Where is the 1550 single-mode single-fiber optical module used

Article Overview

1550nm single-mode single-fiber optical modules are primarily used for long-distance data transmission over single-mode fiber in metro, WAN, and industrial networks.

Networking Applications

These modules are widely deployed in telecommunications and enterprise networks to transmit data over long distances using single-mode fiber (SMF). Operating at a wavelength of 1550 nanometers, they are ideal for long-reach applications, with standard ZX or ZR modules capable of transmitting up to 80 km, and advanced types exceeding 100 km, making them suitable for metro and wide-area network (WAN) environments . They are commonly available in SFP or SFP+ form factors, allowing easy integration with network switches, routers, and other optical equipment .

Single-Fiber Bidirectional Transmission

Some 1550nm modules use BiDi (bidirectional) technology, enabling data transmission over a single fiber. In these setups, the module transmits at 1550nm and receives at 1310nm, allowing two-way communication on a single SMF, which reduces fiber infrastructure costs and simplifies deployment . These modules typically support speeds up to 1.25 Gbps and distances up to 40 km, making them suitable for point-to-point links in enterprise or campus networks .

Industrial, Medical, and Defense Applications...

Article Content

What Is A Single-Fiber BiDi Transceiver?--ETU-LINK

When planning a fiber optic network,one key decision is choosing between single-fiber (BiDi) and dual-fiber optical transceivers. This

SimpliFiber Pro Multimode and Singlemode Sources

Overview Sturdily built and encased in a durable molding, the next generation SimpliFiber Pro LED multimode and laser singlemode

MTS-SFP-1G-LX+/LC-1550 Technical Data Sheet

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether

Singlemode Transceivers 1550 nm Fiber Optic Transmitters,

Singlemode Transceivers 1550 nm Fiber Optic Transmitters, Receivers, Transceivers are available at Mouser Electronics. Mouser

Fiber Optic Cable Types Explained

Our comprehensive guide to types of fiber optic cables. Learn all about the differences between single mode and multimode cables,

SFP BiDi 1000BASE-BX 1.25Gbps Tx1550nm/ Rx1310nm LC SMF

The 1000Base-BX SFP optical module is designed for data transmission using a single single-mode (SM) fiber. It transmits data at

SFP Optical Module 155M Single Optical Fiber 20km

This product need to use in pair and match up with fiber converter and optical Ethernet switch with SFP port, it can be used in

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

1000BASE-ZX SFP 1550nm 80kmTransceiver Datasheet | FS

The transmitter section uses a multiple quantum well 1550nm DFB laser and is a class 1 laser compliant according to International

SFP 1.25G 1550nm/1310nm Single mode Optical Transceiver

8. Digital Diagnostics / Digital Optical Monitoring The transceiver provides serial ID memory contents and diagnostic information

Single Mode SFP Transceiver: Complete Guide Explained

A single mode SFP transceiver is an optical module that uses laser-based transmission over single mode fiber to deliver long

Understanding Wavelengths In Fiber Optics

The wavelengths we use for transmission must be the wavelengths we test for losses in our cable plants. Our power meters are

SM-GDF-1550, Single Mode Passive Double Clad Optical Fiber

Coherent''s SM-GDF-1550 fibers are optimized for passive laser systems operating in the 1550 nm wavelength range. Featuring a

1000BASE-EZX SFP 1550nm 100km Transceiver Datasheet | FS

The SFP1G-ZX100-55 series single-mode transceiver is small form factor pluggable module for serial optical data communications

SFP 1.25G 1550nm Single mode Optical Transceiver

Transceiver high performance, data rate up to length on single mode BlueOptics© transceivers SFP Multi-Source Agreement (MSA).

SFP-1100-WB SFP+ 10G BiDirectional Optical Module Single-Strand

The SFP-1100-WB is a BiDirectional single fiber strand 10G SFP+ optical module using Tx:1550nm and Rx:1490nm wavelengths and

Single-mode optical fiber

The multi-fiber optical connector can be used in the creation of a low-cost switch for use in fiber optical testing. Another application is

Single-Mode vs. Multi-Mode Fiber Optic Cables

Learn more about the differences between single-mode and multi-mode fiber optic cables and which is best for your application!

Single Mode Fiber: Types and Applications

Single mode fiber (SMF) is a type of fiber optic cable that only allows one light mode to transmit at a time. Generally,

Understanding Single-mode and Multi-mode SFP Optical Modules

Abstract: Small Form-factor Pluggable (SFP) optical modules are widely used in networking to facilitate high-speed data transmission

Contact Us

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

Website: https://gmarkconstruction.co.za
Email: sales@gmarkconstruction.co.za
Phone: +31-6-15-38-72-94
Address: Herengracht 456, 1017 BS Amsterdam, Netherlands

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