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

GB/T 7424.23-2021

**Optical fibre cable generic specification - Part 23: Basic optical
cable test procedures - Cable element test methods**

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Foreword

GB/T 7424 is divided into the following 9 parts.

---Optical Cable General Specification Part 1.General;

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

---General Specification for Optical Cables Part 21.Basic Test Methods for Optical Cables, Mechanical Performance Test Methods;

---General Specification for Optical Cables Part 22.Basic Test Methods for Optical Cables, Environmental Performance Test Methods;

---General Specification for Optical Cables Part 23.Basic Test Methods for Optical Cables Test Methods for Optical Cable Components;

---General Specification for Optical Cables Part 24.Basic Test Methods for Optical Cables, Electrical Test Methods;

---Optical Cable Part 3.Sectional Specification for Outdoor Optical Cable;

---Optical Cable Part 4-1.Sectional Specification Optical Fiber Composite Overhead Ground Wire;

---Optical Cable Part 5.Sectional Specification for Miniature Optical Cable and Optical Fiber Unit for Air Blown Installation.

This part is part 23 of GB/T 7424.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

GB/T 7424.20~GB/T 7424.24 jointly replace GB/T 7424.2-2008 "General Specification for Optical Cable Part 2.Optical Cable Basic

experiment method". This part replaces Chapter 29~Chapter 35 in GB/T 7424.2-2008.This part and GB/T 7424.2-2008

Compared with Chapter 29~Chapter 35, the main technical changes are as follows.

---Added terms and definitions (see Chapter 3);

---Modified the test name of Method G1 (see Chapter 4, Chapter 29 of the.2008 edition);

--- Deleted method G4 "the dial gauge method of optical fiber ribbon size" (see Chapter 32 of the.2008 edition);

---Modified the sampling process of method G5 sample (see 7.2, 33.2 of the.2008 edition);

---Modified the requirements of Method G5 (see 7.5, 33.5 in the.2008 edition);

---Added the details to be specified in Method G6 (see 8.6);

--- Deleted "a hot fan (optional)" in the method G7 device (see 35.3 in the.2008 edition);

---Deleted the provision of using a hot fan to flatten the sample in the method G7 procedure (see 35.4 of the.2008 edition);

---The recommended size of the test equipment in Method G7 (see Table 1 in 9.3) has been added, and the test equipment and procedures have been supplemented.

Charge (see 9.4);

--- Added G8 "Fiber Ribbon Residual Torsion Test" (see Chapter 10);

--- Added G9 "Oil Separation and Evaporation" (see Chapter 11);

--- Added G10 "fiber strippability" and the three methods included G10A, G10B and G10C (see Chapter 12);

--- Added G11 "Tensile Performance Test of Loose Tube and Microtube" and the included G11A and G11B methods (see Chapter 13).

This part uses the redrafting method to modify and adopt IEC 60794-1-23.2019 "Optical Cable Part 1-23.General Specification for Optical Cable Basic Test

Test method of optical cable component test method".

Compared with IEC 60794-1-23.2019, this part has many structural adjustments. Appendix A lists this part and IEC 60794-

1-23..2019 chapter number comparison list.

The technical differences between this part and IEC 60794-1-23.2019 and the reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to China's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

- * Replace IEC 60794-1-22.2017 (see 12.1.4, 12.3.4);
- * Replace IEC 60793-1-32 (see 12.1.3, 12.1.4) with GB/T 15972.32, which is modified to adopt international standards;
- * Replace IEC 60793-1-40 (see 4.3) with GB/T 15972.40 modified to adopt international standards;
- * Replace IEC 60793-1-46 (see 4.3) with GB/T 15972.46 modified to adopt international standards;
- * Added reference to GB/T 2951.11-2008 (see 13.1.2.4.2);
- * Added reference to GB/T 2951.12-2008 (see 13.1.1, 13.1.2.5);
- * Added reference to GB/T 2951.13-2008 (see 13.1.2.4.2);
- * Added reference to GB/T 7424.20-2021 (see 9.4, 12.2.6);
- * Added reference to IEC 60794-1-1.2015 (see Chapter 3);
- * Removed IEC 60794-1-2;
- * Removed IEC 60794-1-31.2018;
- * Removed IEC 60811-401;
- Added Chapter 3 terms and definitions;
- Deleted IEC 60794-1-23.2019 Chapter 4 "General Requirements";
- 5.5 The width, thickness and fiber arrangement requirements of the optical fiber ribbon

are revised to "should comply with the relevant optical fiber ribbon specifications";

---Modified Figure 1 in IEC 60794-1-23.2019, and moved its 6.7 "Definition of Optical Fiber Ribbon Geometry" to 3.3;

---8.6 "Specimen length" and "rotation method" are added to the details to be specified;

--- In 9.4, the test environmental conditions are revised to "shall meet the requirements of the loose test conditions in GB/T 7424.20-2021";

---10.6 The "number of samples to be tested" has been added to the details to be specified;

- In 12.2.6, the test environmental conditions are revised to "shall meet the requirements of the loose test conditions in GB/T 7424.20-2021";

----13.1.1 and 13.1.2.5 modify the sample aging treatment requirements to "in accordance with the requirements of GB/T 2951.12-2008";

----13.1.2.4.2 adds the measurement requirements for the thickness, outer diameter and density of the loose tube;

----13.1.5 adds the requirement of "measurement result should take the middle value".

This section also made the following editorial changes.

--- Modify the standard name to "General Specification for Optical Cables Part 23. Basic Test Methods for Optical Cables, Test Methods for Optical Cable Components";

--- In 8.4, a note about the rotation mode and number of optical fiber ribbons has been added;

----13.1.1 Amend Note 1 to "This test is included in GB/T 2951.11-2008";

---13.1.2.3.1d) In the Note, the reference test method is amended to "For example, the ozone resistance test carried out in accordance with GB/T 2951.21-2008

Test and immersion mineral oil test";

----13.2.1 Amend Note 1 to "This test is included in GB/T 2951.14-2008".

1 Scope

This part of GB/T 7424 specifies the purpose, samples, equipment, procedures, requirements and details to be specified for each test method of optical cable components.

Festival etc.

This section applies to optical cable components in optical cables and optical-electric hybrid cables.