Fiber optic connector FCAPC



Overview

FC/APC Fiber Connectors: Single Mode These FC/APC connectors have an 8° pre-angled ceramic ferrule, which when properly polished, results in a typical retu.

Key Takeaways

The FC/APC connector is a fiber optic connector with an 8° angled ferrule designed to minimize back reflections and improve return loss in optical systems.

Overview

The FC/APC (Ferrule Connector/Angled Physical Contact) is a type of fiber optic connector that features a pre-angled 8° ceramic ferrule, which reduces back reflections and enhances return loss compared to standard FC/PC connectors (Physical Contact) (Thorlabs). The connector is typically used with single-mode and low numerical aperture multimode fibers and is widely applied in telecommunications, CATV, LAN, WAN, and test & measurement systems (CTEC).

Key Features

Angled Ferrule: The 8° angle ensures that reflected light is directed into the cladding rather than back into the source, improving signal quality and reducing interference (Thorlabs). Narrow Key Design: FC/APC connectors often have a 2. 0 mm narrow key, which ensures proper alignment and prevents mating with incompatible connectors (Thorlabs).

Compatibility: FC/APC connectors can only be mated with other FC/APC connectors to maintain the angled contact and optimal return loss (Thorlabs). Return Loss Improvement: For fibers with low numerical apertures (e.g., 0. 22–0.

© 2026 EXF OPTICAL NETWORKS - All rights reserved

275 NA), FC/APC connectors can improve return loss by approximately 7–11 dB compared to FC/PC connectors (Thorlabs).

Applications

Fiber Optic Couplers: FC/APC connectors are standard on devices like 1x4 or 2x2 optical fiber couplers, which are used to split or combine optical signals in bi-directional systems (Newport).

Telecommunications and CAT

V: They are commonly used in high-speed networks where low back reflection is critical (CTEC). Laboratory and Test Equipment: FC/APC connectors are preferred in precision optical setups and measurement systems due to their stable optical performance (Thorlabs).

Handling and Maintenance

Dust Protection: Use connector caps to protect the ferrule end face when not in use, as dirt can cause permanent damage and increase coupling losses (Thorlabs). Cleaning: Always clean the fiber tip before connecting to prevent signal degradation (Thorlabs).

Summary

The FC/APC connector is a high-performance fiber optic connector designed for applications requiring low back reflection and high return loss. Its angled ferrule, narrow key alignment, and strict mating rules make it ideal for telecommunications, CATV, and precision optical systems, while proper handling and cleaning ensure long-term reliability and optimal signal quality.

Article Content

FC/APC Fiber Connectors: Single Mode

These FC/APC connectors have an 8° pre-angled ceramic ferrule, which when properly polished, results in a typical return loss of 60 dB. Each connector

Fixed Focus Collimation Packages: FC/APC Connectors

These fiber collimation packages are pre-aligned to collimate light from an FC/APC-terminated fiber with diffraction-limited performance. Because these fiber

FC/APC Series

Wide operating temperature range, threaded retention, and RoHS compliance make FC/APC connectors suitable for military communications, shipboard fiber

FC connector

© 2026 EXF OPTICAL NETWORKS - All rights reserved

The FC connector is a fiber-optic connector with a threaded body, which was designed for use in high-vibration environments. It is commonly used with both

Fiber Connectors

Fiber connectors are often used as the terminations of optical fiber cables to provide non-permanent connections between fiber-coupled devices (a kind of removable

Understanding Fiber Connector Types ST SC LC FC

When working with fiber optic technology, you''ll frequently encounter terms like SC UPC, LC UPC, SC APC, LC APC, FC APC, and FC UPC. These designations

Fiber Optic Connectors Explained: Design, Types

Fibers in lasers are found in the medical, industrial equipment, military, and transportation industries. There are many different connectors for

Fiber Optic Adapter Connector LC, SC, ST, FC, FC (Male) to LC

Complete fiber connector kit : Products include LC, SC, ST, FC, FC Male to LC Female, SC/UPC Male to SC/APC Female six connectors and adapters for seamless compatibility with various fiber optic

Fiber Optic Connectors

Online shopping for Connectors - Fiber Optic Products from a great selection at Industrial & Scientific Store.

Single Mode Fiber Optic Patch Cables

Thorlabs offers single mode fiber optic patch cables with a variety of connector options, including FC/PC, FC/APC, and hybrid FC/PC to FC/APC and FC/PC to SMA. Also available are single mode patch

Precision Fiber Products, Inc. | Leading Fiber Optic Product Solutions

Precision Fiber Products, Inc. offers a wide range of fiber optic products. We specialize in fiber optic interconnect components, including fiber optic cables, connectors, cable splicing, ferrules, and more.

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

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

SC FC LC Multimode Patch Cord OM3 OM4 OM5 Fiber Optic Pigtail

© 2026 EXF OPTICAL NETWORKS - All rights reserved

SC FC LC Multimode Patch Cord OM3 OM4 OM5 Fiber Optic Pigtail Single Mode 25M Product description Optical fiber jumper (jumper) is a section of optical fiber, and connectors are added at

Fiber Optic Couplers & Adapters

Fiber Optic Adapters We offer many types of fiber adapters – for simplex or duplex cable; made of plastic or metal; single mode or multimode; with connector types such as FC, LC, SC, ST, MU, SMA

FTTH Field-Assembled Fiber Optic Connector TK-FC-SCA-B001

Quick-install mechanical fiber optic connector for FTTH networks. Features ≤0.35dB insertion loss, ≥40N tensile strength, and -40°C to +85°C operating range. No epoxy or polishing required.

Basic Fiber Optic Pigtail Kit, LSZH, 900 µm | Corning

Fiber Optic Cable Assemblies Indoor Cable Assemblies Simplex Indoor Cable Assemblies Basic Fiber Optic Pigtail Kit, LSZH, 900 µm Find a Distributor

Fiber Optic Patch Cord ST/FC/LC UPC APC Singlemode

Buy low price Fiber Optic Patch Cord St/fc/lc Upc Apc Singlemode Multimode Cable by SUZHOU COLFLY ELECTRONIC TECHNOLOGY CO., LTD., a leading supplier from China. 120 similar

Fiber Optic Connector Manufacturer & Supplier

They have the characteristics of fast connection, low insertion loss, high stability, high reliability, easy assembly / disassembly, and strong compatibility. As one of the leading fiber optic connector

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

© 2026 EXF OPTICAL NETWORKS - All rights reserved

Contact Us

Continue your research online:

Website: https://explosivefunctions.co.za
Technical inquiry: https://explosivefunctions.co.za/contact.html
EU project coordination: Parque das Nações, Lisbon, Portugal

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

© 2026 EXF OPTICAL NETWORKS - All rights reserved