

Multimode Optical Cable Specifications and Models Comparison Table



AI Overview

Multimode optical cables are classified into OM1, OM2, OM3, OM4, and OM5, each differing in core size, bandwidth, transmission distance, optical source, and typical applications. Overview of Multimode Fiber Types Multimode fiber (MMF) allows multiple light modes to propagate simultaneously, making it suitable for short- to medium-range communication, such as within buildings or campuses. MMF typically has a core diameter of 50–62.5 μm , and it uses LEDs or VCSEL lasers as light sources. The main types standardized by ISO/IEC 11801 are OM1, OM2, OM3, OM4, and OM5, each optimized for different speeds and distances. Detailed Comparison

Fiber Type	Core Diameter	Jacket Color	Optical Source	Bandwidth	Max Distance (10GbE)	Typical Applications
OM1	62.5 μm	Orange	LED	200 MHz·km	33 m	100M Ethernet, legacy networks
OM2	50 μm	Orange	LED	500 MHz·km	82 m	1G Ethernet, short-distance
OM3	50 μm	Aqua	Laser-optimized VCSEL	2000 MHz·km	300 m	10G Ethernet, 40/100G up to 100 m
OM4	50 μm	Aqua	Laser-optimized VCSEL	4700 MHz·km	550 m	10G/40G/100G Ethernet, longer distances than OM3
OM5	50 μm	Lime Green	Laser-optimized VCSEL, wideband	4700–5000 MHz·km	Similar to OM4	Supports multiple wavelengths for WDM, future-proof high-speed networks

Key Features and Considerations OM1 and OM2: Older standards, primarily LED-based, suitable for legacy 1G or 100M Ethernet networks. Limited distance and bandwidth make them less ideal for modern high-speed applications. OM3 and OM4: Laser-optimized for VCSELs, supporting higher data rates and longer distances. OM4 extends the reach of 10G Ethernet from 300 m (OM3) to 550 m, making it ideal for modern data centers. OM5: Introduced for wideband multimode applications, supporting shortwave WDM (SWDM) to transmit multiple wavelengths over a single fiber, enabling higher aggre...

Article Content

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

This comprehensive guide elaborates on the definition, classification, core differences, and practical application scenarios of various multimode fiber types, helping you select the most

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

PRICE OF A SIX-CORE OPTICAL CABLE STRIPPER Search Results

View results and find price of a six-core optical cable stripper datasheets and circuit and application notes in pdf format.

Multimode Fiber Specifications: A Comparative Analysis of OM1,

Introduction Multimode fiber optics play a pivotal role in structured cabling systems, particularly in short-distance, high-bandwidth applications such as data centers and enterprise networks.

Multimode Optical Fiber Selection & Specification

AEN 75, Revision: 11 This Applications Engineering Note (AE Note) discusses the criteria for properly selecting the optimal multimode fiber (MMF) for enterprise applications. This AE Note classifies

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

Comprehensive Guide to Multimode Fiber: Types, Applications, and

One such vital component is the optical fiber, specifically, the multimode fiber. In this article, we dive into the world of multimode fibers, comparing the five major types: OM1, OM2, OM3,

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

How Many Types of Multimode Fiber? Identified by ISO 11801 standard, multimode fiber optic cables can be classified into OM1 fiber, OM2

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

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

Both mediums bring something to the table! Where is Multimode Fiber Optical Cable Used? Multimode fiber optical cable in enterprise LAN and

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

Differences_between_OM1__OM2__OM3__OM4_copy

What are OM and OS type fiber optic cables? Fiber optic cables used in telecommunication are broadly categorized in two types - Multimode fiber and Single mode fiber cables. Multimode fiber cable is

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.

Single Mode vs Multimode Fiber: The Complete Guide

Single Mode vs Multimode Fiber: The Complete Guide to Choosing Right Single mode or multimode? It's the first decision in every fiber installation

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,

Differences between OS1, OS2, & OM1, OM2, OM3,

Fiber Optic Cable Selection Guide OM vs OS Fiber Cable: OS1, OS2, OM1, OM2, OM3, OM4 and OM5 Explained OM and OS are fiber optic cable

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

Multimode Optical Fiber Selection & Specification

Table 6 provides macro-bend loss requirements that meet Corning Cable Systems' Bend-Insensitive requirements. Discussion of bend-insensitive optical fiber standards started in IEC in 2010, but most

Fiber Type vs. Speed and Distance | Multimode vs. Singlemode

However, choosing the right fiber optic cable for your specific needs can be challenging, especially when comparing fiber type vs. speed and distance requirements. Factors such as bandwidth, transmission

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

Multimode Fiber Optic Cable Types: OM1 vs OM2 vs

Multimode fiber optic cable types OM1, OM2, OM3, OM4 and OM5 compared for core size, bandwidth, speed, distance & applications in modern

Comprehensive Guide to Multimode Fiber: Types,

Types of Multimode Fiber There are several types of multimode fibers classified by the ISO 11801 standard, including OM1, OM2, OM3, OM4, and the

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 Types Explained: OM1 vs OM2 vs OM3 vs OM4 vs OM5

This guide explores the differences between these fiber types, providing an authoritative comparison that empowers IT professionals, network engineers, and procurement teams to make

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

2024 Optical Fiber Reference Guide

The Optical Fiber Reference Guide is intended to provide a comprehensive list of single mode and multimode optical fibers currently available from several of the world's leading manufacturers for

Data Centre Cabling Standards 2026: TIA-942 vs BICSI

The complete guide to data centre cabling in 2026 — deep comparison of TIA-942-C, BICSI 002-2024, ISO/IEC 24764, EN 50600, 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

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