Siemon OptiFuse LC Instructions

**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.

**Safety Precautions**

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

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
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<tbody>
<tr>
<td>Fusion Splicer</td>
<td>Cleave length: 10mm</td>
</tr>
<tr>
<td>Fiber Cleaver</td>
<td></td>
</tr>
<tr>
<td>Buffer Stripper</td>
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*Note: Compatible Fusion splice models are listed on page 6.*

**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**

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.*

**Setup**

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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. Remove approx. 35mm of buffer coating from the 900 micron LB of plastic coated 250 micron fiber with buffer strippers. Ensure that the plastic coating (acrilote) is removed from the fiber.

3b. 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 (acrilote) is removed from the fiber.

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

5a. 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. 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. Utilizing a fusion splicing quality precision cleaver (typically included with fusion splicer kit), place fiber holder into cleaver and cleave fiber. Cleave length must be 10mm

8. Place fiber on V-groove gently

9. 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. Place connector holder into the right side of the fusion splicer.

11. Activate fusion splicer. If the position of the fiber is wrong, set the fiber or stub again.

12. Lightly holding assembly to prevent bending. Carefully open the left side of the fiber holder and then repeat on the connector holder on the right side.

13. Maintain light tension to prevent bending. 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.

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

16. Then left side. Lightly maintaining tension on fiber. Do not twist. Continue placing the fiber into the left side while lightly maintaining tension on the fiber.

17. Sleeve at center of heater. Confirm the position of the fiber in the heater before activating heater.

18. Button to start heating. Activate the fusion splice sleeve heater.

19. Carefully remove the fiber from the heater.

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

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

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

2. **UPC**
   - Align flat surface with the lever on the housing for UPC.

3. **APC**
   - Align red dot with lever on the housing for APC.

4. **Cut Tether**
   - Carefully push the front housing into the rear stopper.
   - Cut the tether off of the dust cap.

**Trouble shooting guide**

Below are some common causes of termination problems.

**Legend**

- **Caution** Use extra care when performing this action.
- **Prohibited** Refrain from performing, can result in damage.

**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. After heating
- No bubble
- Bubble (did not shrink)

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

- Gap at flange step before heating process
- Gap at flange step after heating process
- Good.
- Bad.

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-LHDL-29M: Cable holder, 900 micron tight buffered, metal
- FT-F-CHDLU-29M: Cable holder, 900 micron breakout kit, 250 micron coated fiber, metal
- FT-F-HLDU-LSP: Ferrule holder, SC, LC plastic (performs 100 splices)
- FT-F-HLDF-LSM: Fitel, ferrule holder, LC, SC, metal
- FT-F-HLDU-LSM: Ferrule holder, LC, SC, metal

Fiber Holder (left side)
Ferrule Holder (right side)
### 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>
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</thead>
<tbody>
<tr>
<td>AFL</td>
<td>70S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFL</td>
<td>62C+</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM or FT-F-HLHDL-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFL</td>
<td>21$</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>Fitel S15S</td>
<td>S15S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>60mm</td>
</tr>
<tr>
<td>CPS</td>
<td>NI001 M4</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>INNO</td>
<td>View 3</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>40mm</td>
</tr>
<tr>
<td>Fiber Fox</td>
<td>Mini 6S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLHDL-LSM</td>
<td>40mm</td>
</tr>
<tr>
<td>Sumitomo TYPE-Q102-CA and T56</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLHDL-29M , FT-F-HLHDL-29M</td>
<td>FT-F-HLHDL-LSM</td>
<td>LYNX</td>
<td></td>
</tr>
<tr>
<td>Sumitomo T-400S , Lynx Connectorizer</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLHDL-29M , FT-F-HLHDL-29M</td>
<td>FT-F-HLHDL-LSM</td>
<td>LYNX</td>
<td></td>
</tr>
<tr>
<td>Sumitomo TYPE-Q102-M12</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLHDL-29M , FT-F-HLHDL-29M</td>
<td>FT-F-HLHDL-LSM</td>
<td>LYNX</td>
<td></td>
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</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.