Siemon OptiFuse LC Instructions

**Safety Precautions**

⚠ Wear safety glasses to protect your eyes when handling optical fiber.

⚠ Never look into the end of a microscope or optical cable connected to an optical output device that is operating. Laser radiation is invisible, and direct exposure can severely injure the human eye.

⚠ Alcohol is flammable, causes irritation and is harmful if swallowed or inhaled. Keep alcohol away from heat, sparks, skin, and avoid contact with eyes.

**Handling Precautions**

1. Improper assembly will result in a loss of performance. Please read instructions given in this operation manual and the operation manual of the fusion splicer.

2. Never touch the fiber stub. It has been inspected at the factory.

3. The product is sensitive to dirt or dust. Do not take out any parts from the package until it is to be used.

4. The quality of the splice will be effected by the fiber cleaved surface condition. Use of a high quality cleaver is critical to a quality fiber splice.

5. Do not remove the dust cap until the connector has been completely assembled in order to avoid end face contamination and high insertion loss.

**Tools and Equipment**

Below are examples of the tools used to terminate the OptiFuse connectors, typically the precision cleaver, buffer stripers and other support items are included in the Fusion Slicer kit.

<table>
<thead>
<tr>
<th>Fusion Splicer</th>
<th>Fiber Cleaver</th>
<th>Buffer Stripper</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Fusion Splicer" /></td>
<td><img src="image2.png" alt="Fiber Cleaver" /></td>
<td><img src="image3.png" alt="Buffer Stripper" /></td>
</tr>
</tbody>
</table>

Cleave length: 10mm

Note: Compatible Fusion splice models are listed on page 6.

**Fusion Splicer Setup**

Following the specific instructions provided by the fusion splice manufacturer, set fiber type to be spliced and the splice sleeve heater setting.

Next, utilizing the specific instructions provided by the fusion splice manufacturer perform an arc test.

*Fiber for arc testing is not provided with the connector and should match the fiber setting on the splicer.

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1. **Slide Rear Stopper, Boot and Furcation Tube onto the fiber.**

2. **Slide Protection Sleeve and Spring onto the fiber.**

3a. **250 micron and 900 micron tight buffer**
   - **Insert fiber into this hole**

3b. **900 micron loose tube fan out kit**
   - **Remove approx. 35mm of buffer coating from the 900 micron 1B, of plastic coated 250 micron fiber with buffer strippers. Ensure that the plastic coating (acrilite) is removed from the fiber.**
   - **Remove approx. 40mm of the 900 loose tube buffer.**
   - **Next remove approx. 35mm of the plastic coated 250 micron fiber. Ensure that the plastic coating (acrilite) is removed from the fiber.**

4. **Moistened with alcohol**
   - **Clean the fiber with a lint free cleaning wipe. Note: Fiber should only be cleaned before cleaving operation.**

5a. **250 micron and 900 micron tight buffer**
   - **Set the fiber in the holder with the tight buffer or plastic coating flush with the end of the holder**
   - **Note: Compatible Fusion splice fiber holders are listed on page 6.**

5b. **900 micron loose tube fan out kit**
   - **Set the fiber in the holder with buffer tube 5-7mm from the holder end and the plastic coating flush with the end of the holder.**
   - **Note: Compatible Fusion splice fiber holders are listed on page 6.**

6. **Confirm fiber is in proper position in holder. Carefully close the cover(s) to the holder to secure the fiber in place.**
   - **Note: If using holder with two covers, close front cover 1st and rear cover 2nd**

7. **Push to close**
   - **Clean rubber clamp and blade regularly.**

8. **2. Close**
   - **No gap**
   - **Place fiber on V-groove gently**

9. **1. Place**
   - **Carefully pick up Ferrule Subassembly by the plastic stub and place into connector holder and close the cover to secure connector in place.**
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10. Place fiber on V-groove gently.

11. Activate fusion splicer.

12. Carefully open the left side of the fiber holder and then repeat on the connector holder on the right side.

Note: If using left side holder with two covers, open rear cover 1st and front cover 2nd

13. Carefully pick up the spliced fiber and connector.

14. Carefully slide the heat shrink protection sleeve up to the step of the metal flange as shown above. Ensure it does not cover the step.

Note: Buffer (900 um tight buffer 900 fan out kit) or plastic coating(250um) should be under heat shrink sleeve

15. Carefully set the fiber in the heater with the right side first.

16. Continue placing the fiber into the left side while lightly maintaining tension on the fiber.

17. Confirm the position of the fiber in the heater before activating heater.

18. Activate the fusion splice sleeve heater.

19. Carefully remove the fiber from the heater.

Note: connector assembly may be hot even after the cooling by fan has completed its cycle.
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Carefully remove the fiber from the heater.

Note: connector assembly may be hot even after the cooling by fan has completed its cycle.

UPC
Align flat surface with the lever on the housing for UPC.

APC
Align red dot with lever on the housing for APC.

Carefully push the front housing into the rear stopper.

Cut the tether off of the dust cap.

The connector is not complete.

Place the fiber
Check the fiber position on V-groove.

Fiber should be aligned along the V-groove.

Do not place the fiber outside of V-groove or the fiber may break.

Close the cover
Hold the cover with both hands and close gently.

Do not slam the cover or the fiber may break.

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Protection sleeve position

Raise the fiber end up so that the protection sleeve slides toward the ferrule.

Ensure the splice sleeve is over the step and up against the flange. If necessary carefully guide the sleeve into position.

Do not shake!  Do not twist!  The fiber will break from stress.

Protection sleeve position in heater

Set the heat shrink protection sleeve at center of heater.

Good.  No bubble

Bad.  Bubble (did not shrink)

After heating

If protection sleeve is not centered in the heater uneven shrinking of sleeve can result in a bubble. This in turn will cause stress on the fiber resulting in a fracture.

Post heating protection sleeve problems

Good.  Gap at flange step before heating process

Bad.  Gap at flange step after heating process

If no gap is present at flange step, glue can become stuck to the flange. This in turn will cause stress on the fiber resulting in a fracture.

If Protection Sleeve exhibits any of the above mentioned conditions. Please retry using another new connector.

Siemon Holders

FT-F-LHLDL-29M
Cable holder, 900 micron tight buffered, metal

FT-F-CHLDU-29M
Cable holder, 900 micron breakout kit, 250 micron coated fiber, metal

FT-F-FHLDU-LSP
Ferrule holder, SC, LC plastic (performs 100 splices)

FT-F-FHLDU-LSM
Ferrule holder, LC, SC, metal

FT-F-FHLDF-LSM
Fitel, ferrule holder, LC, SC, metal

Fiber Holder (left side)

Ferrule Holder (right side)
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Instructions for using Siemon FT-LB-CLV cleaver with Siemon Fiber Cable holders

1. Open the cleaver cover all the way to lock position.
2. Next using the Allen wrench located on the bottom of the cleaver, remove the fiber holder screw.
3. The fiber holder can now be removed.
4. The fusion splicer holder can then be slid into the cleaver all the way until it stops.

The fiber can then be cleaved

Fusion Splicer Compatibility Chart

<table>
<thead>
<tr>
<th>Manufacturer Fusion Splicer</th>
<th>Manufacturer Fusion Splicer Model #</th>
<th>Fiber Cable Holder</th>
<th>Siemon Ferrule Holder</th>
<th>Slice Sleeve Heater Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFI</td>
<td>70S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDU-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFI</td>
<td>62Ct</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDU-LSP or FT-F-HLDU-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFI</td>
<td>21S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDU-LSP</td>
<td>FUSE900</td>
</tr>
<tr>
<td>Fitel 515S</td>
<td>515S</td>
<td>Splicer manufacturers holder</td>
<td>FT-F-HLDL-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>OPS</td>
<td>NJ001 M4</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDL-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>INNO</td>
<td>View 3</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDU-LSP</td>
<td>40mm other</td>
</tr>
<tr>
<td>Fiber Fox</td>
<td>Mini 6S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDU-LSP</td>
<td>40mm other</td>
</tr>
<tr>
<td>Sumitomo</td>
<td>TYPE-Q102-CA and TS6</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDU-25M, FT-F-HLDU-29M</td>
<td>FT-F-HLDU-LSP or FT-F-HLDU-LSM</td>
<td>LYNX</td>
</tr>
<tr>
<td>Sumitomo</td>
<td>T-100S, Lynx Connectorizer</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDU-25M, FT-F-HLDU-29M</td>
<td>FT-F-HLDU-LSP or FT-F-HLDU-LSM</td>
<td>LYNX</td>
</tr>
<tr>
<td>Sumitomo</td>
<td>TYPE-Q102-M12</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDU-25M, FT-F-HLDU-29M</td>
<td>FT-F-HLDU-LSP or FT-F-HLDU-LSM</td>
<td>LYNX</td>
</tr>
</tbody>
</table>

Splice Sleeve Heater settings shown were validated with splicers shown in initial testing, any manufacturer changes to splice settings are at the discretion of the fusion splicer manufacturer and may not be reflected in this chart.

To assist safe installations, comply with the following:
A. Use caution when installing or modifying telecommunications circuits.
B. Never touch uninsulated wire terminals unless the circuit has been disconnected.
C. Never install this device in a wet location.
D. Never install wiring during a lightning storm.

Lors de l’installation, respectez les consignes de sécurité suivantes:
A. Utiliser avec prudence lors de l’installation ou de la modification circuits de télécommunications.
B. Ne jamais toucher les bornes de fil métallique non isolés sauf si le circuit a été débranché.
C. Ne jamais installer cet appareil dans un endroit humide.
D. Ne jamais installer pendant un orage.

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