

How to Choose the Wire Diameter for Dual-Core Fiber Optic Patch Cords

Article Overview

Dual-core (uniboot) fiber optic patch cords typically have cable diameters of 1.8 mm to 2.0 mm, designed for high-density routing and space-saving applications.

Cable Diameter and Design

Dual-core or uniboot fiber optic patch cords are engineered to carry two fibers within a single jacket, reducing bulk and simplifying cable management in data centers and telecom racks. The standard diameters for these cords are:

- o 1.8 mm: Slim design for ultra-high-density applications, supporting tight routing and minimal congestion while maintaining mechanical strength (tensile strength ~90 N) .
- o 2.0 mm: Slightly thicker for enhanced durability and bend resistance, with tensile strength up to 220-300 N depending on manufacturer and fiber type . These diameters are compatible with standard connectors such as LC, SC, ST, FC, MU, and LSH, and are suitable for both single-mode (OS2) and multi-mode (OM1-OM5) fibers .

Additional Specifications

- o Jacket Material: Flame-retardant, rugged, and durable, with options for LSZH or plenum-rated jackets for safety in different environments .
- o Bend Insensitivity: Many dual-core cords use bend-insensitive fibers, allowing ultra-tight bends without signal degradation, which is critical in high-density racks .
- o Connector Ferrules: High-quality zirconia ferrules ensure low insertion loss and high return loss, meeting GR-326 and TIA/IEC standards .
- o Tensile Strength: Varies by diameter; 1.8 mm cords typically support ~90 N, while 2.0 mm cords can support 220-300 N, ensuring durability during installation and handling .

Applications

Dual-core patch cords are ideal for:

- o Data centers and server farms requiring high-density fiber routing
- o FTTx, LAN/WAN, and telecom networks
- o Environments where space-saving and reduced cable congestion are critical . These cords are factory-terminated and tested for insertion loss, return loss, and end-face quality, ensuring reliable performance in high-speed networks from 1G to 400G/800G . In summary, dual-core fiber optic patch cords



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are designed with 1.8-2.0 mm diameters, combining compactness, mechanical strength, and high-performance fiber standards for modern high-density network deployments.

RLH fiber optic patch cords are factory terminated, inspected, and tested to meet industry standards. They can be custom ordered up

Fiber optic technology is the backbone of modern high-speed communication networks, yet selecting the right modules and patch

Need to upgrade to fiber optics but aren't sure which fiber patch cord is best? C&C

Standard Fiber Patch Cables Fiber optic patch cables are ideal for supporting high speed telecommunication network fiber

Fiber optic cable size chart with complete guide to core, cladding, and jacket dimensions, types, and specifications for

Understand the differences between fiber optic cables, patch cords, and pigtails. Learn standards, applications, and

In high-speed network environments--such as data centers, enterprise LANs, and telecom backbones--fiber optic cables are critical

The right fiber patch cord not only ensures optimal performance but also minimizes signal loss, reduces downtime, and supports

Which fiber patch cable fits your network? Compare OS2, OM3 & OM4 specs, match fiber to distance and speed,

Standard Fiber Patch Cables Applications Fiber optic patch cords are key components for efficient, low-loss optical

This comprehensive guide discusses the differences between the different fiber optic fiber cores, connector types, and jacket types.

The fiber optic connector types chart offers details on fiber patch cable types. Fiber optic patch cables provide transfer speeds in high

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The Opti-Core® patch cords support network applications in main, horizontal and equipment distribution areas and are available in

technical information The Opti-Core® Push-Pull LC Duplex Fiber Optic Patch Cords contain a custom push-pull strain

Choosing the Right Fiber Size for Your Application Selecting the correct fiber optic size for your specific application is

Custom Singlemode Patch Cables Use Model Number F-PATCH-CUSTOM to configure a custom fiber-optic patch cord using these

Web: <https://www.morwarreconst.co.za>

