

What are the models and specifications of multimode logging optical cables



AI Overview

Multimode optical fibers are classified as OM1, OM2, OM3, OM4, and OM5, each with distinct core sizes, bandwidths, maximum distances, optical sources, and applications. Overview of Multimode Fiber Types Multimode fiber (MMF) is designed for short- to medium-range data transmission, typically within buildings or data centers. MMF has a larger core diameter (50–62.5 μm) than single-mode fiber, allowing multiple light modes to propagate simultaneously. MMF is cost-effective for enterprise LANs and data center horizontal cabling, using LEDs or VCSELs as optical sources. Multimode Fiber Specifications

Fiber Type	Core Size (μm)	Jacket Color	Bandwidth (MHz·km)	Max 10 GbE Distance	Max 40/100 GbE Distance	Optical Source	Typical Applications
OM1	62.5	Orange	200 @ 850 nm	33 m	Not supported	LED	100 MbE, legacy LANs
OM2	50	Orange	500 @ 850 nm	82 m	Not supported	LED	1 GbE, short-range LANs
OM3	50	Aqua	2000 @ 850 nm	300 m	100 m	Laser-optimized VCSEL	10 GbE, 40/100 GbE short links
OM4	50	Aqua	4700 @ 850 nm	550 m	150 m	Laser-optimized VCSEL	10/40/100 GbE, high-performance data centers
OM5	50	Lime Green	4700 @ 850 nm, 2470 @ 953 nm	550 m	150 m	Laser-optimized VCSEL, SWDM	Supports SWDM 40/100/400 GbE, future-proof data centers

Key Notes OM1 and OM2 are legacy fibers, primarily using LED sources, suitable for older 100 MbE and 1 GbE networks. Their orange jacket distinguishes them visually. OM3 and OM4 are laser-optimized 50 μm fibers, designed for VCSELs, supporting higher bandwidth and longer distances. Aqua jackets are standard for these types. OM5 is the newest multimode fiber, supporting Short Wavelength Division Multiplexing (SWDM) across multiple wavelengths (850–953 nm), enabling higher data rates like 40 SWDM4, 100G SWDM4, and 400G-BD4.2. Its lime green jacket identifies it as wideband MMF. Backward compatibility:...

Article Content

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

OM1-OM5 multimode fiber standards, detailing their core sizes, jacket colors, transmission capabilities and more.

Single-Mode vs. Multi-Mode Fiber Optic Cables

Fiber optic cables form the foundation of these networks, and to optimize performance, you need to ensure the right kinds are in place. Two main categories of cables are single-mode and multi-mode.

Optical Fiber Product Information Sheets

An all inclusive list of the various optical fiber specification sheets.

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

Identified by ISO 11801 standard, multimode fiber optic cables can be classified into OM1 fiber, OM2 fiber, OM3 fiber, OM4 fiber and newly released

Multimode Fiber Differences: OM1 vs OM2 vs OM3 vs OM4 vs OM5

Multimode fibers OM1 through OM5 offer varying levels of performance, bandwidth, and transmission capabilities. From the basic OM1 suitable for lower-speed applications to the advanced

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Fiber Optic Cable Types – Multimode and Single Mode

Single Mode cable has a much smaller core (8-9um) than multimode cable and uses a single path (mode) to carry the light. The main difference between single mode OS1 and OS2 is cable

Single Mode vs. Multimode Fiber: Core Differences and

How do you choose between single mode and multimode fiber? Compare their differences in core size, light source, bandwidth, transmission

Single-Mode vs Multimode Fiber Optic Cables: A

Compare Single Mode vs Multimode fiber optic cables. Expert analysis on distance, bandwidth, 800G compatibility, and TCO for modern network infrastructure.

OM2, OM3, OM4 vs. OM5 | How to Choose the Right

The difference between multimode fiber optic cables is important when choosing the right cabling for your network. Therefore, we take a detailed

Guide | JTOPTICS

Guide Your go-to resource for understanding fiber optic essentials—learn about different types of fiber cables, connector types, MPO/MTP high-density solutions, and transceiver modules. Perfect for

A Comprehensive Guide to Multimode Fiber Optic Cable

Explore the characteristics, advantages, and practical applications of multimode fiber optic cable in this comprehensive guide. Learn about its installation process, maintenance best practices, and

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 Optic Cable Types: OM1 vs OM2 vs

For short to medium distance high speed data transport, multimode fiber optic cables are popular in data centers, enterprise networks and campus

Types of Fiber Optic Cables: Complete Classification

In today's digital era, a reliable fiber optic cable network forms the backbone of communication. From data centers to enterprises and even smart

Everything You Need to Know About Multimode Fiber

Explore multimode fiber optic cables for enterprise, campus, and data center networks. Learn about OM1-OM5 types, transmission ranges,

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

Single Mode vs. Multimode Fiber Optic Cables

There are two main types of fiber optic cables: single mode and multimode. Although they can do the same job in some instances, the different

Single & Multimode Fiber Optic Cable: What's the difference

On the other hand, multiple light rays propagate through the waveguide at the same time in multimode optical fiber. Single

Types of Optical Fibers: Single-Mode vs. Multimode,

Types of optical fibers, their applications and future trends is the topic of this blog article. Optical fibers are among the most transformative technologies

Fiber Optic Cable Types – Multimode and Single Mode

Fiber Optic Cable Types – Multimode and Single Mode Application Fiber Optic connectors and cables are present in nearly

Multimode Optical Fiber Selection & Specification

There exists considerable overlap and redundancy between the various standards and specifications for each class of MMF. In addition, product specifications can be confused with overall architecture, or

The Ultimate Guide to Multimode Fiber Optic Cable

Multimode fiber optic cables are essential in modern data communication systems since they can transmit data efficiently and at high

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, as well as the various

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

What is the difference between multimode and

Fibre Optic Cable Transmission Distances These are the industry standard minimum distances achieved with each fibre type, however some cable manufacturers

Fiber Optic Cable Buying Guide | Eaton

Fiber Optic Cable Buying Guide Choosing single-mode or multimode fiber for high-performance data networking and telecommunications Fast data transmission,

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