Steps for stripping fiber optic pigtails

Overview

How to Splice Fiber Optic Pigtails: A Step-by-Step GuideMaster the art of fiber termination. Learn how to splice fiber optic pigtails using fusion splicing.

Key Takeaways

Fiber optic pigtails can be stripped using mechanical, thermal, or chemical methods, with specialized tools and safety precautions to avoid damaging the fiber.

Mechanical Stripping

Mechanical stripping is the most common method and involves using precision fiber strippers designed for specific fiber diameters and coatings. Standard telecommunication fibers typically have a 125 µm glass cladding with a 250 µm coating, while specialty fibers may have thinner coatings (e.g., 200 µm). Handheld strippers or automated systems remove the coating over a defined length (usually 30–40 mm) without nicking the glass.

Multi-layer cables require progressive stripping of each layer, including tight buffers (900 µm) and outer jackets, using tools like tri-hole strippers or flat drop cable slitters.

Thermal Stripping

Thermal strippers soften the polymer coating using controlled heat, making it easier to remove without mechanical force. Devices such as the Vytran FFS-2000 or FiberStrip 7030 are commonly used. Thermal stripping is effective for fibers with high-temperature coatings and reduces the risk of microfractures caused by mechanical blades.

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Chemical Stripping

Chemical stripping involves dissolving the fiber coating using solvents or acids. For example, exposing the coating to 120°C sulfuric acid for a short period or applying gel-based paint strippers can soften the coating for removal. Care must be taken to protect the fiber tip and comply with local regulations, as some chemicals like dichloromethane are hazardous.

Best Practices

Safety: Always wear safety glasses and gloves to protect against fiber shards and improve grip. Tool Selection: Use strippers matched to the fiber's cladding and coating diameter. Color-coded blades and fiber guides help ensure consistent stripping.

Cleaning: After stripping, clean the bare fiber with lint-free wipes and high-purity alcohol to remove residues. Avoid Damage: Do not strip more than ~50 mm at a time to prevent weakening the fiber. Ensure the cut edge is straight and clean, avoiding jagged or angled cuts.

Specialty Fibers: Adjustable strippers or automated systems are recommended for non-standard diameters or high-precision applications. By following these methods and precautions, fiber optic pigtails can be safely and efficiently prepared for splicing or connectorization, ensuring reliable optical performance.

Article Content

How to Splice Fiber Optic Pigtails: A Step-by-Step Guide

Master the art of fiber termination. Learn how to splice fiber optic pigtails using fusion splicing, follow the color code, and ensure low insertion loss.

How to Install Fiber Optic Pigtails (Step-by-Step Guide)

Remove the outer coating carefully to expose the fiber. Use alcohol wipes to remove dust and debris. Make a precise cut for optimal splicing. Align and fuse the pigtail fiber with the main

"Fiber Splicing Pigtails | Step-by-Step Guide for Beginners"

In this detailed video, we''ll walk you through the fiber optic pigtail splicing process — from preparation to final testing.

Fiber Optic Pigtail: The Complete Guide to Types,

Confused about fiber optic pigtails—which connector type, which polish, fusion or mechanical splice? Our guide covers LC vs SC, APC vs UPC,

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Stripping Techniques For Your Fiber Optic Cable

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

Fiber Splicing & Winding Tutorial – Step-by-Step Guide

Learn fiber splicing and winding in 5 steps with pro tips on stripping, cleaving, fusion, and sleeve protection. Ensure low-loss, reliable fiber connections.

Optical Fiber Coating Stripping Skills for Fiber Optic Pigtails ...

In this article, we will delve into the skills and techniques required for effectively stripping the coating from optical fiber pigtails. The Importance of Proper Stripping Properly stripping the

Tutorial Passive Fiber Optics, Part 5: Fiber Ends

In most cases when a fiber is used, it is essential to prepare clean endfaces. A first step is usually to strip the polymer coating on the last centimeters, using a fiber stripper. In problematic cases, one

How To Terminate Fiber Optic Cable: Connectors & Splicing

You''ll learn what tools each method requires, the step-by-step process for both single-mode and multimode fiber, and the common mistakes that lead to failed connections.

Stripping-Instructive-Flat-Drop-Fiber-Optic-Pigtail

The pigtail is a high-quality optical assembly manufactured using custom connectors to accomodate another fiber cable in a tray, rack or splice closer. These factory preterminated flat drop pigtails are

Fiber and Cable Stripper – Types, Uses & Guide

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

The Comprehensive Guide to Fiber Termination Boxes

Fiber Termination Boxes organize and protect fiber optic cables, ensuring reliable, high-speed network connections in challenging environments.

Optical fiber cold splicing and hot melting steps

Optical communication is now the dominant network transmission method in society, which is nothing more than because it has many advantages and is now a new transmission

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Best Fiber Optic Splice Kit: Top Kits for DIY and Professional Fiber ...

It includes a fiber optic cleaver, OPM (with RJ45 capability), stripping pliers, cleaning materials, and a fixed-length device. The X5 cleaver is designed for bare fiber, pigtails, and jacketed

The FOA Reference For Fiber Optics

The Installation After the process of designing fiber optic networks is completed, the next step is to install it. What do we mean by the “installation process?” Assuming the design is completed, we''re looking

7 Best Fiber Optic Termination Kit | End-Face Flat

Whether you are terminating drop cables for FTTH builds or prepping pigtails in a data center, the best fiber optic termination kit must combine a high-precision

Tutorial Passive Fiber Optics, Part 6: Fiber Joints

Tutorial: Passive Fiber Optics This is part 6 of a tutorial on passive fiber optics from Dr. Paschotta. The tutorial has the following parts:

How To Strip Fiber Optic Cable | Instructional

In this instructional video, Bob Licari, Test Equipment Product Manager, demonstrates a simple way to strip optical fiber.

Related Video Reference

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