

Flame-retardant six-core single-mode optical fiber



Article Overview

A flame-retardant six-core single-mode optical fiber is designed for high-performance, safe, and durable data transmission in outdoor and indoor environments.

Key Features

Construction: These cables typically use a central strength member (steel wire or fiberglass rod) surrounded by a loose tube containing six single-mode fibers. The loose tube is often filled with thixotropic gel for water-blocking and fiber protection, while optional filling ropes enhance structural stability . The cable is armored for mechanical strength and has a flame-retardant outer sheath, often LSZH (Low Smoke Zero Halogen), to minimize smoke and halogen emissions during fire .

Mechanical and Environmental Protection: The armored layer provides crush resistance and tensile strength, while the outer sheath offers UV and water resistance, making the cable suitable for direct burial, conduit, or aerial installation . The stranded loose tube design allows fibers to slide freely, reducing stress during installation and environmental changes .

Performance: Single-mode fibers support long-distance, high-speed data transmission, ideal for telecom backbones, broadband networks, enterprise campuses, and long-haul fiber links . The central bundle tube layout ensures stable optical performance and consistent signal integrity.

Applications: These cables are suitable for outdoor communication networks, including railways, oil fields, and areas with strict fire safety requirements. They are also used in telecom infrastructure, broadband internet backbones, and campus-wide networks .

Safety and Compliance: The flame-retardant jacket ensures compliance with fire safety sta...

Article Content

Aug 13, 2025

DataGuard® MLT Armoured Fire Resistant Fibre Optic Cable

A fire-resistant fibre optic cable meeting IEC60331-25 & EN50200 PH120 with a Steel Wire Armour protective layer, giving excellent

Aug 25, 2025

Fiber Optic Cable

Fiber Cable Belden's extensive line of indoor and outdoor cable products is offered in tight buffer and loose tube designs. Armored,

Mar 06, 2026

006E8F-31131-A1 | FREEDM® One Tight-Buffered,

Corning FREEDM® One interlocking armored cables are flame-retardant, indoor/outdoor cables designed

Jul 27, 2025

ChimeraX™ Fully Dry Design SWA Fire Resistant Cable

Description Specification Hermesys ChimeraX™ series SWA Fire Resistant Cable is a steel wire armored (SWA) fiber optic cable

Aug 14, 2025

Single-Mode Fibers

Single-mode fibers with small core diameters used in telecommunications for signal transmission across long distances.

Jul 13, 2026

FREEDM® One Tight-Buffered Cable, Riser 6 F, Single

Corning FREEDM® One riser cables are flame-retardant, UV-resistant, indoor/outdoor cables designed for

May 10, 2026

Fire Resistant Fiber Cable | Up to 3-Hour Resistance | UPCOM

Fire Resistant Fiber Optic Cable A-DQ(MK)(BN)H(SR)H provides vital communication that need to be operated during fire. 2 hour fire

Aug 29, 2025

Flame Retardant Multi Loose Tube Fiber Optic cables

The following standards specify a method for flame propagation test for single core cables. The single cable sample undergoes the

Jun 04, 2026

Fire Resistant Fibre

Draka FT Fire Resistant Fibre Optic Unarmoured QFCI OM1 62.5/125 Fire Resistant Armoured Loose Tube Fibre Optic Cable Marine

Apr 05, 2026

Draka FireTuf OFC-LT-CST Fire Resistant Fibre Optic Cable Steel tape ...

FireTuf OFC-LT-CST fibre optic cables are manufactured by Prysmian Draka. Available in OM1, OM3 and OM4 multimode and OS2

Sep 17, 2025

LCS³

Single-mode OS2 fiber optic cable with 9/125µm core/cladding for high-capacity, long-distance data transmission. Tight buffer

Aug 24, 2025

Fire resistant optic fibre cable_V4

They are mainly installed in metro stations, tunnels, oil & gas refineries, petrochemical plants, subways or closed areas in general,

Nov 07, 2025

Lifeline QFCI Fire Resistant Fiber Optic Cable

- Roadway Tunnels Lifeline® QFCI is the first UL flame listed optical cable designed for indoor/outdoor use in vital communication

Oct 21, 2025

Single Mode (SM) Fibers | Coherent

Coherent Single Mode Fibers maintain beam quality, and minimize attenuation and dispersion, and are offered from the visible

May 14, 2026

Draka FT Fire Resistant Fibre Optic Armoured

FireTuf fibre optic cables are manufactured by Prysmian Draka. Offered in OM1, OM3 and OM4 multimode

Apr 14, 2026

Fiber Optic Cables

Indoor and outdoor, flame retardant, LSZH or PVC, loose tube, Armored SWA (Steel wires Armor), SWB (Steel wires Braid) or CST

Nov 25, 2025

Fiber Optic Cable Jackets and Fire Ratings Explained

Learn about fiber optic cable jackets, materials, and fire ratings. Find the right jacket for

Sep 22, 2025

Kaichuang Tong GYXTZW-8B1 Flame Retardant Single-mode Armoured Fiber ...

Shop Kaichuang Tong GYXTZW-8B1 single-mode armored fiber optic cable. Flame retardant, outdoor-ready, 8-core G.652D fiber for

Dec 03, 2025

Draka FireTuf OFC-LT-NM Fire Resistant Fibre Optic

FireTuf OFC-LT-NM fibre optic cables are manufactured by Prysmian Draka. Available in OM1, OM3 and

Jul 23, 2026

Development of flame retardant and fire-resistant optical cable based ...

Light transmittance of flame retardant and fire-resistant optical fiber cable is more than 68% according to IEC61034. According to

Dec 03, 2025

FIBRE OPTIC CABLES

Flame retardant cables can resist the spread of fire, but the cable is fully consumed by the flame and no circuit integrity is assured.

Aug 28, 2025

25-year best-selling non-metallic flame-retardant optical ...

As a popular model in the communications industry for 25 years, the gyftzy-4-core to 48-core series of non-metallic

Mar 01, 2026

Fibre optic cable OS2 loose tube 6 cores indoor/outdoor

The Legrand Indoor/Outdoor fibre optic cable is easy to handle and resilient to hardships. It can be used

Apr 16, 2026

best fiber optic cable multi core single mode armoured

FAHAD CABLES provides high-strength fiber optic cable multi core single mode armoured g 652d for use

Apr 18, 2026

Recommendation ITU-T G.652 (08/2024)

This document outlines the specifications for a single-mode optical fiber and cable designed for use around the 1310 nm zero

Nov 19, 2025

FIBERHOME GJPFJH-6B1.3 Indoor Optical Cable | 6-Core Single

This indoor fiber optic cable features 6 single-mode fiber cores housed in a compact, flame-retardant jacket designed to meet

Sep 14, 2025

Opti-Core® LSZH Indoor-Outdoor All-Dielectric Fiber Optic Cable

The fiber cable shall have a loose tube, all-dielectric (non-conductive) construction with 6, 12, 24 or 48 fibers and comply with

Apr 03, 2026

Single Mode Multi-Core Central Bundle Tube Outdoor Gyxtzw-6b1 Flame ...

Single Mode Multi-Core Central Bundle Tube Outdoor Gyxtzw-6b1 Flame-Retardant Overhead Optical Cable, Find

Dec 13, 2025

Haile Armoured 6-core Single-mode Outdoor Flame Retardant Fiber Optic ...

Buy Haile HT210Z-6S 6-core armored single-mode fiber optic cable. 1000m GYXTZW-6b1.3 central tube flame retardant cable for

Mar 18, 2026

Haile Armoured 6-core single-mode outdoor flame retardant fiber optic ...

About This Item This 6-core single-mode fiber optic cable is constructed using a central loose tube design, offering stable optical

Sep 30, 2025

ChimeraX™ SST Unitube SWA & CST Armored Fire Resistant Fiber Optic ...

Hermesys ChimeraX™ series SST Unitube SWA Fire Resistant Fiber Optic Cable is a durable and fire-resistant cable with stainless

Mar 24, 2026

Fiber Optic Cables

Fire resistant optical fibre cable, QFCI - code F101 NEK TS 606:2016 (available also in MUD protected version).

Nov 15, 2025

Fiber Optic Cables

APPLICATION Optical cable for indoor and outdoor use in vital communication and emergency systems that need to be operational

Dec 28, 2025

GYTZA Single Mode G657 G652D LSZH Fire Retardant Fiber Optical

GYTZA is a type of fiber optic cable designed for outdoor applications, featuring several advantages: Flame-Retardant: The cable is

Apr 12, 2026

Draka FireTuf Fire Resistant Fibre Optic Cable

8, 12 & 24 Core Fibre Optic Cable OM1, OM3, OM4 multimode and OS2 singlemode, Loose Tube, Internal/External LSZH.

Dec 24, 2025

LSZH™ Loose Tube, Gel-Free, Single-Jacket Cable | Corning

Corning LSZH™ loose tube gel-free cables are flame-retardant, indoor/outdoor, suitable for installation in interbuilding and

Contact Us

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