



Installing Fiber Optic Cable in the FiberSource and RoboColor Pro 400

Introduction

The fiber adaptor is tapered to fit fiber optic cables from 8.3 mm (50 fibers) to 19.3 mm (300 fibers) in diameter. When the cable is over 8.3 mm in diameter, the adaptor must be cut shorter for proper fit and maximum light output. How far to insert the adaptor into the FiberSource or RoboColor Pro 400 varies with cable thickness as well. Please follow the instructions below for best cable fit and maximum brightness.

Recommended cable length

Side-emitting cable

With 1 fixture, best results are had 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 2 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. If you are installing a cable over 8.3 mm in diameter (50 1 mm fibers), cut the adaptor with a hacksaw at the position shown in Figure 1. See photo 1.
2. Prepare the fiber optic cable. Cut the cable to the desired length and carefully remove 100 mm (4 in) of the outer casing. See photo 2.
3. Insert the fibers fully into the adaptor. See photo 3. 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.
4. Wrap 2 cable ties (included) around the fibers about 3 mm apart at the end of the adaptor. Cut the fibers between the ties. See photos 4 and 5.
5. Remove the remaining cable tie. Form a tape funnel around the fibers. See photo 6.

6. Pour Loctite 401 (included) into the funnel to fill approximately 3 mm (1/8") above the fibers. See photo 7. Allow the glue to soak in, remove the tape, and allow to harden for 10 minutes.
7. Saw off excess cable about 1 mm (1/32") from the end of the adaptor. File the fibers smooth using the coarse and then the fine file. See photos 8, 9 and 10.

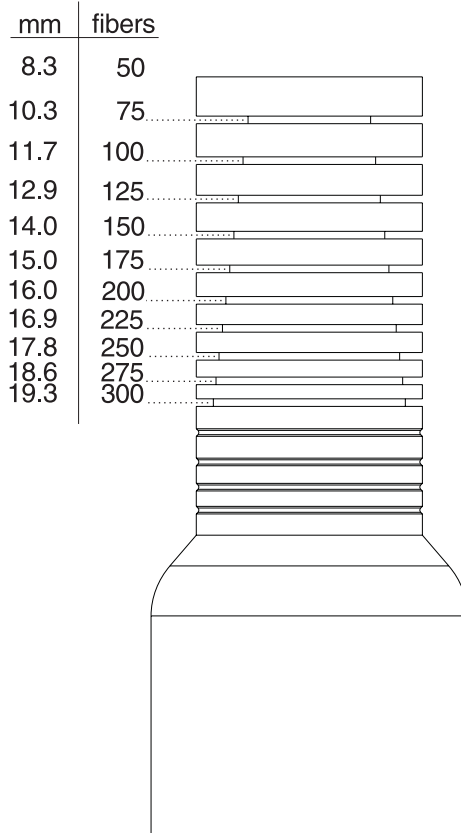


Figure 1: Cutting position for cables over 8.3 mm in diameter

Insert adaptor in fixture

Note: The ideal adaptor position depends on the cable diameter or number of fibers. Inserting the male fitting too far may damage the optic cable and/or the fixture.

1. Find the alignment position for the number of fibers or cable diameter in Figure 2.
2. Slide the adaptor into the shaft until alignment position is even with the face of the female fitting. *Do not fully insert the adaptor unless position 0 is indicated.*
3. Tighten the set screw.

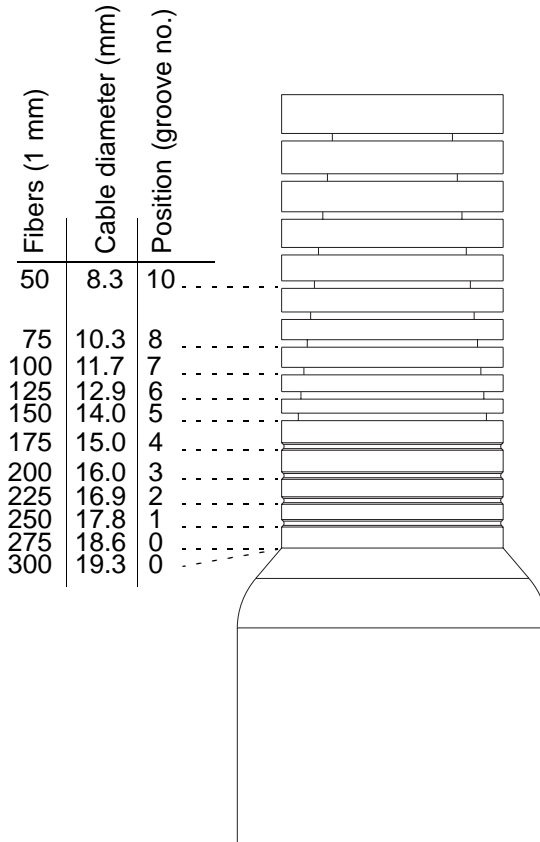


Figure 2: Adaptor alignment positions



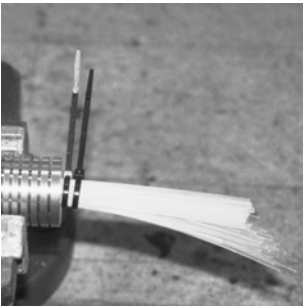
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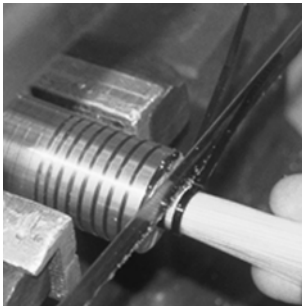
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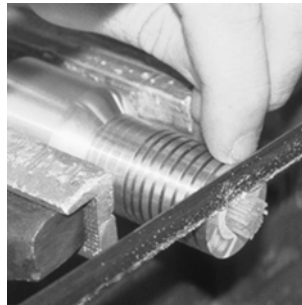
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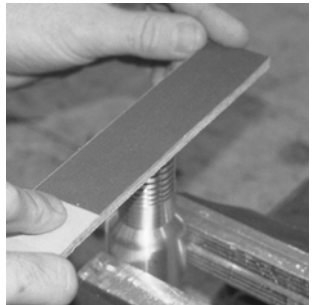
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