

FiberExpress Brilliance® Connectors



FI-4270

SC



ST



LC



Section A - What's New and What You Need to Know

FiberExpress Brilliance Connectors

Include: Brilliance OM1 62.5 μm , OM2 and OM3/OM4 50 μm Multimode & OS2 Singlemode Connectors.

ST Connector



SC Connector



LC Connector



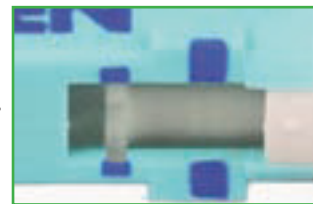
* Visual Fault Locator

** The ST connector's dust cap is not held by the ferrule but instead locks to the connector body.

This connector also includes an ST Activator Cap.

Brilliance LC, SC and ST connectors all share the same component names shown above.

The LC connector is used throughout this guide as a reference only.



Open Position



Closed Position

Section A - What's New and What You Need to Know

This Guide Includes:

- **Installation procedures for Brilliance LC, SC and ST connectors.**
- **A section describing components, features and accessories.**
- **Cleaning procedures.**
- **A troubleshooting guide and tips.**

CAUTION:

- **When installed on a live system, invisible laser radiation may be present.**
- **Do not stare into connector endface or view directly with optical instruments.**
- **Wear safety glasses when working with optical fiber.**
- **Dispose of all scrap fiber in the waste bottle to avoid getting fiber slivers.**
- **Do not touch cleaver blade.**

Key Success Parameters

- **Cleanliness:**
 - **Keep exposed fiber components clean as well as your environment.**
 - **Keep dust caps on and avoid dust creating activities.**
 - **Clean endface with alcohol wipes and then dry wipe as per cleaning procedures**
- **Cleave Quality:**
 - **Field cleaver can produce inconsistent results, verify cleave quality with a microscope after each cleave.**
 - **Precision cleavers are recommended and will improve cleave quality. However, it is important to validate cleaver performance every 25 connectors or less.**
- **Installation Quality:**
 - **Test connector performance at every 100 connector installations or less.**
 - **Use VFL and Support Handle for best results during termination.**



Section B - Components & Features



Shoulder Strap

8.5"x11" Letter Size Zipper Pocket

Belt Mount Feature

Support Handle Holster

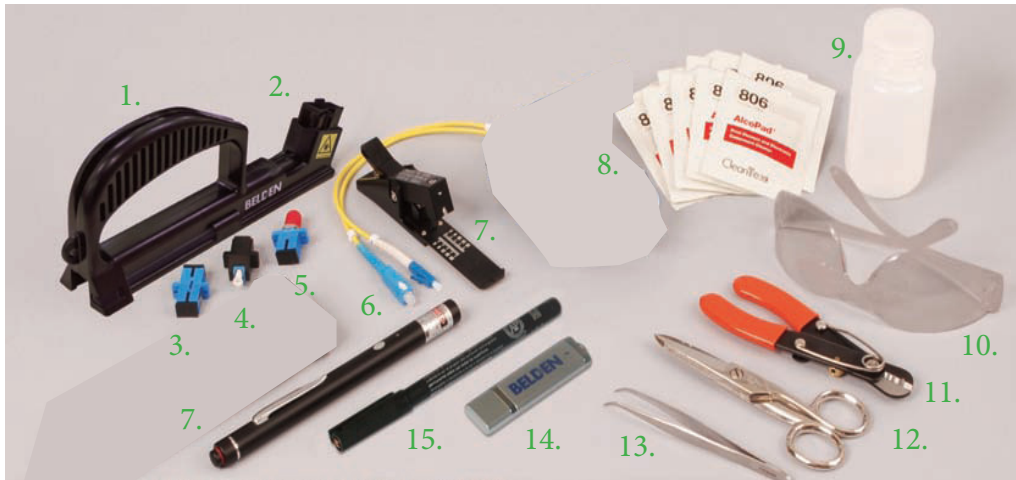
Lid Zipper

Velcro Lid Strap

Business Card Sleeve

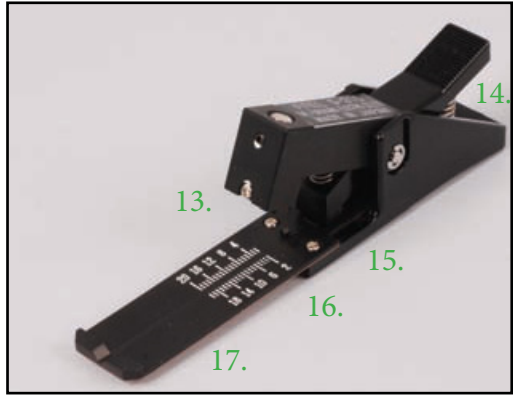
Zipper Pocket for Loose items

Section B - Components & Features



1. Support Handle
2. Protective Adapter
3. SC Adapter
4. LC Adapter
5. ST Adapter
6. Patch Cords
7. Field Cleaver
8. Alcohol Wipes
9. Waste Bottle
10. Safety Glasses
11. Multipurpose Strippers
12. Scissors
13. Tweezers
14. USB Key with Demo Video & Files
15. Ink Marker
16. Visual Fault Locator (VFL)

Section B - Components & Features



Field Cleaver

- 13. Blade
- 14. Grip Lever
- 15. Fiber Tip Grip
- 16. Graduated Scale
- 17. Flexible Fiber Guide



Support Handle

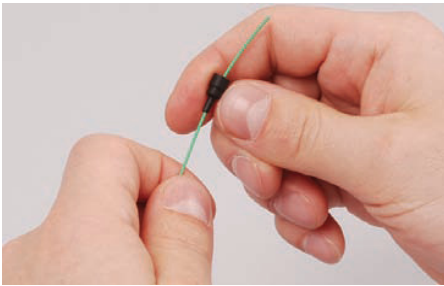
- 7. VFL Push-out Access
- 8. Handle Grip
- 9. Fiber Groove Guide
- 10. Stylus Holder
- 11. Stylus
- 12. Support Handle Adapter Clips

Section C - Fiber Preparation Fiber Preparation

Fiber Preparation on 900 μm Tight Buffered Fiber

- 1 Slide the boot on the fiber as shown.
- 2 Strip off the buffer and the glass coating a t the length specified below:
 - a. Field cleaver: 40 mm
 - b. Precision cleaver: 24 ± 2 mm.If unfamiliar with stripping optical fiber, it is advised to practice using a spare piece of fiber. Be sure to remove in small sections (5 mm) to avoid breaking the fiber.
- 3 Align the buffer on the Installation Card's graduated scale and mark with an ink marker at 13 mm.

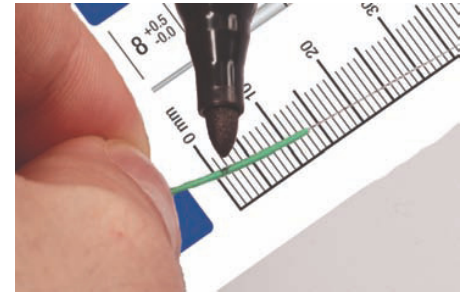
Install Boot



**Strip Buffer/Coating to Bare Glass
(40mm - 1.5")**



Mark Buffer at 13mm



Section C - Fiber Preparation

Fiber Preparation on 900 μm Tight Buffered Fiber (Continued)

4 Clean the bare fiber with alcohol wipes. Use at least two or three passes while protecting the buffer mark with your fingers. Avoid contaminating the bare fiber once it has been cleaned.

5 Cleave the fiber at 8 mm from buffer. When using our precision cleaver, bring the buffer in contact with the cleaver buffer stop. Be sure to read and understand the cleaver instructions before use. Validate cleaver's performance prior to first termination, afterwards re-validate every 25. Use a microscope or another appropriate device to verify cleave quality as per figure 6.

Note: Do not clean the fiber after it has been cleaved.

6 If you are not using a precision cleaver*, it is strongly recommended to verify cleave angle and cleanliness with a microscope for every cleave. Cleave quality depends on the skill of the operator.



Section D- Installation on 900 μ Fiber

Basic Installation

1 Push the activator tab towards the front of the connector using the small line indicator as a locating reference.* A stylus and Support Handle available if needed to provide assistance in opening and closing the activator tab.

2 Align the fiber tip with the rear housing by bringing both hands together for stability, as shown. Guide the fiber into the connector until you reach the buffer mark.

Note: Secure the connector by placing your index finger on the ferrule dust cap while gripping the two sides as shown, especially with SC type connectors. Otherwise, an adapter is available with the Installation Kit to help grip the connector (see Section B).

* For ST connectors, ensure the Dust Cap is in place and the ST Activator Cap is removed to gain access to the Activator Tab.

Open Activator Tab



Using Stylus



Insert Fiber Into Connector



Section E - Installation on 900μ Fiber/Accessories

1 Support Handle Preparation

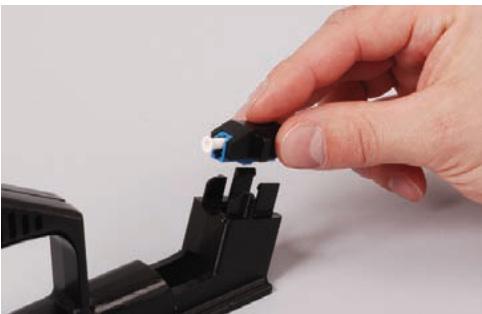
1.1 Remove the clip protector and insert the appropriate adapter into the Support Handle as shown.

1.2 If you are using a Visual Fault Locator (VFL), first remove the VFL's protective cap then snap the VFL into the Support Handle as shown. Using a VFL is optional.

1.3 Connect the VFL to the adapter using the appropriate supplied patch cord.

Note: For APC connectors use an APC VFL patch cord and APC adapter, sold separately (AX203895).
For Standard connectors use a UPC VFL patch cord and standard adapter.
Damage may occur if APC is mated to a flat ferrule.

Snap in Adapter



Snap in VFL



Connect Assembly



Section E - Installation on 900 μ Fiber/Accessories

1 Support Handle Preparation (Continued)

1.4 Insert the Brilliance connector into the Support Handle's adapter as shown.

1.5 Arm the VFL, then choose a pulse or continuous laser mode by repeatedly pressing the mode toggle button.
A green light will appear to indicate that the VFL is active.
If a red light appears, the batteries need to be replaced.

1.6 Push connector activator tab towards the front of the connector using the small line indicator as locating reference.* A stylus is available in the Support Handle, if needed, to provide assistance in opening and closing the activator tab.

1.7 When using a VFL in the connection process, a red light will appear in the connector window w.

* For ST connectors, first ensure the ST Activator Cap is removed.

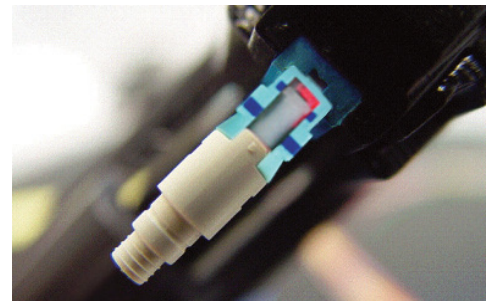
Turn on VFL



Open Activator



Light Indicator



Section E - Installation on 900 μ Fiber/Accessories

2 Fiber Preparation (See Section C for steps)

The support handle can be placed in the pouch's exterior holster or on a work surface to be ready for use while preparing the fiber .

3 Insert Fiber

3.1 After preparing the fiber, grip the Support Handle with your passive hand.

3.2 Using your dominant hand, guide the fiber into the Support Handle groove. Allow the fiber to follow the curve in the handle and secure it with your thumb.

3.3 Guide the fiber into the connector and stop when you feel contact. When fully inserted, the buffer material should be near the edge of the rear housing of the Brilliance connector. If not, gently back off and reseal the fiber.

Grip Support Handle



Place Fiber in Groove



Insert Fiber



Section E - Installation on 900 μ Fiber/Accessories

4 Finalize Connector Installation

- 4.1 Produce a bow by sliding your thumb along the Support Handle's graduated scale. Slide between 5 and 8 mm to produce a slight bow as shown and use your thumb to hold the fiber in position.
- 4.2 Use your other hand to pull the connector activator tab towards the rear using the large indicator line as a locating reference. Once the activator is closed and when using a VFL, the red light in the VFL window should go out for MM connectors or dim substantially for SM connectors, as shown. If not repeat fiber preparation steps and try again.
- 4.3 Install the connector boot, slide it onto the rear of the connector until it reaches the body.* Remove the connector from support handle. The installation is now complete.
* For ST connectors, re-install the ST Activator Cap.

Produce Bow



Close Activator



Install Boot



Section H: Cleaning Procedures

Connector Cleaning Procedure and Precautions

1. Wipe the connector ferrule end-face a few times with a lint-free alcohol soaked wipe.
 2. Before the alcohol has time to dry, wipe the ferrule end-face with a dry wipe to remove any residual alcohol.
- * Do not allow ferrule to touch anything before inserting into adapter.
 - * Preferred alcohol is ethanol but isopropyl alcohol may be used. Only 100% pure alcohol should be used.

VFL Components Cleaning Procedure and Precautions

1. Remove the patch cord and clean the connector ferrule at both ends as described above.
2. Ensure the interior of the VFL adapters are free of contaminants.
3. Ensure the interior of VFL ferrule sleeve is free of contaminants. If not, a lint-free swab can be used to dislodge and remove contaminants.
4. Reapply dust caps to patch cord and adapters immediately after use.

Tips

1. When cleaning the bare fiber with alcohol wipes, a squeak is a good indication that the fiber is free of impurities.
2. Clean the patch cords and adapters regularly by following the recommended procedure. If a contaminant adheres to the ferrule tip or adapter ferrule guide, each connector installed could be damaged or contaminated.
3. It is strongly recommended to store unused adapters in a clean package such as the original packaging to avoid adapter contamination.

Section I: Troubleshooting Guide

Connector Troubleshooting

1. If the VFL is still visible in the connector window after terminating or test results are marginal:
 - The cleave may not be good. Ensure the cleaver is in good working order (see cleaver instructions, FiberExpress Brilliance connectors Installation Guide Section C - step 5-6 and Section A - Key Success Parameters) then repeat the cleave and termination procedure.
 - The cleaved fiber tip may be dirty. Ensure work area is clean and repeat cleave and termination procedure. If the problem persists contaminants may have been introduced into the connector.
2. If you cannot insert the fiber up to the buffer mark, make sure your mark and cleave are accurate and that the connector activator tab is in the open position, then repeat the termination procedure.
3. If the fiber breaks inside the connector, discard the unusable connector and repeat the procedure.

Tips

- A - When removing the buffer from the fiber, cut perpendicular to the fiber and then tilt the stripper slightly to facilitate removal.
- B - When a field cleaver is used, it is strongly recommended to verify the cleave quality with a microscope.
- C - If a VFL and patch cord are attached to the Support Handle be sure not to crush the patch cord in the interior pocket of the pouch. Instead, use the exterior holsters while working. After use, it is recommended to remove the patch cord and adapter then reinstall the appropriate dust caps.
- D - A stylus included in the Support Handle can be used instead of your nail to push the activator tab.
- E - Turn off the VFL after every use to extend the life of the batteries.
- F - Make sure the dust caps are not installed when removing the adapter from the support handle.
- G - To ensure the VFL is properly fastened to the Support Handle make sure a snap is heard while attaching it to the Support Handle.
- H - If the light from the VFL is not apparent in the Brilliance connector window while in the open position, try closing and reopening the activator tab.
- I - To remove the VFL from the Support Handle press on the VFL through the Support Handle Push-out Pocket located in front of the adapter clipping location.

Contact & Additional Information

For More information on West Penn Wire Products:

800-245-4964 | sales@westpennwire.com | www.westpennwire.com

Fiber Optic Installation Video's See West Penn Wire:

<http://westpennwire.com/videos.php>