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

**GB/T 26332.8-2022**

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**Optics and photonics - Optical coatings - Part 8: Minimum  
requirements for coatings used for laser optics**

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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 of Standardization Documents"

drafted.

This document is part 8 of GB/T 26332 "Optics and Photonics Optical Films". GB/T 26332 has issued the following

part.

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

This document is modified from ISO 9211-8:2018 "Optics and Photonics Optical Films - Part 8. Basic Requirements for Laser Optical Films"

beg".

The technical differences between this document and ISO 9211-8:2018 and their reasons are as follows.

- In the introduction 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, it is deleted.

the content;

--- Replace ISO 9211-1 with the normatively cited GB/T 26332.1-2018 (see Chapter 3, Chapter 4),

GB/T 26332.2-2015 replaces ISO 9211-2 (see Chapter 5) to adapt to the technical conditions of our country;

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

ISO 9211-3, GB/T 26332.4-2015 replace ISO 9211-4, GB/T 12085.2-2010 replace

ISO 9022-2, GB/T 16601.1-2017 replace ISO 21254-1, GB/T 16601.2-2017 replace

ISO 21254-2, GB/T 37396.1-2019 replaces ISO 11151-1.2015, GB/T 37396.2-2019 replaces

ISO 11151-2.2015, GB/T 38245-2019 replace ISO 11551 (see Chapter 8) to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

--- The wavelength range has been added to the title of Table 2 to Table 6 to avoid overlapping of the wavelength ranges of the upper and lower tables;

---In Table 2~Table 6, add the inequality operator before each value in "parameters/basic requirements".

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

## Introduction

Optical thin-film elements 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 an irreplaceable and important part of the optical system. With the continuous advancement of science and technology, optical thin film components are becoming more and more

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

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

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

determined.

GB/T 26332 adopts the international standard ISO 9211 series and is intended to consist of eight parts.

--- Part 1. Definitions. The purpose is to standardize technical representations of common terms related to optical films.

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

--- Part 3. Environmental suitability. The purpose is to establish an environmental test method suitable for investigating the environmental adaptability of optical thin film elements.

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

The test methods are cited in.

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

--- Part 6. Basic requirements for reflective films. The purpose is to establish the basic requirements for commonly used metal reflective films.

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

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

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

The optical film specifies the basic technical requirements. GB/T 26332.8 is aimed at laser thin films widely used in laser optical systems.

Optical and Photonics Optical Films

Part 8. Basic requirements for laser optical films

## 1 Scope

This document specifies the optical properties of films for laser optics, especially the laser power carrying capacity, mechanical properties, chemical resistance and environmental

Basic requirements for adaptability, etc.

This document applies to optical films used in the laser field. This document meets both the requirements of film manufacturers for material selection 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 essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 12085.2-2010 Environmental test methods for optics and optical instruments - Part 2.Low temperature, high temperature, damp heat (ISO 9022-2.2002, MOD)

GB/T 16601.1-2017 Laser damage threshold test method for lasers and laser-related equipment Part 1.Definitions and general provisions (ISO 21254-1.2011, MOD)

GB/T 16601.2-2017 Laser damage threshold test method for lasers and laser-related equipment Part 2.Threshold determination (ISO 21254-2.2011, MOD)

GB/T 26332.1-2018 Optical and Photonics Optical Films Part 1.Definitions (ISO 9211-1.2010, IDT)

GB/T 26332.2-2015 Optical and Photonics Optical Films Part 2.Optical Properties (ISO 9211-2.2010, IDT)

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

GB/T 26332.4-2015 Optical and Photonics Optical Films Part 4.Specified Test Methods (ISO 9211-4. 2012, IDT)

GB/T 37396.1-2019 Standard Optical Components for Lasers and Laser-related Equipment Part 1.Ultraviolet, Visible and Near Infrared Components in the spectral range (ISO 11151-1.2015, MOD)