

Specifications for ordinary optical cables

Article Overview

Ordinary optical cables are characterized by their core and cladding dimensions, attenuation, bandwidth, dispersion, and mechanical construction, following standards like ITU-T G.652.

Core and Cladding

The core of an optical fiber is the central glass region that guides light, while the cladding surrounds the core with a lower refractive index to enable total internal reflection. In single-mode fibers, the core diameter is typically around 8–10 μm , and the cladding diameter is standardized at 125 μm . Multi-mode fibers have larger cores, usually 50 μm or 62.5 μm , with the same cladding diameter. The mode field diameter in single-mode fibers measures the transverse extent of the light field and affects coupling efficiency and bending sensitivity .

Attenuation and Bandwidth

Attenuation represents the signal loss per kilometer and is wavelength-dependent. For single-mode fibers, typical attenuation values are around 0.35 dB/km at 1310 nm and 0.22 dB/km at 1550 nm. Multi-mode fibers have higher attenuation due to modal dispersion. Bandwidth is determined by the fiber type and core size, with single-mode fibers supporting very high bandwidth over long distances, while multi-mode fibers are suitable for shorter links .

Dispersion...



Article Content

Dec 24, 2025

Outdoor Fiber Optic Cable | Outside Plant Fiber (OSP) Cable

Fiber optic cables for outdoor applications are engineered to withstand the more demanding conditions seen outside, from

Aug 20, 2025

Fiber Optic Cables

Armoured and Flame retardant optical fibre cable, AICI - code F104 NEK TS 606:2016 (available also in MUD protected version).

Dec 06, 2025

Understanding Fiber Optic Cables and Connectors

Read Whitepaper: Discover the fiber optic cable and connector types, specifications, benefits, typical

Mar 16, 2026

G.652 : Characteristics of a single-mode optical fibre and cable

Recently posted - Search Recommendations G.652 : Characteristics of a single-mode optical fibre and cable

Jun 01, 2026

The Ultimate Guide to Fiber Optic Cables – Types, Standards, and ...

Discover how to choose the right fiber optic cables for your network. Learn about fiber types, cable constructions,

Feb 12, 2026

Optical Fiber Product Information Sheets

An all inclusive list of the various optical fiber specification sheets.

Nov 15, 2025

Understanding and Selecting Optical Fibre and Cable

OPTICAL FIBRE AND CABLE This document will provide an understanding of optical fibre, optical fibre cable (OFC), application

Sep 10, 2025

Optical Fiber Products

Optical fiber broadband brings together a culture of innovation, quality, and manufacturing excellence to create life-changing products.

Mar 25, 2026

Corning® ALTOS® Loose Tube Fiber Optic Cables

Corning ALTOS® cables provide stable performance over a wide temperature range and are compatible

Dec 03, 2025

Fiber Optic Cable Types: A Complete Guide

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

Mar 13, 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

Aug 30, 2025

Optical Fibre Cable Technical Specification

This Specification covers the design requirements and performance standard for the supply of optical fibre cable in the industry.

Sep 30, 2025

Product Catalogue Fibre Optic Cable

The single loose tube cables consist of 2 to 24, 250 µm optical fibres in a single gel filled loose tube with helically applied E-glass non

Jan 06, 2026

Optical cable fiber specifications

Learn about the optical fiber cable specifications for your server. The preferred optical fiber for the server is 50/125

Oct 01, 2025

Understanding and Selecting Optical Fibre and Cable

In this document, the relationship between the cable features, followed standards, test parameters, and acceptance criteria are

May 15, 2026

Handbook Optical fibres, cables and systems

Moreover, the optical plant needs a lot of complementary hardware (passive nodes, optical distribution frames, joint closure,

Dec 30, 2025

FIBRE OPTIC CABLES GENERAL SPECIFICATIONS

FIBRE OPTIC CABLES GENERAL SPECIFICATIONS ... * All attenuation values are valid for cabled fibres ** Zero Water Peak

Oct 26, 2025

The Ultimate Fiber Optic Cable Size Reference Chart

With the right specs, you can ensure optimal performance and avoid missteps that cost both time and money. Fiber

Feb 27, 2026

Fiber Optic Cable Types – Multimode and Single Mode

Single Mode cable has a much smaller core (8-9um) than multimode cable and uses a single path (mode) to carry the light. The main

Oct 03, 2025

CORNING OPTICAL COMMUNICATIONS GENERIC SPECIFICATION

CORNING OPTICAL COMMUNICATIONS GENERIC SPECIFICATION FOR 1728-3465 FIBER STRANDED SUBUNIT

May 03, 2026

Fibre optic cable selection guide

Fibre optic cable selection guide; explains the differences between the different fibre optic cable types and the commonly available

Dec 09, 2025

Optical Fibre Cable Technical Specification

Optical fibre cables supplied in compliance with this specifications is capable to withstand the typical service condition for a period of

Oct 05, 2025

Optical Fiber Cable Specifications and Fibre-Count Guide

This guide sets out the technical parameters to define when specifying optical fiber cable. For how these map to physical cable

Mar 06, 2026

Network Cable Types and Specifications

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

Sep 27, 2025

Fiber Optic Cables Specifications

Find Fiber Optic Cables on GlobalSpec by specifications. Fiber optic cables are composed of one or more transparent optical fibers

Oct 09, 2025

Fiber Optic Cable Specifications Guide

This document provides specifications for single mode and multimode optical fibers according to various ITU-T and IEC standards.

May 27, 2026

Fiber Optic & Cable Standards Guide | FiberMania

Fiber optic networks are built on well-defined standards that ensure quality, performance,

Feb 05, 2026

A Complete Guide to Fibre Optic Cables | RS

Far less electricity is also used by fibre optic LED lighting compared to standard bulb options, which makes it both

May 02, 2026

OM1 vs OM2 vs OM3 vs OM4 vs OM5 Multimode Fiber Guide | EDGE Optical ...

Compare OM1, OM2, OM3, OM4, and OM5 multimode fiber specs, distances, bandwidth, and applications. Essential

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.

