

# American National Standard

*for Ophthalmics –  
Devices for Low Vision*

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**ANSI®**  
**Z80.9-2010 (R2015)**  
Reaffirmation of  
ANSI Z80.9-2010

American National Standard  
for Ophthalmics –  
Devices for Low Vision

Secretariat  
**The Vision Council**

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**American National Standards Institute, Inc.**

# American National Standard

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## *Developed by*

The Accredited Committee Z80 for Ophthalmic Standards -

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**Foreword** (This foreword is not part of American National Standard ANSI Z80.9-2010 (R2015).)

This American National Standard specifies optical and mechanical requirements and test methods as applied to optical and electro-optical devices used by persons with low vision. With the wide variety of interpretations applied to commonplace terms, such as magnification, it is important to define terms and outline appropriate use of terms to reduce confusion.

ANSI Z80.9-2010 (R2015) was adapted by a group of experts within the ANSI ASC Z80 Instruments and Low Vision Devices Subcommittee under the chair of William L. Brown, O.D., Ph.D. It is a performance standard.

This document is virtually identical to ANSI Z80.9-2010. The only changes are minor and editorial. This standard originated in 1998, when the ANSI ASC Z80 Committee approved adoption of ISO 15253, Optical Devices for Low Vision, as ANSI Z80.9-1998. In 2004, upon review of ANSI Z80.9-1998, the Z80 Committee further approved inclusion of ISO 15254, Electro-Optical Devices for Low Vision, into the revision of ANSI Z80.9, thus creating a single standard that includes all classes of devices for Low Vision.

Suggestions for improvement of this standard are welcome. They 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 on Ophthalmic Optics, Z80. Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time of approval of this standard, the Z80 Committee consisted of the following members:

Thomas C. White, M.D., Chair  
Quido Cappelli, Vice-Chair  
William Benjamin, Secretary  
Jeffrey Endres, Secretariat

<i>Organization Represented</i>	<i>Name of Representative</i>
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Advance Medical Technologies Association .....	Michael Pflieger
American Academy of Ophthalmology .....	Thomas White
American Academy of Optometry.....	David Loshin
American Ceramic Society .....	Lyle Rubin
American Glaucoma Society .....	Steven Gedde
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National Association of Optometrists & Opticians .....	Nick Mileti
Optical Laboratory Association.....	Michael Vitale
Opticians Association of America .....	Tom Hicks
Sunglass Association of America .....	Frederick Grethel
The Vision Council.....	Jeffrey Endres
US ISO TC 172/SC7 .....	Jeffrey Endres

The Subcommittee on Ophthalmic Instruments, which modified this American National Standard, had the following members:

William L. Brown, O.D., Ph.D., Chair

Charles Campbell  
Bruce Drum  
David Loshin  
Sharon Miller  
Robert Rosenberg  
John Townsend  
Thomas White

# American National Standard for Ophthalmics –

## Devices for Low Vision

### 1 Scope

This Standard applies to optical and electro-optical devices specified by the manufacturer for use by visually impaired persons as low-vision devices. It specifies optical and mechanical requirements and test methods. It includes devices with optical and/or electrical and/or electronic components used for image capture or display.

### 2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ANSI, ISO and IEC maintain registers of currently valid Standards.

ANSI Z80.1-2010, *Ophthalmics – Prescription Spectacle Lenses*

ANSI Z80.3-2009, *Ophthalmics – Nonprescription Sunglass and Fashion Eyewear Requirements*

ANSI Z80.5-2010, *Ophthalmics – Requirements for ophthalmic frames*

ISO/DIS 15004, *Ophthalmic instruments – Fundamental requirements and test methods*

IEC 598-1, *Safety of Luminaires – Part 1: General requirements and tests*

IEC/CISPR 15, *Limits and methods of measurement of radio interference characteristics of power supply with high frequency*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measuring techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

MPRII: MPR 1990:8/MPR 1990:10, *Requirements for low frequency discharge*

UL 60606-1, *Requirements for electrostatic discharge*

ISO 12870, *Ophthalmic optics – Spectacle frames – General requirements and test methods*

### 3 Terms and Definitions

**3.1 Low-vision microscope:** Alternative term for magnifier (see 3.15.1)