



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 8596:2018

# Ophthalmic optics - Visual acuity testing -- Standard and clinical optotypes and their presentation (ISO 8596:2017)

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## I.S. EN ISO 8596:2018

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## National Foreword

I.S. EN ISO 8596:2018 is the adopted Irish version of the European Document EN ISO 8596:2018, Ophthalmic optics - Visual acuity testing -- Standard and clinical optotypes and their presentation (ISO 8596:2017)

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**EUROPEAN STANDARD**

**EN ISO 8596**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

January 2018

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Supersedes EN ISO 8596:2009

English Version

## **Ophthalmic optics - Visual acuity testing -- Standard and clinical optotypes and their presentation (ISO 8596:2017)**

Optique ophtalmique - Mesure de l'acuité visuelle -  
Optotype normalisé et optotypes cliniques et leur  
présentation (ISO 8596:2017)

Augenoptik - Sehschärfepfung - Normsehzeichen  
und klinische Sehzeichen und ihre Darbietung (ISO  
8596:2017)

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**EN ISO 8596:2018 (E)**

**Contents**

Page

<b>European foreword.....</b>	<b>3</b>
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## **European foreword**

This document (EN ISO 8596:2018) has been prepared by Technical Committee ISO/TC 172 “Optics and photonics” in collaboration with Technical Committee CEN/TC 170 “Ophthalmic optics” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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

This document supersedes EN ISO 8596:2009.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Endorsement notice**

The text of ISO 8596:2017 has been approved by CEN as EN ISO 8596:2018 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
8596**

Third edition  
2017-11

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## **Ophthalmic optics — Visual acuity testing — Standard and clinical optotypes and their presentation**

*Optique ophtalmique — Mesure de l'acuité visuelle — Optotype  
normalisé et optotypes cliniques et leur présentation*



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**ISO 8596:2017(E)**



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# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Requirements</b> .....	<b>2</b>
4.1 Specifications of the standard optotype .....	2
4.2 Visual acuity grades and standard optotype grades .....	3
4.3 Test area and spacing between standard optotypes .....	4
4.4 Positions of the optotype .....	4
4.5 Quality of presentation .....	4
4.6 Luminance .....	5
<b>5 Test methods</b> .....	<b>6</b>
5.1 Viewing distance for distance visual acuity testing .....	6
5.2 Criteria for determination and assignment of visual acuity grade .....	6
<b>6 Test report</b> .....	<b>6</b>
<b>Annex A (informative) Optotypes for clinical investigations</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>10</b>

## ISO 8596:2017(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

This third edition cancels and replaces the second edition (ISO 8596:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a) restructuring of technical content into the [Clauses 4](#) and [6](#) has been applied;
- b) terms and definitions with the terms standard optotype, clinical optotype, visual acuity, and the systems decimal visual acuity, Snellen fraction, LogMAR acuity, and visual acuity grade have been added;
- c) Snellen fraction values in [Table 1](#) have been added;
- d) [Figure 2](#) has been added;
- e) [Annex A](#) has been added.

# Ophthalmic optics — Visual acuity testing — Standard and clinical optotypes and their presentation

## 1 Scope

This document specifies a range of Landolt ring optotypes and describes a method for measuring distance visual acuity under photopic conditions for the purposes of certification or licensing.

This document is neither intended as a standard for clinical measurements nor for the certification of blindness or partial sight.

Other optotypes used for clinical investigations are described in [Annex A](#) for information.

## 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 3:1973, *Preferred numbers — Series of preferred numbers*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **standard optotype**

Landolt ring

Note 1 to entry: The Landolt ring is specified in [Table 1](#) and [Figure 1](#).

### 3.2

#### **clinical optotype**

optotype other than the *standard optotype* ([3.1](#)) used for measuring *visual acuity* ([3.3](#))

Note 1 to entry: This definition does not exclude the standard optotype from being used for the same purposes as a clinical optotype.

Note 2 to entry: Since clinical optotypes can differ greatly in legibility, it is crucial to refer to the standard optotype whenever the comparability of the results is important. ISO/TR 19498 provides a method for correlation of clinical optotypes to the standard optotype.

### 3.3

#### **visual acuity**

number characterizing the ability of the visual system to recognize optotypes

Note 1 to entry: Currently, three different scaling systems are used to describe the visual acuity of a patient. These are decimal visual acuity, Snellen fraction, LogMAR acuity. See [Table 1](#).

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