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

GB/T 10810.2-2025

Uncut finished spectacle lenses - Part 2: Power-variation

眼镜镜片第2部分：渐变焦

(English Translation)

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Table of Contents

Foreword...	3
Introduction...	6
1 Scope...	7
2 Normative references...	7
3 Terms and definitions...	7
4 Requirements...	8
4.1 Optical performance...	8
4.2 Geometric dimensions...	8
4.3 Material and surface quality...	9
5 Test methods...	9
5.1 Test conditions...	9
5.2 Optical performance...	9
5.3 Geometric dimensions...	10
5.4 Material and surface quality...	10
6 Labels...	11
6.1 Permanent labeling...	11
6.2 Non-permanent selective labeling...	11
7 Marks...	11

Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020

"Directives for standardization -- Part 1.Rules for the structure and drafting of standardizing documents".

This document is Part 2 of GB/T 10810 "Uncut finished spectacle lenses". GB/T 10810 has already released the following parts.

- Part 1.Single-vision and multifocal;
- Part 2.Power-variation;
- Part 3.Transmittance test methods;
- Part 4.Anti-reflective coatings test methods;

- Part 5. Abrasion-resistant of surfaces test methods.

This document replaces GB 10810.2-2006 "Uncut finished spectacle lenses -- Part 2. Progressive power spectacle lenses ". Compared with GB 10810.2-2006, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Changed terminology and definitions (see Chapter 3 of this Edition; Chapter 3 of Edition 2006);
- b) Deleted the testing conditions (see 4.1 of Edition 2006);
- c) Changed the "lens vertex power" to "main reference point vertex power" (see 4.1.2 this Edition; 4.2.2.1 of Edition 2006);
- d) Added technical requirements for the axial deviation of the prism when the top focal length of the prism is $< 0.12 \text{ m}^{-1}$ and $\geq 0.12 \text{ m}^{-1} \sim \leq 0.25 \text{ m}^{-1}$ (see 4.1.3 this Edition);
- e) Changed "additional vertex power" to "vertex power variation" (see 4.1.4 and 6.5 of this Edition; 4.2.3 and 5.4 of Edition 2006);
- f) Changed the measurement method for the change in vertex power (see 5.2.3 of this Edition; 5.4 of Edition 2006);
- g) Added geometric dimension measurement methods (see 5.3 of this Edition).

The modification of this document uses ISO 8980-2:2017 "Ophthalmic optics -- Uncut finished spectacle lenses -- Part 2. Specifications for power-variation lenses".

Compared to ISO 8980-2:2017, this document has undergone significant structural adjustments. The comparison on structural numbering changes between two documents can be found in Annex A.

The technical differences and reasons between this document and ISO 8980-2:2017 are as follows.

- Replaced ISO 13666 with the normative reference GB/T 26397. Added terms and definitions for verification power (see Chapter 3) to adapt to China's technical conditions and increase operability;
- Replace ISO 7944, ISO 8429, ISO 8598-1, ISO 8980-3, ISO 14889, and ISO 21987

(see 4.1.1~4.1.5, 5.2.1~5.2.4) with the normative reference GB 45184 to adapt to China's technical conditions and increase operability;

- Deleted normative references to ISO 7944, ISO 8598-1, ISO 8429, ISO 8980-3, ISO 14889, and ISO 21987 (see Chapters 3, 5.2.1, 5.2.3, 5.4, and 8 of ISO 8980-2.2017) to adapt to China's technical conditions and increase operability;
- Deleted the classification, recommended temperature, axial deviation of polarizing lenses, and references in this document (see Chapters 4, 5.1, 5.4, and 9 of ISO 8980-2.2017) to adapt to the standard system of GB/T 10810;
- Changed prism degree and prism substrate orientation (see 4.1.5, 5.2.5 and 5.2.6 of ISO 8980-2.2017) to adapt to the standard system of GB/T 10810;
- Added prism base orientation (see 5.2.4) to adapt to China's technical conditions and increase operability;
- Added geometric dimension testing methods (see 5.3) to adapt to China's technical conditions and increase operability;
- Changed identification and information (see Chapter 7, Chapter 8 of ISO 8980-2.2017) to adapt to the standard system of GB/T 10810.

This document has undergone the following editorial changes.

- To coordinate with the existing standards in China, the standard name is changed to "Uncut finished spectacle lenses -- Part 2.Power-variation";
- Added a schematic diagram of the position of each reference point for gradient lenses (see Annex B).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This document was proposed by China National Light Industry Council.

Uncut finished spectacle lenses -- Part 2.Power-variation

1 Scope

This document specifies the requirements, markings, and symbols for gradient lenses.

It describes the corresponding test methods.

This document applies to uncut (ground) edge gradient lenses for glasses..

2 Normative references

The following referenced documents are indispensable for the application 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.

GB/T 26397, Ophthalmic optics -- Terminology (GB/T 26397-2011, ISO 13666.1998, MOD)

GB 45184, Optometry products -- Safety technical specifications of components

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 26397 and GB 45184 as well as the followings apply.

3.1 verification power

The top focal power of the lens calculated and provided by the producer as a reference value for verification using a refractometer.

NOTE 1: This value is the measured vertex power value provided by the producer.

NOTE 2: The verification power may not necessarily be the same as the power of the order. For example, due to (visual) physiological effects, the light passing through the lens during measurement

on the focus meter may not be consistent with the wearing position.

NOTE 3: If the producer who has not cut (ground) the edges or assembled the lenses only describes

one power, that power is the order power used for verification.

Test according to the method described in 5.3.1. Lens size deviation should meet the following requirements.