

CITIC Optical Module Single Mode



AI Overview

CITIC single-mode optical modules are designed for long-distance, high-speed data transmission using single-mode fiber, supporting wavelengths of 1310 nm or 1550 nm and offering superior reach and low signal loss compared to multimode modules.

Overview Single-mode optical modules, such as those offered by CITIC, are critical components in fiber optic networks, converting electrical signals into optical signals for transmission and vice versa. They are optimized for long-distance communication, typically supporting transmission distances from 10 km up to 200 km depending on the module type and wavelength used. These modules use single-mode fiber (SMF) with a 9/125 μm core/cladding structure, which allows only one light propagation mode, minimizing modal dispersion and maintaining signal integrity over long distances.

Technical Characteristics

- Wavelengths:** Commonly 1310 nm or 1550 nm for long-reach applications.
- Light Source:** Laser diodes (LD) or narrow-line LEDs for precise optical transmission.
- Form Factors:** SFP, SFP+, QSFP, QSFP28, and other standard modular designs for flexible deployment.
- Transmission Speeds:** Modules support 10G, 25G, 40G, 100G, and higher, with emerging solutions for 200G and beyond.
- Monitoring:** Real-time parameters such as temperature, voltage, TX/RX power, and laser bias current for proactive maintenance.

Applications CITIC single-mode modules are suitable for:

- Telecom networks:** Backbone and long-haul links requiring high bandwidth and low attenuation.
- Data centers:** Hyperscale and enterprise networks needing 100G, 400G, or higher-speed interconnects.
- 5G infrastructure:** Supporting high-speed, low-latency connections for mobile networks.
- AI and HPC systems:** High-performance computing environments using 800G to 1.6T optical modules for server and switch interconnects.

Market and Cost Considerations Single-mode modules generally cost more than multimode modules due to the precision optics and laser components required. However, they provide l...

Article Content

LYNX Technik OH-TR-12G-LC 12G SDI Optical Transceiver SFP Module ...

The LYNX OH-TR-12G-LC SDI optical transceiver is a plug in option for select LYNX Technik yellowbrik greenMachine products. This SFP module includes a receiver and a transmitter which facilitates the

How to Choose SFP Module | FIBEYE

Price Single-mode modules are typically more expensive than multi-mode modules because they use more components and more expensive laser light sources.

Single-mode optical fiber

In fiber-optic communication, a single-mode optical fiber, also known as fundamental- or mono-mode, is an optical fiber designed to carry only a single

Multi-mode and single-mode of optical modules

The single-mode and multi-mode in the optical module actually only refer to the type of optical fiber. LC/PC refers to the type of connector, single-mode, multi-mode will have a standard on

Singlemode Fiber Optics - Mouser

Mouser offers inventory, pricing, & datasheets for Singlemode Fiber Optics.

SFP+ 10G ER transceiver singlemode 1550nm 40Km,

The SFP-1040-ER is a long haul single-mode 10G SFP+ optical module compatible with the 10GBase-ER specifications. It uses a cooled EML laser transmitter at

Understanding Single-mode and Multi-mode SFP

A SFP single-mode optical modules and SFP multi-mode optical modules are incompatible. If you mix SFP single-mode optical modules and SFP multi-mode

Fiber Optic Cable Types: Single Mode (SM) vs Multi

Discover the critical differences between Single Mode (SM) and Multimode (MM) Fiber Optic Cables, applications, advantages and disadvantages.

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, common types, and naming conventions of optical modules, causes of

Single Mode SFP vs Multimode SFP: What the

A single-mode SFP is specially used with the 9/125µm single-mode fiber (SMF) but can not be used with multimode fiber cable. It utilizes ultra-low

DIGITUS Gigabit SFP Modul Singlemode LC Simplex 1310/1550nm

DIGITUS Gigabit SFP Modul, Mini GBIC, Singlemode, LC Simplex (BiDi), Tx 1310nm / Rx 1550nm, 20 km, 1.25 Gbit/s - Kostenloser Versand ab 29€. Jetzt bei Amazon bestellen!

Single-Mode Optical Fiber

Dual-mode optical fiber having a larger core diameter than single-mode optical fiber, without sacrificing bandwidth, was proposed as an alternative to single-mode optical fiber.

Single Mode Optical Modules Market 2026

Global Single Mode Optical Modules Market is witnessing significant growth driven by increasing demand for high-bandwidth applications. With data centers requiring 100G and 400G solutions,

GLC-LH-SMD= (Does it ready support both Single

Hi, It was mentioned that GLC-LH-SMD support both Single Mode and MultiMode fiber. I think it should be quite sure that it can support Single

Cisco Transceiver Modules

Cisco Transceiver Modules - Learn product details such as features and benefits, as well as hardware and software specifications.

Ubiquiti 10 Gbps Bidirectional Single-Mode Optical Module

Allgemein Packungsmenge: 2 (Spezifikationen gelten für einen Artikel) Gerätetyp: SFP (Mini-GBIC)-Transceiver-Modul Formfaktor: Plug-in-Modul Netzwerk Anschlusstechnik: Kabelgebunden

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.

Citic Rui Technology Wave Splitter Module 25g 10Km Colored ...

welcome to taobao purchase citic rui technology wave splitter module colored light module 12 wave 12 channels cwdm splitter, taobao hundreds of millions of hot selling goods, official logistics can be sent

436A6B7F-464B-28F675.pub

The module is intended for single-mode fiber, operates at a nominal wavelength of CWDM and complies with Gigabit Interface Converter (GBIC). Each module consists of a transmitter optical subassembly,

Cisco® Compatible 1000Base-LX SMF SFP

This SFP (mini-GBIC) transceiver module is designed for use with Cisco network equipment and is equivalent to Cisco part number GLC-LH-SM. This transceiver

The Difference Between Single/Dual Fiber and

As fiber optic networks continue to evolve, selecting the right optical transceiver becomes increasingly important. Whether you're designing a short

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

Singlemode: Transceiver Lösungen & Einsatzbereiche

Singlemode: Transceiver Lösungen von Fiber24. Individuell ideal für große Entfernungen flexibel Hier bei Fiber24 entdecken und beraten lassen!

Cisco Compatible Optical Modules Catalog

ing of parameters such as optical output power temperature, and bias current. This architecture integrates advanced retiming and clock data recovery (CDR) circuits for high-speed modules (10G

Single-Mode Vs Multimode Optical Modules: Detailed

Choosing between Single Mode and Multimode Optical Modules will shape cost, reach and upgrade paths. This guide breaks down practical differences—core

A Comprehensive Guide to Choosing the Right FS 10G Optical Modules

10G XFP LR: For long-range transmissions up to 10 kilometers on single-mode fibers, similar to SFP+ LR modules. 10G XFP ER: Supports distances up to 40 kilometers on single-mode

Ubiquiti 1Gbps Bidirectional Single-Mode Optical

The Ubiquiti UACC-OM-SM-1G-S-2 1 Gbps Bidirectional Single-Mode Optical Module is a cutting-edge optical transceiver designed for bidirectional data

Fiber Optics Part 2: Single-Mode Fiber vs. Multi-Mode

Written by Priya Maratukulam, Product Manager, Transceiver Modules Group, Cisco In our previous post we described the phenomenon of

Amazon : Single Mode Gbic

10Pack SFP+ LC 10GBase-LR Transceiver - 10G Single Mode Module, Compatible with Cisco SFP-10G-LR, Ubiquiti UF-SM-10G, Meraki, Mikrotik, Netgear, Aruba, TP-Link and More - 1310nm, SMF,

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

As data center and telecommunications networks continue to demand higher speeds and larger capacities, the need for high-speed optical fiber modules has become increasingly important.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.tomor.eu>

Email: info@tomor.eu

Phone: +49 69 2381 5497

Address: Am Hauptbahnhof 10, 60329 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

