

Specific steps for stripping optical cables



Overview

Ultimate Guide: Fibre Optic Cable Stripping and Preparation In this informative guide, we'll walk you through the step-by-step process of stripping and prep.

Key Takeaways

Optical cables can be stripped using mechanical, thermal, chemical, or laser-based methods, each tailored to the cable type and coating to expose the bare fiber without damage. Mechanical Stripping

Mechanical stripping is the most common method and involves precision tools designed to remove coatings and jackets:

- **Handheld Fiber Strippers:** These tools remove polymer coatings (acrylate, silicone, polyimide) from the fiber over a defined length, typically 30–40 mm, without nicking the glass core. They are available in various hole sizes to match standard 125 μm fibers or specialty fibers with thinner coatings .
- **Layer-by-Layer Stripping:** Multi-layer cables require progressive stripping. First, the outer jacket is removed, followed by aramid yarn strength members, and finally the buffer coating around the fiber. Each layer must be stripped carefully to avoid damaging underlying fibers .



- **Specialized Scissors and Cable Cutters:** Tools like CFS-2 fiber cable cutting scissors or buffer tube coaxial strippers allow precise removal of outer sheaths and aramid fibers, with adjustable blade depths to prevent fiber damage .

Thermal and Chemical Methods

- **Thermal Stripping:** Heat is applied to soften the polymer coating, making it easier to remove. This method is often used for coatings that are difficult to strip mechanically.
- **Chemical Stripping:** Solvents can dissolve certain polymer coatings. After chemical treatment, fibers must be thoroughly cleaned with lint-free wipes and high-purity alcohol to remove residues .

Laser-Based Stripping

Laser stripping is a non-contact method suitable for high-precision applications:

- A focused laser beam is directed onto the cable's protective cover to form an axial groove without reaching the optical fiber. The groove is then opened to remove the split protective cover portion .
- This method is particularly useful for tight-buffered cables and harness manufacturing, where long sections of protective cover must be removed without stressing the underlying fiber or acrylate layer .

Best Practices

- **Inspect Cable Structure:** Identify layers such as jacket, buffer coating, strength members, cladding, and core before stripping .
- **Use Proper Tools:** Select strippers appropriate for the fiber type and diameter. Ensure blades are sharp and well-maintained .
- **Controlled Stripping:** Perform slow, deliberate movements to avoid scratches or nicks, which can lead to cracks and signal loss .
- **Cleaning:** After stripping, clean the bare fiber with high-purity alcohol or dedicated fiber cleaning agents to remove residues .
- **Safety:** Wear protective eyewear to prevent injury from flying debris during mechanical or laser stripping . By following these methods and best practices, optical fibers can be safely prepared for splicing, connectorization, or other processing, ensuring optimal signal transmission and minimizing the risk of fiber damage.

Article Content

Ultimate Guide: Fibre Optic Cable Stripping and Preparation

In this informative guide, we'll walk you through the step-by-step process of stripping and preparing fibre optic cable

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How to Properly Strip, Cut, and Test Fiber Optic Cables? In fiber optic installations, precision is critical to maintaining optimal signal

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Use the fiber strippers to strip ~1" (25mm) from the end of the fiber in 3 steps, about 1/4-3/8" (6-8mm) at a time. Hold the stripper at a

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Fiber stripping

Fibers must be stripped of all protective coatings prior to inserting into a connector. Mechanical stripping, by far the

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Complete Guide: How To Terminate Fiber Optic Cable

Fiber optic connectors (SC, LC, ST, FC, etc.) provide a pluggable interface for optical fibers, similar to the

Fiber Strippers – tools, mechanical, thermal, chemical, plasma,

Fiber strippers are precision tools that remove a coating from a fiber before connectorization or splicing. There are mechanical,

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Learn how to install optical cable correctly, from choosing the right fiber type to terminating, cleaning, and testing your

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