

FC fiber single-mode



Article Overview

FC-FC single-mode fiber patch cables are optical fibers with FC connectors on both ends, designed for precise alignment and minimal back reflection in single-mode networks.

Overview

FC-FC single-mode fibers are designed for long-distance, high-precision optical communication. They use a single-mode core (typically 9/125 μm), which allows only one propagation mode, reducing modal dispersion and enabling high-bandwidth transmission over long distances. The FC (Ferrule Connector) ensures stable, repeatable connections with a threaded coupling mechanism, making it ideal for laboratory, telecom, and industrial applications.

Connector Types

- FC/PC (Physical Contact): The fiber end-face is polished flat or slightly curved, providing low insertion loss but moderate back reflection (~ 40 dB) suitable for general applications.
- FC/APC (Angled Physical Contact): The ferrule tip is polished at an 8° angle, significantly reducing back reflection (~ 60 dB), which is critical for systems sensitive to reflections, such as interferometers or high-power laser setups.

Cable Construction

- Core/Cladding: Standard single-mode fiber has a 9 μm core and 125 μm cladding

Article Content

Single Mode FC/APC Fiber Optic Patch Cables

Thorlabs also offers AR-Coated Single Mode Patch Cables, which have an antireflective coating on one fiber end for higher

Optical fiber connector

Field-mountable optical fiber connectors are used to join optical fiber jumper cables that contain one single-mode fiber. Field

Fiber Connectors

FC connectors ("ferrule connector") are a popular type for single-mode fibers. They contain a floating ferrule with 2.5 mm diameter,

Single Mode Fiber Optic Adapters | SC, LC, FC & ST | Amerifiber

Shop single-mode fiber connectors in SC, LC, FC & ST styles. Simplex, duplex & quad configurations for telecom & long-distance

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

Fiber Optic Cable Types Explained

Our comprehensive guide to types of fiber optic cables. Learn all about the differences between single mode and multimode cables,

FC/PC Fiber Connectors: Single Mode and Polarization-Maintaining

Threaded FC/PC connectors are designed for high-vibration environments. The "PC" stands for "physical contact" because these

Single Mode Fiber Patch Cables 320-2500nm

We offer high-quality single-mode patch cables. Narrow key FC/PC connectors on both ends are standard and all variations of

Single-mode Patch Cables

Single-mode Patch Cables FIBERTRONICS Single-mode Patch Cables feature a core with a very small diameter that only allows

Single Mode Hybrid Fiber Optic Patch Cables

Features Single Mode Fiber Optic Adapter Cables for Signal Transmission from 305 nm to 2200 nm FC/PC to FC/APC or FC/PC to

Single Mode Fiber Optic Patchcords

Single Mode Fiber Optic Patchcords are available with FC/PC or FC/APC terminated connectors. Hybrid terminated connectors

Single Mode Fiber Optic Patchcords

Designed for use with lasers from 450 – 1650nm in 1m, 2m and 5m standard lengths, these Single Mode Fiber Optic Patchcords are

Single Mode Fiber Optic Patch Cables

Also available are single mode patch cables with AR-coated FC/PC or FC/APC connectors for improved fiber-to-free-space coupling,

Fiber Optic Basics

FC — the FC has become the connector of choice for single-mode fibers and is mainly used in fiber-optic instruments, SM fiber optic

Single-mode Fiber

Schäfter+Kirchhoff offers single-mode fibers (fiber cables or fiber patch cables) with Gaussian beam profile altogether for 360 - 1650

FC to FC, Simplex Singlemode Fiber Optic Cables, 9/125 with OFNR

L-com's 9/125 Simplex Singlemode fiber optic cables are constructed of the highest quality components and are covered by a one

Single Mode FC/PC Fiber Optic Patch Cables

Thorlabs offers single mode patch cables with FC/PC connectors on both ends. Each cable is manufactured in our facility on state-of

Contact Us

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