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

Part 1: General

Optique et photonique — Indications sur les dessins pour éléments et systèmes optiques —

Partie 1: Généralités

Reference number
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Foreword

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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 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 1, *Fundamental standards.*

This third edition cancels and replaces ISO 10110-1:2006 and ISO 10110-10:2004, which have been technically revised and merged into one single document.

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

a) Drawing scale and the reference wavelength are required to be included on the drawing;

b) provisions have been added to allow coordinate systems to be defined for each surface and for the part as a whole;

c) new tabular formats have been added to allow more surfaces on a tabular drawing, partially tabulated drawings, and new types of assembly drawings;

d) a new notation for special surfaces has been added;

e) in addition, many more examples of drawings and notations have been provided;

f) and various detailed notes have been added, and corrections and modifications have been made for improved clarity;

g) GSP defaults by definition no longer apply, they have to be specifically invoked.

A list of all parts in the ISO 10110 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.

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

Part 1: General

1 Scope

This document specifies the general layout of drawings and provides examples of indications in the ISO 10110 series, which standardizes drawing indications for optical elements and systems.

This document specifies the presentation in drawings of the characteristics, including the tolerances, of optical elements and systems. This document also includes the popular tabular format, formerly presented in ISO 10110-10. This tabular format, now described in 5.1, is the preferred format for ISO 10110 drawings.

Rules for preparation of technical drawings as well as for dimensioning and tolerancing are given in various ISO Standards. These general standards apply to optical elements and systems only if the necessary rules are not given in the various parts of ISO 10110.

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 128-24, *Technical drawings — General principles of presentation — Part 24: Lines on mechanical engineering drawings*

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

ISO 10110-11, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 11: Non-toleranced data*

ISO 10110-12, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 12: Aspheric surfaces*

ISO 10110-18, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 18: Stress birefringence, bubbles and inclusions, homogeneity, and striae*

ISO 10110-19, *Optics and photonics — Preparation of drawings for optical elements and systems — Part 19: General description of surfaces and components*

ISO 12123, *Optics and photonics — Specification of raw optical glass*

ISO 80000-1, *Quantities and units — Part 1: General*

3 Terms and definitions

No terms and definitions are listed in this document.

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