

Optical Module LcLc



Article Overview

An LC-LC optical module is a fiber optic module or patch cable with LC connectors on both ends, designed for high-density, low-loss network connections in data centers and enterprise networks.

Overview of LC-LC Modules

LC-LC optical modules use LC connectors at both ends, which are small form factor (SFF) connectors originally developed by Lucent Technologies. The LC connector features a 1.25 mm ceramic ferrule, half the size of standard SC connectors, allowing for high-density port deployment in switches, routers, patch panels, and transceivers (SFP, SFP+, QSFP, etc.). LC-LC modules can be used with single-mode or multimode fiber, supporting both simplex (one fiber) and duplex (two fibers) configurations for one-way or two-way communication.

Key Features

- **Compact Size:** Ideal for high-density racks and panels, doubling port density compared to SC or ST connectors.
- **Low Insertion Loss:** LC connectors include a six-position tuning mechanism to optimize fiber alignment, maintaining signal integrity with typical insertion loss as low as 0.12 dB for ultra low-loss variants.
- **Push-Pull Latch:** Ensures secure connections that are easy to insert and remove without tools, reducing maintenance time.
- **Versatility:** Compatible with LC patch cables, adapters, patch panels, attenuators, and LC-interfaced transceivers, enabling flexible network design

Article Content

Oct 15, 2025

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

Sep 12, 2025

Arista Optics Modules and Cables

Arista's Optical Modules and Cable portfolio offer a wide variety of high-density and low-power 800G (dual 400G), 400G, 200G,

Feb 25, 2026

What is the difference between lc and duplex lc?

The Duplex LC connector offers the advantage of space-saving and simplified cable management, making it a popular choice in

Nov 27, 2025

Using TPS63805 for Extreme Low Ripple in Optical Module

TPS63805 is a good solution for voltage stabilizer in optical module due to its good performance on efficiency and load capacity as

May 19, 2026

Comparison of Optical Module Connectors: SC vs LC vs MTP/MPO

All three fiber optic connectors play a good role in the use process. The SC connector has strong compatibility and

Oct 13, 2025

LC Fiber Optics: A Comprehensive Guide

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

Feb 14, 2026

H!Fiber 1.25G Single Mode SFP LC Module, 1000Base-LX/LH Fiber

About this item 1000Base-LX/LH SFP: Gigabit Single Mode SFP Module support 1.25 Gb/s data rates, 1310nm wavelength, SMF;

Jan 10, 2026

Optical fiber connector

Optical fiber connectors are used to join optical fibers where a connect/disconnect capability is required.

Jul 27, 2026

10G BiDi SFP+ Optical Module Interface Comparison: SC vs LC

With the increasing demand for high-speed optical communications in data centers, enterprise networks, and carrier

Aug 06, 2025

Optic Modules Datasheet

Features and Benefits The following table lists the different pluggable optic modules and supported platforms, along with the

Nov 14, 2025

Cisco Digital CFP2-DCO Coherent Optical Module Data Sheet

Cisco offers a comprehensive range of pluggable optical modules in the Cisco ONS pluggables portfolio. The wide

Aug 01, 2025

Optimize fiber patch cabling in high-density patching applications ...

4m (13ft) LC to LC (UPC) OM4 Multimode Fiber Optic Cable w/Push Pull Tabs, 50/125µm, 100G, Bend Insensitive, Low Insertion

Oct 08, 2025

What Is an Optical Module and Its FAQs (V200)

Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key performance counters,

May 25, 2026

Optical Solutions

Optical Flex Circuits FlexPlane Optical Flex Circuits provide versatile, high-density routing on a flexible

Feb 11, 2026

LC Fiber Optics: The Ultimate Guide to High-Density, High

Explore high-performance LC fiber optic solutions including connectors, patch cables, adapters, patch panels, and

Jul 26, 2026

400G Optical Modules Explained: SR4 Vs. DR4 Vs. FR4 Vs. LR4

Key differences between SR4, DR4, FR4, and LR4 400G optical modules. Expert advice from Asterfusion engineers

Dec 23, 2025

Optics and Transceivers | Fiber Optical Transceivers

FS offers a growing portfolio of optical transceivers, with speed range from 100M, 1G, 10G, 25G, 40G, 50G, 100G, 200G, 400G to

Dec 17, 2025

Optical Module Market Size, Competitors & Forecast to 2032

The Optical Module Market, valued at USD 30.01B in 2026, is projected to reach USD 66.94B by 2032, growing at a 14.1% CAGR.

Mar 12, 2026

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical

May 24, 2026

40G QSFP+ BIDI LR4 10km 1310nm LC Connector

The optical connectivity is based on two SMF LC connectors, one for Tx and one for Rx. The Tx and Rx

Dec 11, 2025

Passive Optical TAPs for High-Speed Networks

Cubro Optical TAPs. Cubro Passive Optical TAPs Deliver Full-Duplex Monitoring With Zero Impact On The

Mar 16, 2026

50/25/10/1G Transceiver Modules | Optical Transceivers

FS provides 50/25/10/1G transceivers modules in SFP/SFP28/SFP56/QSFP28 form factor, supporting transmission distances from

Feb 22, 2026

Optical Transceiver Market Size, Share, Analysis 2030

The global Optical Transceiver Market size in terms of revenue was estimated to be worth \$13.6 billion in 2024 and is poised to reach

Apr 27, 2026

LC Connectors and Adapters | OEM Optical Communication Solutions

We also manufacture an LC adapter family to support LC interconnection. Corning's extensive line of of LC connectors offer great

Contact Us

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