

What optical cables are available



Article Overview

Optical cables, or fiber optic cables, are available in multiple types including single-mode, multi-mode, indoor, outdoor, armored, and specialty cables for high-performance networks.

Core Types

Single-Mode Fiber (SMF): Features a small core (~9 microns) that allows only one light mode to propagate, ideal for long-distance, high-speed communication such as telecommunications and long-haul networks . **Multi-Mode Fiber (MMF):** Has a larger core (50–62.5 microns) supporting multiple light modes, suitable for shorter distances like LANs, data centers, and enterprise networks . Variants include OM3, OM4, and OM5, optimized for higher bandwidth and laser-based transmission.

Construction Types

Loose Tube: Fibers are housed in a protective tube with gel or water-blocking material, commonly used for outdoor installations where environmental protection is critical . **Tight Buffered:** Fibers are coated with a thicker protective layer, easier to handle and terminate, often used for indoor cabling and patch cords .

Application-Specific Cables

Indoor/LSZH (Low Smoke Zero Halogen): Designed for indoor use with fire-resistant jackets that emit minimal smoke and no halogen gases . **Outdoor/ADSS (All-Dielectric Self-Supporting):** Suitable for aerial installation on power lines, contains no metallic...

Article Content

Fiber Optic Cable Types Explained

Our comprehensive guide to types of fiber optic cables. Learn all about the differences between single mode and multimode cables,

Multi-mode optical fiber

Optical fiber manufacturers have greatly refined their manufacturing process since that standard was issued and cables can be made

10 Types of Fiber Optic Cable Explained: Selection Guide (2026)

Explore the top 10 fiber optic cable types for 400G/800G networks. From ADSS to MPO, learn technical specs, applications, and how

Optical fiber

Because of these properties, silica fibers are the material of choice in many optical applications, such as communications (except for

Fiber Optic Cables Selection Guide: Types, Features, Applications ...

Fiber optic cables are composed of one or more transparent fibers enclosed in protective coverings and strength members. Fiber

Fiber Optic Cables

CommScope designs and manufactures a comprehensive line of fiber optic cables—from outside plant to indoor/outdoor and fire

Fiber-optic cable

There are two main types of material used for optical fibers: glass and plastic. They offer widely different characteristics and find uses

Fiber Optic Cable: Types, Uses, Benefits & How to Choose

This page explains what fiber optic cable is, how it works, the main cable types available, where it is used, and how to

Contact Us

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