

Om1 Multimode Fiber Optic 100Mbps Transmission Distance



AI Overview

OM1 multimode fiber supports 100Mbps Ethernet transmission up to 275 meters. OM1 fiber, standardized in 1989, has a 62.5 μm core diameter and typically uses an LED light source. It was widely deployed in legacy enterprise LANs and short-distance building interconnections. For 100Mbps Ethernet (Fast Ethernet), OM1 fiber can reliably transmit data up to 275 meters under standard conditions. At higher speeds, such as 1Gbps, the maximum distance decreases to around 33 meters, and for 10Gbps, it is limited to 33 meters as well.

Key Characteristics of OM1

- Fiber Core/Cladding: 62.5/125 μm
- Jacket Color: Orange (industry standard)
- Light Source: LED
- Bandwidth: 200 MHz·km at 850 nm, 500 MHz·km at 1300 nm
- Typical Use: Short-distance LANs, legacy 100Mbps networks, and building interconnects

Practical Considerations

OM1 fiber is less suitable for modern high-speed networks due to its limited bandwidth and distance capabilities. For new installations, OM3 or OM4 fibers are recommended, as they support higher speeds (10G, 40G, 100G) over longer distances and are compatible with VCSEL laser sources. However, OM1 remains relevant for maintaining or upgrading older 100Mbps Ethernet links without replacing the existing cabling infrastructure. In summary, for 100Mbps Ethernet, OM1 multimode fiber provides a maximum transmission distance of 275 meters, making it suitable for short-range legacy network deployments.

Article Content

Exploring Multimode Fiber Distance Limits in Data Centers

Discovering the Multimode Fiber Distance Limits and Types Multimode fiber comes in different types, each designed to handle different data

Fiber Optic Cable Types: Transmission Distance by Data Rate (1GB to ...

The performance of fiber cables—especially their transmission distance at different data rates—varies significantly across types. Below is a detailed guide to help you understand how

Optical Fiber Types

OM1 is legacy 62.5/125 micron multimode fiber standardized for data by IBM in the mid 1980s, adopted by FDDI in the late 1980s and standardized for TIA-568 in the early versions of the premises cabling

Multi-mode optical fiber

Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances, such as within a building or on a campus. Multi-mode links can

Multimode Fiber Cable Types: OM1/OM2/OM3/OM4/OM5 Compared

Compare all five multimode fiber grades — OM1 through OM5 — with full specs, bandwidth, distance limits, and real-world data center use cases. Learn which grade fits your

Gigabit Ethernet

Fiber optics 1000BASE-X is used in industry to refer to Gigabit Ethernet transmission over fiber, where options include 1000BASE-SX, 1000BASE-LX,

Multimode Fiber Distance Limits in Data Centers

OM1 fiber has a core diameter of 62.5 micrometers and a bandwidth of 200 MHz·km, typically used for low-speed applications like 100Mbps Ethernet. It supports a maximum distance of 275 meters at

Multimode Fiber Distance Limits in Data Centers

Types of Multimode Fiber and Their Distance Limits Multimode fibers are categorized into five types—OM1, OM2, OM3, OM4, and OM5—each with distinct characteristics in terms of bandwidth

Exploring Multimode Fiber Distance Limits in Data Centers

This article discusses multimode fiber distance limits, the types of multimode fiber and their respective distance capabilities, and solutions to

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.

Fiber Optic Patch Cord, Single Mode & Multimode

Understanding these specifications is crucial for selecting the right fiber optic patch cord to meet network performance, transmission distance, and environmental

100 Gigabit Ethernet

Optical modules are not standardized by any official standards body but are in multi-source agreements (MSAs). One agreement that supports 40 and 100 Gigabit Ethernet is the CFP MSA which was

The Complete Guide to Fiber Optic Cable Management

Ultimate fiber optic cable management guide: Best practices for installation, organization & maintenance - ensure network reliability.

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

Because of this, more data can pass through the multimode fiber core at a given time. The maximum transmission distance for MMF cable is around

OS1, OS2 vs OM1-OM5 Fiber Cables: Differences, Speeds, and

Explore the differences between OS1, OS2 (single-mode) and OM1, OM2, OM3, OM4, OM5 (multimode) fibers. Learn their speeds, distances, and ideal uses for data centers and telecom

Fiber Optic Patch Cables: The Complete 2026 Buyer's

Confused by LC, SC, MPO, UPC, and APC? This complete fiber optic patch cable guide covers connector types, single-mode vs multimode,

OM1 vs OM5 Fiber Guide: Bandwidth, Speed & Max Distance Charts

Match your fiber type to your distance needs and network speeds. The table below shows all critical distance specs across OM1 through OM5 and singlemode fiber for 2025 Ethernet standards.

Single Mode vs Multimode Fiber Explained | TRG

Understand the difference between single mode and multimode fiber, including performance, cost, and use cases, to choose the right fiber for your network.

OM1 OM2 OM3 OM4 OM5 Multimode Fiber Types:

This post is a comprehensive OM1 OM2 OM3 OM4 OM5 comparison guide, which illustrates the differences among OM1 OM2 OM3 OM4 OM5

OM1 vs OM2 vs OM3 vs OM4 vs OM5 Multimode Fiber

Compare OM1, OM2, OM3, OM4, and OM5 multimode fiber specs, distances, bandwidth, and applications. Essential guide for data center fiber

A Guide to Multimode Fiber Types (OM1-OM5) -

As for whether to choose a singlemode fiber patch cord or multimode patch cord, it all depends on applications that you need, transmission distance to

Fiber Optical Duplex Cable LC/LC InLine 62.5/125µm OM1 | AiO.lv

Product information Description The InLine Fiber Optical Duplex Cable LC/LC 62.5/125µm OM1 0.5m is a short-range multimode fiber patch cable designed for full-duplex data transmission in structured

Choosing the Right Fiber Optic Cable: Singlemode vs

Confused between SM and MM fiber optic cables? This article clarifies the differences and helps you choose the right one for your data

Fibre Optic Cable

Fibre optic cable, also known as "optical fibre cable" is a technology that uses thin strands of glass or plastic to transmit data, including text, sound, and images, in the form of light pulses.

Fiber Optic Cables | Cable Assemblies | DigiKey

Fiber optic cable is designed to transmit data using light signals instead of electricity, making it faster, more secure, and immune to electromagnetic interference

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

Multimode Fiber - OM1 to OM5 (Characteristics and

The maximum transmission distance through multimode fiber is up to 2km, which may vary according to the type of transmission (100Mbps,

Fiber Optic Cable Distance: A Comprehensive Guide

The type, transmission rate, fiber material, and other factors affect the maximum transmission distance of fiber optic cable. This article also

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