

Single-core lc optical module



AI Overview

An LC single-core optical module is a compact transceiver that uses a single-mode fiber with an LC connector to transmit data over long distances through a single fiber core.

Overview An LC single-core optical module is designed for long-distance fiber communication in Ethernet, telecom, and data center networks. It uses a single-mode fiber with a single core, meaning light travels in a single propagation path, which minimizes signal loss and allows for high-speed, long-distance transmission. The LC connector is compact, with a 1.25 mm ferrule, enabling high-density port deployment and easy snap-in connections.

Key Features

- Single-Core Fiber:** Uses one fiber core for data transmission, suitable for point-to-point links. This is ideal for long-distance communication where a single, uninterrupted light path is required.
- Single-Mode Transmission:** Supports long-range communication with minimal signal degradation, typically over distances from a few kilometers up to 20 km or more depending on the module and wavelength.
- LC Connector:** Compact and efficient, allowing high port density and reduced signal loss. The push-and-click design ensures secure and easy installation.
- Hot-Swappable:** Can be inserted or removed from networking equipment without powering down the device, providing flexibility in network management.

Applications: Commonly used in switches, routers, firewalls, media converters, and optical transport equipment for enterprise backbones, data centers, and telecom infrastructure.

Technical Considerations When selecting an LC single-core optical module, consider:

- Transmission Speed:** Modules are available for 1G, 10G, 25G, and higher speeds.
- Wavelength:** Typical single-mode wavelengths include 1310 nm and 1550 nm, affecting distance and compatibility.
- Distance:** Single-mode modules can cover long distances, often up to 20 km or more depending on the model.
- Device Compatibility:** Ensure the module is compatible with the switch, router, or media converter in use.
- Environmental Conditions:** Temperature range and durability may...

Article Content

100GBASE QSFP-100G Modules Data Sheet

The Cisco® 100GBASE Quad Small Form-Factor Pluggable (QSFP) portfolio offers customers a wide variety of high-density and low-power 100

40G/100G single-mode single-core optical fiber module application

In this article, we will discuss the application of 40G/100G single-mode single-core optical fiber modules, their advantages and limitations, and some considerations for their deployment.

Fiber Patch Cords: Types and How to Choose the Right

The “mode” of a fiber patch cord refers to how light travels through the fiber core. This is one of the most critical distinctions, as it directly impacts

75M/246FT Outdoor Armored LC to LC Fiber Optic Cable, 4 Core OS2 Single ...

About This Industrial-Grade Durability: Engineered with a rugged 5.0mm industrial TPU jacket and dual-layer armor (steel tube + stainless mesh), this LC to LC fiber optic cable resists water, UV,

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A deep understanding of ZTE SFP module distance and wavelength specs is a prerequisite for designing reliable, scalable, and high-performance networks. From the cost-effective 850 nm SR

Top Optical Modules for POTN Deployment: SFP, QSFP, and OSFP

Connector interface: LC duplex, MPO, or MTP, depending on whether the fiber is single-mode or multi-mode. Power and thermal envelope: The heat generated by high-speed optics affects

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The MJ-OSFP1.6TB-DR8 is a cost-effective, high-performance OSFP module tailored for AI datacenter applications, delivering an aggregate throughput of 1.6

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Confused about simplex vs duplex fiber optic cables? Learn key differences, BiDi & WDM technology, FTTH vs data center use cases, and how to choose the right fiber.

Understanding Single Mode LC Connector: A

This guide will explain their functions, discuss the role of single-mode LC connectors in modern fiber optic systems, and present the logic for their

All Kinds of Fiber Optic Patch Cords – SC, LC, FC, ST

Learn about SC, LC, FC, and ST fiber optic patch cords, their uses in FTTH, telecom, and data centers, and how to choose the right type.

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SFP LC Single Mode: How to Choose the Right Module

Learn how to choose the right SFP LC Single Mode transceiver for distance, compatibility, fiber type, and stable network performance.

100M/328FT Outdoor Armored LC to LC Fiber Optic Cable, 4 Core

About This Industrial-Grade Durability: Engineered with a rugged 5.0mm industrial TPU jacket and dual-layer armor (steel tube + stainless mesh), this LC to LC fiber optic cable resists water, UV,

SFP+ Optical Transceiver Modules (10G-SR/LR)

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

Explore the features, applications, and selection guide for optical transceiver SFP+ 10G single-mode 1310nm 10km LC modules for data centers and enterprise networks.

Huawei SFP-10G-iLR Optical Transceiver Best price in Dubai

Basic Information Module name SFP-10G-iLR Part Number 02311BJJ Model SFP-10G-iLR Form factor SFP+ Application standard 10GBASE-iLR (non-standard) Connector type LC Optical fiber type SMF

Optical Interconnect Technology Analysis: LPO, NPO,

Exploring optical interconnects for AI data centers: LPO for low-power, short-distance links, NPO for high-density, near-package connections,

The Key Differences Between 1-core, 2-core, Single

In optical modules, “core” refers to the light-transmitting channel in the fiber. A 1-core module uses a single fiber core for data transmission, while a

Cisco 10GBASE SFP+ Modules Data Sheet

The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the Cisco SFP Modules for Gigabit Ethernet Applications.

The Key Differences Between 1-core, 2-core, Single

Single Mode fibers have a smaller core, allowing light to travel in a single, straight path, ideal for long distances with less signal loss. Multi-mode

SFP Single Mode LC Module (80km)

TRENDnet's SFP Single Mode LC Modules are compatible with standard SFP slots found on network switches and fiber converters. Each single mode SFP transceiver is equipped with a duplex LC fiber

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