High-Speed OM1 Multimode Bare Optical Fiber – 62.5?m Core, Low Non-Circularity, Bend-Insensitive Design

Product Overview

Winner OM1 bare multimode optical fiber is engineered for dependable performance in established enterprise, campus, and telecom networks that rely on 62.5/125 µm infrastructure. Compliant with ISO/IEC 11801, IEC 60793-2-10, and TIA-492AAAC standards, this fiber delivers an overfilled modal bandwidth of ⩾200 MHz・km at 850 nm and ⩾500 MHz・km at 1300 nm, supporting Ethernet speeds up to 1 Gb/s over distances of 275 meters.

Key geometric enhancements include core/cladding concentricity error below 1.5 µm, core non-circularity under 5%, and cladding non-circularity less than 1%, which collectively minimize modal dispersion and insertion loss during splicing or connectorization. The fiber also incorporates a proprietary bend-insensitive design—inspired by advanced industry principles—that reduces sensitivity to macrobends in tight routing environments such as patch panels, conduits, and equipment racks. With stable attenuation performance (⩽2.7 dB/km @850 nm, ⩽0.6 dB/km @1300 nm) and resilience across a wide temperature range (-60°C to +85°C), Winner OM1 ensures long-term reliability even under thermal cycling conditions.

Technical Specifications

Brand Name	Winner
Model Number	OM1
Product Type	Bare Multimode Optical Fiber
Core Diameter	62.5 ± 2.5 μm
Cladding Diameter	125 ± 1 μm
Coating Diameter	245 ± 7 μm
Core Non-Circularity	<5%
Cladding Non-Circularity	<1%
Coating Non-Circularity	⩽6%
Core/Cladding Concentricity Error	<1.5 μm
Group Refractive Index	1.496 @850 nm, 1.491 @1300 nm
Overfilled Modal Bandwidth	⩾200 MHz・km @850 nm, ⩾500 MHz・km @1300 nm
Attenuation	⩽2.7 dB/km @850 nm, ⩽0.6 dB/km @1300 nm
Temperature Cycling Stability	-60°C to +85°C, Δα ⩽0.1 dB/km

Delivery Length per Reel	4.4 – 17.6 km

Applications

- Enterprise local area networks (LAN) for horizontal and backbone cabling in office buildings, hospitals, and educational campuses
- Telecommunications central offices and access networks requiring compatibility with legacy OM1 infrastructure
- Data centers maintaining brownfield installations operating at 100 Mb/s to 1 Gb/s
- Industrial control systems where EMI immunity and proven multimode reliability are essential
- Retrofit and extension projects that maximize reuse of existing OM1 pathways without full re-cabling

Compatibility & Standards

Winner OM1 fiber is fully compatible with standard OM1 connectors (ST, SC, FC) and transceivers (e.g., 100BASE-FX, 1000BASE-SX). It can be spliced using conventional fusion splicers and terminated with standard polishing techniques. While OM3/OM4/OM5 fibers are recommended for new 10G+ deployments, OM1 remains the most cost-effective solution for sub-gigabit applications and legacy system continuity.