

Ophthalmic instruments - Corneal topographers (ISO 19980:2012)

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NATIONAL FOREWORD

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English Version

Ophthalmic instruments - Corneal topographers (ISO
19980:2012)

Instruments ophtalmiques - Topographes de la cornée (ISO
19980:2012)

Ophthalmische Instrumente - Hornhauttopographen (ISO
19980:2012)

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Foreword

This document (EN ISO 19980:2012) has been prepared by Technical Committee ISO/TC 172 “Optics and photonics” in collaboration with Technical Committee CEN/TC 170 “Ophthalmic optics” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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Endorsement notice

The text of ISO 19980:2012 has been approved by CEN as a EN ISO 19980:2012 without any modification.

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Ophthalmic instruments — Corneal topographers

1 Scope

This International Standard specifies minimum requirements for instruments and systems that fall into the class of corneal topographers (CTs). It also specifies tests and procedures to verify that a system or instrument complies with this International Standard and thus qualifies as a CT according to this International Standard. It also specifies tests and procedures that allow the verification of capabilities of systems that are beyond the minimum requirements for CTs.

This International Standard defines terms that are specific to the characterization of the corneal shape so that they may be standardized throughout the field of vision care.

This International Standard is applicable to instruments, systems and methods that are intended to measure the surface shape of the cornea of the human eye.

NOTE The measurements can be of the curvature of the surface in local areas, three-dimensional topographical measurements of the surface or other more global parameters used to characterize the surface.

It is not applicable to ophthalmic instruments classified as ophthalmometers.

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.

IEC 60601-1:2005, *Medical electrical equipment — Part 1: General requirements for basic safety and essential performance*

3 Terms and definitions

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

3.1

corneal apex

location on the corneal surface where the mean of the local principal curvature is greatest

3.2

corneal eccentricity

e_c

eccentricity, e , of the conic section that best fits the corneal meridian of interest

NOTE If the meridian is not specified, the corneal eccentricity is that of the flattest corneal meridian (see Table 1 and Annex A).

3.3

corneal meridian

θ

curve created by the intersection of the corneal surface and a plane that contains the corneal topographer axis

NOTE 1 A meridian is identified by the angle θ , that the plane creating it makes to the horizontal (see ISO 8429).

NOTE 2 The value of θ , for a full meridian, ranges from 0° to 180°.