National Standard for Standard Optical Cables



Overview

This standard describes procedures for installing and testing cabling networks that use fiber optic cables and related components to carry signals for communications, security, control and similar purposes.

Key Takeaways

The latest national standard for optical cables in China is GB/T 7424. 3-2025, specifying outdoor optical cable requirements and aligning with IEC 60794-3. 2022.

GB/T 7424 Series OverviewThe GB/T 7424 series is the national standard system for optical cables in China, providing specifications, test methods, and quality assurance guidelines for various types of optical fiber cables. The series includes: GB/T 7424. 1: General provisions for optical cablesGB/T 7424.

2: Basic test methods for optical cablesGB/T 7424. 3-2025: Specifications for outdoor optical cables, replacing the 2003 version and implemented on February 1, 2026 GB/T 7424. 3-70: Standards for outdoor fast/multi-layer optical cablesGB/T 7424.

4: Fiber optic composite overhead ground wireGB/T 7424. 5: Miniature optical cables and air-blown fiber unitsGB/T 7424. 20–24: General rules and test methods for mechanical, environmental, and electrical performance The 2025 update of GB/T 7424.



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3 incorporates structural adjustments, editorial changes, and technical updates aligned with IEC 60794-3. 2022, covering optical fiber characteristics, cable components, structure, mechanical and environmental adaptability, and testing methods.

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C 60794-1-1: 2023 AlignmentThe IEC 60794-1-1: 2023 standard provides international guidance for optical fiber cables, specifying uniform requirements for geometrical, transmission, material, mechanical, ageing, climatic, and electrical properties. This edition updates optical fiber, attenuation, and bandwidth subclauses, serving as a reference for the GB/T 7424 series and other IEC 60794-x standards. ITU-T L.

103 RecommendationFor indoor optical cables, the ITU-T L. 103 (2024) recommendation defines cable characteristics, construction, and test methods to ensure proper performance in indoor environments. While compliance is voluntary, it provides a globally recognized framework for indoor fiber installations.

Practical Implications

Manufacturers must follow GB/T 7424. 3-2025 for outdoor cables to meet national compliance and quality assurance requirements. Testing and inspection should adhere to the standardized mechanical, environmental, and optical performance methods outlined in the GB/T 7424 and IEC 60794 series.

Designers and installers can reference ITU-T L. 103 for indoor cable selection and performance verification. These standards collectively ensure high-quality, reliable optical cable deployment across outdoor and indoor applications, supporting both domestic and international interoperability.

Article Content

FOA Standard For Installing Fiber Optic Cable Plants

This standard describes procedures for installing and testing cabling networks that use fiber optic cables and related components to carry signals for communications, security, control and similar purposes.

BS EN IEC 60794-1-136:2026 | 31 Jul 2026 | BSI Knowledge

BS EN IEC 60794-1-136:2026: The Standard for Optical fibre cables - Generic specification. Basic optical cable test procedures. Determination of the maximum applicable push force during cable

Standard for Installing and Testing Fiber Optics

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Although most fiber optic cables are not conductive, any metallic hardware used in fiber optic cabling systems (such as wall-mounted termination boxes, racks, and patch panels) must be grounded.

Fiber Optic & Cable Standards Guide | FiberMania Standards

Get a complete guide to fiber optic & related products standards—from basics to advanced, covering all key details for full understanding.

NG TS 3.08.24

This Specification is for reinforced, all dielectric, multimode and single mode optical fibre cable construction, for use in buildings.

IEC 60794: Optical Fibre Cables

IEC 60794 serves as a comprehensive standard that sets forth the general specifications governing optical fiber cables, which form the backbone of modern telecommunications networks.

The Complete List Of Fiber Optic Cable Standards (Iso/Iec) For

While the US relies heavily on TIA/EIA standards (like TIA-568), most of the rest of the world runs on ISO/IEC. As an importer, knowing which standard to specify on your Purchase Order (PO) is your

Recommendation ITU-T L.103 (08/2024)

This document outlines the recommendations for single-mode optical fiber cables used in telecommunication networks within buildings, focusing on their mechanical and environmental

IEC 60794 standard

The object of this document is to establish uniform generic requirements for the geometrical, transmission, material, mechanical, ageing (environmental exposure), climatic and electrical

FOA Fiber Optic Standards

One FOA standard, the FOA Standard For Installing Fiber Optic Cable Plants, was created because there was a demand for an installation standard that covered all aspects of fiber optic installation.

The FOA Reference For Fiber Optics

The fiber optic contractor should be able to work with the customer in each installation project through six stages: design, installation, testing,

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Optical fiber cable and communication cable raceway systems

Scope: This Standard applies to optical fiber cable and communication cable raceway systems designed for use with optical fiber and communication cables and intended to be installed in

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Achieved using a newly developed standard 19-core optical fiber, equivalent to 19 standard fibers, low loss across multiple wavelength bands, and the development of an optical

Fiber Optic Cable Color Codes

There is a color code standard in TIA, TIA-598 that addresses fiber optic color codes, which most manufacturers adopt and reference, although there are many

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Overview of optical fibres standardization

Readers of this document are encouraged to seek information on specific matters regarding Optical cables and components from the manufacturer or provider and to consider the Technical Standards

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Technical inquiry: https://cgweb.co.za/project-enquiry.html

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

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