

STN	Očná optika. Hotové okuliarové šošovky s neobrušeným okrajom. Časť 3: Špecifikácia priepustnosti a skúšobné metódy (ISO 8980-3:2013).	STN EN ISO 8980-3
		19 0570

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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/13

Obsahuje: EN ISO 8980-3:2013, ISO 8980-3:2013

Oznámením tejto normy sa ruší
STN EN ISO 8980-3 (19 0570) z júna 2005

EUROPEAN STANDARD

EN ISO 8980-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2013

ICS 11.040.70

Supersedes EN ISO 8980-3:2004

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-
3:2013)

This European Standard was approved by CEN on 7 September 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....**3**

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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

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

**Ophthalmic optics — Uncut finished
spectacle lenses —**

**Part 3:
Transmittance specifications and test
methods**

Optique ophthalmique — Verres de lunettes finis non détournés —

*Partie 3: Spécifications relatives au facteur de transmission et
méthodes d'essai*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	4
5 Classification	4
6 Requirements	4
6.1 General.....	4
6.2 General transmittance requirements.....	5
6.3 Spectral transmittance requirements of spectacle lenses intended for road use and driving.....	6
6.4 Additional transmittance requirements for special types of spectacle lenses.....	6
6.5 Resistance to radiation.....	7
7 Test methods	8
7.1 General.....	8
7.2 Spectral transmittance.....	8
7.3 Luminous transmittance and relative visual attenuation coefficient (quotient).....	8
7.4 Ultraviolet transmittance.....	8
7.5 Transmittance properties of photochromic spectacle lenses and photochromic specimens.....	9
7.6 Test methods for polarizing spectacle lenses.....	11
7.7 Determination of resistance to radiation.....	13
8 Identification	14
Annex A (normative) Spectral data for calculating relative visual attenuation quotients for incandescent signal lights	15
Annex B (normative) Calculation of solar UV transmittance values	20
Annex C (normative) Cut-on filter for UV filtering	22
Annex D (informative) Spectral data for calculating relative visual attenuation quotients for LED signal lights	25
Annex E (informative) Spectral radiation risks	28
Annex F (informative) Example of the calculation of luminous transmittance, τ_V	29
Bibliography	31

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. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

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

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

This third edition cancels and replaces the second edition (ISO 8980-3:2003), which has been technically revised. In particular, the requirement in [6.3.2](#) for lenses intended for road use and driving has been amended with an extension of three years for the continued manufacture of existing products.

ISO 8980 consists of the following parts, under the general title *Ophthalmic optics — Uncut finished spectacle lenses*:

- *Part 1: Specifications for single-vision and multifocal lenses*
- *Part 2: Specifications for progressive power lenses*
- *Part 3: Transmittance specifications and test methods*
- *Part 4: Specifications and test methods for anti-reflective coatings*
- *Part 5: Minimum requirements for spectacle lens surfaces claimed to be abrasion-resistant*

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*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN