LC optical module wavelength

Overview

What Does LC Mean in Fiber Optics? LC stands for a type of optical connector of which the full name is Lucent Connector.

Key Takeaways

LC optical modules typically operate at 850 nm, 1310 nm, or 1550 nm, depending on fiber type and transmission distance. Standard WavelengthsLC optical modules use specific wavelengths to match fiber type and application requirements: 850 nm: Primarily used for multimode fiber (MMF) in short-reach applications such as intra-data center links. Modules like 10G SR, 25G SR, and 400G SR4 often use 850 nm for high-bandwidth, short-distance transmission (up to ~100 meters on OM4 fiber).

1310 nm: Designed for single-mode fiber (SMF), supporting medium-reach links such as campus or metro networks. This wavelength reduces modal dispersion and allows longer distances than 850 nm. 1550 nm: Also for single-mode fiber, optimized for long-haul or extended-reach applications.

It offers low attenuation and is commonly used in DWDM systems and long-distance optical networks.

High-

Density and Parallel OpticsFor modern high-speed networks (100G, 200G, 400G), LC modules are used in duplex or parallel configurations: 400G SR4 modules: Use 4 channels at 850 nm for multimode fiber, supporting short-range intra-data center links. 400G SR4. 2 modules: Employ multiple wavelengths (850 nm and 910 nm) to increase capacity over multimode fiber.

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C connectors remain dominant in duplex serial optics for 10G–400G links, even as MPO and parallel optics grow.

Considerations for Deployment

Fiber type compatibility: 850 nm for MMF, 1310/1550 nm for SMF. Distance and attenuation: Short-reach links use 850 nm; longer links require 1310 or 1550 nm. Network design: Wavelength choice affects dispersion, link margin, and whether optical amplification or DWDM is feasible.

Connector type: LC modules are typically simplex or duplex, with UPC or APC polish depending on application. In summary, LC optical modules are wavelength-specific devices, with 850 nm, 1310 nm, and 1550 nm being the most common, chosen based on fiber type, distance, and network architecture requirements. High-speed modules may use multiple wavelengths in parallel to maximize bandwidth while maintaining LC connector compatibility.

Article Content

LCOS | Santec

The wavelength blocker (WB) is a multi-functional optical module for constructing ROADM (Reconfigurable Optical Add/Drop Multiplexer) nodes in next generation

LC Fiber Optics: A Comprehensive Guide

What Does LC Mean in Fiber Optics? LC stands for a type of optical connector of which the full name is Lucent Connector. It comes with the name because the LC connector was first

LC Fiber Optics: Complete Guide 2026 to Patch Cables,

This guide provides a fully updated and industry-ready overview of LC fiber optics, explaining the origin and design of LC connectors, their key

Optical Transceiver SFP+ 10G Single-Mode Module 1310nm 10km LC

These modules typically follow the 10GBASE-LR Ethernet standard defined in IEEE 802.3ae, operating at a 1310 nm wavelength and supporting transmission distances up to 10 km

100GBASE QSFP-100G Modules Data Sheet

The Cisco QSFP-100G-SR-S Module is a pluggable optical transceiver with a duplex LC connector interface supporting link lengths of 70 and 100 meters on laser-optimized OM3 and

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

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LC (Lucent Connector) is the world''s dominant duplex optical interface, used across enterprise networks, telecom infrastructure, and especially data centers.

Understanding Optical Transceiver Modules: A Comprehensive Guide

In the world of fiber optic communications, optical transceiver modules play a pivotal role as interfaces that convert electrical signals to optical signals and vice versa. If you''re dealing with

SFP-10G-SR vs LRM vs LR: Which 10G Module Should

Both SFP-10G-SR and SFP-10G-LR are 10G SFP+ modules and use an LC duplex interface, but they differ in fiber type and transmission distance.

Cisco 10GBASE SFP+ Modules Data Sheet

Product overview The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport

Fortinet FN-TRAN-SFP56-SR Compatible 50GBASE-SR SFP56

Engineered for 850nm wavelength transmission, this module facilitates data links up to 100 meters when utilizing OM4 multi-mode fiber (MMF) infrastructure with a duplex LC/UPC interface. Key Features

QSFP-DD Product Family » Acacia

Quad Small Form-factor Pluggable Double Density (QSFP-DD) solution that fits into high-density switch and router client ports for optical interconnect links

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How do You Connect Fiber Optic Cable to SFP?

Learn how to connect a fiber optic cable to an SFP module correctly. Follow our step-by-step guide, avoid common mistakes, and troubleshoot connection issues.

25Gbps SFP28 BIDI Optical Module

125M~2.67Gbps eSFP DWDM Optical Module 10Gbps SFP+ Optical Module 1.25/9.953/10.3125Gbps SFP+ Optical Module 10Gbps SFP+ CWDM Optical Module 10Gbps SFP+ BIDI Optical Module

The Ultimate Guide to SFP Modules (2026): Types,

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Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the

AVLGEAR Ubiquiti 1G Multi-Mode Optical Module 1G Fiber

Ubiquiti 1G Multi-Mode Optical Module SFP Transceiver The Ubiquiti 1G Multi-Mode Optical Module offers seamless performance with 1 Gbps data rates, designed for use in multi-mode fiber networks.

Optical Transceiver Module Wholesale,10g/25g/40g/100g SFP+ Optical ...

Fiber optic module manufacturer,ETU-Link supply full model optical transceivers,including standard 8g/10g/25g/40g/100g sfp+ optical modules and copper RJ45 transceiver,wholesale at factory price!

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for

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

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