AS/NZS ISO 8980.3:2015
ISO 8980-3:2013

AS/NZS ISO 8980.3:2015

Australian/New Zealand Standard™

Ophthalmic optics—Uncut finished spectacle lenses

Part 3: Transmittance specifications and test methods

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MS-024, Spectacles. It was approved on behalf of the Council of Standards Australia on 20 January 2015 and on behalf of the Council of Standards New Zealand on 20 January 2015.
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The following are represented on Committee MS-024:

Australian Dispensing Opticians Association
New Zealand Association of Optometrists
Optical Distributors and Manufacturers Association of Australia
Optometrists Association Australia
Queensland University of Technology
University of Auckland (New Zealand)
University of Melbourne
University of New South Wales

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS ISO 8980.3:2014.

Australian/New Zealand Standard™

Ophthalmic optics—Uncut finished spectacle lenses

Part 3: Transmittance specifications and test methods

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MS-024, Spectacles, to supersede AS/NZS ISO 8980.3:2011.

The objective of this Standard is to specify the requirements for the transmittance properties of uncut finished spectacle lenses.

This Standard is identical with, and has been reproduced from, ISO 8980-3:2013, *Ophthalmic optics—Uncut finished spectacle lenses*, Part 3: *Transmittance specifications and test methods.*

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this part of ISO 8980' should read 'this Australian/New Zealand Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australia/New Zealand Standard*	
ISO		AS/NZS ISO	
13666	Ophthalmic optics—Spectacle lenses—Vocabulary	13666	Ophthalmic optics—Spectacle lenses—Vocabulary
14889	Ophthalmic optics—Spectacle lenses—Fundamental requirements for uncut finished lenses	14889	Ophthalmic optics—Spectacle lenses—Fundamental requirements for uncut finished lenses

Only normative references that have been adopted as Australian or Australian/New Zealand Standard have been listed.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annexes to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

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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
τ_{UVA}
mean transmittance between 315 nm and 380 nm

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