

A comprehensive list of classification charts for indoor optical cables

Article Overview

Indoor optical cables are classified into riser, interconnect, distribution, and breakout types, each designed for specific indoor applications and environmental requirements.

Indoor Optical Cable Classification

Cable Type	Structure & Core	Key Features	Typical Applications	Jacket/Sheath Material
Riser (Vertical Lifting)	Single or multi-core, designed for vertical runs	High tensile strength, supports vertical shafts, withstands self-weight	Connection between entrance equipment, equipment rooms, and communication cabinets on different floors	PVC or LSZH, flame-retardant
Interconnect Cable	Compact single-core, 2-8 cores, tight-buffered	Small size, flexible, can handle small bending radius, equipped with standard connectors	Optical fiber to workstation, patch cords, jumpers, communication cabinet interconnections	LSZH or PVC, sometimes PU for abrasion resistance
Distribution (Bundle) Cable	Multiple tight-buffered fibers bundled under one jacket, 4-144 fibers	Flexible branching, no splice trays needed, supports horizontal and vertical structured cabling	Data centers, office networks, structured cabling	LSZH or flame-retardant PVC
Breakout Cable	Each fiber has its own strength member and jacket	Excellent tensile and crush resistance, direct termination without splice boxes	Industrial Ethernet, machine vision, high-mechanical-stress environments	LSZH, PVC, or PU for chemical and abrasion resistance
Plenum Cable	Single or multi-core, designed for air-handling spaces	High flame retardancy, low smoke emission, corrosion-resistant	Pipelines, high-pressure inflatable spaces, HVAC systems	LSZH or UL-certified flame-retardant PVC
Rodent-Resistant Cable	Single or multi-core, reinforced with stainless steel or armored layers	High lateral pressure resistance, excellent rodent protection	Buildings prone to rodent damage, industrial environments	LSZH, PVC, or PU armored jackets

Key Considerations

- o Core Count & Fiber Type: Indoor cables can be single-mode or multimode, with core counts ranging from 1 to over 144 fibers depending on application ().
 - o Fire Safety Ratings: LSZH (Low Smoke Zero Halogen) is preferred in high-toxicity or smoke-sensitive areas, while PVC is common for general indoor use ().
 - o Flexibility & Bend Radius: Tight-buffered and compact designs allow installation in limited spaces and small bending radii without signal loss ().
 - o Specialized Sheaths: PU jackets provide chemical, abrasion, and scratch resistance for emergency, military, or high-stress applications ().
- This classification chart provides a clear overview of indoor optical cable types, helping in selecting the appropriate cable based on installation environment, mechanical requirements, and fire safety standards.

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

The document provides a list of type codes for fiber optic cables, detailing the meanings of each code related to cable specifications.

In order for an optical fibre to perform appropriately, characteristics that a cable should have been described. Also, the method of

General Indoor Cable Description Indoor Optical Cable is intended primarily for use within an environmentally controlled structure

In all types of optical fiber cables, the individual optical fibers are the signal transmission media that act as individual optical wave

This document discusses different types of optical fibers and optical fiber cables. It describes the various materials and configurations

This document outlines the recommendations for single-mode optical fiber cables used in telecommunication networks within

This document will provide an understanding of optical fibre, optical fibre cable (OFC), application standards, and key considerations

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

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

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This exhaustive work will elucidate fibre optic cable types, their uses, and benefits, leaving one capable of deciding how

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

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industry in product quality and

Abalone offers a comprehensive range of indoor fiber optic cable solutions tailored to various deployment scenarios, including data

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