Fiber optic APC and PC

AI Overview

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.PC (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 . PC 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 .APC (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. APC connectors are typically color-coded green for easy identification and must be mated with other APC connectors to maintain performance .Key Differences Between PC 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 t...

Article Content

The FOA Reference For Fiber Optics

Fiber optic joints or terminations - where cables are terminated - are made two ways: 1) connectors that mate two fibers to create a temporary joint and/or

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

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

Modern fiber connectors are virtually all UPC or APC for single-mode applications, and PC for multimode. You may encounter SPC connectors in legacy plant

PLC Splitter 1*N Steel Tube SC APC/UPC 0.9mm Fiber Optic for Data ...

Quality Fiber Optic PLC Splitter from factory, PLC Splitter 1*N Steel Tube SC APC/UPC 0.9mm Fiber Optic for Data Center Telecom FTTX, USD2-32/pc,1 MOQ,China

Addon Networks 1442705Pg2-Ao Network Transceiver Module Fiber Optic

SMF, SFP, LC, BX, max. 15 km, 10G, 1550nmTx/1310nmRx, Non-DOM AddOn Networks 1442705PG2-AO. SFP transceiver type: Fiber optic, Interface type: SFP, Fiber optic connector: LC. Product colour:

Ultimate Guide to APC, UPC, and PC Fiber Optic Connectors: Types ...

Explore the key differences between APC, UPC, and PC fiber optic connectors. Learn about their performance, compatibility, applications, and expert selection tips to optimize your network.

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.

DIGITUS OS2 Fibre Optic Cable

The single-mode simplex fibre optic cable allows for easier installation due to its bending insensitive property. It is designed to transmit data with lower attenuation when bent or twisted, making it very

Understanding Fiber Optic Pigtails: Types and

Characterized by having an optical fiber connector on one end and a bare fiber end on the other, they are primarily used to connect optical

3M Fiber Optic Patch Cords and Pigtails

3MTM Fiber Optic Patch Cords and Pigtails 3MTM Patch Cords provide the interface between distribution cables and active optical equipment. Patch cords are offered in simplex and duplex cable

PC vs UPC vs APC Connector: Selecting the Right

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

Buy fiber optic couplers from the experts

High-quality fiber optic connectors and couplers are essential for a reliable fiber optic transmission. In our online store, we offer a wide range of fiber optic connectors

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 Optic Patch Cord

Fiber Optic Patchcord Series by Fiber4u For over 20 years, Fiber4u has been the top choice for fast, cost-effective solutions in Fiber Optics, Rack Cabinets, and Copper network products. By partnering

50-feet-long fiber optic HDMI cable and Steam

An enthusiast is DIYing his own Steam Machine through ancient, lost methods known as cables that turn his existing PC into the perfect couch gaming setup. As expected, the Steam

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

Types of Fiber Optic Cable Connectors and Their Uses

Choosing the Right Types of Fiber Connectors When choosing among different fiber connectors, consulting a fiber optic connector types chart might help. Knowing

Fiber Color Code: A Simple Guide for Beginners (2024)

Fiber optic cables for external plants and premises, such as fiber optic distribution cables and fiber optic patch cables, often use colored outer jackets or

pingyin-smart-building-fiber-optic-cable-manufacturer ...

Matching products Fiber Optic Cabling System | Parallel Optics Cabling E-2000™ Connector - Simplex, Duplex | PC and APC/UPC High-Fiber Optic Cabling System - PreCONNECT® STANDARD 19"

The 2026 Fiber Optic Pigtail Guide: SN/CS/MDC, Bend

Discover the 2026 Fiber Optic Pigtail Guide—covering SN/CS/MDC VSFF connectors, bend-insensitive OS2 G.657.A2, OM5 ribbon pigtails and AI

What is a Fiber Optic Adapter: The Most Complete Guide

In the precision-driven world of fiber optic networking, where signal integrity, latency, and density are paramount, the fiber optic adapter is one of the

The Most Common Mistakes When Installing Fiber Optic Patch Cables

Fiber-optic patch cables are easy to install, but installers can also damage them. Many network problems blamed on switches, transceivers, or patch panels actually stem from poor cable

What Is A Fiber Optic Pigtail

Defining the Fiber Optic Pigtail: Purpose and Fundamental Role A fiber optic pigtail is a short segment of optical fiber cable (typically 0.5–3 meters,

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

PC vs UPC vs APC Connectors: ORL, Geometry and

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

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

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