

SUMITOMO RECOMMENDED PROCEDURE

SRP SP-F02-007

Ribbon Access Procedure (MA-2)

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1.0 General

Optical fiber ribbons contain multiple, individually colored, 250µm optical fibers arranged in a flat linear matrix encapsulated by a UV cured polymer material. The ribbon structure is ideal for high fiber count cables, quick fiber identification, and mass splicing.

Sometimes, it is necessary to access individual fibers within a ribbon for distribution or emergency purposes. This document contains procedures for accessing individual fibers by removing the matrix encapsulate either at the end of a ribbon or in the middle of a continuous piece of ribbon (mid-span). The ribbon can be either 12, 24 or 36 fiber.

2.0 Safety Precautions

The use of safety eyeglasses is strongly recommended when handling optical fibers and ribbons. Ensure adequate ventilation when using isopropyl alcohol.

3.0 Reference Documents

SP-F02-004 ARMORLUX™ Cable
SP-F02-005 ADS™ Cable
SP-F02-006 Cable Mid-Span Access
SP-F02-008 Ribbon Indoor Riser
SP-F03-011 Ribbon Splitting Procedure

4.0 Tools Required

The following tools and materials are required to complete this procedure.

1. Procedure Instructions
2. RS-M1 12 Fiber Ribbon Splitter Tool
3. Surface Board
4. Double Sided Adhesive Tape
5. Isopropyl Alcohol for gel filled cables

5.0 Ribbon Access Procedure

5.1 Remove double sided tape from protective layer and place on top of the surface board. Overlap the tape on one end approximately 1/2". Remove second protective layer on double sided tape exposing the adhesive. (Fig. 1)

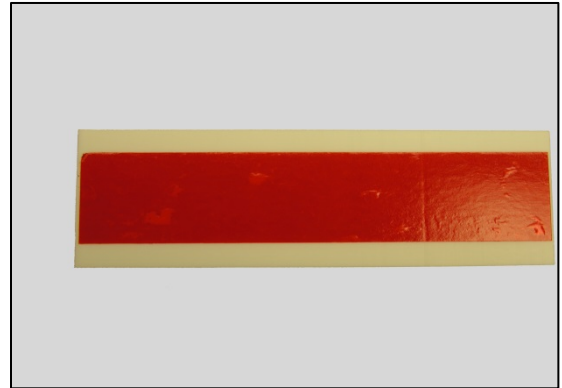


Figure 1

5.2 Clean ribbon thoroughly with alcohol if needed. Using the RS-M1 tool ensure that the ribbon is seated in the groove properly by pushing down on each side of the RS-M1 simultaneously. See (Fig. 2) below for proper alignment.

NOTE: If using a 24 or 36 fiber ribbon, the ribbon should be split into 12 fiber ribbons subsets using the RS-24 Ribbon Splitter Tool. Prior to peeling, refer to SP-F02-011.



Figure 2

5.3 Push button forward against ribbon until you feel the matrix split and stop movement of the button. Retract the button back into place before removing the ribbon from the tool (Fig. 3)



Figure 3

5.4 Place the section of ribbon where the RS-M1 tool split the matrix to the overlap side of the adhesive tape. This will ensure that the tape will not lift off of the board when removing the matrix coating. Run finger down the ribbon several times to ensure adhesion to the tape (Fig. 4).

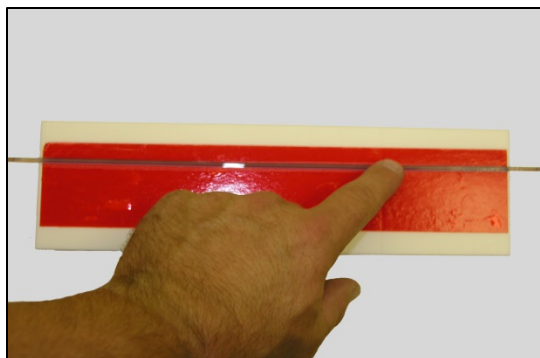


Figure 4

5.5 Carefully lift the ribbon at a 30° angle from the end applying a little back tension until the matrix has pulled from the fibers. Continue to slowly lift the fibers away from the tape section to remove the length of matrix from that side of the ribbon.(Fig. 5)

NOTE: If using a 12 fiber sub-unit of a 24 or 36 fiber ribbon, it is best to remove the outer layer of the matrix first by using only the doubled sided tape after splitting the ribbons. This will ensure that the ribbon has no excess matrix and will sit properly in the slot and not cause misalignment when splitting the matrix coating.

NOTE: For accessing fibers in live ribbons, maintain a shallow pull angle ($<30^\circ$) with tension. This will reduce any attenuation increase.



Figure 5

5.6 Flip the ribbon and repeat steps to remove matrix from the other side for the same region. To access longer lengths of ribbon, simply replace the ribbon on a section of clean tape to initiate the peel a second time if the free end of matrix is placed on the tape. Fibers are clean and ready for splicing or re-ribbonizing with ribbon arrangement tool (Fig. 7).

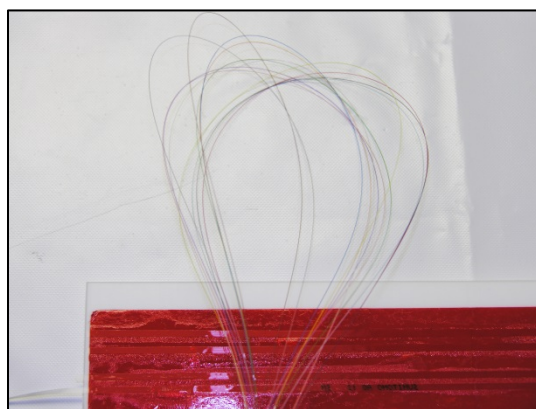


Figure 6