Fiber Adaptor Kit Installation

This document explains how to install the following fiber adaptor kits:

- P/N 91611035, for 75-350 x Ø1mm fibers. This has a diameter of 30mm and is supplied with an adaptor ring that increases the adaptor diameter to 38mm so that it will fit in the port of the FiberSource CMY150 fixture.
- P/N 91611034, for 350-800 x Ø1mm fibers. This has a diameter of 38mm.

The fiber adaptors are tapered to fit a varying number of fiber optic cables. The adaptor often needs to be cut for proper fit and maximum light output. Follow these instructions for the best cable fit and maximum brightness.

The kit includes:

- 1 x fiber adaptor
- 2 x cable ties
- 1 x roll of tape
- 1 x tube Loctite 401 glue
- 2 x files (fine and coarse)
- 1 x emery cloth

The following tools are required to install the fiber adaptor:

- 2 mm Allen wrench
- Hacksaw
- Cable stripper or sharp knife

Recommended cable length

The following guidelines provide a starting point for estimating your needs. Light transmission through fiber-optic cable depends on its quality and results will vary depending on the type of cable used.

Side-emitting cable

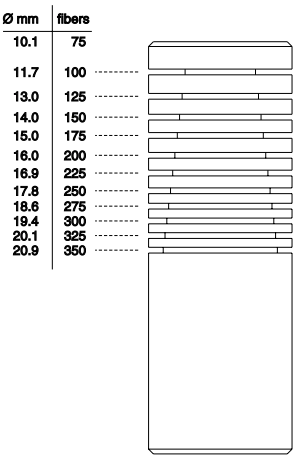
With a single fixture, best results are achieved when the fiber optic cable is 10 m (33 ft.) or shorter. The length may be increased to 15 m (50 ft.) by looping the cable and illuminating both ends. With two fixtures, one at each end of the cable, lengths up to 30 m (100 ft.) can be achieved.

End-emitting cable

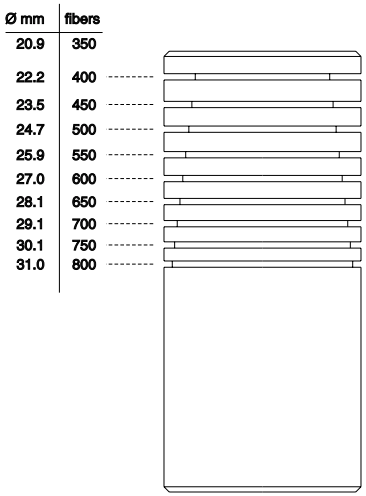
Light output decreases with length: keep the cable as short as possible. The maximum recommended length is 25 meters. Cut the light emitting end of the fibers with a sharp knife for maximum output.

Install cable in adaptor

1. The adaptor is cone-shaped internally so that it can accommodate a variety of cable quantities and sizes. It is likely that it will have to be cut to fit the cable that you use. Use one of the following illustrations (whichever is relevant for the adaptor you have) to find the position where your adaptor should be cut.

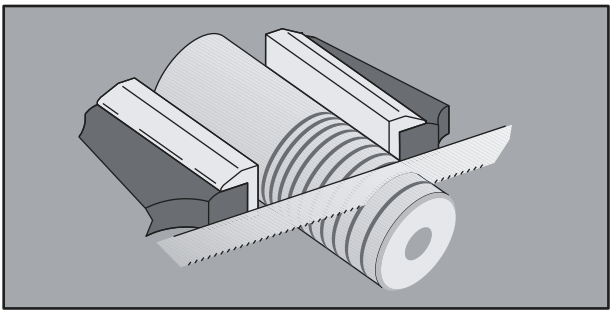


Fiber adaptor, 75-350 pcs.
Ø1mm fiber, D=30mm
P/N 91611035



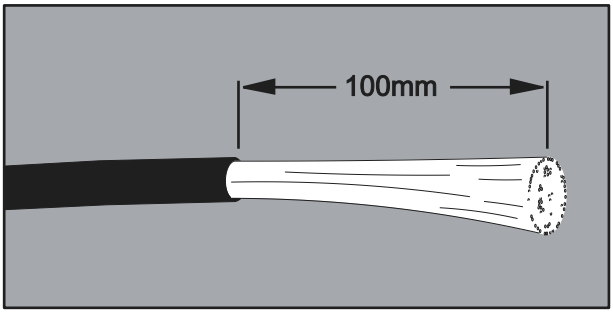
Fiber adaptor, 350-800 pcs.
Ø1mm fiber, D=38mm
P/N 91611034

2. Cut the adaptor with a hacksaw at that position.

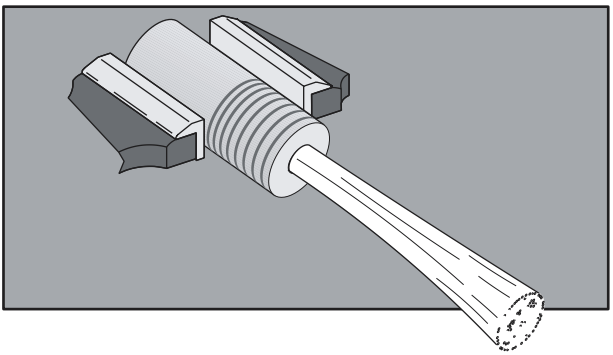


3. Using the emery cloth, wipe the inside of the adaptor to remove any burrs that could damage the fibers.

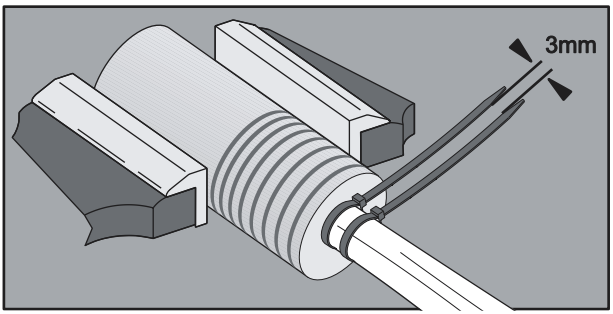
4. Prepare the fiber optic cable. Cut the cable to the desired length and carefully remove 100 mm (4 in) of the outer casing.



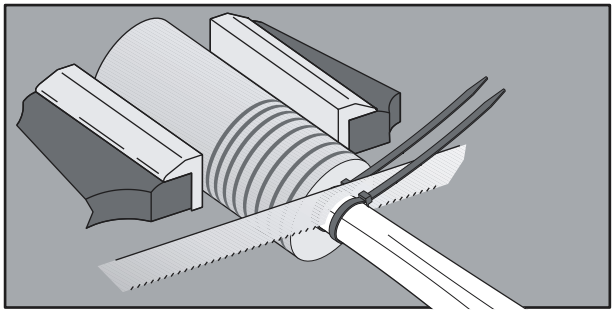
5. Insert the fibers fully into the adaptor. The fibers must fit snugly for the glue to hold. Pack the adaptor with a few extra fibers if necessary to achieve a snug fit.



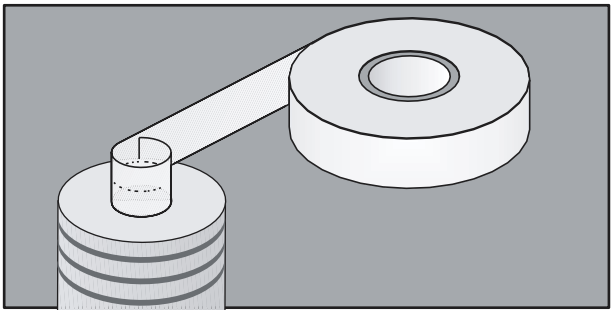
6. Wrap two cable ties (included) around the fibers about 3 mm apart at the end of the adaptor.



7. Cut the fibers between the ties.



8. Remove the remaining cable tie. Using the tape that is included with the kit, form a tape funnel around the fibers.

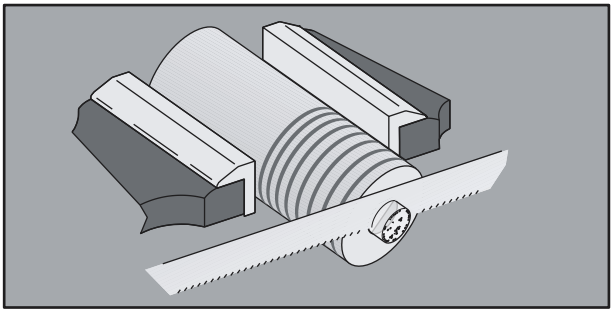


9. Pour Loctite 401 (included in the kit) into the funnel to fill approximately 3 mm (1/8”) above the fibers. Allow the glue to soak in, remove the tape, and allow to harden for 20 minutes.

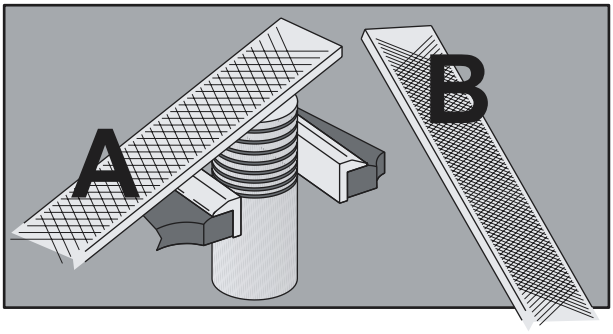


10. Turn the adaptor over and apply the remaining glue to the other end of the adaptor, so that it runs down between the fibers and the inside metal wall. This is to ensure that the fibers sit securely. With the adaptor in this upright position, allow the glue to harden for 20 minutes.

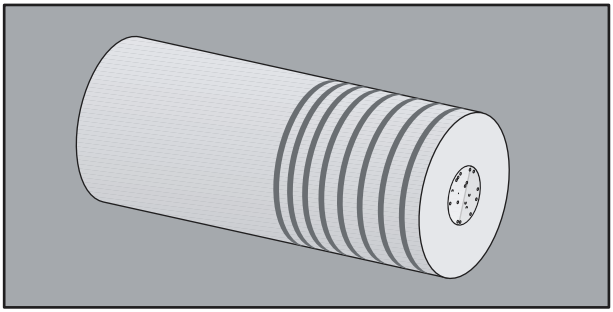
11. Saw off excess cable about 1 mm (1/32”) from the end of the adaptor.



12. File the fibers smooth using the coarse and then the fine file (included). It is very important that the edges of the fibers are polished to a smooth surface to ensure that light is passed to them effectively.



13. The adaptor is ready to be inserted into the FiberSource fixture.



Insert adaptor in fixture

1. If your adaptor is the smaller 30 mm diameter adaptor (P/N 91611035), then it is supplied with an adaptor ring that is used to increase the diameter to 38 mm. Place this ring onto the adaptor so that the end with the exposed fibers is flush with the adaptor ring and so that the locking screw is furthest away. Screw the adaptor ring into place using a 2mm Allen wrench.
2. Slide the adaptor into the port of the FiberSource CMY150 as far as it will go.
3. Tighten the locking screw in the fixture port using a 2mm Allen wrench to lock the adaptor into place.