How is optical fiber cable stripped

Article Overview

Stripping optical fiber involves carefully removing the protective jacket and buffer layers to expose the bare fiber for splicing or termination.

Overview

Stripping fiber optic cable is a critical step in preparing fibers for fusion splicing or connectorization. Proper stripping ensures a clean, defect-free fiber end, which is essential for optimal signal transmission and network performance. Damaging the fiber during stripping, even with a small nick or scratch, can lead to cracks or connection failures under stress or thermal cycling .

Tools Required

o Fiber optic strippers: Specialized tools with grooves for different fiber diameters (e.g., 900 um and 250 um buffers) to remove coatings without breaking the fiber .
o Kevlar scissors: For cutting the cable jacket and aramid yarn.
o Alcohol wipes or cleaning solution: To clean the stripped fiber end.
o Fiber cleaver: To create a clean, perpendicular end face.
o Inspection microscope or Visual Fault Locator (VFL): To check the cleaved fiber for defects.

Step-by-Step Stripping Process
o Safety first: Wear safety glasses and work in a clean, well-lit area free of dust and debris .
o Cut the cable jacket: Use Kevlar scissors to cut the cable at the desired location.
o Remove the outer jacket: Use the largest groove on the fiber stripper to gently cut and pull off about 2 inches (50 mm) of the jacket .
o Trim aramid fibers: Cut the aramid yarn close to the jacket end and wind them into a bundle for easier handling.
o Strip the buffer layers: Remove the 900 um and 250 um buffer coatings in small steps (about 6-8 mm at a time), holding the stripper at a 45-degree angle to reduce stress on the fiber .
o Clean the fiber: Use alcohol wipes or a microfiber cloth to remove debris and ensure a clean surface for termination .
o Cleave the fiber: Use a fiber cleaver to create a smooth, perpendicular end face.
o Inspect the fiber: Check the cleaved end under a microscope or with a VFL to ensure it is free of defects .
o Protect the fiber: Cover the prepared ends with protective caps or sleeves until termination.

Best Practices

o Strip each layer progressively; do not attempt to remove all layers at once .

o Avoid excessive force to prevent micro-cracks in the fiber.
o Dispose of fiber scraps safely in a marked container to prevent injury .
o Follow manufacturer guidelines for stripper blade depth and cleaver settings.

Methods of Stripping

o Mechanical stripping: Uses hand tools or automated strippers to remove coatings without chemicals .
o Chemical or thermal stripping: Uses hot sulfuric acid or controlled hot air to remove coatings, typically in specialized preparation units . Proper stripping and preparation of fiber optic cables are essential for reliable network performance, minimizing signal loss, and preventing costly repairs in the field .

First, strip the outer sheath of the optical fiber with optical fiber strippers; remove the stripped

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

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

Fiber optic termination is a necessary step for installing a fiber optic network. It is a physical connection of a fiber optic

Stripping is the act of removing the protective polymer coating around optical fiber in preparation for fusion splicing. The splicing

Good fiber optic stripping techniques in your cable assembly process are crucial. See best

Fiber & Cable Stripper for Fiber Tools 1. FOS03 Fiber strippers remove the coating from the fiber optic cable to expose

Fiber Optic Termination Tutorial We terminate fiber optic cable two ways - with connectors that can mate

How to terminate fiber optic cable?Fiber optic termination is the process of preparing and connecting the end of a fiber optic cable

FIBER HANDLING, STRIPPING, CLEAVING AND COUPLING This application note addresses general handling of fibers from NKT

Splicing and termination procedures require the removal of a section of the optical fiber"s protective coating.

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It is crucial that the

A fiber stripper is a precision tool used to remove the protective polymer fiber coatings from an optical fiber. This process exposes

Proper stripping can be done with strip tools designed specifically for the diameter buffer you are trying to strip. These are generically

Conclusion Terminating a fiber optic cable requires precision and care. Whether using epoxy and polish or pre

The preparation process before inserting the fiber into the splicer is important. Let"s discuss fiber splicing methods,

Fiber Optic cable termination is the addition of connectors to each optical fiber in a cable. The fibers need to have connectors fitted

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