Complete List of Multimode Logging Optical Cable Models

Article Overview

Multimode optical cables (OM1-OM5) vary by core size, bandwidth, maximum distance, and data rate, with OM3, OM4, and OM5 optimized for high-speed data center applications.

Multimode Fiber Types and Specifications
Fiber TypeCore DiameterCladding DiameterBandwidth (MHz.km)Max Distance (10 GbE)Max Distance (40/100 GbE)Jacket ColorLight SourceTypical ApplicationsOM162.5 um125 um200 @ 850 nm33 mNot supportedOrangeLED100 MbE, legacy LANOM250 um125 um500 @ 850 nm82 mNot supportedOrangeLED1 GbE, short-distance LANOM350 um125 um2000 @ 850 nm300 m100 mAquaVCSEL10/40 GbE, data centersOM450 um125 um4700 @ 850 nm550 m150 mAquaVCSEL10/40/100 GbE, high-performance computingOM550 um125 um4700 @ 850 nm550 m150 mLime GreenVCSELWideband multimode, supports SWDM for multiple wavelengths
Notes on Specifications:

o OM1 and OM2 are legacy fibers, primarily using LED sources, suitable for short-distance LAN applications .
o OM3, OM4, and OM5 are laser-optimized multimode fibers (LOMMF), designed for VCSEL sources and high-speed data center links .
o OM4 and OM5 support higher bandwidth and longer distances for 40/100 GbE applications, making them ideal for modern enterprise and cloud computing environments .
o OM5 supports shortwave wavelength division multiplexing (SWDM), allowing multiple wavelengths over a single fiber for increased capacity .

Multimode Trunk Cable Optical Specifications

o Attenuation: Measured in dB/km according to EIA 455 FOTP standards (e.g., FOTP 58, 164, 167) and varies by wavelength and fiber type .
o Link Loss: Total link loss must not exceed calculated specifications; typical values are provided for planning purposes .
o Bend-Insensitive Fibers: Modern multimode fibers (OM3-OM5) often incorporate bend-insensitive technology for improved macro-bending performance, reducing signal loss in tight installations .
o Wavelengths: Standard operation at 850 nm and 1300 nm; suitable for LED, VCSEL, and Fabry-Perot laser sources .
o Core/Cladding: Standard 50 um core for OM2-OM5, 62.5 um for OM1, with 125 um cladding for all types .

Summary

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For enterprise and data center applications, OM3, OM4, and OM5 are recommended due to their high bandwidth, laser optimization, and support for 10-100 GbE. OM1 and OM2 remain relevant for legacy networks. Trunk cables should be selected based on attenuation, bend-insensitivity, and link loss requirements, ensuring compliance with EIA and ISO/IEC standards for reliable multimode optical performance .

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

Optical fiber logging cable enables the transmission of detailed data over long distances, making it an essential

Comprehensive guide to multimode fiber optic cable -- definitions, OM1-OM5 differences, specs, construction, typical

Fiber Optic Patch Cable Types and How to Choose the Right One? Fiber optic cables come in various types based on

The primary distinction between single mode and multi-mode fiber optic cable is the fiber core diameter, wavelength &

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

Complete comparison of OM1, OM2, OM3, OM4, and OM5 multimode fiber. Core diameter, modal bandwidth, jacket colors, distance

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

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

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

View Eland Cables" range of singlemode and multimode fibre optic cables - loose tube and tight buffered. Technical support, fast

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

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One such vital component is the optical fiber, specifically, the multimode fiber. In this article, we dive into the world of

Electro-Optic Tow Cables depths up to 6,000 meters The cable constructions are designed to endure the demands of the required

Multimode optical fiber represents one of the most critical infrastructure components in modern data centers,

Different generations of multimode fibers, designated as OM1, OM2, OM3, OM4, and OM5,

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