

With multimode fiber



Article Overview

Multimode fiber (MMF) is an optical fiber with a larger core that allows multiple light modes to propagate, ideal for short- to medium-distance high-speed data transmission.

Overview

Multimode fiber is primarily used for short-distance communication, such as within buildings, campuses, or data centers, due to its larger core diameter (typically 50–100 μm) which supports multiple light modes simultaneously. This design simplifies alignment and installation, making MMF cost-effective compared to single-mode fiber, and allows the use of lower-cost light sources like LEDs and VCSELs while maintaining reliable performance. MMF can support data rates up to 100 Gbps over distances ranging from 300 to 550 meters depending on the fiber type.

Types of Multimode Fiber

Multimode fibers are classified according to the ISO/IEC 11801 standard into OM1, OM2, OM3, OM4, and OM5:

- OM1: Core diameter 62.5 μm , orange jacket, LED light source, supports 10G Ethernet up to 33 meters, commonly used for 100M Ethernet.
- OM2: Core diameter 50 μm , orange jacket, LED light source, supports 10G Ethernet up to 82 meters, often used for 1G Ethernet.
- OM3: Laser-optimized 50 μm core, supports 10G Ethernet up to 300 meters, suitable for modern data centers

Article Content

Single Mode vs Multimode Fiber Cable: Difference & How to Choose

Learn the complete differences between single mode and multimode fiber optic cables, including distance, core size, wavelength,

Single Mode vs Multimode Fiber Cable

Multi-Mode Optical Fiber Cable : Multimode fiber cables are the type of fiber cables that transmit data via their core of

Single Mode vs. Multimode Fiber: Core Differences and Selection Guide

Single mode fiber typically has a core diameter of about 9 μm , which allows only one mode of light to propagate. In

Single Mode and Multimode Fiber: What's the Difference?

Learn more about Single Mode and Multimode Optical Fibers - their design, key differences, and intended fiber optic systems

Tutorial Passive Fiber Optics, Part 4: Multimode Fibers

Compared with a single-mode fiber, a multimode fiber allows for much easier launching of light, particularly if it supports many guided

Multimode Fiber

Multimode fiber is a type of fiber optic cable that uses inexpensive LEDs to transmit data. It is made of inexpensive plastic and allows

Single Mode vs. Multimode Fiber What's the Difference?

Single Mode vs. Multimode: Differences in Construction First the basics. single mode fiber is designed to propagate a single light

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.gmarkconstruction.co.za>

Email: sales@gmarkconstruction.co.za

Phone: +31-6-15-38-72-94

Address: Herengracht 456, 1017 BS Amsterdam, Netherlands

This document is for informational purposes only. Specifications subject to change without notice.

