

There are several types of optical cables

Article Overview

Optical fiber cables are primarily classified into single-mode and multi-mode types, each optimized for specific distances, bandwidths, and applications.

Single-Mode Fiber (SMF)

Single-mode fibers use a thin glass core (8-10 microns) that allows light to travel in a single path, minimizing signal loss and enabling transmission over long distances without the need for signal regeneration. They are ideal for telecommunications, cross-continental networks, and high-speed internet backbones. Single-mode fibers are further categorized into OS1 and OS2: OS1 is designed for indoor, shorter distances (up to 6 miles) and supports up to 10 Gbps, while OS2 is built for outdoor, long-distance use (up to 125 miles) and supports up to 100 Gbps, often using loose-tube construction for durability and flexibility .

Multi-Mode Fiber (MMF)

Multi-mode fibers have a larger core (50-62.5 microns) that allows multiple light paths simultaneously, making them suitable for shorter distances such as within data centers or campus networks. MMF supports high bandwidth over medium-range distances but can experience modal dispersion over longer runs. Common subtypes include OM1, OM2, OM3, OM4, and OM5, which differ in core size, bandwidth, and maximum transmission distance. For example, OM1 supports 10 Gbps up to 300 meters, while OM3 can handle 10 Gbps up to 1000 meters and 40 Gbps up to 400 meters

Article Content

Apr 22, 2026

Fiber Optical Cabling Types and Considerations

Navigating the Fiber Optic Landscape: Fiber Optical Cabling Types and Considerations
In our blog "Unveiling the Power of Fiber

Oct 27, 2025

Network Cable Types and Specifications

This tutorial explains the types of network cables used in computer networks in detail. Learn

Apr 15, 2026

Fiber Optic Cable Types: A Complete Guide

The plethora of fiber optic cable types can seem overwhelming, but choosing the right cable

Oct 29, 2025

Fiber Optic Cable Types & What They Are Used For

Transmission Efficiency: These cables are superior to traditional copper cables as they can transmit data over longer

Jun 08, 2026

Types of Fibre Optic Cable: A Comprehensive Guide

Learn about single-mode and multi-mode fiber optic cables, their components, uses, and how to choose the right type

Jun 23, 2026

Types of Fiber Optic Cables: Complete Classification

In today's digital era, a reliable fiber optic cable network forms the backbone of

May 23, 2026

Types of Ethernet Cable

3. Fiber Optic Cable Fiber optic cables use optical fibers which are made of glass cores surrounded by several layers

Apr 18, 2026

Basics of Fiber Optics

Lower loss: Optical fiber has lower attenuation (loss of signal intensity) than copper conductors, allowing longer cable runs and fewer

Jan 17, 2026

The FOA Reference For Fiber Optics

Fiber Optic Cable Cable Types: (L>R): Zipcord, Distribution, Loose Tube, Breakout Cable provides

Nov 27, 2025

Types of optical fibers

As mentioned in the article on the structure of optical fibers, the properties of data transmission via a fiber optic

Mar 19, 2026

Fiber Optic Cable Types | Omnitron Systems Guide

Explore fiber optic cable types, features, and applications. Omnitron Systems explains single-mode, multi

Nov 10, 2025

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

Once the fiber optic cables are installed, it is important to clean and maintain the cables. There are two types of fiber optic connector

May 10, 2026

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,

Feb 12, 2026

Types of Optical Fibers and Cables: A Comprehensive Guide

FTTA and CPRI cables are specific types of optical fibers used in mobile communication systems. FTTA cables are

Feb 07, 2026

Fiber-optic cable

Different types of cable are used for fiber-optic communication in different applications, for example long

May 14, 2026

How does fiber optics work?

Uses for fiber optics Shooting light down a pipe seems like a neat scientific party trick, and you might not think there'd

Nov 28, 2025

What Is Fiber Optics? Definition from SearchNetworking

What is fiber optics? Fiber optics, or optical fiber, refers to the technology that transmits information as light pulses

Nov 29, 2025

Types of Fibre Optic Cable: A Comprehensive Guide

Understanding the types is essential in deciding between a speedy, distant, and rugged solution. This exhaustive work

Mar 09, 2026

Fiber Optic Cable Types Explained: Choosing the Right Fiber Cable

Explore different types of fiber optic cables, from single mode to armored and LC uniboot options. Learn how to

May 27, 2026

Fiber Optic Cable Types: Comprehensive Guide

Explore the different types of fiber optic cables and understand which type suits your specific needs for speed, distance,

Jun 25, 2026

Types of Optical Cables, Features, and Operating Principles

Fibre optic cables are essential components of modern telecommunications. They ensure high-speed data

Jan 31, 2026

Multi-mode optical fiber

Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances, such as within a building or on a

May 09, 2026

What Types Of Fibre Optic Cable Are There?

Not all fibre cables are the same. Discover the important differences between different types of fibre cabling and what it means to you.

Nov 10, 2025

Fiber-optic cable

This list includes both standards-based and real-world technical cable types utilized in fiber-optic infrastructure, telecoms, enterprise,

Jun 21, 2026

Fiber Optic Cable Types: Single-Mode, Multimode, and Beyond – A ...

Discover fiber optic cable types, including single-mode (OS1, OS2) and multimode (OM1, OM2, OM3, OM4, OM5),

Sep 11, 2025

Optical Cable Types: A Guide to Selecting the Right Cable

Understanding the variety of optical cable types is like picking the perfect pair of shoes:

Aug 29, 2025

The Complete Guide to Optical Fiber Cables: Types, Benefits, and ...

There are two main types of optical fiber cables: single-mode and multi-mode fiber cables. Single-mode fiber cables use thinner

Jul 07, 2026

Fiber Optic Cable Types – Multimode and Single Mode

Fiber Optic Cable Types – Multimode and Single Mode Application Fiber Optic connectors

Jun 19, 2026

Fiber Optic Cable Types | Omnitron Systems Guide

From the fiber core and core size to single mode fiber and multimode fiber cables, each type of optical

Aug 27, 2025

What are the different types of network cables?

What are the different types of network cables? The main types of network cables are coax, fiber optics, and shielded

Mar 25, 2026

How optical communication cables work and how they

In several articles, I mentioned optical fibre in the context of substation automation,

May 29, 2026

Fiber Optic Cable Types—Complete Guide

Ever wondered what are the different fiber optic cable types? Yes, there are different ones,

May 16, 2026

A Complete Guide to Fibre Optic Cables | RS

There are multiple fibre optic cable types, and it is important to understand the differences between each one. Each

Mar 05, 2026

Fiber Optics and Types

Fiber optic cables are used for long-distance and high-performance data networking. They are capable of transmitting

Jun 19, 2026

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

Apr 15, 2026

Fiber Optic Cable Types: Single-Mode, Multimode, and Beyond – A ...

A fiber optic cable (frequently shortened to “fiber cable”) is a specialized transmission medium crafted to carry data as

Dec 18, 2025

The Complete Guide to Optical Fiber Cables: Types, Benefits, and ...

Understanding the different types of optical fiber cables, their benefits, and their applications is vital for those who work in industries

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

