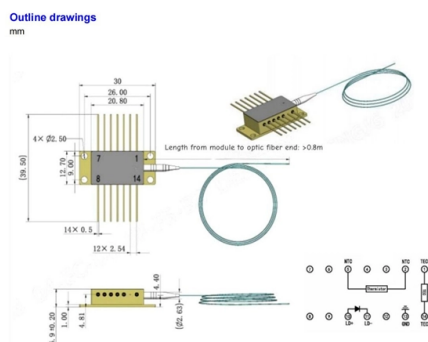


Flame-retardant optical cables and ordinary optical cables



Overview

We carry RHW-2 and RW90-Two-Hour Fire cables as well as Two-Hour Horizontal and One-Hour Vertical Cables.

Key Takeaways

Flame-retardant optical cables are designed to resist fire, limit smoke, and maintain communication during emergencies, whereas ordinary optical cables lack these protective features and are more vulnerable to heat and fire damage.

1. Fire Resistance and Safety

- Flame-retardant optical cables are engineered to withstand high temperatures and prevent flame propagation. They often include LSZH (Low Smoke Zero Halogen) sheaths, ceramic sheathing materials, and synthetic mica tape layers to protect fibers from heat and fire damage.

- Ordinary optical cables typically use standard polymer jackets (PVC or basic LSZH) without specialized fire-resistant layers, making them susceptible to melting, smoke emission, and halogen gas release during a fire.

2. Structural Composition

- Flame-retardant cables often feature armored layers (steel wire or corrugated steel tape) and multi-layer insulation to maintain mechanical integrity and fiber performance under extreme conditions.

- Ordinary optical cables usually have a simpler structure: a central fiber core, loose tubes, and a single outer sheath, which provides basic protection but not fire survival capability. 3. Performance Under Fire

- Flame-retardant cables are tested to maintain signal transmission during fires, with standards such as IEC 60331, IEC 60332, and BS6387 ensuring minimal attenuation even at temperatures up to 950°C for extended periods .

- Ordinary cables can fail quickly under fire, leading to loss of communication, which is critical in emergency systems. 4. Applications

- Flame-retardant optical cables are used in fire alarm systems, voice evacuation systems, tunnels, metro lines, and public buildings, where maintaining communication during a fire is essential .

- Ordinary optical cables are suitable for general data transmission in environments where fire risk is low and emergency operation is not critical. 5. Standards and Compliance

- Flame-retardant cables comply with international fire safety standards (IEC, EN, UL, CSA) and are often halogen-free to reduce toxic gas emissions .

- Ordinary cables may meet basic electrical and mechanical standards but do not guarantee fire performance.

Summary

Flame-retardant optical cables provide enhanced safety, fire resistance, and operational reliability in hazardous or public environments, while ordinary optical cables are cost-effective for standard installations but lack protection against fire and heat. Choosing between them depends on risk assessment, regulatory requirements, and criticality of communication systems.

Article Content

Development of flame retardant and fire-resistant optical cable

In the paper, we try our best to develop a kind of flame retardant & fire-resistant cable with excellent comprehensive performance,

AEN071 rev 4 9-28-23 PDF_

UL 1651 specifies the requirements for listing cable of these types and they include flame performance testing, marking durability,

QFCI Fiber Cable | Lifeline® MC Cable | Fire Rated Cables

We carry RHW-2 and RW90-Two-Hour Fire cables as well as Two-Hour Horizontal and One-Hour Vertical Cables. We also carry

Fiber Optic Cable Fire Ratings Explained

Engineering explanation of fiber optic cable fire ratings, flame classification systems, and installation environment

Flame Retardant Fiber Optic Cable: OFNP vs LSZH | Rectivas

Our flame retardant for wire and cable overview covers the systems used across every cable family. Why does a fiber

Fiber Optic Cable Jacket Fire Ratings: OFNP, OFNR, LSZH

Learn how to choose the right fiber optic cable jacket fire rating, including OFNP, OFNR, LSZH, PVC, PE and outdoor cable options

Harsh Environment Fiber Optic Cable Solutions for Extreme

Explore how to select the right fiber optic cable for challenging environments including high temperatures, extreme

Armada® Loose Tube Fire Resistant Fibre Optic Cable SHF-1

A highly flame retardant, universal loose tube fibre optic cable for use where resistance to fire is needed for critical systems. This

Fire Resistant Optic Fiber Cables|Fireproof Cables

The cables may be armoured or braided, with or without metallic screen, depending on different applications. INTERNATIONAL

Lifeline QFCI Fire Resistant Fiber Optic Cable L

Lifeline® QFCI Fire Resistant Fiber Optic Cable Survivability in a Fire for Vital Communication and Emergency Systems Regulators

Indoor Fiber Optic Cables | Flame Retardant Indoor Cable Products

These indoor fiber optic cables are used exclusively within buildings and must have a flame-retardant cable jacket to fit this purpose.

Fire-Resistant Optic Cable

Engineered for critical safety, this fire-resistant optic cable provides reliable data transmission in high-risk environments.

3 Fiber Optic Cable Fire Rating – OFNP, OFNR And OFN

The fire rating of fiber optic cable can be specified into 3 types, which are OFNP, OFNR and OFN. Before we can

Flame Retardant fiber Optic cable Enhanced SWA Armoured Material

Offshore/Oil Gas/ heavy industrial Fiber Optic Flame Retardant Cable Direct Buried
Single Mode/Multimode UniTube Fire Resistant

FIRE RESISTANT CABLE

FIRE RESISTANT CABLE In all fire disasters, fire smoke, heat and toxic fumes are the main obstacles to safe evacuation of a

Safety fire-resistant fibre optical cable with system integrity for 90 min

Oil-resistant PUR and PVC cables 100% Products Catalogue Characteristics and Technologies Mechanical Characteristics Chemical

Fiber Optic Cable Fire Resistance Ratings – Fosco Connect

This article describes the fire resistance ratings code from NEC for fiber optic cables. We carry a large inventory of all types of fiber

Production process of high-performance fire-resistant optical cable

The main application of flame retardant and fire-resistant optical cable, generally by selecting excellent flame retardant

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