

Is the fiber optic LC interface dual-fiber



Overview

Duplex LC Connector: Design, Fiber Types, and Best Practices 2025 LC connectors are available in both simplex (single fiber) and duplex (two fibers) version.

Key Takeaways

A standard LC connector is single-fiber, but a duplex LC connector supports dual-fiber transmission for bidirectional communication. LC Connector Overview

The LC (Lucent Connector) is a small form-factor fiber optic connector that uses a 1.25 mm ferrule, making it compact and suitable for high-density applications in data centers and telecom networks. LC connectors are available in two main configurations:

- Simplex LC: Accommodates a single fiber, used for one-way transmission or when only one fiber is needed.
 - Duplex LC: Houses two fibers side-by-side in a single connector housing, allowing simultaneous transmit (Tx) and receive (Rx) signals for bidirectional communication.
- Duplex LC Features
- Two 1.25 mm ferrules aligned in a single housing.
 - Duplex clip holds the two connectors together for easy insertion into duplex adapters.
 - Supports both single-mode and multimode fibers.



- Commonly used in Ethernet, telecom, and high-speed data networks where two-way communication is required .

Applications

Duplex LC connectors are widely adopted in modern networking equipment, including SFP/SFP+/SFP28 modules and QSFP-based transceivers, because they provide high port density while enabling bidirectional fiber links . Simplex LC connectors are still used in scenarios where only a single fiber is needed, such as certain patch panels or point-to-point links.

Summary

- Single LC connector: Single-fiber (simplex), one-way transmission.
- Duplex LC connector: Dual-fiber, supports bidirectional communication with Tx and Rx fibers in one housing . Thus, whether an LC interface is dual-fiber depends on whether it is a duplex LC; standard LC connectors are not dual-fiber by default.

Article Content

Duplex LC Connector: Design, Fiber Types, and Best Practices 2025

LC connectors are available in both simplex (single fiber) and duplex (two fibers) versions. Duplex is most common

What Is an SFP Duplex LC Connector in Fiber Networks

In fiber optic networking, the term Duplex LC describes a connector configuration that combines the LC connector

Understanding the LC Duplex Connector: A Comprehensive Guide to

A: An LC Duplex Connector is a small form factor (SFF) fiber optic connector used in high-density situations. It has

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LC F LC Fiber Optic Connectors provide a rugged solution for high-density telecommunication rooms, LANs, public networks and

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LC fiber connector products are robust optical solutions designed for telecom applications, encompassing LC fiber

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LC Fiber Connector Specifications

The LC Connector Product is a robust optical connector designed to support Telecom and Datacom networks. The connector family

LC Fiber Optics: Guide to LC Connectors, ULL Cables, MPO 2026

LC (Lucent Connector) is the world's dominant duplex optical interface, used across enterprise networks, telecom

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