

Article Overview

OM5 > OM4 > OM3 > OM2 > OM1, ranked by bandwidth, distance, and suitability for modern high-speed indoor networks.

Overview of Multimode Fiber Types

Multimode fibers (MMF) are designed for short- to medium-range indoor applications, such as data centers, enterprise LANs, and campus networks. They have larger core diameters (50 um or 62.5 um) allowing multiple light modes to propagate simultaneously, which makes them cost-effective for high-speed connections using LED or VCSEL sources .

Ranking and Key Characteristics

o OM5 (Lime Green Jacket)

- o Core Size: 50 um

- o Bandwidth: Wideband multimode fiber (supports Short Wavelength Division Multiplexing, SWDM)

- o Max Distance: 150m+ at 100 Gbps

- o Optical Source: VCSEL, SWDM

- o Use Case: Future-proof high-speed data centers, 400G+ Ethernet, and applications requiring multiple wavelengths over a single fiber

o OM4 (Aqua Jacket)

- o Core Size: 50 um

- o Bandwidth: Laser-optimized for VCSEL

- o Max Distance: 550m at 10 Gbps, 150m at 100 Gbps

- o Use Case: High-performance enterprise networks and data centers; supports 10G, 25G, 40G, and 100G Ethernet

o OM3 (Aqua Jacket)

- o Core Size: 50 um

- o Bandwidth: Laser-optimized for VCSEL

- o Max Distance: 300m at 10 Gbps, 100m at 40/100 Gbps

- o Use Case: Cost-effective option for 10G/25G networks; suitable for moderate-distance data center links

o OM2 (Orange Jacket)

- o Core Size: 50 um

- o Bandwidth: LED-based, limited for high-speed applications

- o Max Distance: 82m at 10 Gbps, commonly used for 1 Gbps

Ranking of Multimode Indoor Optical Cables

- o Use Case: Legacy networks or cost-sensitive installations; not ideal for modern high-speed links
- o OM1 (Orange Jacket)
- o Core Size: 62.5 μ m
- o Bandwidth: LED-based, lowest performance
- o Max Distance: 33m at 10 Gbps, 275m at 1 Gbps
- o Use Case: Obsolete for 10G+ networks; suitable only for legacy 100 Mbps or 1 Gbps applications

Summary

- o OM5 is the most advanced multimode fiber, supporting wideband, multi-wavelength transmission for future-proof high-speed networks.
- o OM4 and OM3 are laser-optimized and widely used in modern data centers, with OM4 offering longer reach.
- o OM2 and OM1 are legacy fibers, suitable for older or cost-sensitive networks but limited in bandwidth and distance.
- o Color coding helps identify fiber type: OM1/OM2 (orange), OM3/OM4 (aqua), OM5 (lime green). Selecting the right multimode indoor optical cable depends on required data rate, distance, budget, and future scalability. For new installations aiming at 10G and beyond, OM3, OM4, or OM5 are recommended, with OM5 being the most future-proof option .

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

We can divide optical communication fibers into single-mode optical and multimode optical fibers according to the

Discover the best fiber optic manufacturers globally, offering cutting-edge multimode and

A complete guide to multimode fiber types OM1, OM2, OM3, OM4, and OM5. Compare

This comprehensive guide explores Multimode Fiber Cable Types, covering technical specifications, deployment

Indoor fiber optic cables are typically available in two types: single-mode and multimode. Understanding the difference between

Multimode fiber optic cables are essential in modern data communication systems since

Ranking of Multimode Indoor Optical Cables

Explore CommScope's Fiber Optic Cables for reliable connectivity. Our high-quality fiber optic cabling

Compare all five multimode fiber grades -- OM1 through OM5 -- with full specs, bandwidth, distance limits, and real

However, choosing the right fiber optic cable for your specific needs can be challenging, especially when comparing fiber type vs.

Fiber optic technology has transformed the way we transmit data, enabling faster, more reliable

Multimode fiber cables have advanced over the years from OM1 to OM2, OM3, OM4 and now OM5. Click to learn how

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

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

Explore Indoor Fiber Cable in 2025: types, uses, and installation tips. Find top indoor fiber

Learn the differences between multimode (OM1-OM5) and single mode (OS1-OS2) fiber optic cables--speed,

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