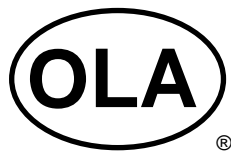


AMERICAN NATIONAL STANDARD



*for Ophthalmics –
Nonprescription Sunglasses and
Fashion Eyewear –
Requirements*

ANSI®

Z80.3-2001

(Revision and consolidation of
ANSI Z80.3-1997 and ANSI Z80.3a-1999)

American National Standard
for Ophthalmics –

**Nonprescription Sunglasses and
Fashion Eyewear –
Requirements**

Secretariat

Optical Laboratories Association

Approved November 20, 2001

American National Standards Institute, Inc.

American National Standard

Approval of an American National Standard requires review by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgement of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made towards their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Developed by

The Accredited Committee Z80 for Ophthalmic Standards -

Optical Laboratories Association
Z80 Secretariat
P. O. Box 2000
Merrifield, VA 22116-2000

Published by

Optical Laboratories Association
P. O. Box 2000
Merrifield, VA 22116-2000

Copyright © 2002 by Optical Laboratories Association
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of the publisher.

Printed in the United States of America

Contents

	Page
Foreword	ii
1 Scope and purpose	1
2 References	1
3 Definitions	2
4 Requirements	5
5 Test procedures.....	9
6 Identification of the standard	14
Tables	
1 Computational data for transmittance properties.....	15
2 Reference data for products given in table 1	16
3 Solar irradiation at sea level with surface perpendicular to sun's rays, m=2	17
4 Transmittance properties for nonprescription sunglass and contact lenses	18
Figures	
1 Color limit regions of acceptance	19
2 Lens on tube	20
3 Baseplate.....	21
4 Lens on block	22

Foreword (This foreword is not part of American National Standard ANSI Z80.3-2001.)

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 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 chairman was appointed by Dr. Arthur Keeney, chairman of the parent Z80 Committee. Other members were appointed jointly by Dr. Keeney and the previous chairman of the subcommittee, John K. Davis.

Suggestions for improvement of this standard will be welcome. They should be sent to Optical Laboratories Association, PO. Box 2000, Merrifield, VA 22116-2000.

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

Thomas White, Chairman
F. Dow Smith, Vice-Chairman
Robert Rosenberg, Secretary

Advance Medical Technologies.....	Carolyn Jones Douglas Fortunato (Alt.) Glenn Davies (Alt.) Stanley Rogaski (Alt.)
American Academy of Ophthalmology	Gerhard Cibis Keith Baratz (Alt.) Paul Vinger (Alt.) Thomas White (Alt.)
American Academy of Optometry.....	David Loshin
American Ceramic Society	Ron Klimek
American Optometric Association	Donald Pitts Gregory Stephens (Alt.) Jeffrey Weaver (Alt.) Robert Rosenberg (Alt.) William Benjamin (Alt.)
American Society of Cataract and Refractive Surgery	Jack Holladay John Alpar (Alt.) Stephen Johnson (Alt.)
AR Council	Don Quinn Mark Imus (Alt.) Scott Rickert (Alt.)

<i>Organization Represented</i>	<i>Name of Representative</i>
Contact Lens Institute	Ed Schilling
Contact Lens Manufacturer's Assn.	Quido Cappelli
Department of Veterans Affairs	John Townsend
	Sharon Atkin (Alt.)
Food & Drug Administration	Ashley Boam
	David Whipple (Alt.)
	Don Calogero (Alt.)
	Robert Landry (Alt.)
Industrial Safety Equipment Association	Janice Bradley
	John Salce (Alt.)
National Academy of Opticianry	Floyd Holmgrain
	Jeffrey Snodgrass (Alt.)
National Association of Optometrists & Opticians	Arthur Newman
Optical Laboratories Association	Daniel Torgersen
	Henry Hart (Alt.)
	Jeffrey Kosh (Alt.)
Optical Society of America	F. Dow Smith
	Richard Phillips (Alt.)
Opticians Association of America	Mike Robey
Prevent Blindness America	Tod Turriff
Sunglass Association of America	David Elliott
	James Pritts (Alt.)
	Kenneth Frederick (Alt.)
	Thomas Loomis (Alt.)
US Leader to ISO TC 172/SC7	Charles Campbell
Vision Council of America	Darryl Meister
	Dick Whitney (Alt.)
	Kenneth Wood (Alt.)
	Michael Vitale (Alt.)
	Richard Waido (Alt.)

Subcommittee Z80.3, which developed this standard, had the following members:

Floyd H. Holmgrain, Chairman

David Elliott
Kenneth L. Frederick
Jeffrey S. Kosh
David S. Loshin
Don McDuffie
Arthur Newman
Dale B. Pfriem
Donald G. Pitts
James Pritts
Robert Rosenberg
John Salce
Jeffrey C. Snodgrass
F. Dow Smith
Daniel Torgersen
Paul F. Vinger
Richard P. Waido
David Whipple
Thomas C. White
Kenneth O. Wood

American National Standard for Ophthalmics –

Nonprescription Sunglasses 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 Z87.1-1989 (R1998), ANSI Z80.1-1999, ANSI/ASTM F803-01a and high-impact-resistance eyewear designed exclusively for designated sports use. 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 and for fashionwear, and the flammability of frames and lenses. These products are commonly called sunglasses and are not designed to be industrial safety eyewear as defined in ANSI Z87.1-1989 (R1998), or to provide corrective prescriptions as defined in ANSI Z80.1-1999, or to provide protection for selected sports defined in ANSI/ASTM F803-01a. Lenses covered by this standard are not intended for use under conditions of reduced illumination, such as for night driving.

2 References

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

2.1 Normative References

ANSI Z80.1-1999, *Recommendations for Prescription Ophthalmic Lenses*¹⁾

ANSI Z80.17-2001, *Focimeters*¹⁾

ANSI Z87.1-1989 (R1998), *Practice for Occupational and Educational Eye and Face Protection*¹⁾

ANSI/ASQC Z1.4-1993, *Sampling Procedures and Tables for Inspection by Attributes*¹⁾

ASTM D412-92, *Test Methods for Rubber Properties in Tension*²⁾

ASTM D1415-94, *Test Method for Rubber Property -International Hardness*²⁾

ANSI/ASTM F803-01a, *Eye Protectors for Use by Players of Racket Sports*²⁾

*Title 21, Code of Federal Regulations, Section 801.410*³⁾

¹⁾ For electronic copies of some standards, visit ANSI's Electronic Standards Store (ESS) at www.ansi.org. For printed versions of all standards, contact Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5704, 800-854-7179.

²⁾ Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

³⁾ Available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954.