

Performance Comparison of Long-Distance Optical Cable OM5 with Other Cables



Summary of Content

OM5 fiber offers the highest multimode performance with SWDM support, enabling longer reach and higher bandwidth than OM1-OM4 fibers while maintaining backward compatibility.

Core Size and Light Source Compatibility

- OM1: 62.5 μm core, LED light source, legacy applications .
- OM2: 50 μm core, LED, improved modal dispersion, supports 1-10 GbE over short distances .
- OM3 & OM4: 50 μm core, VCSEL laser-optimized, designed for 10-100 GbE; OM4 offers higher bandwidth and longer reach than OM3 .
- OM5: 50 μm core, VCSEL, supports Shortwave Wavelength Division Multiplexing (SWDM) across 850-953 nm, enabling multiple wavelengths on a single fiber .

Bandwidth and Data Rate

- OM1: 200 MHz·km, 10 GbE up to 33 m .
- OM2: 500 MHz·km, 10 GbE up to 82 m .
- OM3: 2000 MHz·km, 10 GbE up to 300 m, 40/100 GbE up to 100 m .
- OM4: 4700 MHz·km, 10 GbE up to 550 m, 40/100 GbE up to 150 m .

Article Content

A Technical Comparison of OM1, OM2, OM3, OM4, and OM5 Fibers

Performance: Instead of just operating at 850nm, OM5 is designed to support at least four low-cost wavelengths across a wideband

Multimode Fiber Guide: OM1 to OM5 | PHILISUN

OM5 is a wideband multimode option used when the optics architecture is designed around SWDM or other

OM5 Fibre | Empowering Networks with Speed and Reach

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

OM5 Multimode Fiber Guide: OM4 vs OM5, Specs & SWDM4

The Verdict: For intra-rack and inter-rack connections under 150 meters, OM5 + SWDM provides the most cost

Fiber Patch Cable Selection Guide: OS2 vs OM3 vs OM4 vs OM5

This guide walks you through every variable that matters: fiber type, bandwidth rating, maximum distance, connector

OS2 vs OM3 vs OM4 vs OM5 Fiber | 2026 ZION Selection Guide for

3) Speed-Distance & Performance Comparison (2026 Reality) Modern Ethernet and InfiniBand links push optical reach

OM1 vs OM5 Fiber Guide: Bandwidth, Speed & Max Distance Charts

Compare OM1, OM2, OM3, OM4, and OM5 fiber types. Get the 2025 bandwidth specs, max distance charts for

Multimode Fiber Cable Types: OM1/OM2/OM3/OM4/OM5 Compared

While OM5 carries a 25-35% price premium over OM4, the total cost of ownership (TCO) is lower when factoring in

OS2 vs OM1 vs OM2 vs OM3 vs OM4 vs OM5 Fiber Types

Choosing the correct fiber type is critical for network performance, cost efficiency, and future scalability. This guide

Fiber OS1 OS2 OM3 OM4 OM5: Practical Network Cabling Guide

The difference is cable construction and attenuation specification. OS2's lower attenuation (0.4 dB/km vs 1.0 dB/km) and loose-tube

Contact Us

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