



A Furukawa Company

Your Optical Fiber Solutions Partner®

## Crimp & Cleave Termination Instructions

for 50 and 62.5µm GiHCS<sup>®</sup>, 200µm HCS<sup>®</sup> SC and SC-RJ Connectors



### For Use With:

50 and 62.5µm GiHCS<sup>®</sup> 2.5mm  
Aramid Reinforced Optical Fiber  
Cables

200µm HCS<sup>®</sup> Optical Fiber Cable

SC, SC Duplex, and SC-RJ  
Crimp & Cleave Connectors

## Important Safety and Warranty Information

### Please Read First

Please make sure to **READ** and understand termination instructions completely. Improper assembly will cause poor termination results and cause damage to termination kit components.

Make sure you **WEAR** eye protection during the termination process. Bare optical fiber is sharp and may splinter; handle very carefully and make use of the provided fiber optic shard disposal container.

OFS **WARRANTS** this termination kit to be free of defects for a period of 90 days from the date of purchase. Each kit is qualified at our factory prior to shipment. OFS will, at our discretion, repair or replace tools suspected defective due to our workmanship within the stated warranty period. This excludes damage to any kit component due to improper use. OFS recommends

that all replacements or repairs be made at our Avon, CT USA factory or one of our certified international service centers. Please **CONTACT** the sales representative in your region or call our factory for technical support.

Mon-Friday, 8:00 am-5:00 pm EST.

**860 678 6636**

### Table of Contents

<b>Content</b>	<b>Page</b>	<b>Content</b>	<b>Page</b>
SC Termination Kit Contents . . . . .	1	<b>Maintenance &amp; Trouble Shooting Guide</b>	
Related Accessories . . . . .	2	Importance of Cleave Tool Cleaning . . . . .	10
SC, SC Duplex, SC-RJ Connectors . . . . .	2	Cleave Tool Cleaning Kit . . . . .	10
Insertion Loss Test Kit . . . . .	2	Troubleshooting . . . . .	11
		Termination and Test Kits Available . . . . .	12
<b>Termination Instructions</b>			
Step 1: Slide Strain Relief Boot & Crimp Ring . . .	3		
Step 2: Remove Cable Outer Jacket . . . . .	3		
Step 3: Remove ETFE Buffer . . . . .	4		
Step 4: Install Connector Body . . . . .	5-6		
Step 5: Cleave Optical Fiber . . . . .	7-8		
Step 6: Install Inner Housing . . . . .	8		
Step 7: Install Outer Housing . . . . .	9		

# SC Termination Kit Contents

## Contents

### Part Numbers Description

DT03732-SC1 . . . . . GiHCS SC Termination Kit  
 DT03732-SC2 . . . . . GiHCS SC Cleave Tool Only

P61226 . . . . . GiHCS SC Instruction Manual  
 AP01224 . . . . . Cable Strip Tool  
 BT03865-06 . . . . . Crimp Tool SC (Green Handles)  
 CP01229-02 . . . . . ETFE Buffer Stripper  
 w/ prong tool and brush  
 AP01225 . . . . . Scissors  
 K60791 . . . . . Optical Fiber Shard Disposal Unit  
 K60792 . . . . . Alcohol Prep Pad (Box of 100)

*Other Items Required (not included in kit): Safety Glasses, Marker*



## Related Products and Accessories (Sold Separately)

### Part Numbers Description

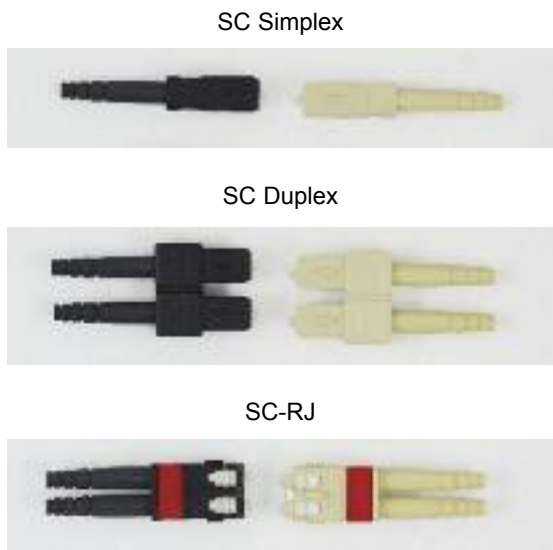
P25561-BKS . . . . . SC Simplex Connector – Black  
 P25561-BGS . . . . . SC Simplex Connector – Beige

P25561-BKD . . . . . SC Duplex Connector – Black  
 P25561-BGD . . . . . SC Duplex Connector – Beige

P25561-BKRJ . . . . . SC-RJ Connector – Black  
 P25561-BGRJ . . . . . SC-RJ Connector – Beige

P10188-14 . . . . . Insertion Loss Test Kit for  
 50µm and 62.5µm GiHCS  
 SC and SC-RJ Connectors

P16247 . . . . . Cleave Tool Cleaning Kit  
 (Includes cleaning fluid  
 and safe cleaning swabs)



## Termination Instructions

### STEP 1

#### Install Strain Relief Boot and Crimp Ring

- Slide STRAIN RELIEF BOOT (tapered end first) onto cable and slide approximately 3 inches [76mm] out of the way.
- Slide CRIMP RING (small ID end first) onto the cable and slide out of the way.

### STEP 2

#### Remove Cable Outer Jacket and Trim Aramid Yarn

- Mark cable outer jacket 2.5 inches [63.5mm] from the end with a marker.
- Using 2nd hole (marked 1.6) from the open side of the cable jacket strip tool, remove the 2.5 inches of outer jacket.



### STEP 3

#### Remove ETFE Buffer

- Insert the buffered fiber through the guide tube of the ETFE Buffer Strip Tool, all the way in until the cable jacket bottoms out inside it.
- Holding cable securely, squeeze tool's handles to cut ETFE buffer and then PULL STRAIGHT to remove the ETFE buffer.
- With alcohol prep pad folded in two, wipe surface of fiber where the ETFE buffer was just removed.



#### NOTE:

Be careful while handling the ETFE Buffer Strip Tool. Handle it as a precision device and do not strike on hard surfaces or drop.

Be sure to clean the ETFE Buffer Strip Tool's blades frequently using the small bristle brush provided.

#### NOTE:

If unable to insert ETFE buffered fiber through the guide tube, trim tip of the fiber using scissors. If a short length of cable is being terminated, wrap the cable around your finger to prevent fiber from being pulled out of cable jacket.

## Termination Instructions

### STEP 4

#### Install Connector Body

- Insert stripped fiber into CONNECTOR BODY sub-assembly until the rear of the component bottoms on the cable jacket. The aramid yarn should be on the outside of rear of the CONNECTOR BODY sub-assembly.
- Slide up CRIMP RING over aramid yarn and onto rear of CONNECTOR BODY sub-assembly as far as it will go.



- Using the large cavity in the crimp tool, secure the crimp ring to the cable jacket and CONNECTOR BODY subassembly.
- Next locate the CONNECTOR BODY subassembly into the crimp tool nest with the smaller ID cavity and apply crimp.
- Using scissors, trim the aramid yarn back so that 1/4 inch [6mm] remains extending from the cable jacketing.
- Slide up and install STRAIN RELIEF BOOT as far as it will go up over the crimp ring.



#### NOTE:

Be careful not to touch the GiHCS fiber coated surface once the fiber has had the ETFE buffer removed. The coating may retain finger oils which can transfer to and damage the gripper pads in the cleave tool during later termination process steps.

## Termination Instructions

### STEP 5

#### Cleave Optical Fiber

- Holding the cleave tool in a horizontal position, grip the handle while leaving your index finger free to actuate trigger.
- Gently insert CONNECTOR BODY into cleave tool as shown. Be sure to have it fully inserted and release the connector.



- Using index finger, slowly depress trigger to perform the cleave operation. The cleave process is complete when the optical fiber snaps away from the connector. Do not release trigger just yet!
- Before releasing the trigger, remove the CONNECTOR BODY from the cleave tool and grasp the optical fiber scrap while releasing the trigger. Gently remove the scrap fiber from the cleave tool while keeping it away from the tool's diamond blade. Place the scrap optical fiber into the fiber optic shard container for safe disposal.

### STEP 6

#### Install Inner Housing

- Insert CONNECTOR BODY into the white INNER HOUSING.
- Note the presence of the spline grooves in the internal diameter at the rear of the white INNER Housing. Align the splines on the outer diameter of the CONNECTOR BODY with those spline grooves and then push in as far as the CONNECTOR BODY goes until a positive click is heard.

#### NOTE:

Careful while handling the Cleave Tool. Handle it as a precision device and do not strike on hard surfaces or drop.

Keep the Cleave Tool clean and free from oils, including naturally occurring finger oils. The diamond blade and gripper pads should be cleaned often (e.g. every 50 cleaves).

Use OFS Cleave Tool Cleaning Kit Part # P16247 – available separately. Do not use isopropyl alcohol to clean any part of the Cleave Tool, especially near the gripper pads as alcohol may ruin them.

Do not insert metal tools near the diamond blade as it is quite sensitive and very fragile and can chip.

#### NOTE:

Make sure the CONNECTOR BODY is fully seated in the Cleave Tool. Do not hold onto the CONNECTOR BODY during the cleave process as this may induce undesirable torsion stress which will have adverse effect on cleave surface quality.



## Termination Instructions

### STEP 7

#### Install Outer Housing

- Insert CONNECTOR BODY with white INNER HOUSING into the OUTER HOUSING. The Simplex version is shown; however the Duplex and SC-RJ versions go together in a similar manner.
- Simply align the two corner flats on the white OUTER HOUSING with the same feature on the respective OUTER HOUSING and push in as far as it will go until a positive click is heard.



#### NOTE:

For the Duplex SC and SC-RJ versions, channel polarity is important. Make sure to orient so that if Channel A is Tx on one end it is Rx on the other end.

## Maintenance

### Importance of Cleave Tool Cleaning

The Cleave Tool included with OFS' Termination kits contains movable parts, wear items, and a diamond blade that require regular maintenance, care, or replacement after useful life in order to perform satisfactorily. Damage and parts replacement expense can result if recommended procedures and techniques are not followed.

- Diamond blade and gripper pads must be cleaned, kept oil free, and replaced if broken or worn
- The Cleave Tool trigger must be depressed slowly to allow the tool to work properly

### Cleave Tool Cleaning Kit

For cleaning your Cleave Tool, please order the OFS Cleave Tool Cleaning Kit (part # P16247) which includes special cleaning fluid. Swabs, and complete instructions.



## Trouble Shooting Guide

Problem	Dim-light termination/ no light termination	Poor cleave quality / High insertion loss	Fiber does not cleave	Fiber protrudes or recesses after cleave
Possible Explanations	<p>Improper ETFE strip technique resulting in HCS coating scratch. <i>See step 3.</i></p>	<p>Diamond blade needs to be cleaned or replaced if chipped.</p> <p>Gripper pads needs to be cleaned or replaced if too worn.</p> <p>Cleave tool trigger depressed too quickly.</p> <p>Improper crimp retention causing fiber to slip with respect to connector.</p>	<p>CONNECTOR BODY not fully inserted into cleave tool during cleave process.</p> <p>Did not let go of CONNECTOR BODY during cleave process.</p> <p>Diamond Blade chipped or broken.</p>	<p>Gripper pads need to be cleaned or replaced because the fiber is slipping through them.</p> <p>Improper cleave technique.</p> <p>Improper crimp retention causing fiber to slip with respect to connector.</p> <p>CONNECTOR BODY not fully inserted into cleave tool during cleave process.</p>

If you are still experiencing problems, please call for Technical Support 860 678 6636

## Termination and Test Kits Available

OFS offers various field termination kits and insertion loss tests kits configured to support each crimp & cleave connector type we offer. Contact a customer service representative to discuss your specific application.



This document is for informational purposes only and is not intended to modify or supplement any OFS warranties or specifications relating to any of its products and services.

Copyright © 2016 OFS Fitel, LLC.  
All Rights Reserved.

0416



55 Darling Drive, Avon, CT 06001

**To learn more, please call or visit our website.**

Phone: **1 860 678 0371**

Toll Free: **1 888 438 9936**

Web: **[www.ofsoptics.com](http://www.ofsoptics.com)**

**P61226 rev.B**

## **Trademark Information:**

Manufactured in the USA by OFS.

GiHCS and HCS are registered trademarks in the USA of OFS Fitel, LLC.