BS ISO 10110-19:2015

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Optics and photonics — Preparation of drawings for optical elements and systems

Part 19: General description of surfaces and components

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National foreword

This British Standard is the UK implementation of ISO 10110-19:2015.

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A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Part 19: General description of surfaces and components

Optique et photonique — Préparation des dessins pour éléments et systèmes optiques —

Partie 19: Description générale des surfaces et des composants

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Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Referencing **2**
4.1 General 2
4.2 Coordinate system 3
4.3 Sign convention 3

5 Drawing specifications **4**
5.1 General 4
5.2 Specification of surface form tolerances 4
5.3 Specification of centring tolerances 5
5.4 Tolerance specifications for surface imperfections and surface texture 5

6 Data exchange **6**

7 Data reduction **6**

Annex A (informative) **Mathematical description, data formats, and data reduction** **7**

Bibliography **12**

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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 1, *Fundamental standards*.

ISO 10110 consists of the following parts, under the general title *Optics and photonics — Preparation of drawings for optical elements and systems*:

— *Part 1: General*

— *Part 2: Material imperfections — Stress birefringence*

— *Part 3: Material imperfections — Bubbles and inclusions*

— *Part 4: Material imperfections — Inhomogeneity and striae*

— *Part 5: Surface form tolerances*

— *Part 6: Centring tolerances*

— *Part 7: Surface imperfection tolerances*

— *Part 8: Surface texture; roughness and waviness*

— *Part 9: Surface treatment and coating*

— *Part 10: Table representing data of optical elements and cemented assemblies*

— *Part 11: Non-toleranced data*

— *Part 12: Aspheric surfaces*

— *Part 14: Wavefront deformation tolerance*

— *Part 17: Laser irradiation damage threshold*

— *Part 19: General description of surfaces and components*

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INTERNATIONAL STANDARD ISO 10110-19:2015(E)

Optics and photonics — Preparation of drawings for optical elements and systems —

Part 19: General description of surfaces and components

1 Scope

ISO 10110 specifies the presentation of design and functional requirements for optical elements and systems in technical drawings used for manufacture and inspection.

This part of ISO 10110 provides a general method of describing surfaces and components. This part of ISO 10110 applies to continuous and discontinuous surfaces. It does not apply to diffractive surfaces, Fresnel surfaces, ophthalmic glasses, and micro-optical surfaces.

This part of ISO 10110 applies to any general surface or component, even including spherical or rotationally symmetric surfaces if it is necessary, i.e. when NURBS, splines, point clouds, etc. are used.

This part of ISO 10110 does not specify the method by which compliance with the specifications is to be tested.

2 Normative references

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

ISO 1101, *Geometrical Product Specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 5459, *Geometrical product specifications (GPS) — Geometrical tolerancing — Datums and datum systems*

ISO 10110-5, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 5: Surface form tolerances*

ISO 10110-6, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 6: Centring tolerances*

ISO 10110-7, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 7: Surface imperfection tolerances*

ISO 10110-8, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 8: Surface texture; roughness and waviness*

ISO 10110-14, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 14: Wavefront deformation tolerance*

3 Terms and definitions

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

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