International Standard

ISO 10322

Ophthalmic optics — Semi-finished blanks

Optique ophtalmique — Verres semi-finis

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Foreword

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 170, *Ophthalmic optics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 10322 cancels and replaces the fourth edition of ISO 10322-1:2016 and ISO 10322-2:2016, which have been combined and technically revised.

The main changes are as follows:

— the two original parts of the International Standard have been combined;

— blanks have been classified by the type of finished surface, not by their intended use, since what were termed single-vision blanks are now also used to make multifocal or power-variation surfaces by using free form technology;

— the terminology related to power-variation lenses that was introduced with ISO 21987[1] has been adopted to avoid the separate descriptions necessary for progressive-power and degressive power blanks;

— in 5.1, a cross reference has been made to the requirements on the material of the blank that are in ISO 14889;

— the tables giving the spherical power and cylindrical power tolerances are now both in the same subclause, and the tolerances for cylindrical powers between 0,00 D and ≤0,25 D have been transferred to the cylindrical power tolerance table;

— blank size: effective size is now called actual size and the tolerances for actual and usable sizes changed;

— the default position for the distance power measurement when measuring the addition power for multifocal blanks has been moved to the geometrical centre of the blank;

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— the text on addition power and variation power measurement has been made more similar to that in ISO 8980-1 and ISO 8980-2, where appropriate (these two standards are also being revised and combined).

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Ophthalmic optics — Semi-finished blanks

1 Scope

This document specifies requirements for the optical and geometrical properties of semi-finished blanks.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7944, *Optics and photonics — Reference wavelengths*

ISO 8598-1, *Optics and optical instruments — Focimeters — Part 1: General purpose instruments*

ISO 13666, *Ophthalmic optics — Spectacle lenses — Vocabulary*

ISO 14889:2025, *Ophthalmic optics — Spectacle lenses — Fundamental requirements for uncut finished lenses*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13666 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
single-surface-power blank
blank with the finished surface having a single nominal surface power

Note 1 to entry: This includes blanks with spherical, aspherical, cylindrical and atoroidal surfaces.

[SOURCE: ISO 13666:2019, 3.8.2 – modified, ”spherical”, “cylindrical” and “and atoroidal” have been added to Note 1 to entry.]

4 Classification

Semi-finished blanks (shortened to blanks in the remainder of this document for easier reading) shall be classified according to the finished surface as follows:

a) single-surface-power blanks;

b) multifocal blanks;

c) power-variation blanks.

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