

Common types of multimode fiber include



AI Overview

The main multimode fiber types are OM1, OM2, OM3, OM4, and OM5, each differing in core size, bandwidth, distance, optical source, and typical applications.

Overview of Multimode Fiber (MMF)

Multimode fiber is designed for short-distance data transmission, typically within buildings or campus networks. It has a larger core diameter (50–62.5 μm) than single-mode fiber, allowing multiple light modes to propagate simultaneously. This enables cost-effective use of LED or VCSEL light sources and supports high data rates over short distances, though modal dispersion limits its maximum reach compared to single-mode fiber.

Multimode Fiber Types

Fiber Type	Core Size	Jacket Color	Optical Source	Max Distance (10G Ethernet)	Typical Use
OM1	62.5 μm	Orange	LED	33 m	Legacy 100 Mb/s networks, older buildings
OM2	50 μm	Orange	LED	82 m	1 Gb/s Ethernet, limited 10G applications
OM3	50 μm	Aqua	Laser-optimized (VCSEL)	300 m	10G Ethernet, moderate-distance 40G/100G links
OM4	50 μm	Aqua	Laser-optimized (VCSEL)	550 m	High-speed 10G/25G/40G/100G, data centers
OM5	50 μm	Lime Green	Laser-optimized, SWDM	150 m+	(100G) Wideband multimode fiber for SWDM, future-proof 100G/200G/400G short-range applications

Key Differences and Evolution

- Core Size: OM1 has a larger 62.5 μm core; OM2–OM5 use 50 μm cores, reducing modal dispersion and increasing bandwidth

Article Content

Jan 27, 2026

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

In this article, we dive into the world of multimode fibers, comparing the five major types: OM1, OM2, OM3, OM4, and

Dec 22, 2025

Multimode Fiber: A Comprehensive Guide

Discover the world of multimode fiber, its types, advantages, and applications in modern optical communication systems.

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Multimode Fiber Guide: Types, Features & Selection

This guide explains how multimode fiber works, compares OM1 through OM5 fiber types, explores common

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Multimode Fiber Cable: Types, Uses, Advantages & Disadvantages

Multi mode fiber also provides you higher bandwidth with highly speeds (0 to 100MBS – Gigabit to 275m to 2km) for

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OM1 vs OM2 vs OM3 vs OM4 vs OM5: Understanding Multimode

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

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Single Mode vs Multimode Fiber, What is The Difference?

What is single mode fiber? Single mode fiber, short as SMF, is a fiber cable that only allows one mode of light to

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Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

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

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Multimode Fibers: A Comprehensive Guide

Graded-Index Multimode Fibers: Graded-index fibers have a gradual change in refractive index between the core and

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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

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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

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Single Mode vs Multimode Fiber Cable: Guide to Fiber Optic Cable Types ...

Single Mode vs Multimode Fiber Cable: Compare core size, bandwidth, distance, cost, and best use cases to help you

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Fiber Optic Cable Types: Single Mode vs. Multi-mode Fiber Cable

While single mode fiber frequently employs a laser or laser diodes to generate light that is injected into the cable. The

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

With a larger fiber core and good alignment tolerances, multimode fiber and components are less expensive and often

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

Among the available options, multimode fiber (MMF) plays a critical role in short-distance, high-bandwidth applications.

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Multimode Fiber: OM1 to OM5 Explained

Multimode fiber remains a popular choice for high-speed networking within enterprises and data centers. It enables

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Single-mode vs Multimode SFP 2026: Fiber Types and distances

A guide to single-mode vs multimode SFP modules. Covers fiber types, wavelengths, distances, BiDi, CWDM/DWDM,

Sep 30, 2025

Networks on Multimode Fiber: A Reference Guide

Fiber manufacturers have been actively updating multimode fiber to meet the needs of high-speed networks by engineering new

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

ISO/IEC 11801 defines the OM1, OM2, OM3, OM4, and OM5 types of multimode fiber. It also lists the key technical

Feb 07, 2026

Singlemode vs Multimode Fiber Optic Cable

We breakdown the differences between single mode and multimode fiber optic cable,

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Modes of Propagation in Optical Fiber

This illustration would explain the optical fiber structure, the power paths of multimode and single-mode propagation,

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Multimode Fiber Types Explained: Understanding OM1

Among various fiber types, the most common categories are OM1, OM2, OM3 fiber, OM4,

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Fiber Optic Cable Types: Single-Mode, Multimode, and Beyond – A ...

Discover fiber optic cable types, including single-mode (OS1, OS2) and multimode (OM1, OM2, OM3, OM4, OM5),

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Fiber Optic Cable Types – Multimode and Single Mode

Single mode fiber is the standard choice for high data rates or long distance spans and can carry signals at much higher speeds than

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