

## Product Overview

The Celerity Fiber Termination Kit (CT-FTK) is a professional tool set for splicing and terminating fiber optic cables in the field or at an assembly workstation. The CT-FTK includes all the necessary tools for proper and reliable fiber optic cable terminations.

## Included items



**Fiber scissor**  
to cut the fiber jacket, strength members & fibers



**Thermal stripper**  
to remove the fiber coating



**Fiber cleaver**  
to precisely cleave the bare fibers



**Brush**  
for cleaning the thermal stripper and fiber cleaver



**10X Magnifier**  
for viewing the fibers in the V-groove glass plate



**LED UV light**  
to cure the UV glue when applied to the fibers



**Tweezers**  
to place the bare fibers into the v-groove glass plate



**Plastic bottle**  
fill with isotropic alcohol for cleaning the bare fiber



**Tissues**  
for cleaning the bare fibers

## Required materials (not included)

ZapIt® Super Glue  
Isotropic alcohol

Recommended UV glue to bond the fiber to glass plate.  
to clean the bare fibers

## Step 1 - Fiber Scissors

Cleanly cut the fiber cable with fiber scissors.

Using fiber scissors, score and remove the cable jacket 1" (25mm) and then bending the yellow strength member yarn (Kevlar material) back so that the fiber ribbon is fully visible.

Cut the yellow strength member yarn at the jacket edge.



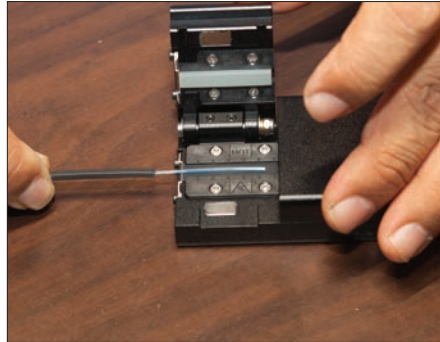
## Step 2 - Thermal Stripper

Connect the thermal stripper to its power supply. Do not turn on.

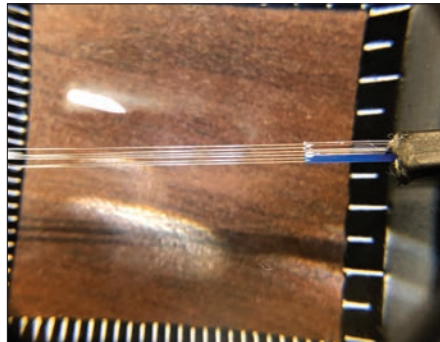
Open the magnetic top cover of the thermal stripper and insert 1" of the fiber ribbon in the center channel.

Close the magnetic top cover. Press the power button on the thermal stripper. Wait 3 seconds and slowly but firmly pull the fiber ribbon from the stripper. Proper technique result will be six fully exposed 3/4" (18 mm) long glass fibers.

Ensure that all six fibers are visible and are not damaged. If any blue color is visible on the fibers, this means the ribbon has not been correctly removed. Re-insert the fiber ribbon repeating the above steps. Confirm the ribbon has been fully removed. In some instances, it may be necessary to repeat Step 1.



**Precision guideline:** The fiber ribbon must be positioned in the thermal stripper ribbon channel perfectly straight to ensure that all 6 fibers are fully exposed and not damaged after stripping. View the fibers carefully before proceeding. If all 6 are not present and the same length, you must repeat step 2 for thermal stripping.



## Step 3 - Fiber Cleaning - before cleaving

Using the isotropic alcohol and wiping tissue, clean the fibers, gently wiping AWAY from the cable jacket to the end of the fibers. Check the fibers to be sure there is no damage.

## Step 4 - Fiber Cleaver

**WARNING: NEVER TOUCH THE FIBER CLEAVING BLADE. IT IS SURGICAL-GRADE SHARP AND TOUCHING CAN CAUSE INJURY.**

Position the fiber cleaver on a flat, stable surface. Open its top cover and fiber holder lid and insert the fiber ribbon carefully into the fiber ribbon alignment channel. The fiber ribbon channel is next to the single fiber channel which is used for cleaving single conductor fiber.

The 0.75" bare fibers must fully cross the two black pads.

Correct positioning of the fiber to the cleaving blade is accomplished as follows:

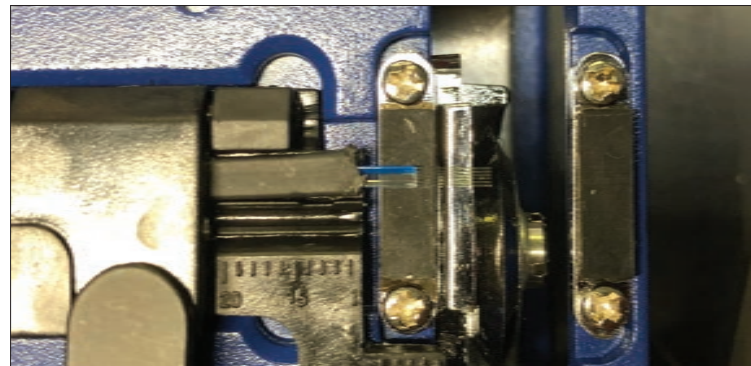
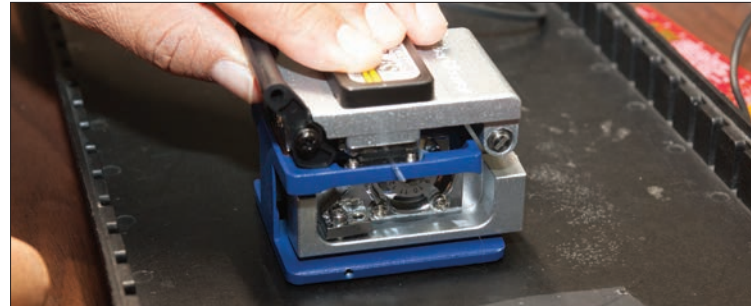
There is a blue coating along one side of the fiber ribbon. The end of the blue coating is a visual reference for the end of the fiber ribbon where the bare fibers become exposed.

Position the end of the blue coating at the inside edge of the black pad to the left of the cleaving blade.

Close the fiber holder lid and top cover and push in the cleaving blade assembly. The cleaving blade assembly will lock into place. Open the top cover and fiber holder lid and carefully remove the fiber cable. There should be, to the visual eye, 3/8" ( 9 mm) of 6 bare fibers remaining.

Carefully put the cable aside where the exposed and cleaved fibers cannot be damaged. Using the brush and holding the fiber cleaver over a trash receptacle, brush out the fiber channel to remove and safely dispose of fiber splinters.

**Precision guideline:** The 6 stripped and cleaned fibers must be positioned exactly in the fiber cleaver to ensure that the cleaved length of fibers will be 9mm. The 9mm cleaved fiber length is critical to step 6.



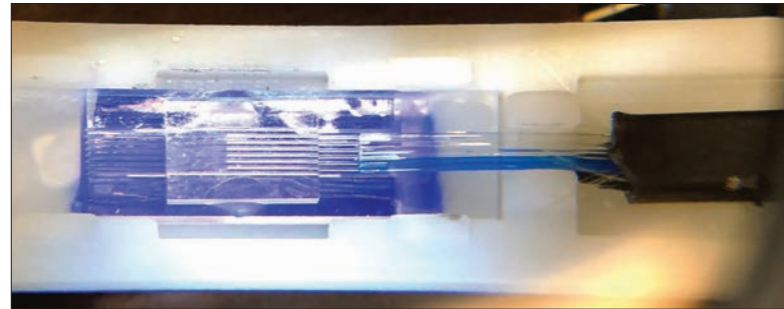
### Step 5 - 10X Magnifier and Mechanical Fiber Splice (MFS) bottom section

Place the 10X magnifier on a flat, stable surface. The magnifier includes two small LED lights for viewing the tiny fibers to be spliced. Turn on the LEDs using the switch on the side of the magnifier.

Place the bottom section of the CT-MFS under the magnifier. Inside the CT-MFS bottom section is a precision glass "v-groove" plate which serves to properly align the 6 fibers.

While viewing under the magnifier, use the tweezers to carefully position the bare fibers into the V-groove glass plate.

**Precision guideline:** The 6 fibers 9mm in length will perfectly fit into the v-groove glass plate and be secured under the top glass surface. View their position using the magnifier and ensure the fiber ends are at the mid-point. Ensure the blue alignment stripe is at the top as you view the fibers. Repeat the same process for the adjoining fibers. The two sets of fibers to be spliced will remain in place as glue is applied. View the splice after glue to ensure the fibers are aligned before proceeding to step 7





## Step 6 - Apply Glue and Curing Light

Continue working under the 10X magnifier, hold each fiber end with forefront and index fingers, use the other hand to carefully apply 1 drop of glue onto the center of the v-groove where the bare fibers meet.

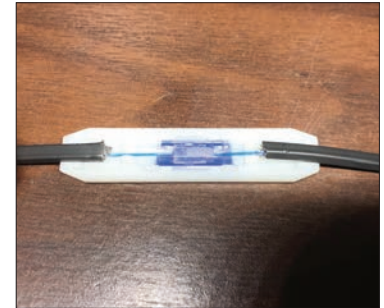
Hold for three (3) seconds and release. The glue will secure the splice for curing.

Place the LED curing light on the top of the 10X magnifier and turn on.

Hold the fiber end with forefront and index fingers, positioning the splice under the center of the curing light for 30 seconds.

The glue will cure.

Repeat steps 1-7 for the other end of the Celerity fiber ribbon to be spliced.



## Step 7 - Mechanical Fiber Splice (MFS) top section

Apply glue around edge of MFS. The top section will snap into place with the bottom section to protect the fiber splice.



