

**Oftalmiline optika. Mõõtulõikamata viimistletud prilliläätsed. Osa 3: Läbipaistvust puudutavad tehnilised nõuded ja katsemeetodid**

**Ophthalmic optics - Uncut finished spectacle lenses - Part 3: Transmittance specifications and test methods (ISO 8980-3:2013)**

## EESTI STANDARDI EESSÕNA

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English Version

## Ophthalmic optics - Uncut finished spectacle lenses - Part 3: Transmittance specifications and test methods (ISO 8980- 3:2013)

Optique ophtalmique - Verres de lunettes finis non détourés  
- Partie 3: Spécifications relatives au facteur de  
transmission et méthodes d'essai (ISO 8980-3:2013)

Augenoptik - Rohkantige fertige Brillengläser - Teil 3:  
Transmissionsanforderungen und Prüfverfahren (ISO 8980-  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN ISO 8980-3:2013) 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of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by October 2016.

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

This document supersedes EN ISO 8980-3:2004.

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### Endorsement notice

The text of ISO 8980-3:2013 has been approved by CEN as EN ISO 8980-3:2013 without any modification.

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# Ophthalmic optics — Uncut finished spectacle lenses —

## Part 3:

## Transmittance specifications and test methods

### 1 Scope

This part of ISO 8980 specifies requirements for the transmittance properties of uncut finished spectacle lenses and mounted pairs, including attenuation of solar radiation.

This part of ISO 8980 is not applicable to

- spectacle lenses having particular transmittance or absorption characteristics prescribed for medical reasons;
- products where specific personal protective equipment transmittance standards apply;
- products intended for direct observation of the sun, such as for solar-eclipse viewing.

NOTE Optical and geometric requirements for uncut finished spectacle lenses are specified in ISO 8980-1 and ISO 8980-2, and for mounted lenses, in ISO 21987.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11664-1, *Colorimetry — Part 1: CIE standard colorimetric observers*

ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

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

ISO 14889, *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 apply.

NOTE 1 For the convenience of the reader, the following definitions have been reproduced from ISO 13666.

NOTE 2 Absorptance, reflectance and transmittance are usually expressed as percentages. The equations in this clause are written in this form. Although the definitions use integrals, in practice summation, typically at 1 nm, 5 nm or 10 nm intervals, is performed to calculate the various transmittances.

#### 3.1

##### mean UV-A transmittance

$\tau_{\text{UVA}}$

mean transmittance between 315 nm and 380 nm

$$\tau_{\text{UVA}} = 100 \times \frac{1}{65 \text{ nm}} \int_{315 \text{ nm}}^{380 \text{ nm}} \tau(\lambda) \cdot d\lambda \%$$