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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7424.370-2025

**Optical fibre cables - Part 3-70: Outdoor cables - Family
specification for optical fibre cables for rapid/multiple
deployment**

光缆 第3-70部分：室外光缆 快速/多次布放光缆门类规范
(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 3-70 of GB/T 7424 "Optical Cables". GB/T 7424 has the following parts published.

---Part 1: General Provisions;

---Part 3: Specifications for Outdoor Optical Cables;

---Part 3-70: Standards for Outdoor Optical Cables Deployed Quickly/Multiple Times;

---Part 4: Specifications for Fiber Optic Composite Overhead Ground Wire;

---Part 5: Specifications for Miniature Optical Cables and Fiber Optic Units Used for Air-blown Installation;

---Part 20: General Principles and Definitions of Basic Test Methods for Optical Cables;

---Part 21: Basic Test Methods and Mechanical Performance Test Methods for Optical Cables;

---Part 22: Basic Test Methods and Environmental Performance Test Methods for Optical Cables;

---Part 23: Basic Test Methods for Optical Cables; Test Methods for Optical Cable Components;

---Part 24: Basic Test Methods and Electrical Test Methods for Optical Cables this document is modified to adopt IEC 60794-3-70:2021 "Optical cables - Part 3-70: Outdoor optical cables - Fast/multiple deployment outdoor optical cables".

Category Specifications.

This document has undergone significant structural adjustments compared to IEC

60794-3-70:2021. A comparison of the structural numbering changes between the two documents is provided.

See Appendix A for a list.

This document differs significantly from IEC 60794-3-70:2021. The differences are indicated in the margins of the relevant clauses.

Vertical single lines (|) are indicated. A summary of these technical differences and their reasons can be found in Appendix B.

The following editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Optical Cable Part 3-70. Outdoor Optical Cable Rapid/Multiple Deployment Optical Cable Gate" Class Specification;

---The content of Chapter 1 has been adjusted, and "rapid/multiple fiber optic cable deployment" has been added. The content in parentheses has been changed to a note.

This document was proposed and is under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China.

Introduction

Optical fiber, as the core medium for optical signals, is widely used in transmission and access networks, data centers, power transmission, and security monitoring.

Fiber optic signal transmission is the cornerstone of building modern communication networks. With the continuous emergence of new technologies, materials, and products in the field of fiber optic communication...

Currently, related testing and measurement technologies are developing rapidly. This is to ensure that the technical requirements, testing, and measurement procedures for optical cable products are standardized globally.

Standards, promoting international trade. The International Electrotechnical Commission (IEC) has developed and implemented the IEC 60794 series of standards, covering the mechanical properties of optical cables.

Test methods for electrical and mechanical properties, environmental performance, optical fiber cable components, and electrical testing methods, as well as test methods for optical fiber cable components, indoor optical fiber cables, and outdoor optical fiber cables.

Products include optical cables, optical cables laid along power lines, micro-duct cables/pipes for air-blowing installation, indoor and outdoor optical cables, fire-resistant optical cables, and vehicle-mounted optical cables.

These standards provide an important basis for the inspection and acceptance of optical

cable products internationally.

The GB/T 7424 series of standards for optical cables, referencing the IEC 60794 series of standards, has established a systematic set of test methods, measurement methods, and product specifications.

Standardization System. This series of standards aims to provide a standardized set of performance evaluation criteria and product testing methods for the domestic optical cable industry, effectively guiding...

To guide the research, development, production, testing and application of domestic optical cable products, so as to promote the high-quality development of my country's fiber optics industry.

The GB/T 7424.3x "Outdoor Optical Cable" series of standards is proposed to consist of the following parts.

---Part 3: Standards for Outdoor Optical Cables. The purpose is to standardize the general requirements and testing methods for outdoor optical cables.

---Part 3-10. Standards for Outdoor Optical Cable Conduits, Direct Burial, and Bundled Aerial Communication Optical Cables. The purpose is to standardize the relevant optical cables.

Performance requirements and testing methods for various product categories.

---Part 3-20. Standards for Outdoor Self-Supporting Aerial Communication Optical Cables. The purpose is to standardize the relevant optical cable product categories.

Performance requirements and testing methods.

---Part 3-30. Specifications for outdoor optical fiber cables crossing lakes and rivers and laid along the coast. The purpose is to regulate...

Specifications for the performance requirements and testing methods of corresponding optical cable products.

---Parts 3-40. Standards for outdoor optical cables laid along rainwater and sewage pipes. The purpose is to standardize the corresponding optical cable categories.

Product performance requirements and testing methods.

---Part 3-70. Specifications for Outdoor Fiber Optic Cables (Rapid/Multiple Deployment Types). The purpose is to standardize the relevant fiber optic cable product categories.

Performance requirements and testing methods.

Optical Cable Parts 3-70. Outdoor Optical Cable Specifications for rapid/multiple fiber optic cable deployment

1 Scope

This document specifies the requirements for rapid/multiple-layout optical cables and describes the inspection methods for rapid/multiple-layout optical cables.

This document applies to optical cables (hereinafter referred to as "optical cables") used in ground environments for rapid/multiple deployment.

Note: This type of fiber optic cable is used in any application related to rapid/multiple deployments (e.g., mobile broadcasting units, emergency response services, outdoor sports, tactical ground weaponry).

Used for robots, small-scale equipment, and emergency repairs of damaged lines, etc.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 2951.21 General test methods for insulation and sheathing materials of cables and optical fibers - Part 21: Tests for elastomer mixtures Methods. Ozone resistance test - Heat stretching test - Mineral oil immersion test (GB/T 2951.21-2008, IEC 60811-2-1:2001, IDT)
GB/T 7424.3 Optical Cables Part 3: Specifications for Outdoor Optical Cables (GB/T 7424.3-2025, IEC 60794-3:2021) MOD) GB/T 7424.20-2021 General Specification for Optical Cables Part 20: General Rules and Definitions of Basic Test Methods for Optical Cables (IEC 60794-1-2:2017, MOD) GB/T 7424.21-2021 General Specification for Optical Cables Part 21: Basic Test Methods for Optical Cables - Mechanical Performance Test Methods (IEC) 60794-1-21.2020, MOD) GB/T 7424.22-2021 General Specification for Optical Cables Part 22: Basic Test Methods and Environmental Performance Test Methods for Optical Cables (IEC) 60794-1-22.2017, MOD) GB/T 7424.23-2021 General Specification for Optical Cables Part 23: Basic Test Methods for Optical Cables and Test Methods for Optical Cable Components (IEC) 60794-1-23.2019, MOD) GB/T 9771.1 Single-mode optical fiber for communication - Part 1: Characteristics of non-dispersion-shifted single-mode optical fiber GB/T 9771.3 Single-mode optical fiber for communication - Part 3: Characteristics of wavelength-extended non-dispersion-shifted single-mode optical fiber GB/T 9771.7 Single-mode optical fiber series for communication - Part 7: Characteristics of bending loss insensitive single-mode optical fiber GB/T 15972.40 Fiber Optic Test Methods Specification Part 40: Measurement Methods and Test Procedures for Transmission Characteristics - Attenuation (GB/T 15972.40-2024, IEC 60793-1-40:2019, MOD) GB/T 15972.41 Fiber Optic Test Methods Specification Part 41: Measurement Methods and Test