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

YY/T 0764-2025

Replacing YY/T 0764-2009

**Ophthalmic instruments - Projected and electronic chart
displays for visual acuity measurement**

国家药品监督管理局

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces YY/T 0764-2009 "Ophthalmic Instruments - Visual Acuity Chart Projector". Compared with YY/T 0764-2009, the only changes are in the structural design.

Aside from integration and editorial changes, the main technical changes are as follows.

---The terminology and definition of "visibility target" have been changed (see 3.1, 2009 edition of 3.1);

---The term and definition of "node" have been removed (see 3.4 in the 2009 edition);

---The term and definition of "visual acuity" have been added (see 3.4);

---Added the terminology and definition of "Snellen score" (see 3.5);

---Added the term and definition of "decimal acuity" (see 3.6);

---Added the term and definition of "LogMAR sensitivity" (see 3.7);

---Added the terminology and definition for "5-point record" (see 3.8);

---Added the terminology and definition for "visual acuity level" (see 3.9);

---The term and definition of "resolution" have been added (see 3.10);

---The term "projection range" and its definition have been added (see 3.11);

---Added the term and definition of "pixel" (see 3.12);

---Added the terminology and definition for "critical details" (see 3.13);

---Added requirements for "target size" (see 4.1.2);

---The requirements for "Visual Acuity Level and Number of Presentations" have been changed, adding Snellen score and LogMAR for Visual Acuity Level.

The requirements for sensitivity, the representation of 5-point records, and the number of demonstrations (see 4.1.3, 4.2 in the 2009 edition);

---The requirements for "beacon spacing" have been changed (see 4.1.4, 4.3 in the 2009 version);

---The requirements for "background brightness" have been changed (see 4.1.5, version 4.5 from 2009);

---The requirements for "target contrast" have been changed (see 4.1.6, 4.5 in the 2009 version);

---Added requirements and test methods for "display quality" (see 4.1.7, 5.2.6);

---The requirement for "resolution" has been changed (see 4.1.8, 4.4 in the 2009 version);

---Added requirements and test methods for "projected vision chart screen" (see 4.2.2, 5.3.2);

---Added requirements and test methods for "compliance scope" (see 4.3, 5.4);

---Added "General Requirements" and test methods (see 4.4, 5.5);

---Added requirements and test methods for "electromagnetic compatibility" (see 4.6 and 5.7);

---The requirement for "environmental conditions" has been removed (see 4.7 in the 2009 edition).

This document is modified to adopt ISO 10938:2016 "Ophthalmic optics - Visual acuity charts for measurement of visual acuity - Printing, projection and electronic".

This document has undergone significant structural adjustments compared to ISO 10938:2016. A table comparing the structural numbering changes between the two documents is provided.

See Appendix A.

This document differs significantly from ISO 10938:2016. The relevant clauses are indicated in vertical margins.

Single lines (|) are indicated. A summary of these technical differences and their causes can be found in Appendix B.

The following editorial changes have been made to this document.

---The standard name has been changed;

---References have been added.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the National Medical Products Administration.

This document was prepared by the Medical Optics and Instruments Subcommittee of the National Technical Committee on Standardization of Optics and Photonics (SAC/TC103/SC1) is under the jurisdiction of the relevant authorities.

1 Scope

This document specifies the requirements, accompanying documents, and standards for projections and electronic vision charts (hereinafter referred to as "vision charts") used for measuring visual acuity.

The record describes the corresponding experimental methods.

This document applies to projections and electronic vision charts used for measuring visual acuity.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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

This document.

GB 9706.1 Medical electrical equipment - Part 1: General requirements for basic safety and basic performance (GB 9706.1-2020) IEC 60601-1:2012, MOD) YY 9706.102 Medical Electrical Equipment - Part 1-2.General Requirements for Basic Safety and Basic Performance (Parallel Standard). Electromagnetic Compatibility Requirements and tests (YY 9706.102-2021, IEC 60601-1-2:2007, MOD) ISO 15004-1 Ophthalmic instruments - Basic requirements and test methods - Part 1: General requirements for ophthalmic instruments

3 Terms and Definitions

The following terms and definitions apply to this document.

Optotype

Symbols used to measure visual acuity.

Standard Optotype

The Landolt ring beacon uses a circular "C" shape, with the width of the ring and the width of the notch on the ring both being one-fifth of the ring's diameter.

The "E" shaped sign uses a square "E" sign with three strokes of equal length, where the width or gap of each stroke is one-fifth of the side length of the square.

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