

Materials of China Unicom Optical Cables



AI Overview

China Unicom optical cables are primarily made of doped silica glass fibers with polymer coatings, mechanical stress-resistant structures, and water-resistant materials.

Core Optical Fiber The main data-transmitting component of China Unicom optical cables is the single-mode optical fiber, specifically the G.654E standard used in high-speed backbone networks. The fiber core and cladding are made of ultra-pure silica (SiO_2), often doped with germanium to control the refractive index and optimize signal transmission. These fibers are designed for low attenuation and large effective area, which improves performance in 400G and higher-speed networks.

Protective Coatings and Buffers To protect the delicate glass fiber, China Unicom cables use dual-layer UV-cured acrylate coatings: a soft primary coating and a hard secondary coating. These coatings provide mechanical protection, reduce microbending losses, and enhance durability during installation and operation. Additionally, polymer mechanical buffer coatings and PBT bushings are applied to further protect the fiber from stress and environmental factors.

Cable Structure and Environmental Protection The optical cables include mechanical stress-resistant structures, such as aramid yarns or FRP rods, to maintain integrity under tension and bending. Water-resistant special fiber pastes and cable pastes are incorporated to prevent moisture ingress, which is critical for outdoor and harsh-environment deployments, such as in Xinjiang and Shandong. Some cables may also include metallic components for grounding or additional protection, depending on the application.

Summary In essence, China Unicom optical cables combine: Doped silica glass fibers (core and cladding) UV-cured dual-layer polymer coatings Mechanical buffers and stress-resistant structures Water-resistant pastes and protective jackets These materials ensure high-speed, low-loss transmission, durability in extreme climates, and suitability for large-scale backbone network deployment.

Article Content

Shanghai Unicom Tower – China

Molex has designed a Category 6, Optical Fiber Cabling Solution and flexible PDS solution comprised of five subsystems for Unicom Tower, the headquarters office of China Unicom Shanghai Branch.

MPT, China Unicom Plan International Cable to Boost Internet ...

RANGOON — Myanmar Posts and Telecommunication and China Unicom have signed an agreement to build a new optical fiber cable that would connect Burma with China and

YOFC Assists Three Major Operators in Advancing the

Recently, Yangtze Optical Fibre and Cable Joint Stock Limited Company (YOFC, stock code: 601869.SH, 06869.HK), in collaboration with

Optical fiber and cable market: This year is a "big year"

Recently, the results of China Unicom's 2024 optical cable centralized procurement project were announced. 15 optical fiber and cable companies shared this large order of 65.7859 million core

YOFC assists China Unicom to complete the first gl

In the end of 2015, China Unicom and YOFC jointly led and boosted the approval of communication industrial standard of G.654.E type optical fibre, making outstanding contributions to

2025 ANNUAL RESULTS ANNOUNCEMENT AND CLOSURE OF

GROUP RESULTS China Unicom (Hong Kong) Limited (the “Company”) is pleased to announce the audited consolidated results of the Company and its subsidiaries (the “Group”) for the year ended 31

Fiber Optic Cables China: Structure, Specifications, and Common ...

Chinese fiber optic cables are engineered for performance, durability, and scalability, supporting applications from urban broadband networks to remote rural connectivity. Below is a detailed

Optical Communication Development in China

1. Optical Fiber and Cable Industry Optical fiber technology research in China started in early 70's and a few field trials for telephone inter-office relay were held in Shanghai (1979) and

Yangtze Optical Fibre and Cable Joint Stock C : Growing research on ...

The main points of the product focus on the selection of raw materials, test analysis of optical transmission performance, high-speed cable forming technology and so on.

China Unicom's ADC Submarine Cable Into Operation, with 8 Pairs of ...

China Unicom, as the main operator of the global backbone three-dimensional Internet network and the main constructor of the “the Belt and Road” new digital infrastructure, has also been

What China's Major Submarine Cable Means for U.S. Network Architects

China Telecommunications Corporation (China Telecom), China Mobile Limited, and China United Network Communications Group (China Unicom) are planning the "world's most

China's reported construction of undersea internet cable is normal ...

Chinese state-owned telecom firms, China Telecom, China Mobile, and China Unicom, are developing a \$500 million undersea fiber-optic internet cable network that would link Asia, the Middle

Global Fiber Optic Cable Market Analysis | OPELINK

The fiber optic cable industry is witnessing a structural transformation from a cyclical commodity market to a technology-driven growth sector, with premium fibers commanding 20-30%

Growing research on long-term performance of optical fibre and cable

Abstract: Optic fibre and cable products consist of doped silica fibre glass layer, polymer mechanical buffer coating, PBT bushing, water-resistant special fibre paste and cable paste, and mechanical

Guangdong Unicom Procures 82 Core-Kilometers of Hollow-Core Fiber

This procurement involves hybrid optical cables containing hollow-core fiber, along with fiber splicing and termination services, and corresponding auxiliary materials.

YOFC assists China Unicom to complete the first global carrier class ...

In 2015, China Unicom cooperated with the mainstream optical fibre and cable suppliers at home and abroad including YOFC to carry out the field test of G.654.E optical fibre by building two optical fibre

Optic Fiber Cables

To ensure high quality of fiber optic cables, ZTT always selects raw materials of international and domestic brands. ZTT also has received authentications of ISO9001, ISO14001 and OHSAS 18001.

YOFC assists China Unicom to complete the first gl

In 2014, China Unicom took the lead in launching the exploration of new types of optical fibre in the global industry, and promoted and participated in setting the ITU-T G.654E optical cable

Building AI-Optical Network to Drive New Growth in the AI Era

China Mobile, China Telecom, China Unicom, Zain Jordan, and Shunwang Technology shared their latest practices in embracing AI opportunities. Building on improved bandwidth speeds,

Collection: All-optical infrastructure innovation and application of ...

All-optical Infrastructure has been Applied on a Large Scale and Gained Significant Economic and Social Benefits China Unicom's all-optical infrastructure system architecture and

Growing research on long-term performance of optical fiber and cable

The main points of the product focus on the selection of raw materials, test analysis of optical transmission performance, high-speed cable forming technology and so on.

Optic Fiber Cables

As the major cable production base, Nantong base consists of four factories for three production parts: conventional, special and FTTX cables. The annual capacity can reach 3.5million kilometers total

China Unicom to Build Cambodia's First State-Owned Submarine Optical ...

The nearly 3,000-kilometer submarine optical fiber cable will run from Hong Kong to Sihanoukville in southern Cambodia, China Unicom announced yesterday, citing a deal it signed with

What You Need to Know About China Unicom and Its Fiber Optic

In addition to the fusion splicer pack, AliExpress offers a wide range of other fiber optic tools that are compatible with China Unicom's infrastructure. These include high-quality fiber optic cables,

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://adikor.eu>

Email: info@adikor.eu

Phone: +33 6 48 37 92 15

Address: 12 Rue de la Paix, 75002 Paris, France

This document is for informational purposes only. Specifications subject to change without notice.

