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

GB/T 18310.11-2026

**Fibre optic interconnecting devices and passive components -
Basic test and measurement procedures - Part 2-11: Tests -
Axial compression**

纤维光学互连器件和无源器件 基本试验和测量程序 第2-11部分：试验 轴向挤压
(English Translation)

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Figure 1.Experimental setup 3

Table 1 Recommended Severity Level 4

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.

GB/T 18309 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices - Part 1: General Principles and Guidelines" GB/T 18310 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices - Part 2: Tests" and GB/T 18311 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices, Part 3: Inspection and Measurement" together constitute the fiber optic interconnect...

National standard system for testing methods of interconnected and passive devices.

This document is based on GB/T 18310 "Basic Test and Measurement Procedures for Fiber

Optic Interconnects and Passive Devices - Part 2: Tests".

Parts 2-11.GB/T 18310 has published the following parts.

- Part 2-1.Test Vibrations (Sinusoidal);
- Part 2-2.Testing the durability of mating;
- Parts 2-4.Testing the holding power of optical fibers/cables;
- Parts 2-5.Testing Torsion/Twisting;
- Parts 2-6.Testing the tensile strength of the locking mechanism;
- Parts 2-7.Test Bending Moment;
- Parts 2-9.Test Impact;
- Part 2-10.Testing for resistance to compression and load;
- Part 2-11.Testing Axial Compression;
- Part 2-12.Test Impacts;
- Part 2-14.Experiments with high light power;
- Part 2-18.Testing Dry Heat-High Temperature Durability;
- Part 2-19.Constant Temperature and Humidity Tests;
- Part 2-21.Temperature-Humidity Combined Cyclic Test;
- Part 2-22.Test Temperature Variation;
- Part 2-23.Testing the seal of non-pressurized junction boxes;
- Part 2-26.Test Salt Spray;
- Part 2-27.Experimental Dust (Laminar Flow);
- Part 2-28.Test Corrosive Atmosphere (Sulfur Dioxide);
- Part 2-29.Testing at Low Pressure;
- Parts 2-35.Testing Optical Cable Nulling;
- Part 2-39.Experimental Sensitivity to External Magnetic Fields;
- Part 2-42.Testing the static end load of the connector;
- Part 2-45.Testing for water immersion durability;
- Part 2-48.Test temperature and humidity cycles.

This document adopts IEC 61300-2-11:2023 "Fiber optic interconnects and passive devices - Basic test and measurement procedures" Part 2-11.Test Axial Compression.

The following minimal editorial changes have been made to this document.

---The symbol 'd' for 'optical cable diameter' in Table 1 has been added for ease of use;

---Added footnotes explaining the source of the categories in Table 1.

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

Fiber optic interconnects and passive devices play a crucial role in fiber optic products and applications. With the advancement of optical communication technology and products...

With the continuous emergence of new technologies, testing and measurement techniques for fiber optic interconnects and passive devices have also developed rapidly. To ensure that product testing and measurement procedures are conducted in a timely manner...

To promote international coordination and trade, the IEC has developed and published the IEC 61300 series of test and measurement procedures standards, covering...

It covers the measurement and testing of optical performance, mechanical properties, and environmental adaptability of fiber optic interconnects and passive devices, and is a leading international standard.

The basic standards for supporting product inspection and acceptance.

my country has established a standardized system of testing and measurement procedures for fiber optic interconnect devices and passive devices in accordance with the IEC 61300 series standards.

The system includes GB/T 18309 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices - Part 1: General Principles and Guidelines", GB/T 18310 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices - Part 2: Tests" and GB/T 18311 "Basic Test and Measurement Procedures for Fiber Optic Interconnects and Passive Devices, Part 3: Inspection and Measurement" aims to establish product specifications.

It provides a complete and unified set of methodologies and standards for product testing and verification.

GB/T 18310 is proposed to consist of the following parts.

---Part 2-2. Testing the durability of the mating joint. The purpose is to determine the test procedures for mating joint durability.

---Parts 2-4. Testing the Holding Force of Optical Fibers/Cables. The purpose is to determine the testing procedures for the holding force of optical fibers/cables.