
**Eye and face protection — Sunglasses
and related eyewear —**

**Part 1:
Sunglasses for general use**

*Protection des yeux et du visage — Lunettes de soleil et articles de
lunetterie associés —*

Partie 1: Lunettes de soleil pour usage général



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 94 *Personal safety – Personal protective equipment*, Subcommittee SC 6, *Eye and face protection*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 85, *Eye-protective equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 12312-1:2013), including ISO 12312-1:2013/Amd.1:2015, which has been technically revised.

The main changes compared to the previous edition are as follows:

- added a specification for the electro-optical filters;
- replaced the "local variations in refractive power" with the "spatial deviation";
- introduced the activation of photochromic lenses at 5 °C and 35 °C as optional information;
- extended the side protection to children's sunglasses mounting filter category 4 lenses.

A list of all parts in the ISO 12312 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Eye and face protection — Sunglasses and related eyewear —

Part 1: Sunglasses for general use

1 Scope

This document is applicable to all afocal (plano power) sunglasses and clip-ons for general use, including road use and driving, intended for protection against solar radiation.

Information on the use of sunglass filters is given in [Annex A](#). Requirements for unmounted filters used as replacement or alternative filters are given in [Annex C](#).

This document is not applicable to:

- a) eyewear for protection against radiation from artificial light sources;
- b) eye protectors intended for specific sports (e.g. ski goggles or other types – see ISO 18527 (all parts));
- c) sunglasses that have been medically prescribed for attenuating solar radiation;
- d) products intended for direct observation of the sun, such as for viewing a partial or annular solar eclipse, for which ISO 12312-2 applies;
- e) products intended for occupational eye protection – see, for example, ISO 16321 (all parts).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4007, *Personal protective equipment — Eye and face protection — Vocabulary*

ISO 8980-5, *Ophthalmic optics — Uncut finished spectacle lenses — Part 5: Minimum requirements for spectacle lens surfaces claimed to be abrasion-resistant*

ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

ISO 12311:—¹⁾, *Personal protective equipment — Test methods for sunglasses and related eyewear*

ISO 18526-1:2020, *Eye and face protection — Test methods — Part 1: Geometrical optical properties*

ISO 18526-2:2020, *Eye and face protection — Test methods — Part 2: Physical optical properties*

ISO 18526-3:2020, *Eye and face protection — Test methods — Part 3: Physical and mechanical properties*

ISO 18526-4:2020, *Eye and face protection — Test methods — Part 4: Headforms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4007 and the following apply.

1) In preparation. Stage at the time of publication, ISO/DIS 12311:2022.