Australian Standard®

Sunglasses and fashion spectacles

Part 2: Performance requirements

This Australian Standard was prepared by Committee CS/53, Sunglasses. It was approved on behalf of the Council of Standards Australia on 22 June 1990 and published on 17 September 1990.

The following interests are represented on Committee CS/53:

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Australian Chamber of Commerce
Australian Consumers Association
Australian Federation of Consumer Organizations
Australian Optometrical Association
Australian Radiation Laboratory
Australian Ski Federation
Confederation of Australian Industry
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This Standard was issued in draft form for comment as DR 88032.

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First published as part of AS 1067—1971
Second edition 1983.
AS 1067—1983 revised and redesignated in part as
AS 1067.2—1990

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140
ISBN 0 7262 6414 8

PREFACE

This Standard was prepared by the Standards Australia Committee on Sunglasses to supersede in part, AS 1067—1983, *Sunglasses and fashion spectacles—Non-prescription types*.

The Standard is now divided into two Parts. Part 1 (AS 1067.1) deals with safety requirements and Part 2 (AS 1067.2) with performance details for lenses, frames, and assembled sunglasses and fashion spectacles.

Both Parts 1 and 2 include technical and editorial modifications made necessary by the decision to incorporate AS 1067—1983 in legislation, and shortcomings identified during the application of that edition. It should be noted that with the publication of the revised Standard, only Part 1 (AS 1067.1) is incorporated in legislation.

Although the Standards specify requirements for the safety and performance of sunglasses and fashion spectacles having lenses of zero refractive power, they may also be applied to sunglasses having prescription type lenses.

The two Standards differ from the 1983 edition in that they now cover children's sunglasses. They do not however cover toy sunglasses, ski goggles, spectacles for special purposes such as protection in solaria used for cosmetic purposes, and eye protection against sources of radiation other than from the sun. It should be noted that where sunglasses are worn by a child there is no need for the glasses to comply with the dimensional requirements.

Appendices describing methods for the determination of spectral transmittance, and examples of calculation of mean transmittance and coloration limits are included in Part 1, whilst those in Part 2 provide suitable methods of test for performance characteristics.

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STANDARDS AUSTRALIA

Australian Standard
Sunglasses and fashion spectacles

Part 2: Performance requirements

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out performance requirements for sunglasses and fashion spectacles having lenses of nominally zero refractive power.

The appropriate performance requirements for glasses apply to the types set out in AS 1067.1.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1067 Sunglasses and fashion spectacles–Non-prescription types
1067.1 Part 1: Safety requirements
1680 Code of practice for interior lighting and the visual environment

1.3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 1067.1 apply.

1.4 CLASSIFICATION For the purpose of this Standard, sunglasses and fashion spectacles shall be classified in accordance with AS 1067.1.

SECTION 2 REQUIREMENTS FOR LENSES

2.1 VISUAL QUALITY On visual inspection, lenses shall be reasonably free of pits, scratches, greyness, watermarks, bubbles, striae, local variations and inclusions. In addition, lenses shall have no defects that could impair or prevent the use of lenses for their intended purpose, or be cosmetically noticeable.

Visual inspection shall be carried out under good illumination against a suitable background with the unaided eye although spectacles may be worn if required.

NOTE: Adequate lighting conditions for the above inspection purpose are those recommended in AS 1680.

2.2 DIMENSIONS Lenses for fashion spectacles and sunglasses shall conform to the following dimensions:

(a) *Fashion spectacles and general-purpose sunglasses* Each lens shall have a datum length of not less than 38 mm and a mid-datum depth of not less than 30 mm.

(b) *Specific-purpose sunglasses* Each lens shall have a datum length of not less than 46 mm and a mid-datum depth of not less than 34 mm.

(c) *One-piece or visor-type sunglass lenses* The usable lens areas of one-piece clip-on, slip-on or visor-type sunglass lenses shall be situated symmetrically on either side of the centreline of the visor or one-piece lens and shall be at least 32 mm in diameter. The usable lens area of one-piece sunglasses shall be of sufficient size to include two circles each 32 mm in diameter with their centres separated by 64 mm.

(d) *Dimensional tolerance of lenses* The shape and size of a pair of lenses assembled in a frame shall not differ by more than ±0.5 mm in any meridian, except where the difference is intended as a design feature.

NOTE: Children's sunglasses are exempt from the requirements listed in items (a), (b) and (c).

2.3 THERMAL STABILITY When tested in accordance with Appendix B, the surface power of the lenses shall not change by more than 0.75 m^{-1}. After the test, the lenses shall continue to comply with the surface power requirements.

2.4 VARIATION IN DENSITY

2.4.1 Uniformly tinted lenses The luminous density of a uniformly tinted lens shall appear constant from one area to another when the lens is inspected visually against a uniform white background.

2.4.2 Gradient-density lenses The luminous density of a gradient-density lens shall appear to be constant along the length of the datum line for 15 mm either side of the datum centre when the lens is inspected visually against a uniform white background.

2.5 POLARIZING LENSES Polarizing lenses shall be mounted in frames with the plane of polarization oriented within ±5 degrees of the vertical. The plane of polarization is that containing the direction of the transmitted electric vector.

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