Fiber Optic Cable Connector Specification Table



Overview

LC vs SC vs FC vs ST: A Complete Fiber Optic Connector GuideCompare LC, SC, FC & ST fiber-optic connectors — size, coupling, and ideal use cases — to help.

Key Takeaways

Fiber optic connectors are precision devices that align and secure optical fibers, with specifications varying by type, ferrule size, fiber mode, and performance metrics such as insertion loss and return loss.

Key Connector Types and Specifications

Connector Type

Ferrule DiameterFiber ModeTypical Insertion LossTypical Return LossKey FeaturesCommon ApplicationsSC (Standard Connector)2. 5 mmSingle-mode / Multimode0. 2–0.

5 dB≥ 50 dB (SM)Snap-on, push-pull, square bodyGigabit Ethernet, telecom, patch panelsLC (Lucent Connector)1. 25 mmSingle-mode / Multimode0. 1–0.

3 dB≥ 50 dB (SM)Small form-factor, high-density, latch mechanismData centers, high-density cablingST (Straight Tip)2. 5 mmSingle-mode / Multimode0. 2–0.

5 dB≥ 40 dB (SM)Bayonet twist-lock, cylindrical ferruleLegacy networks, industrialFC (Ferrule Connector)2. 5 mmSingle-mode0. 2–0.

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5 dB≥ 55 dB (SM)Screw-on, high precisionTest equipment, high-vibration environmentsMPO / MTP (Multi-Fiber Push-On)1. 25 mm per fiberSingle-mode / Multimode0. 35 dB per fiber≥ 50 dB (SM)Multi-fiber, push-pull, guide pinsHigh-density data centers, ribbon cablesE20002.

0 mmSingle-mode0. 1–0. 3 dB≥ 55 dB (SM)Spring-loaded shutter, high return lossTelecom, high-performance networksFischer FO Connectors (SE, KE, DBE)1–2.

5 mmSingle-mode / Multimode0. 2–0. 5 dB≥ 50 dB (SM)Push-pull, multiway, optional electrical contactsIndustrial, military, broadcast systemsConnector Structure and FeaturesFerrule: Aligns the fiber core; precision polishing minimizes signal loss and reflection.

Connector Body: Protects the ferrule and provides mechanical stability. Attachment Mechanism: Push-pull, screw-on, or bayonet for secure mating. Boots / Strain Relief: Protects the fiber from bending and mechanical stress.

Performance Considerations

Insertion Loss: Typically 0. 1–0. 5 dB depending on connector type and fiber mode.

Return Loss: Higher for single-mode connectors (≥ 50 dB) to reduce back reflection. Fiber Mode Compatibility: Single-mode (9/125 µm) or multimode (50/125 µm, 62. 5/125 µm).

Multi-

Fiber Options: MPO/MTP connectors can connect up to 24 fibers simultaneously, ideal for high-bandwidth applications.

Applications

Telecommunications: SC, LC, FC, E2000 connectors for long-distance and high-performance networks. Data Centers: LC and MPO/MTP for high-density, high-speed connections. Industrial / Military: Fischer FO connectors with multiway and optional electrical contacts for rugged environments.

Patch Panels and Test Equipment: ST and FC connectors for legacy systems and precision testing. This table and overview provide a comprehensive reference for selecting fiber optic connectors based on mechanical design, optical performance, and application requirements.

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Article Content

LC vs SC vs FC vs ST: A Complete Fiber Optic Connector Guide

Compare LC, SC, FC & ST fiber-optic connectors — size, coupling, and ideal use cases — to help you choose the best fit for your network setup.

FibreFab-Fibre-Optic-Cable-Catalogue

The following icons are used throughout this catalogue to represent the fibre optic cable specification, features and value added services that FibreFab can offer:

Fibre Optic Cable & Connector Guide

This white paper is designed to help you select the right kind of fibre optic cable. It should also help you in understanding the various fibre optic connectors in the market and get you up and running in no

I FISCHER CHAPTER FIBEROPTIC

REAR ACCESSORIES CABLE CLAMP SET 114.1 1) The last number indicates the max compatible cable diameter in mm. Note: indicated connector P/N = delivered without contacts, termini and rear

Fiber Connector Types: A Complete Guide (2024)

A fiber connector is a precise coupling device to join fiber cables quickly. This guide introduces LC, SC, FC, ST, MPO, CS and many others.

DTS0079 Standard Table

The following pages list the standard fibers, cables, connectors, lenses, and laser head adaptors available from OZ Optics. Accompanying each table are technical notes to help you make the most

Fiber Optic Connector Types

A number of fiber connector types have been evolved and withstood the test of time to become industry standards. Then how many fiber connector types do you know or use? What are the differences

13-SDMS-01 REV. 00 SPECIFICATIONS FOR FIBER OPTIC

This document specifies the minimum technical requirements for design, engineering, construction, manufacture, inspection, testing and performance of fiber optic connectivity components, consisting

Fiber Connector Types: A Comprehensive Guide 2025

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Discover the common fiber connector types. Learn the differences, uses, and best practices for SC, LC, ST, FC, MPO/MTP connectors.

Connectors for audio, video, fiber optic and industry

Neutrik is the leading manufacturer of audio connectors and receptacles. Neutrik produces XLR, plugs, jacks, speaker and power connectors, patch panels, 75 o...

Multi-fiber Push On (MPO) Connectors

Multi-fiber push on connectors, or MPOs, are fiber cable connectors comprised of multiple optical fibers. Learn more at Fluke Networks.

Electrical and Electronic Connectors

Hirose Electric Co., Ltd. is a leading global supplier of innovative interconnects, employing advanced engineering services, superior customer support and worldwide manufacturing capabilities to provide

High Density Junction Box Rack-Mounted 144 Ports LC ...

AI overview of item Disclaimer: This content is generated by AI and does not represent the merchants opinion. The platform and merchants assume no related legal liability. LC Splitter: Compatible with

Calculating Fiber Optic Loss Budgets

Power Budgets And Loss Budgets The terms "power budget" and "loss budget" are often confused. The power budget refers to the amount of fiber optic cable plant loss that a datalink (transmitter to

Single-mode optical fiber

In fiber optics, a quadruply clad fiber is a single-mode optical fiber that has four claddings. Each cladding has a refractive index lower than that of the core.

Handbook Optical fibres, cables and systems

The optical fibres are specified in ITU-T with reference to the geometrical, optical, transmission and mechanical attributes listed in Table 1-1. However, as shown in the same table, for some attributes

100 Gigabit Ethernet

Provide physical layer specifications (PHY) for operation over single-mode optical fiber (SMF), laser optimized multi-mode optical fiber (MMF) OM3 and OM4, copper cable assembly, and backplane.

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Vocabulary list of GPT-4o (o200k_base) and GPT-4/GPT-3.5 (cl100k_base) tokenizers. Special tokens are excluded. - kaisugi/gpt4_vocab_list

Related Video Reference

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

Contact Us

Continue your research online:

Website: https://cgweb.co.za
Technical inquiry: https://cgweb.co.za/project-enquiry.html

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

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