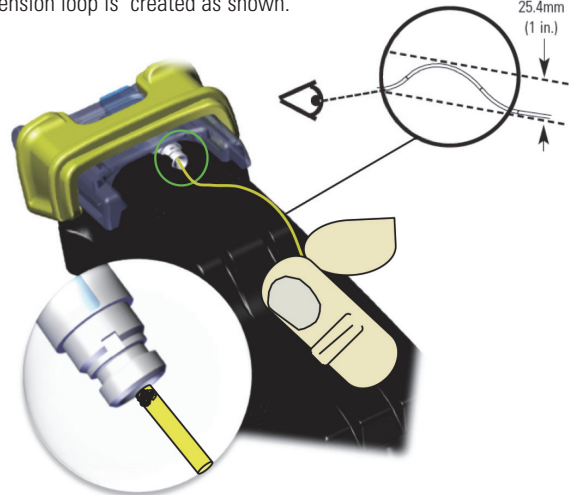
**NOTE: IT IS NOT NECESSARY OR RECOMMENDED TO RE-WIPE THE FIBER AFTER CLEAVING AS THIS PRACTICE COULD LEAVE DEBRIS ON THE END-FACE WHERE IT IS DIFFICULT TO CLEAN PRECISELY. IF A MIS-CLEAVE OCCURS, STRIP THE BUFFER BACK FURTHER AND CLEAVE IN A DIFFERENT LOCATION. DO NOT TRY TO RE-CLEAVE IN THE SAME LOCATION ON THE FIBER.**



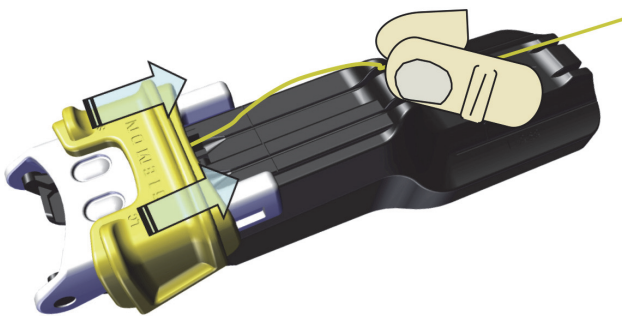
11

1. Place fiber in appropriate guide slot with buffer even with guide line closest to connector. 2. Push fiber forward into connector.

Insure reference dot is at back of connector and tension loop is created as shown.



12



13

While maintaining tension loop, slide the activation cuff to release position



14

Open activation cuff and gently remove the connector. Be sure to grab the connector body and not the fiber.

# LightBow™ Termination Tool Instructions

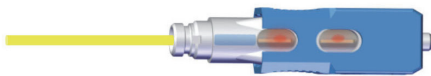
## VFL Verification



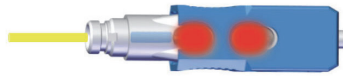
VFL included in kit can be used to verify connector has been terminated correctly. Remove dust cap prior to VFL use.

**15** It is recommended that terminations be periodically audited to ensure proper termination process has yielded good terminations, especially if being installed for the first time.

Good

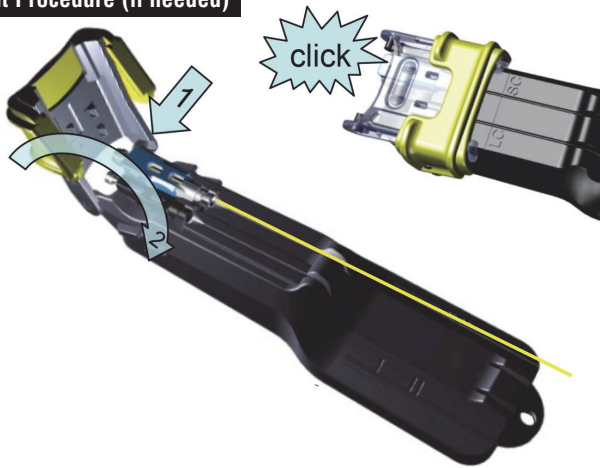


Bad



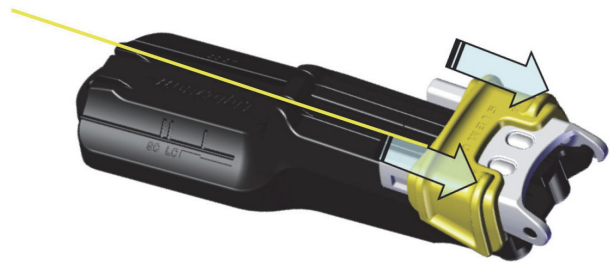
**NOTE: 0.5 Mw Laser VFL must be used to verify termination quality**

### Adjustment Procedure (if needed)



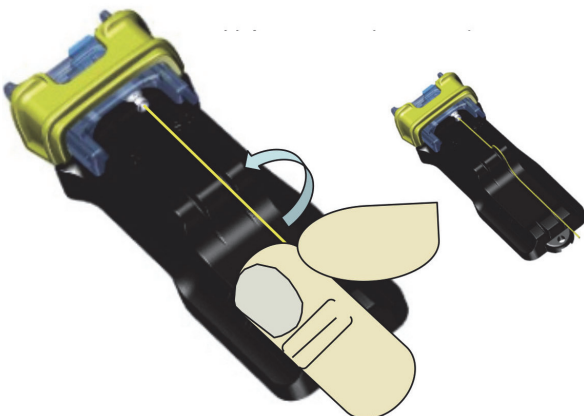
**A1** Ensure dust cap has been put back onto connector. 1. Place connector back in tool. 2. Close activation cuff. A "click" will indicate activation.

### Adjustment Procedure (if needed)



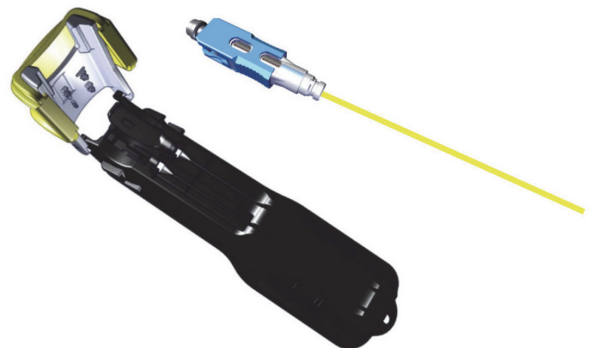
**A2** Slide activation lock cuff forward.

### Adjustment Procedure (if needed)

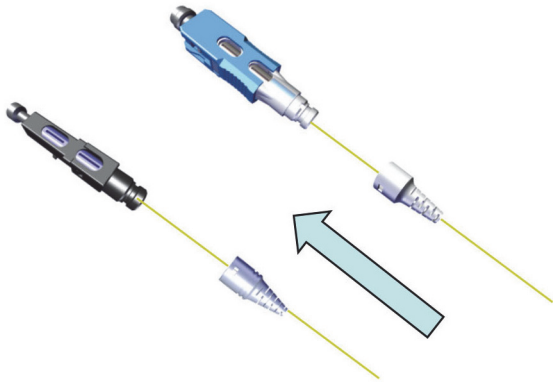


**A3** Gently rotate the fiber between a  $\frac{1}{4}$  and  $\frac{1}{2}$  turn. Apply tension loop from step 12.

### Adjustment Procedure (if needed)



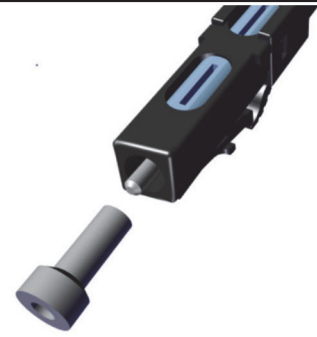
**A4** Slide cuff and open, remove connector and move back to step 15. If problem remains, remove fiber and repeat from step 1. The fiber may be completely removed, re-cleaved and reinserted into the same connector one additional time



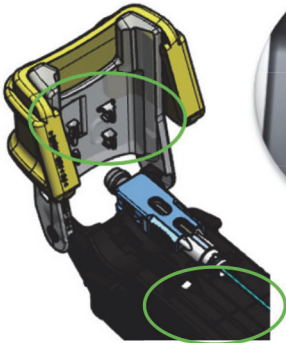
Slide the boot up to the back of the connector and gently press onto place while holding the connector housing.

**NOTE: NEVER PULL ON THE FIBER TO ENGAGE THE BOOT OR WHILE HANDLING THE TERMINATED CONNECTOR AS THIS CAN CAUSE A GAP AT THE SPLICE JOINT RESULTING IN EXCESSIVE INSERTION LOSS.**

16



Remove the front protective cap. The fiber is now ready for insertion. Although not required with the Siemon **LightBow** connector, it is always good practice to clean the end face thoroughly just prior to connection. This is especially true if the factory installed protective cap was removed at any point during the termination. An alcohol wipe followed by a clean dry lint-free wipe will ensure reliable results. A properly cleaned end face can make a significant difference in the performance of your system



**TERMINATION TOOL MAINTENANCE:**

1. The guide slot on the activation tool should be kept as clean as possible to prevent debris from transferring onto the fiber end face.
  2. Inspect activation fins to check for debris or damage
- Always use 99% reagent grade isopropyl alcohol for cleaning**

**WARNING:**

**Optical transmitters and fiber optic test equipment used in the telecommunications industry uses invisible infrared energy. At sufficient power, this may cause eye or skin damage.**

**If you work with fiber optic products, including test equipment**

If you work with fiber optic products, including test equipment, consider the following:

1. Do not look into fibers or connectors. They may be 'live'.
2. Know what is happening with the fiber under test at the far end!
3. When connecting a light source, try to make it the last element you connect!
4. Whenever possible, switch off and disconnect your light source(s) before breaking any fiber connections.
5. Always consider the hazard to other people:
  - a. Use warning signs, etc.
  - b. Keep caps on unconnected fibers whenever possible.
  - c. If using "live" optical beams, keep them low and facing away from personnel.
6. Don't view optical outputs with a microscope, use a TV camera/monitor.
7. Elect a safety officer to:
  - a. Train staff
  - b. Maintain records of equipment classification, calibrations and safety checks.
8. Be careful of cut fibers. Remember they are sharp and difficult to see!
9. Always wear safety glasses when terminating fiber connections

**TERMINATION TOOL END OF LIFE:** The Termination Tool is rated for 1,000 terminations. The tool may exhibit the following signs it has reached the end of life.

1. Inability to insert the fiber into the connector while in tool in open position.
2. Unable to get the VFL light to dim in the connector. (unable to improve with reactivation of tool and adjusting the fiber Steps 13-16 or re-termination steps)
3. Experiencing High loss while testing the connector (unable to improve with reactivation of tool and adjusting the fiber Steps 13-16)

**CLEAVER MAINTENANCE:**

1. The cleaver should be periodically cleaned for proper operation and consistent cleave quality. Always use 99% reagent grade isopropyl alcohol for cleaning.
2. It is important to keep the rubber clamping pads clean since the ability of these pads to hold the fiber security helps to ensure consistent cleave results. Some blade assemblies can be lifted then rotated 90 degrees to gain easier access when cleaning. While paying careful attention to the sharp blade, clean on and around both clamping pads including the pads on the top of the clamp lever. The blade can also be cleaned carefully as necessary. Be extremely careful if using the cleave tool that allows rotation of the blade carrier as this will expose the sharp blade. This allows easier cleaning access but over-rotation of the assembly will permanently damage the blade if allowed to contact the tool base. Over-rotation can cause the lubricant on the bottom of the blade assembly to transfer to the clamping pad.
3. Avoid getting debris inside the blade carrier channel and regularly inspect to ensure the blade carrier is free of debris. The cleave blade height is precisely adjusted for proper cleaving. Debris in the channel can cause the blade carrier to change the height of the blade during the cleaving process resulting in a "mis-cleave".

**When cleaning, do not remove the grease contained in the blade carrier channel as it is necessary for smooth operation.**

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