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

GB/T 15972.44-2017

Replacing GB/T 15972.44-2008

**Specifications for optical fibre test methods -- Part 44:
Measurement methods and test procedures for transmission
and optical characteristics -- Cut-off wavelength**

(English Translation)

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Foreword

GB/T 15972 "Optical Fiber Test Method Specification" consists of several parts, the expected structure and the corresponding international standards.

--- Part 10 - Part 19. General principles of measurement methods and test procedures (corresponding to IEC 60793-1-10 to IEC 60793-1-19);

--- Part 20 ~ Part 29. Measurement methods and test procedures for size parameters (corresponding to IEC 60793-1-20 to IEC 60793-1-29);

--- Part 30 ~ Part 39. Measuring methods and test procedures for mechanical properties (corresponding to IEC 60793-1-30 to IEC 60793-1-39);

--- Part 40 ~ Part 49. Transmission characteristics and optical characteristics of the measurement methods and test procedures (corresponding to IEC 60793-1-40 to IEC 60793-1-49);

--- Part 50 ~ Part 59. Environmental performance measurement methods and test procedures (except for part 55, corresponding to IEC 60793-1-50 to IEC 60793-1-59).

Among them, GB/T 15972 Part 40 to Part 49 are as follows.

--- Part 40. Transmission characteristics and optical characteristics of the measurement

methods and test procedures attenuation;

--- Part 41. Transmission characteristics and optical characteristics of the measurement methods and test procedures bandwidth;

--- Part 42. Transmission characteristics and optical characteristics of the measurement methods and test procedures wavelength dispersion;

--- Part 43. Transmission and optical characteristics of the measurement methods and test procedures numerical aperture;

--- Part 44. Transmission characteristics and optical characteristics of the measurement methods and test procedures cut-off wavelength;

--- Part 45. Transmission and optical characteristics of the measurement methods and test procedures mode field diameter;

--- Part 46. Transmission and optical characteristics of the measurement methods and test procedures change in transmittance;

--- Part 47. Transmission characteristics and optical characteristics of the measurement methods and test procedures Bending loss;

--- Part 48 - Measurement methods and test procedures for transmission characteristics and optical characteristics Polarization mode dispersion;

--- Part 49. Transmission characteristics and optical characteristics of the measurement methods and test procedures differential mode delay.

This section GB/T 15972 Part 44.

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

This Part replaces GB/T 15972.44-2008 "Fiber Optic Test Method Specification Part 44. Transmission and optical characteristics of the measurement Methods and test procedures --- cut-off wavelength ", and GB/T 15972.44-2008 compared to the main technical changes are as follows.

--- Added abbreviations chapter (see Chapter 3);

--- Removed jumper cable cutoff wavelength test method (see the 2008 edition of Chapter 3 and Chapter 4);

--- Increasing the wavelength range of light source for B4, B5 and C fiber (see 7.1);

--- Modify the description of the ring, the diameter are modified to radius (see 7.6.2 and 7.6.3, 2008 version 6.7.1 and 6.7.2);

--- Modify the test symbols in the alphabet symbols, the diameter symbols are modified to radius symbols (see 7.6.2, 7.6.3 and 7.6.4, 2008 Version 6.8);

- Increasing the test cable cut-off wavelength sample layout (see 9.1.2);
- Increased B6 fiber optic test provisions (see 9.3.1, 10.1 and 10.2);
- Modify the use of curved reference technology and multi-mode reference technology to define the method of large wavelength region (see 10.3.2.1 and 10.3.2.2, 2008 Editions 9.3.2.1 and 9.3.2.2);
- Removed too many clauses and changed the clauses to examples (see 10.3.4 and 2008 version 9.3.5.1 and 9.3.5.2);
- Increased informative Appendix A, this part of the structural changes compared with IEC 60793-1-44 were described (see Appendix A).

This section uses the redrafted law to amend the use of IEC 60793-1-44:2011 "Optical Fiber Part 1-44. Measurement methods and test procedures Cutoff wavelength "(in English).

This part of the structure compared with IEC 60793-1-44:2011 compared to more adjustment, Appendix A lists this section and IEC 60793-1-44.

2011 reg number control list.

This section and the main technical differences IEC 60793-1-44:2011 and the reasons are as follows.

--- On the normative references, this section made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- GB/T 15972.40 instead of IEC 60793-1-40, the consistency between the two standards for the MOD;

- GB/T 31242 instead of IEC 60793-2-60, the degree of consistency between the two standards NEQ.

--- Added abbreviations chapter (see Chapter 3);

--- Modify the description of the ring, the diameter is modified to a radius (see 7.6.2 ~ 9.3.1, IEC 60793-1-44:2011 7.6.2 ~ 9.2.2);

--- Modify the test symbols in the alphabet symbols, the diameter symbols are modified to radius symbols (see Figure 1 and Figure 2, IEC 60793-1-44.

Figures 1 and 2 of 2011);

--- Increased measurement reference light power spectrum bending reference technology and multi-mode reference technology (see Chapter 5);

- Removed IEC version "Method C" code (IEC 60793-1-44:2011 of 7.6.4);
- Increasing the cut-off wavelength to determine the chapter (see 9.4);
- Removed the IEC version of Chapter 12 (see Chapter 12 of IEC 60793-1-44:2011).

This section made the following editorial changes.

- IEC 60793-1-44:2011 of Figure 3 and Figure 4a) position interchange.

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

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1 Scope

GB/T 15972 provisions of this part of the single-mode optical fiber cable cut-off wavelength test method provides for the test device, the injection conditions, Procedures, calculation methods and results of the uniform requirements.

This section applies to the provisions of GB/T 9771 Class B and GB/T 31242-2014 specified in the C single-mode optical fiber products Cable cut-off wavelength measurement and inspection.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 9771 (all parts) communication with single-mode optical fiber Specification for test methods for optical fibers - Part 40. Measurement methods and tests for transmission and optical characteristics Program attenuation (IEC 60793-1-40:2001, Opticalfibres-Part 1-40. Measurement methods and test procedure-dures-Attenuation, MOD) Single-mode optical fiber characteristics for interconnection of equipment (IEC 60793-2-60:2008, Optical fibers-Part 2 - 60 GB/T 31242-2014.

Products specifications-Sectional specification for category C single mode intraconnection fibres, (NEQ)