

Non-metallic flame-retardant optical cable connector



Overview

Find your flame-retardant optical cable easily amongst the 50 products from the leading brands (LEMO, LAPP, YOCF, ...) on DirectIndustry, the industry specialist for your professional purchases.

Key Takeaways

Non-metallic flame-retardant optical cables are designed to maintain data transmission integrity during fire while providing mechanical strength without using metal components.

Construction and Materials

These cables typically feature a central non-metallic strength member, often made of Fiber Reinforced Plastic (FRP), which provides tensile strength and structural integrity without electromagnetic interference issues. The optical fibers are housed in loose tubes filled with water-blocking compounds or thixotropic gels to prevent moisture damage. The outer sheath is usually Low Smoke Zero Halogen (LSZH), which reduces toxic smoke and halogen emissions in case of fire.

Some designs include glass yarn reinforcement for additional fire protection and mechanical durability.



Fire-

Resistant and Flame-Retardant FeaturesNon-metallic flame-retardant optical cables are engineered to maintain circuit integrity under fire conditions, ensuring continuous data transmission in critical environments. They comply with international fire safety standards such as B2ca CPR and FE180, providing low smoke emission, zero halogen content, and exceptional flame retardance. These properties make them suitable for tunnels, hospitals, airports, industrial plants, data centers, and railway networks where safety and reliability are paramount.

Applications

These cables are versatile and can be deployed in indoor and outdoor environments, including ducts, aerial installations, and weak electrical areas. They are ideal for long-haul communication, interoffice networks, CATV, and computer networks, especially in areas prone to electromagnetic interference, lightning, or fire hazards. Their design allows for high-speed data transmission over long distances without significant signal loss.

AdvantagesNon-metallic design avoids electromagnetic interference and corrosion issues. Fire resistance ensures network continuity during emergencies. Water-blocking and moisture resistance protect fibers in harsh environments.

Mechanical durability with reinforced sheaths and loose tube construction supports long-term reliability. Compliance with international safety standards ensures suitability for critical infrastructure. Non-metallic flame-retardant optical cables provide a future-proof solution for high-speed, reliable, and safe optical networks, combining fire safety, mechanical strength, and environmental resilience.

Article Content

Flame-retardant optical cable

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Non Metallic Armored Fiber Optic Cables | ETK Kablo

ETK Kablo manufactures non-metallic armored cables in multiple configurations to meet varied bandwidth and distance requirements: Each cable is engineered for low attenuation, stable optical

Draka FireTuf OFC-LT-NM Fire Resistant Fibre Optic

This FireTuf fire resistant fibre optic range is fully compliant with fire resistant standards and flame retardant standards, guaranteeing the cables circuit

Flame-retardant connector

Find your flame-retardant connector easily amongst the 14 products from the leading brands (TE connectivity, ZIMMER, Fongkit, ...) on DirectIndustry, the industry

Fiber Optic Cables

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

Fire Resistant Fibre

Draka FireTuf OFC-LT-CST Fire Resistant Loose Tube Fibre Optic Cable Steel Tape Armoured QFCI OM3 50/125 Fire Resistant Armoured Loose Tube Fibre Optic Cable Marine DNV-GL & ABS Approved

Fibre optic cables

With our SKINTOP®, EPIC®, SILVYN® and FLEXIMARK® brands, we meet the requirements for plug connectors, cable glands, cable guiding systems and marking systems. We only use top-quality

Fiber Optic Cables

Corrugated steel tape armoured central loose tube cable with excellent mechanical protection and thus secure rodent protected. The cable features a two jacket construction with up to 24 fibers maximum

Kaitron GYFTZY-48B1 Non-Metallic Flame Retardant 48-Core Fiber

Shop Kaitron GYFTZY-48B1 48-core single-mode fiber optic cable with non-metallic core and flame retardant LSZH jacket. Ideal for telecom, FTTH, and high-density networks.

Hongkai GJAFKV FRP | Non-Metallic Armored Fiber

Get robust, lightweight protection with Hongkai's GJAFKV FRP. This non-metallic armored cable is ideal for indoor and outdoor installations.

FireTuf™ Fire Resistant Loose Tube Cable

Use outdoors for duct installation and as a fire resistant and flame retardant cable indoors. The fiber optic cable exceeds the requirements of EN50173-1, ISO/IEC11801 and EN/IEC60794-6.

OFNP OFNR and LSZH Cables: What are they and

LSZH (low-smoke zero-halogen) is optical cables' most common flame-retardant material. According to NEC (National Electrical Code), the flame

Fiber Optic Cable Jackets & Fire Ratings Guide

Fiber Optic Cable Fire Rating In the National Electrical Code (NEC), fiber optic cables are categorized into various fire ratings, including

Kaitron GYFTZY-48B1 Non-Metallic Flame Retardant 48-Core Fiber Optic ...

Product Overview Kaitron Loose sleeve stranded non-metallic reinforcing core non-armored flame retardant fiber optic cable GYFTZY-48B1 is a high-capacity, reliable fiber optic cable designed for

GYFTZA53 Loose Tube Layer Stranded Non-metallic Reinforced

Loose Tube Layer Stranded Non-metallic Reinforced Core Armored Flame-retardant Optical Cable is designed for superior performance and durability in outdoor communication networks.

FLAME RETARDANTS IN ELECTRIC AND ELECTRONIC

Fire-safety is at the center of our activities. The main objective of the association is to co-operate with members of the value chain including industry organisations involved in the use of non-halogenated

Fibre optic cables

Non-permanent connections allow for easy change of equipment Direct connection between two active optical components Tight-buffered duplex cable with LSZH outer Zero electromagnetic interference as

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 OM4 multimode and OS2 singlemode, in 24, 36, 48,

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

