American National Standard

for Ophthalmics –

Nonprescription Sunglass and Fashion Eyewear Requirements

ANSI Z80.3-2025

Approved American National Standard

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American National Standard
for Ophthalmics –

Nonprescription Sunglass and Fashion Eyewear Requirements

Secretariat

The Vision Council

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American National Standard

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Contents

Page

Foreword.....ii

1 Scope and Purpose 1

2 Normative References 1

3 Definitions 2

4 Requirements 8

5 Test Procedures 14

6 Country of Origin 22

7 Identification of the Standard and Labeling 23

Annexes

A Spectral Bands Task Force Report – Overview 35

B Cut-On Filter for UV Filtering 36

C Bibliography 37

Foreword (This foreword is not part of American National Standard ANSI Z80.3-2025.)

Summary of Changes to ANSI Z80.3 for 2025

This 2025 revision represents the most current consensus of experts in this field. The changes from the 2018 standard are the result of a thorough study by the ANSI Z80.3 committee of the relevance and applicability of its contents.

Changes include:

- incorporation of the definition of High Energy Visible light, per the Technical Report of the ASC Z80 Spectral Bands Task Force;
- clarification of requirements for frame finish and cosmetic quality of lenses;
- new requirements for claims for selective spectral transmittance and UV attenuation other than absorption by a lens,
- amendment to the resistance to radiation test to be consistent with international requirements,
- inclusion of labeling requirements when lenses may not be suitable for driving and road use, consistent with international standards, and
- renaming of “cosmetic” eyewear as “fashion” eyewear.

Background and summary of past revisions for ANSI Z80.3

Changes made in 2018 clarified testing of photosensitive lenses, making requirements in this standard consistent with international standards.

Changes made in 2015 include revised requirements for prism power and imbalance; clarification of luminous transmittance variations, tolerances, and requirements; updated requirements for frame flammability and new requirements for frame durability; and several new definitions and a new figure demonstrating assessment of cosmetic lens quality.

Changes made in 2010 were the addition of subclauses addressing resistance to radiation; revision of the photochromic lens qualification test; addition of the definition of polarizing efficiency; correction of the equations for the calculation of mean transmittance; addition of country of origin labeling; and addition of an equation to the Notes under Table 5.

The purchasers and users of nonprescription sunglasses and fashion eyewear need to be assured of certain minimum levels of performance and quality in these products. These are either implicit expectations in the product performance, or safety. The purchaser of the product does not ordinarily have the means to properly assess these characteristics.

In order to accomplish these goals, it is necessary to establish commonly accepted definitions, equations, sources, and methodology so that manufacturers can produce products to meet the standard.

This American National Standard specifies impact-resistant characteristics; cosmetic, refractive, and transmittance properties of lenses; and the flammability and durability of frames and lenses.

Cosmetic, refractive, transmittance, and frame properties specified herein are intended as guidelines, and therefore they are subject to revision since there is a need to study further the validity of these property specifications as related to actual normal use requirements.

The Z80.3 Subcommittee was organized in December 1970 and had its first meeting on January 7, 1971. The committee usually meets formally twice per calendar year, and members review material by email, phone, or fax throughout the year. Working groups may be formed to investigate specific projects.

This standard contains one annex, which is informative and is not part of this standard.

Comments or suggestions for improvement of this standard should be sent to:
The Vision Council, 225 Reinekers Lane, Suite 700, Alexandria, VA 22314.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee Z80 (ASC Z80). Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time of approval, ASC Z80 had the following members:

Dr. Carl Tubbs, M.D., Chair
Lauren Bianchi, Vice-Chair
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American National Standard
for Ophtalmics –

Nonprescription Sunglass and Fashion Eyewear Requirements

1 Scope and Purpose

1.1 Scope

This standard applies to all nonprescription sunglasses and fashion eyewear, normally used for casual, dress, and recreational purposes, having lenses of substantially plano power. This standard specifically excludes products covered by ANSI Z87, ANSI Z80.1, ANSI Z136.7, and sports and recreational protective eyewear covered within the ASTM F08.57 committee; however, these and other standards may reference requirements specified within this standard. Sunglass needs for aphakics may not be met by this standard.

1.2 Purpose

The purpose of this standard is to establish standards for noncorrective (essentially plano power) lenses that are intended for attenuation of light, for clear fashion eyewear, and for the flammability and durability of frames and lenses. These products are not designed to be industrial safety eyewear as defined in ANSI Z87, or to provide corrective prescriptions as defined in ANSI Z80.1, or to provide protection for selected sports as defined within ASTM F08.57 committee standards, or to provide protection against laser sources as defined in ANSI Z136.7, or to provide protection when making direct observation of the sun, such as for viewing a partial or annular solar eclipse. Sunglass lenses covered by this standard are not intended for use under conditions of reduced illumination; however, variable tint lenses that fade to a luminous transmittance greater than 75% are covered. Lenses with less than 75% luminous transmittance anywhere on the lenses are not suitable for driving under low light conditions, such as but not limited to twilight or night.

2 Normative References

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to apply the most recent editions of the standards indicated below.

ANSI Z80.1, *Recommendation for prescription ophthalmic lenses*.[1]

ANSI Z80.17, *Focimeters*.[2]

[1] Available from the American National Standards Institute, 1180 Avenue of the Americas, New York, NY 10036 (Website: webstore.ansi.org)

[2] Available from the American National Standards Institute