

RIVO MULTITRADE OPTICAL SYSTEMS

APC type pigtail fiber



Overview

The fiber pigtails are designed to support fusion and mechanical splicing for fiber cabling systems.

Key Takeaways

APC stands for Angled Physical Contact, a type of fiber connector polish designed to minimize back reflection in optical fibers. Definition and Purpose

In a fiber optic pigtail, APC refers to the polishing style of the connector end face, where the fiber tip is polished at an 8-degree angle rather than flat or slightly curved as in PC or UPC connectors. This angled polish directs reflected light into the fiber cladding instead of back toward the light source, significantly reducing back reflection and improving signal quality.

Performance Characteristics

- **Return Loss:** APC connectors typically achieve a return loss of -60 dB or greater, which is higher than UPC connectors (-50 dB), making them ideal for high-precision applications.
- **Insertion Loss:** The amount of optical power lost through the connector is similar to UPC connectors, but APC excels in minimizing reflected light that can interfere with sensitive equipment.
- **Color Coding:** APC connectors are usually green, distinguishing them from blue UPC connectors.

Applications in Pigtails

A fiber optic pigtail is a short fiber with a factory-terminated connector on one end and a bare fiber on the other, designed for fusion or mechanical splicing to the main fiber line . Using an APC connector on the pigtail ensures that the connection to active equipment, such as ODF ports or optical transceivers, maintains low reflection and high signal fidelity, which is critical in FTTH networks, high-speed data centers, and RF-over-fiber systems .

Comparison with Other Polishes

- PC (Physical Contact): Slightly curved end face, return loss ~ -40 dB, older standard .
- UPC (Ultra Physical Contact): Domed end face, return loss ~ -50 dB, suitable for most digital and analog systems .
- APC (Angled Physical Contact): Angled end face, return loss ~ -60 dB, optimal for minimizing back reflection in high-performance networks . In summary, APC in a pigtail fiber ensures superior optical performance by reducing reflected light, making it the preferred choice for single-mode fiber applications where signal integrity is critical.

Article Content

Fiber Patch Cord & Pigtail: Types, Termination & Selection Guide

Comprehensive guide to fiber patch cord and pigtail types, LC/SC/FC/MPO connectors, UPC vs APC polish, insertion

SC/APC Fiber Optic Pigtail — FTTH Splicing | TTI

Standard SC/APC pigtail for fusion splicing at optical line terminals and optical network units in GPON, XGS-PON, and EPON fiber-to

Fiber Optic Pigtail: The Complete Guide to Types, Splicing Methods ...

This guide covers everything: what fiber optic pigtails are, how they differ from patch cords, which connector and

Fiber Optic Pigtails

ShowMeCables offers a wide variety of fiber optic pigtails with LC, LC-UPC, SC, SC-UPC and ST connector types and in lengths of 1

Understanding Fiber Connector Types ST SC LC FC with UDP or APC

Understanding Fiber Connector Types: SC/APC,SC/PC, LC/UPC,LC/APC, ST/PC, FC/PC,FC/APC Table of Contents How Thor

Fiber Pigtails | Single-mode & Multimode Fiber Pigtails | Amerifiber

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These pigtails feature premium-grade jackets and are equipped with LC, SC, ST, and FC connectors, typically with a 0.9mm outer

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Fiber Optic Pigtails

SC Fiber Optic Pigtails We supply SC fiber optic pigtails, including the single mode and multimode types, these SC fiber pigtails are

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Fiber Optic Pigtail: Types, Splicing Guide, Specs & Price

Technicians use FC/APC or SC/APC reference-grade pigtails with individual IL/RL test reports to calibrate OTDRs and

Fiber Pigtails

The fiber pigtails are designed to support fusion and mechanical splicing for fiber cabling systems. They are available separately or in

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Our pigtails are available in 12 fiber counts, making it easy to install large quantities of fiber in a short amount of time. With a 900um

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