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

GB/T 27995.1-2025

**Semi-finished spectacle lens blanks - Part 1: Single-vision and
multifocal**

半成品镜片毛坯第1部分：单焦和多焦

(English Translation)

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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 1 of GB/T 27995 Semi-finished lens blanks. GB/T 27995 has been published in the following parts.

--- Part 1: Single focal and multifocal;

---Part 2: Gradual zoom.

This document replaces GB 27995.1-2011 "Semi-finished spectacle lens blanks Part 1: Specification for single vision and multifocal lens blanks" and Compared with GB 27995.1-2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Added normative reference GB/T 10050 (see 5.1.1);
- b) Changed the surface cylindrical power requirements for lens blanks with a surface cylindrical power of 0.00m-1 or a preset surface cylindrical power of $< 0.25\text{m}^{-1}$ (see 5.1.2, 2011 Edition 5.2.1);
- c) The 30 mm identification area has been deleted (see 5.4.1 of the 2011 edition);
- d) Added "marking" requirements (see Chapter 7);
- e) Added the measurement of additional surface focal length using a focalometer (see Appendix C).

This document is modified to adopt ISO 10322-1:2016 "Ophthalmic optics semi-finished spectacle lens blanks Part 1: Single-focal and multifocal spectacle lenses" "Rough Specifications".

Compared with ISO 10322-1:2016, this document has some structural adjustments. The structural number changes between the two documents are listed below.

See Appendix A for the table.

The technical differences between this document and ISO 10322-1:2016 and their reasons are as follows.

--- Replaced ISO 13666 with the normative reference GB/T 26397 and added the normative reference GB 45184 (see Section 3 Chapter), in order to adapt to my country's technical conditions and increase operability;

--- ISO 7944 (see 5.1.1) has been replaced by the normative reference GB/T 10050 to adapt to my country's technical conditions and increase operability.

Sexuality;

--- ISO 8598 (see Appendix C) has been replaced by the normative reference GB/T 17341 to adapt to my country's technical conditions and increase operability.

Sex;

--- The basic requirements (see 5.1 of ISO 10322-2:2016) have been deleted to adapt to my country's technical conditions and increase operability;

--- Changed the marking content [see Chapter 7, 7.1a) and 7.1b) of ISO 10322-1:2016] to adapt to my country's technical conditions;

--- Changed the marking content (see Chapter 8, 7.2 and 7.3 of ISO 10322-1:2016) to adapt to my country's technical conditions;

--- The reference notes of this part (see Chapter 8 of ISO 10322-1:2016) have been deleted to adapt to the technical conditions of my country.

The following editorial changes were made to this document.

--- In order to coordinate with the existing standards of my country, the name of the standard is changed to "Semi-finished lens blanks Part 1: Single focus and multifocal";

--- Add Note 2 to Table 1.

Introduction

Semi-finished lens blanks are important components of prescription customized lenses. They can not only quickly meet customers' personalized needs, but also effectively improve the quality of lenses.

Processing time, optimize lens inventory, and reduce the risk of lens aging caused by long-term storage.

GB/T 27995 "Semi-finished lens blanks" is a recommended national standard that complements the mandatory national standard and consists of two parts.

--- Part 1: Monofocal and multifocal. The purpose is to establish the optical and geometrical properties of the surface of monofocal and multifocal semi-finished lens blanks.

Requirements and related test methods to improve processing level.

--- Part 2: Progressive focus. The purpose is to establish the requirements and related Related test methods to improve processing level.

Semi-finished lens blanks Part 1: Monofocal and multifocal

1 Scope

This document specifies the requirements for the optical and geometrical properties of semi-finished lens blanks with finished monofocal and multifocal surfaces.

Appropriate test method.

This document applies to monofocal and multifocal semi-finished lens blanks.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 10050 Reference wavelengths for optics and optical instruments (GB/T 10050-2009, ISO 7944:1998, IDT) GB/T 17341 Optics and optical instruments Lensmeters (GB/T 17341-1998, ISO 8598:1996, NEQ) GB/T 26397 Ophthalmic Optics Terminology (GB/T 26397-2011, ISO 13666:1998, MOD) GB 45184 Safety technical specification for components of ophthalmic products

3 Terms and definitions

The terms and definitions defined in GB 45184 and GB/T 26397 apply to this document.

4 Categories

Semi-finished lens blanks are classified as follows.

- a) Single-focus semi-finished lens blanks;
- b) Multifocal semi-finished lens blanks;
- c) Progressive focus semi-finished lens blanks.

5.1.1 General

The mercury e-line in GB/T 10050 is used as the reference wavelength to measure at the reference point. The position of the reference point is marked by the manufacturer.

If the lens is marked, the geometric center of the lens is used as the reference point.

The surface power tolerances in Tables 1, 2 and 3 correspond to the refractive index of the lens blank material.