Om2 fiber optic cable compatible with om3 fiber optic patch cord



Overview

OM2 fiber optic patch cable uses a 50/125-micron core and offers improved performance compared to OM1.

Key Takeaways

OM2 and OM3 are both multimode fiber types, but OM3 supports higher bandwidth and longer distances; OM2 connectors can physically connect to OM3 fiber, but performance will be limited to OM2 specifications. Key Differences Between OM2 and OM3Core Size and Wavelength: Both OM2 and OM3 fibers have a 50/125 µm core, but OM2 is optimized for 850 nm with a bandwidth of 500 MHz·km, while OM3 supports 850 nm and 1300 nm with a higher bandwidth of 2000 MHz·km, enabling faster data transmission over longer distances. Transmission Speed and Distance: OM2 supports 1 Gbps up to 300 meters and 10 Gbps up to 150 meters.

OM3 can handle 10 Gbps up to 300 meters and 40/100 Gbps up to 100 meters. Typical Applications: OM2 is often used in older networks or cost-sensitive installations, while OM3 is preferred in modern data centers and high-speed enterprise networks.

Patch Cord Connections

Connector Compatibility: OM2 and OM3 fibers use the same types of connectors (LC, SC, ST, MPO). You can physically connect an OM2 patch cord to OM3 fiber, but the connection will operate at OM2 performance levels, limiting bandwidth and distance. Best Practice: For optimal performance, match the patch cord type to the fiber type.

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Use OM3 patch cords with OM3 fiber to fully utilize its higher bandwidth and longer reach. Color Coding and IdentificationOM2 cables: Typically have an orange jacket. OM3 cables: Typically have an aqua jacket.

This color coding helps quickly identify fiber types in patch panels and network racks.

Recommendations

Upgrading Networks: If upgrading from OM2 to OM3 fiber, consider replacing patch cords with OM3-rated cables to achieve full performance.

Short-

Term Compatibility: OM2 patch cords can be used temporarily with OM3 fiber, but expect reduced speed and distance.

Future-

Proofing: For new installations, OM3 or higher (OM4/OM5) is recommended to support 10G, 40G, and 100G Ethernet and future network growth. By understanding these differences and following proper connector matching, you can ensure reliable, high-speed network performance while avoiding signal loss or bandwidth limitations.

Article Content

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OM2 fiber optic patch cable uses a 50/125-micron core and offers improved performance compared to OM1. While OM2 offers improved performance, it is

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