AS ISO 8598.1:2017

Australian STANDARD

Optics and optical instruments—Focimeters

Part 1: General purpose instruments

STANDARDS Australia

AS ISO 8598.1:2017

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Australian Dispensing Opticians Association
Optical Distributors and Manufacturers Association of Australia
Optometry Australia
Queensland University of Technology
University of New South Wales

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Australian Standard®

Optics and optical instruments—Focimeters

Part 1: General purpose instruments

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Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee, MS-024 Spectacles.

The objective of this Standard is to specify requirements and test methods for general purpose focimeters designed for the measurement of vertex powers, cylinder axis, prismatic power and prism base setting within a restricted area at a specified location of a lens. This excludes instruments that can only measure the whole lens at once.

This Standard is identical with, and has been reproduced from, ISO 8598-1:2014, *Optics and optical instruments — Focimeters* — Part 1: *General purpose instruments.*

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text 'this part of ISO 8598' should read 'Australian/New Zealand Standard'.

(b) A full point substitutes for a coma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms 'normative' and 'informative' are used in Standards to define the application of the appendices or annexes to which they apply. A 'normative' appendix or annex is an integral part of a Standard, whereas an 'informative' appendix or annex is only for information and guidance.

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

This first edition of ISO 8598-1 cancels and replaces ISO 8598:1996, of which it constitutes a technical revision. It also incorporates the Technical Corrigendum ISO 8598:1996/Cor.1:1998.

ISO 8598 consists of the following parts, under the general title *Optics and optical instruments — Focimeters*:

— *Part 1: General purpose instruments*

Introduction

General purpose focimeters are intended for measurement of contact lenses, single-vision, multifocal and progressive-power or degressive-power spectacle lenses, both uncut and mounted in spectacle frames, and for the orientation and marking of spectacle lenses.

Australian Standard®

Optics and optical instruments—Focimeters

Part 1: General purpose instruments

1 Scope

This part of ISO 8598 specifies requirements and test methods for general purpose focimeters designed for the measurement of vertex powers, cylinder axis, prismatic power and prism base setting within a restricted area at a specified location of a lens. This excludes instruments that can only measure the whole lens at once.

It is applicable to instruments typically intended for use by the ophthalmic community with the capability to demonstrate conformity of lens products with the International Standards existing for these lenses.

2 Normative references

The following referenced documents are indispensable for the application 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 7944, *Optics and optical instruments — Reference wavelengths*

ISO 8429, *Optics and optical instruments — Ophthalmology — Graduated dial scale*

ISO 9342-1, *Optics and optical instruments — Test lenses for calibration of focimeters — Part 1: Test lenses for focimeters used for measuring spectacle lenses*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
adjusting rail
movable rail or bar used as the reference axis for spectacles during measurement and which is aligned perpendicularly to the optical axis of the focimeter and parallel to the axis direction 0° to 180°

Note 1 to entry: This is also called the lens table or frame rest.

3.2
capability
ability of a system or process to achieve the required performance

3.3
general purpose focimeter
instrument that is used to measure vertex powers, cylinder axis and prismatic effects of spectacle and contact lenses, to orientate and mark uncut lenses, and to verify the correct mounting of lenses in spectacle frames

3.3.1
manual focusing focimeter
instrument that allows the operator to view images formed by rays of light passing through a lens and, by manually focusing and adjusting, to measure the vertex power and identify the principal meridians

Note 1 to entry: For lenses with cylindrical power, the cylinder axis is found using the method provided to locate the principal meridians of the lens in the area defined by the focimeter aperture. Prismatic power is measured separately for this type of focimeter.