

List of Multimode Optical Cable Models



Overview

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

Key Takeaways

The main multimode optical cable models are OM1, OM2, OM3, OM4, and OM5, each differing in core size, bandwidth, distance, and application suitability. Overview of Multimode Fiber Models

Model	Core Diameter	Jacket Color	Light Source	Bandwidth	Maximum Distance	Typical Use
OM1	62.5 μm	Orange	LED	Lower modal bandwidth, suitable for legacy networks	Up to 275 m at 1 Gbps	100 Mbps Ethernet, older enterprise LANs
OM2	50 μm	Orange	LED	Moderate, supports higher speeds than OM1	Up to 82 m at 10 Gbps	1–10 Gbps Ethernet, cost-sensitive networks
OM3	50 μm	Aqua	Laser-optimized (VCSEL)	High, supports 10–40 Gbps	300 m at 10 Gbps	Modern data centers, high-speed LANs
OM4	50 μm	Aqua	Laser-optimized (VCSEL)	Very high, supports 10–100 Gbps	550 m at 10 Gbps	High-performance computing, 40/100 GbE networks
OM5	50 μm	Lime Green	Laser-optimized, supports Short Wavelength Division Multiplexing (SWDM)	4700 MHz·km at 850 nm, 2470 MHz·km at 953 nm	150 m+ at 100 Gbps	Future-proof data centers, multi-wavelength 40/100/400 GbE networks

Key Considerations

- Core Size:** OM1 has the largest core (62.5).

5 µm), while OM2-OM5 have 50 µm cores, enabling higher bandwidth and longer distances. Jacket Color Coding: OM1/OM2 (orange), OM3/OM4 (aqua), OM5 (lime green) for easy identification. Light Source Compatibility: OM1/OM2 use LEDs, limiting speed and distance; OM3-OM5 are laser-optimized for VCSELs, supporting higher data rates.

Applications: OM1/OM2 are suitable for legacy or cost-sensitive networks, OM3/OM4 for modern high-speed LANs and data centers, and OM5 for wideband SWDM applications. Selecting the appropriate multimode fiber depends on distance, bandwidth requirements, budget, and future network scalability. OM3 and OM4 remain the most widely deployed in current enterprise and data center environments, while OM5 is designed for next-generation high-speed, multi-wavelength networks.

Article Content

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

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

How Many Types of Multimode Fiber? 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 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

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

A complete guide to multimode fiber types OM1, OM2, OM3, OM4, and OM5. Compare speed, distance, bandwidth, and applications, and learn how

OM1 vs OM2 vs OM3 vs OM4 vs OM5 Multimode Fiber Guide | EDGE

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

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

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

Multimode Fiber Guide: Differences Between OM1,

This guide will walk through the differences between OM1-OM5 multimode fibers, their physical specifications, Ethernet support, connectors, and

Multimode Fiber Guide: OM1 to OM5 | PHILISUN

Compare OM1, OM2, OM3, OM4 and OM5 multimode fiber for speed, reach, patch cords, MPO cabling and upgrade planning.

OM1 vs OM2 vs OM3 vs OM4 vs OM5: Understanding

With several types available—OM1, OM2, OM3, OM4, and OM5—each offering distinct performance characteristics, selecting the right fiber

Global Optical Fiber Cable Market Size, Share and Outlook 2025-31

Global Optical Fiber Cable market size is predicted to grow from US\$ 12340 million in 2025 to US\$ 15560 million in 2031; it is expected to grow at a CAGR of 3.9% from 2025 to 2031.

Know Your 800G Transceiver | Juniper Networks

Fiber type and reach—The fiber type specifies the type of optical fiber (singlemode or multimode) compatible with 800G transceivers. The reach provides the maximum supported distance or range

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Juniper 800G Optical Transceivers and Cables Guide

About This Guide Use this guide to learn about the Juniper Networks® 800G optical transceivers and cables, their specifications, and how to install, remove, and maintain these

Top 5 Best Optical Cables 2026

Optical cables are crucial in modern telecommunication and audio-visual systems. They're renowned for their high-speed data transfer rates and

Fiber Optic Cable Types - Multimode and Single Mode

Application Fiber Optic connectors and cables are present in nearly every communications project that we might sell into, be it a DAS installation or a Base Station with wireless backhaul, you can be

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 every communications

Multimode Fiber Optic Cable Types: OM1 vs OM2 vs OM3 vs OM4 vs

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

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