

ICS 17.180  
CCS N 30



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

**GB/T 26332.7-2022**

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**Optics and photonics - Optical coatings - Part 7: Minimum  
requirements for neutral beam splitter coatings**

**Issued on: October 12, 2022**

**Implemented on: May 1, 2023**

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**Issued by: State Administration for Market Regulation, China National  
Standardization Administration**

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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 is Part 7 of GB/T 26332 "Optics and Photonics Optical Films". GB/T 26332 has issued the following

part.

- Part 1. Definition;
- Part 2. Optical properties;
- Part 3. Environmental adaptability;
- Part 4. Specified test methods;
- Part 5. Basic requirements for anti-reflection coatings;
- Part 6. Basic requirements for reflective film;
- Part 7. Basic requirements for neutral beamsplitters;
- Part 8. Basic requirements for laser optical films.

This document is modified to adopt ISO 9211-7:2021 "Optics and Photonics Optical Films Part 7. Basic Requirements for Neutral Beamsplitter Films".

The technical differences between this document and ISO 9211-7:2021 and their reasons are as follows.

--- In the introductory words of "Terms and Definitions", the content about maintaining the "standardized terminology database" of ISO and IEC has been deleted (see Section 3

Chapter), because my country's national standards do not involve the maintenance of the "standardized terminology database" of ISO and IEC ;

--- Deleted ISO 10110-8 in "Normative References", because the standard is not cited in the text;

--- Replace ISO 9211-1 (see Chapter 3) with the normatively quoted GB/T 26332.1 to adapt to the technical conditions of our country;

---Because the serial number of the specific test method is quoted in the text, replace it with the normative referenced GB/T 26332.3-2015

ISO 9211-3 (see 6.2.3, 6.3.4), GB/T 26332.4-2015 replaces ISO 9211-4 (see 6.2.2, 6.3.2, 6.3.3),

GB/T 12085.2-2022 replaces ISO 9022-2 (see 6.3.5, 6.4) to adapt to the technical conditions of our country.

The following editorial changes have been made to this document.

--- Added a description of the symbol "BS" in "Symbol Identification" (see Chapter 4);

---In "Basic Requirements", change the table description method of "Table 1" to "Table 4" in the original text of the international standard to the article description method (see Section Chapter 6).

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

## Introduction

Optical thin film components are widely used in various fields of science and technology related to optics and photonics to realize reflection, beam splitting, filtering, etc.

Different optical functions such as light are irreplaceable and important components in the optical system. With the continuous advancement of science and technology, optical thin film components

It is developing in the direction of higher performance requirements and more diversified demand types. Therefore, it is necessary to formulate a set of technology specifically for optical thin film technology.

National standards with content in line with international standards. This is not only conducive to promoting the standardized and orderly development of my country's optical film industry, but also better promotes related industries.

trade, exchanges and technical cooperation in the field of GB/T 26332 "Optics and Photonics Optical Films" was drafted under this background.

GB/T 26332 adopts the standard ISO 9211 series, which is proposed to be composed of eight parts.

--- Part 1. Definitions. The purpose is to standardize the technical expressions of general terms related to optical films.

--- Part 2. Optical properties. The purpose is to standardize the description of various spectral characteristics of optical thin films.

--- Part 3. Environmental adaptability. The purpose is to establish the applicable environmental test method for investigating the environmental adaptability of optical thin film components.

--- Part 4. Specified test methods. The purpose is to supplement the detailed technical requirements of several environmental test methods, part 3

The test methods are cited in.

--- Part 5. Basic requirements for anti-reflective coatings. The purpose is to specify the basic requirements for commonly used anti-reflection coatings.

--- Part 6. Basic requirements for reflective film. The purpose is to specify the basic requirements for commonly used metallic reflective coatings.

--- Part 7. Basic requirements for neutral beamsplitters. The purpose is to specify the basic requirements for commonly used neutral beamsplitters.

--- Part 8. Basic requirements for laser optical films. The purpose is to specify the basic requirements for commonly used laser optical films.

The first four parts of the GB/T 26332 series of standards describe the general specifications for optical films, and the rest are for specific applications

Orientation of optical films specifies the basic technical requirements. GB/T 26332.7 is aimed at neutral beam splitting widely used in optical systems

membrane. The main function of the neutral beam splitter is to redistribute light energy through transmission and reflection. GB/T 26332.7 according to commonly used neutral

The different characteristics of the beamsplitter are classified, and the naming rules and graphic identification methods are proposed. At the same time, the corresponding spectral characteristics and environmental adaptation are given

Technical requirements for sex and film defects.

Optics and Photonics Optical Films

## Part 7. Basic requirements for neutral beamsplitters

### 1 Scope

This document specifies the basic requirements for the optical properties, mechanical properties, chemical stability and environmental adaptability of neutral beamsplitters.

This document applies to neutral beamsplitters for optical applications. This document satisfies the requirements of film manufacturers for the selection of materials and preparation methods.

It can also enable users to accurately understand the relevant quantitative regulations of the film product.

### 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 12085.2-2022 Optics and Photonics Environmental Test Methods Part 2. Low temperature, high temperature, damp heat (ISO 9022-2.

2015, MOD)

GB/T 26332.1 Optics and Photonics Optical Films Part 1. Definitions (GB/T 26332.1-2018, ISO 9211-1.

2010, IDT)

GB/T 26332.3-2015 Optical and Photonic Optical Films Part 3. Environmental Adaptability (ISO 9211-3.2008,

IDT)

GB/T 26332.4-2015 Optical and Photonic Optical Films Part 4. Specified Test Methods (ISO 9211-4.2012,

IDT)

ISO 10110-7 Preparation for drawing of optical and photonic optical components and systems - Part 7. Surface imperfections (Optics and

ISO 10110-9 Preparation of drawings for optical and photonic optical components and systems - Part 9. Surface treatments and coatings (Optics