

LC interface single port and dual port



AI Overview

Single-port LC connectors handle one fiber, while dual-port (duplex) LC connectors house two fibers for simultaneous bidirectional communication.

Single-Port (Simplex) LC Connectors Single-port LC connectors, also known as simplex LC, are designed to accommodate one fiber per connector. They use a 1.25 mm ferrule, which is smaller than the SC connector's 2.5 mm ferrule, allowing for high-density port layouts in data centers and telecom racks. Simplex LC connectors are typically used for unidirectional communication, where a single fiber transmits or receives data. They are compact, easy to install, and suitable for applications where only one-way optical transmission is required.

Dual-Port (Duplex) LC Connectors Dual-port LC connectors, or duplex LC, integrate two LC connectors in a single housing, enabling simultaneous bidirectional communication—one fiber for transmit (TX) and one for receive (RX). This configuration is standard in Ethernet, telecom, and SFP/SFP+/SFP28 optical modules, supporting full-duplex data transmission. Duplex LC connectors maintain precise fiber alignment with two 1.25 mm ceramic ferrules and are compatible with both single-mode and multimode fibers. They are widely used in high-speed networks where two-way communication is essential.

Key Differences

Feature	Single-Port LC	Dual-Port LC
Fiber count	1	2
Communication	Unidirectional	Bidirectional
Housing	Single connector	Two connectors in one housing
Common use	Simple links, patch cords	Ethernet, telecom, SFP modules
Port density	High	High, but slightly larger than simplex
Compatibility	Simplex adapters	Duplex adapters or couplers

Applications and Considerations Simplex LC is ideal for point-to-point links or where only one fiber is needed. Duplex LC is preferred for full-duplex networks, reducing cabling complexity by combining TX and RX fibers in one connector. Both types support high-density installations, with duplex LC being dominant in modern data centers and optical transceivers due to its compact size and bidirectional capability. Proper handling, c...

Article Content

LC Fiber Optics: A Comprehensive Guide

LC fiber connector products are robust optical solutions designed for telecom applications, encompassing LC fiber connectors, patch cords, adapters, patch panels, and more. Perfect for data

10G BiDi SFP+ Transceivers: SC vs. LC Interface

Learn the key differences between SC and LC interfaces in 10G BiDi SFP+ transceivers, including structure, space efficiency, and ideal deployment

LC vs SC SFP Module Interface: 2025 Buying Guide for

Confused about the LC vs SC SFP module choice? We explain the physical differences, density benefits, and why Wolontek recommends LC for data

DisplayPort

DisplayPort Dual-Mode (DP++), also called Dual-Mode DisplayPort, is a standard which allows DisplayPort sources to use simple level-shifting adapters to connect

Singlemode Duplex LC Connectors Fiber Optic Connectors

Mouser offers inventory, pricing, & datasheets for Singlemode Duplex LC Connectors Fiber Optic Connectors.

SFP LC Connector: Everything You Need to Know

Components and Structure There are two main components — the SFP transceiver and the LC connector in the SFP LC connector. This creates an

Unraveling the Duplex LC Connector: Your Guide to

Discover the Duplex LC Connector: your ultimate guide to fiber optic connectivity. Explore our range of singlemode and multimode LC fiber optic

Duplex LC Connector: Design, Fiber Types, and Best

Learn everything about Duplex LC connectors: design, UPC vs APC, single-mode vs multimode, polarity, plenum vs riser jackets, and installation tips.

Understanding Single Mode LC Connector: A

Discover the essentials of Single Mode LC Connectors in our comprehensive guide. Explore our range of fiber optic cables, including simplex

Agilent 1290 Infinity II LC, System Manual and Quic Reference

Solutions 2D-LC Solution The Agilent 1290 Infinity II 2D-LC Solution matches separation performance with sample complexity. The solution offers intuitive software, completely pre-configured systems,

Mastering LC Fiber Connectors: A Practical Guide

Jumper LC connectors are available in simplex (single fiber) and duplex (two fibers) formats; their compact bodies are designed to minimize footprint while providing

Application of LC Duplex Connectors in Modern Fiber

LC duplex connectors are compact, high-performance connectors widely used in modern fiber optic networks. The LC connector, known for its small form factor,

LC Fiber Connector Specifications – Fosco Connect

The LC family of connectors includes a stand-alone simplex design; a “behind the wall” (BTW) connector; and the duplex connector available in both single mode

Duplex LC Connector: Design, Fiber Types, and Best

This article explains what Duplex LC connectors are, how they work, the difference between single-mode and multimode use, how to choose and

LC Connectors and Cable Assemblies

LC Adapters and Cable Assemblies meet the growing demand for small form factor, high-density fiber optic connectivity with simplex, duplex, single-mode and multimode options. These connectors

SFP Fiber Optic Connector Types: LC, SC, MPO Explained

Explore common SFP fiber optic connector types, including LC, SC, and MPO/MTP. Learn their differences, use cases, and compatibility.

Optical fiber connector

In many data center applications, small (e.g., LC) and multi-fiber (e.g., MTP/MPO) connectors have replaced larger, older styles (e.g., SC), allowing more fiber

LC Connector Types: A Comprehensive Guide

Their compact size—about half the size of older SC connectors—makes LC connector types a popular choice in fiber optic

Optical fiber connector

Optical fiber connector LC (top) and ST (bottom) optical fiber connectors, both with protective caps in place An optical fiber connector is a device used to link optical

Fiber Connector Types

However, the widely used types are about a dozen of fiber optic connectors, which can be divided into single-fiber, duplex fiber connectors (such

Simplex vs Duplex LC Connector Engineering Explained

Engineering comparison of simplex and duplex LC connectors, explaining physical topology, fiber usage logic, and deployment boundaries in

LC Adapters and Cable Assemblies

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LC Connector | FO Connector LC-Simplex, LC-Duplex

The LC is a small-form-factor connector system for fibre optic cabling in telecommunications systems, data centres and LANs. LC connectors are available for both singlemode and multimode applications.

Understanding the LC Duplex Connector: A

The LC Connector, once known as the Lucent Connector, is a single-fiber optical connector invented by Lucent Technologies and belongs to the small

LC Fiber Optic Connectors

LC F LC Fiber Optic Connectors provide a rugged solution for high-density telecommunication rooms, LANs, public networks and fiber-to-the-desk applications. LC simplex and duplex connectors are

How to Use Duplex LC connector SFP-LX20: Examples, Pinouts, and

Connection: Insert the SFP-LX20 module into an SFP port on your networking device, ensuring a firm connection. Fiber Optic Cable: Connect the single-mode fiber optic cable to the Duplex LC

Contact Us

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