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Optics and photonics — Test methods for telescopic systems —

Part 6: Test methods for veiling glare index

Optique et photonique — Méthodes d'essai pour systèmes télescopiques —

Partie 6: Méthodes d'essai de l'indice de lumière parasite

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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).

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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 4, *Telescopic systems*.

This second edition cancels and replaces the first edition (ISO 14490-6:2005), of which it constitutes a minor revision. ISO 14490 consists of the following parts, under the general title *Optics and photonics — Test methods for telescopic systems*:

— *Part 1: Test methods for basic characteristics*

— *Part 2: Test methods for binocular systems*

— *Part 3: Test methods for telescopic sights*

— *Part 4: Test methods for astronomical telescopes*

— *Part 5: Test methods for transmittance*

— *Part 6: Test methods for veiling glare index*

— *Part 7: Test methods for limit of resolution*

— *Part 8: Test methods for night-vision devices*

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Optics and photonics — Test methods for telescopic systems —

Part 6:
Test methods for veiling glare index

1 Scope

This part of ISO 14490 specifies the test methods for the determination of the veiling glare index of telescopic systems and observational telescopic instruments.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9358:1994, *Optics and optical instruments — Veiling glare of image forming systems — Definitions and methods of measurement*

ISO 14132-1, *Optics and photonics — Vocabulary for telescopic systems — Part 1: General terms and alphabetical indexes of terms in* ISO 14132

ISO 14490-1:2005, *Optics and photonics — Test methods for telescopic systems — Part 1: Test methods for basic characteristics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14132-1 apply.

4 General considerations

The veiling glare test methods are generally described in ISO 9358:1994. ISO 9358:1994 deals with arbitrary optical instruments and contains two basic approaches to measuring the veiling glare, namely integral (or black patch) method and analytical (or glare spread function) method.

For terrestrial telescopes with which this part of ISO 14490 deals, the black patch method is more adequate while the glare spread function might prove to be better for astronomical telescopes. For the moment, consideration in this part of ISO 14490 is given only to the black patch method. If need of measuring the glare spread function arises, the reference shall be made directly to appropriate clauses of ISO 9358:1994.

From the classification given in ISO 9358:1994, Clause 3, the case where both the object and the image are at infinity will usually apply to telescopic systems. Clauses 6 and 7 give detailed and more specific descriptions of the general test method given in ISO 9358:1994, 4.1 and of test conditions given in ISO 9358:1994, 5.1.

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