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

GB/T 18899-2023

Replacing GB/T 18899-2002

All dielectric self-supporting optical fibre cable

全介质自承式光缆

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting: This document replaces GB/T 18899-2002 "Full Dielectric Self-supporting Optical Cable": Compared with GB/T 18899-2002, except for structural adjustment and Apart from editorial changes, the main technical changes are as follows:

- a) The structural type composition of ADSS has been changed (see Figure 1 in 5:2, Figure 1 in 4:2 of the:2002 edition);
- b) The code of the application scenario of the optical cable is added (see 5:2:3);
- c) The index requirements for optical fiber ribbons have been added (see 6:1:3:2);
- d) The requirements for the inner sheath are added, especially the requirements for the thickness of the inner sheath of optical cables with a span greater than 800m (see 6:1:11);
- e) Deleted multimode fiber and its index requirements (see 6:4:1, 8:1:2 of the:2002 edition);
- f) The requirements for fiber attenuation index after cabling are added (see 6:4:1:3);
- g) Changed the requirements for the breaking force index of the optical cable (see Table 5 in 6:4:3:2, Table 4 in 8:3:2 of the:2002 edition);
- h) Changed the classification requirements for decay temperature characteristics (see Table 7 in 6:4:4:2, Table 6 in 8:4:2 of the:2002 edition);
- i) The test method for combustion performance has been changed (see 6:4:4:6, 9:6:6 of the:2002 edition);

- j) Added requirements and test methods for outer sheath wear and loose tube bending (see 7:3:1);
- k) Changed the acceptance requirements for the impact test (see 7:5:5, 8:3:4 of the:2002 edition);
- l) Changed the acceptance requirements for repeated bending tests (see 7:5:6, 8:3:5 of the:2002 edition);
- m) Added the bending test under tension (see 7:5:11);

1 Scope

GB/T 18899-2023 is the Chinese national standard on all dielectric self-supporting optical fibre cable, in the field of telecommunications and audio-video engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 23 May 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2023. Classification: ICS 33.180.10, CCS M33. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the model, designation, requirements, test methods, and inspection of all-dielectric self-supporting optical cables (ADSS optical cables, hereinafter referred to as optical cables): Regulations, packaging, transport and storage: This document is applicable to the design, development, production and testing of ADSS optical cables for communication lines used in overhead power transmission systems, and is also applicable to lightning-prone ADSS optical cables in aerial laying environments such as strips and large spans:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 2423:24-2013 Environmental testing - Part 2: Test method Test Sa: Simulation of solar radiation on the ground and its test Guidelines

GB/T 2951:11-2008 General test methods for insulation and sheath materials of electric

and optical cables Part 11: General test methods Thickness and Dimensions Measurement
- Mechanical Properties Test (IEC 60811-1-1:2001, IDT)

GB/T 2952 (all parts) Cable outer sheath

GB/T 6995:2-2008 Wire and Cable Identification Marking Method Part 2: Standard Colors

GB/T 7424:21-2021 General Specification for Optical Cables Part 21: Basic Test Methods
for Optical Cables-Mechanical Performance Test Methods

GB/T 7424:22-2021 General Specification for Optical Cables Part 22: Basic Test Methods
for Optical Cables-Environmental Performance Test Methods

GB/T 7424:23-2021 General Specification for Optical Cables Part 23: Basic Test Methods
for Optical Cables-Test Methods for Optical Cable Components

GB/T 8170 Numerical rounding off rules and expression and determination of limit values

GB/T 9771:

1 Single-mode fiber for communication Part 1: Characteristics of non-dispersion-shifted
single-mode fiber GB/T 9771:

2 Single-mode optical fiber for communication Part 2: Cut-off wavelength shifted
single-mode optical fiber GB/T 9771:

3 Single-mode optical fiber for communication Part 3: Characteristics of
non-dispersion-shifted single-mode optical fiber with extended wavelength range GB/T
9771:

5 Single-mode fiber for communication Part 5: Characteristics of non-zero
dispersion-shifted single-mode fiber

GB/T 15065 Black polyethylene plastic for wire and cable GB/T 15972: