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QB

**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2506-2017

Uncut Finished Spectacles Lenses - Optical Hard Resin Lenses

眼镜镜片 光学树脂镜片

(English Translation)

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Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009.

This Standard replaced QB 2506-2001 Optics Resin Spectacles Lenses.

Compared with QB 2506-2001, besides the editorial modifications, this Standard has the major technical changes as follows.

--- Increase the material properties of photochromic spectacles lenses and progressive power spectacles lenses;

--- Add lens transmittance and classification, lens blue light transmittance, lens infrared transmittance;

--- Add the lens light-resistant irradiation performance;

--- Adjust the lens tolerance of refractive index into ± 0.005 ;

--- Adjust the lens abbe number tolerance into $\pm 5\%$.

This Standard was proposed by China Light Industry Council.

This Standard shall be under the jurisdiction of National Center for Standardization of Glasses.

Drifting organizations of this Standard. Carl Zeiss Optical (Guangzhou) Co., Ltd.,

Donghua University, China National Inspection & Testing Center for Ophthalmic Optics

Glass and Enamel Products, Shanghai Yishilu Optical Co., Ltd., Shanghai Conant Optics Co., Ltd., Bizhen Optical (Shanghai) Co., Ltd., Jiangsu Wanxin Optical Co., Ltd., Shanghai Leez Optical Glasses Co., Ltd., Shanghai Mingyue Optics Glasses Co., Ltd., Rodenstock Trading (Shanghai) Co., Ltd., and Riccino (Xiamen) Optical Inc.

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The historical edition replaced by this Standard is as follows.

--- QB 2506-2001.

Uncut Finished Spectacles Lenses -

Optical Hard Resin Lenses

1 Scope

This Standard specifies the terms and definitions, classification, requirements, test methods, inspection rules, marking, package, transportation, storage of optical hard resin lenses.

This Standard is applicable to the spectacles lenses made of polymer materials with optical property.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 2828.1 Sampling Procedures for Inspection by Attribute - Part 1. Sampling

Schemes Indexed by Acceptance Quality Limit(AQL) for Lot-by-Lot Inspection

GB/T 8427 Textiles - Tests for Color Fastness - Color Fastness to Artificial Light.

Xenon Arc Fading Lamp Test

GB 10810.1 Uncut Finished Spectacle Lenses - Part 1. Single-Vision and

Multifocal Lenses

GB 10810.2 Uncut Finished Spectacle Lenses - Part 2. Progressive Power
Spectacle Lenses

3 Terms and Definitions

The following terms and definitions and those ones stipulated in GB 10810.1, GB 10810.2, GB 10810.3, GB 10810.4, GB 10810.5, and GB/T 26397 are applicable to this document.

3.1 Blue light transmittance τ_{blue}

The approximate weighted average of the spectral transmittance in the wavelength range of 380nm~500nm τ_{blue} is calculated by Formula (1).

3.3 Solar IR-A transmittance τ_{SIRA}

The approximate weighted average of spectral transmittance in the wavelength range of 780nm~1400nm τ_{SIRA} is calculated by Formula (2).

5.1.1 The vertex power, cylinder axis direction of single vision lens and multifocal

lens, and additional vertex power, optical center, prism degree, substrate orientation of prism degree, material, surface quality and geometric dimension of multifocal lens shall conform to the provisions of relevant clauses in GB 10810.1.

5.2 Anti-reflective film properties

The anti-reflective film properties of lens shall meet the requirements of GB 10810.4.

5.3 Surface wear-resistance

The surface wear-resistance of the lens shall meet the requirements of GB 10810.5.

5.5 Refractive index

The tolerance between the measured value and nominal value shall be ± 0.005 .

5.6 Abbe number (dispersion coefficient)

The tolerance between the measured value and nominal value shall be $\pm 5\%$.

5.7 Light irradiation proof

After through the test in 6.7, the lens shall satisfy.

5.8 Flame retardancy

After the test in 6.8, the lens shall not continue to burn.

5.9 Impact resistance

If the lens claims with safety protection property, after though the test in 6.9, the lens shall not appear any of the following circumstances.

6.1 Test conditions

Unless otherwise is specified, the test in this Standard shall be performed in the indoor environment with temperature at (23 ± 5) °C, relative humidity of 30%~80%.

The optical parameters of various lenses shall be measured at the design reference point of the lenses.

6.3 Anti-reflective film property

The anti-reflective film property of lenses shall be inspected as per the provisions of GB 10810.4.

6.4 Surface wear resistance

The surface wear resistance of lenses shall be inspected as per the provisions of GB 10810.5.

6.5 Transmittance property

The transmittance property of lenses shall be inspected as per the provisions of GB 10810.3.

6.6.1 Device

The V prism refractor with measurement accuracy no less than 5×10^{-5} , the measuring device that is equivalent to the method described in this section can also be used.