What are the types of 10GE multimode pigtails

Overview

Fiber Optic Pigtails: Types, Uses & How to Splice ThemLearn fiber optic pigtails types and uses in plain English. Compare LC, SC, MPO Fiber Optic Pigtails.

Key Takeaways

10GE multimode pigtails are typically OM1, OM2, OM3, OM4, or OM5 fibers, available in single-fiber or multi-fiber configurations with various connector types and protective constructions.Multimode Fiber Types for 10GE
• OM1 (62.5 µm core, orange jacket): Supports 10G Ethernet up to 33 meters; LED light source; legacy installations .

• OM2 (50 µm core, orange jacket): Supports 10G Ethernet up to 82 meters; LED light source; slightly higher bandwidth than OM1 .

• OM3 (50 µm core, aqua jacket): Laser-optimized for 10G Ethernet up to 300 meters; widely used in modern data centers .

• OM4 (50 µm core, aqua jacket): Enhanced laser-optimized multimode fiber; supports 10G Ethernet up to 400 meters; ideal for high-density applications .

• OM5 (50 µm core, lime green jacket): Wideband multimode fiber supporting multiple wavelengths; future-proof for parallel optics and 10G–400G Ethernet .
Connector Types

10GE multimode pigtails are available with common connectors, chosen based on equipment or patch panel interfaces :

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• LC: Small form factor, duplex-friendly, standard in data centers.

• SC: Square push-pull connector, common in telecom and FTTH.

• ST: Bayonet-style, older networks or industrial use.

• MTP/MPO: Multi-fiber connectors for high-density ribbon pigtails.

• FC/E2000: Screw-type or high-performance connectors for specialized applications.
Pigtail Configurations
• Single-fiber pigtails: Most common for LC, SC, or FC connectors; used in standard ODF or patch panel terminations .

• Multi-fiber pigtails: Bundles of 2, 4, 6, 12, 24, 48, or 72 fibers; often in ribbon format for high-density splicing in data centers .
Construction Types
• Indoor pigtails: Lightweight, flexible, suitable for protected environments like splice trays and ODF panels .

• Armored pigtails: Metal protective layer for durability against crushing or impact; used in industrial or high-traffic areas .

• Waterproof pigtails: Stainless steel armored with waterproof connectors; suitable for outdoor or harsh environments .
Summary

For 10GE multimode applications, OM3, OM4, and OM5 fibers are preferred due to their higher bandwidth and longer reach. Pigtails can be single-fiber or multi-fiber, with connectors like LC, SC, or MPO, and constructions ranging from indoor to armored or waterproof depending on deployment requirements. Proper selection ensures low insertion loss, high return loss, and reliable 10G Ethernet performance .

Article Content

LC Multimode Fibre Pigtails

Fibre optic pigtails are typically used to link the fibre optic cable with fibre optic equipment. The connector side of the pigtail is used to

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