

How to strip thick optical cables



Overview

Note the cable diameter and jacket thickness for each cable – Stripping cables and fibers is a delicate process.

Key Takeaways

Stripping thick optical cables requires a layer-by-layer approach using precision fiber strippers, cutting tools, and careful handling to avoid damaging the glass fiber or inner coatings. Layer-by-Layer Stripping

Thick optical cables typically consist of multiple layers: the outer jacket, strength members (like aramid yarn), buffer coatings, and the acrylate coating protecting the glass fiber. Each layer must be stripped individually, progressively, rather than attempting to remove all layers at once. Start by stripping the outer jacket using a wire stripper or a notch designed for the cable diameter, taking care not to cut the underlying aramid yarn. Next, remove the aramid yarn and any inner tubing, ensuring the fibers remain intact. Finally, strip the buffer and acrylate coatings to expose the bare glass fiber for splicing or connectorization.

Tools and Methods

- **Mechanical Fiber Strippers:** Precision handheld strippers have multiple notches calibrated for different coating diameters, allowing safe removal of the outer jacket, tight buffer, and acrylate coating down to the 125 μm glass cladding.
- **Cutting Scissors:** Specialized fiber cable scissors, such as the CFS-2, can strip 125 μm fibers and 250 μm cladding without damaging the fiber, and are useful for cutting aramid yarn or small buffer layers.

- **Radial Cutters:** Tools like the RCS-0425 allow controlled radial cuts around thick insulation layers, with adjustable blade depth to prevent damage to inner fibers .
 - **Thermal or Air Strippers:** For certain coatings, heated air or thermal strippers can remove polymer layers cleanly without mechanical contact, reducing the risk of nicks or scratches .
- Best Practices**
- **Measure and Set Tool Depth:** Always adjust the stripper or cutter to match the cable diameter and jacket thickness to avoid cutting the glass fiber .
 - **Progressive Stripping:** Remove layers sequentially—outer jacket, aramid yarn, buffer, and coating—rather than attempting a single pass .
 - **Clean and Inspect:** After stripping, clean the fiber with a lint-free wipe and high-purity alcohol to remove residues, and inspect for nicks or scratches .
 - **Maintain Tools:** Keep cutting edges sharp and calibrated to ensure consistent, clean stripping and prevent fiber damage .
 - **Limit Strip Length:** Avoid stripping more than 50 mm at a time to reduce stress on the fiber and prevent accidental breakage . By following these techniques and using the appropriate tools, technicians can safely strip thick optical cables while preserving the integrity of the glass fiber, ensuring reliable splicing and connectorization.

Article Content

The “golden rule” in stripping

Note the cable diameter and jacket thickness for each cable – Stripping cables and fibers is a delicate process.

Fiber and Cable Stripper – Types, Uses & Guide

Learn how to use fiber strippers, cable cutting scissors, and armored cable slitters. Discover their applications in fiber

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Discover the importance of proper fiber cable stripping techniques and tools, including the Fusion Splicer. Learn how

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You have successfully completed this exercise when you have been able to strip the jacket and both buffer coating layers from the

NKT Photonics App notes

Safety Operators familiar with electronic wires and cables may not be aware of the special features of optical fiber and components.

Procedure for Cutting and Respooling Fiber Optic Cable

GENERAL 1.1 Improper use of a respooler (Figure 1) can cause damage to a cable jacket or result in wavy fiber in tight buffered

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Good fiber optic stripping techniques in your cable assembly process are crucial. See best practices for how to strip

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Understanding how to remove optical cable is crucial for maintaining the integrity of your audio setup and ensuring a

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Lesson: Stripping Optical Fiber Cable Objectives: From this lesson you should learn: How to use these tools to strip cable to the bare

Fiber Optic Cable Stripping Tools and Equipment

Shop our fiber optic cable stripping tools, essential for removing cable jackets, aramid yarn, and buffers to ensure optimal fiber optic

How do I cut the fiber optic filament or cable?

Cutting the fiber optic filament or cable is not as hard as it might seem. It's possible to cut the thinner diameter fibers (0.25 mm - 1.00

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Learn how to terminate fiber optic cable with connectors and splicing. Discover tools, techniques, and tips for precise

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