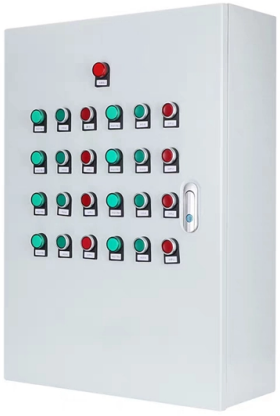
Fiber optic PC and APC



Overview

It''s important to never directly mate an APC connector (green) with a UPC or PC connector (blue or black), as this can damage the fiber surfaces.

Key Takeaways

PC (Physical Contact) and APC (Angled Physical Contact) are fiber optic connector types distinguished by their end-face polish, affecting return loss and signal reflection.

P

C (Physical Contact) ConnectorsPC connectors were the earliest fiber polish type, featuring a slightly curved or convex end-face that allows the fiber cores to make direct contact, minimizing air gaps between fibers. This design reduces optical return loss (ORL) compared to flat connectors, but typical return loss is around -40 dB, which is relatively high by modern standards.

P

C connectors are largely used in older telecom systems where back reflection is less critical. They are compatible with other flat or slightly domed connectors but are generally being replaced by UPC and APC connectors in new installations.

AP

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C (Angled Physical Contact) ConnectorsAPC connectors feature an 8° angled ferrule end-face, which directs reflected light into the fiber cladding rather than back toward the source. This significantly reduces back reflection, achieving a return loss of around -60 dB, making APC ideal for high-frequency applications such as RF, CATV, L-Band satellite, GPS, and long-distance single-mode links. The angled design also helps maintain signal integrity in systems sensitive to reflections, such as WDM and PON networks.

AP

C connectors are typically color-coded green for easy identification and must be mated with other APC connectors to maintain performance.

Key Differences Between P

C and APCFeaturePCAPCEnd-face geometrySlightly curved/convex8° angledReturn loss~-40 dB~-60 dBBack reflectionHigherMinimalTypical applicationsLegacy telecom, low-demand systemsHigh-frequency RF, CATV, WDM, PON, long-distance single-modeCompatibilityCan mate with PC or UPCMust mate with APC onlyColor codingBlue or blackGreenSummaryPC connectors provide basic physical contact suitable for older or less demanding systems, while APC connectors are optimized for low back-reflection and high-performance optical networks. Choosing the correct connector type is critical for minimizing signal loss and ensuring network stability, especially in high-speed or analog systems.

Article Content

APC, UPC, PC Fiber Connector Types Comparison and

Today, this post will introduce APC, UPC, and PC fiber connector types, which are classified based on the different angle polished fiber end face

Understanding Fiber Connector Types: SC/APC,SC/PC,

It''s important to never directly mate an APC connector (green) with a UPC or PC connector (blue or black), as this can damage the fiber surfaces. If such a

UPC, PC and APC Fiber Connectors Guide | PHILISUN

UPC, PC, and APC connectors differ in polish type, return loss, and application. This guide explains how each connector works and helps you

PC vs UPC vs APC Connector: Selecting the Right Fiber Connector

This post introduces the three connector polish types: PC vs UPC vs APC and gives a comparison of the fiber connector types in terms of their appearance, performance, and application.

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PC vs UPC vs APC Fiber Connectors – What is the

This article explains the differences between PC, UPC, and APC fiber connector polishes and their typical reflectance loss values. Learn how

Fiber Polish Types: PC, UPC, APC, SPC Differences

The four fiber polish standards explained. PC, SPC, UPC, and APC: what each polish means, the return loss specifications, the geometry differences, and which

PC vs UPC vs APC Connectors: ORL, Geometry and System-Level

This engineering guide dives into the physics, geometry, optical return loss, and system-level requirements behind PC/UPC/APC polishing styles and provides a complete selection

How to Choose Between PC, UPC, and APC Fiber

Compare PC vs UPC vs APC fiber connectors to choose the best type for your network. Understand differences in return loss, insertion loss, and

APC vs UPC vs PC Fiber Connectors: Differences, Uses, and

Discover the key differences between APC, UPC, and PC fiber connectors. Learn their designs, return loss, and ideal applications in FTTH, data centers, and telecom networks.

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What Is Fiber Patch Cord? Singlemode/Multimode,LC SC FC,UPC Vs APC ...

LC or SC connector? UPC or APC polish? This article systematically introduces fiber patch cord basics, optical specifications and full-range industry applications to help you make correct

50-feet-long fiber optic HDMI cable and Steam Controller 2 is ...

First is the 50-foot-long fiber-optic HDMI 2.1 cable that can carry the signal over long distances without degradation or latency. It costs $75 and sits there, running along the molding of the house.

High-Performance Fiber Optic Attenuators | Reliable Signal Reduction ...

Explore our high-performance Fiber Optic Attenuators at Fiber4u. Designed for precise signal attenuation, our attenuators ensure optimal network performance. Rely on us for 20 years of

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1x8 Single Mode Fiber Optic Splitters

1x8 Single Mode Fiber Optic Splitters 1310 / 1550 nm Dual-Window Planar Splitters Split Input Evenly into Eight Ports 2.0 mm Narrow Key FC/PC or FC/APC Connectors

Fiber Optic Patch Cables: The Complete 2026 Buyer''s Guide

Confused by LC, SC, MPO, UPC, and APC? This complete fiber optic patch cable guide covers connector types, single-mode vs multimode, insertion loss specs, and how to choose the right

Fiber Connectors

Our selection includes PC, UPC, and APC Fiber Optic Connector polish types. Most Fiber Cable Connectors are spring loaded so that the fiber faces are pressed together when the connectors are

SeaMAX SM-PC-LC/UPC-SC/APC-2-D, Optical cord, 2m, duplex,

The SeaMAX SM-PC-LC/UPC-SC/APC-2-D Fiber Optic Patch Cord is a premium duplex singlemode fiber optic cable designed for reliable optical connectivity in FTTH, GPON, EPON,

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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