

**BUREAU OF INDIAN STANDARDS**

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**Doc No.: PGD 39 (23514)**

**IS 5920 (Part 12) : 2023**

**ISO 10110-18 : 2018**

**November 2023**

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*भारतीय मानक मसौदा*

**प्रकाशिकी और फोटोनिक्स - ऑप्टिकल तत्वों और प्रणालियों के लिए आरेखण तैयार करना  
भाग 12 तनन द्विप्रतिरोध, बुलबुले और समावेशन, एकरूपता और स्ट्राई**

*Draft Indian Standard*

**Optics and Photonics — Preparation of Drawings for Optical Elements and Systems  
Part 12 Stress Birefringence, Bubbles and Inclusions, Homogeneity, and Striae**

ICS 01.100.20; 37.020

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**Optics and Photonics, PGD 39**

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**NATIONAL FOREWORD**

This draft Indian Standard (Part 12) which is identical with ISO 10110-18 : 2018 ‘Optics and photonics — Preparation of drawings for optical elements and systems — Part 18: Stress birefringence, bubbles and inclusions, homogeneity, and striae’ issued by the International Organization for Standardization (ISO) will be adopted by the Bureau of Indian Standards on the recommendation of the Optics and Photonics Sectional Committee and approval of the Production and General Engineering Division Council.

This standard specifies the indication of tolerances for four categories of imperfections within optical materials — stress birefringence, bubbles and inclusions, homogeneity, and striae. Tolerances are applied either to a finished optical part, a finished system of optical parts, or to the raw material used to manufacture an optical part.

This standard has been published in thirteen parts. Part 1 of this series supersedes the originally published Indian Standard IS 5920 : 1970 ‘Recommendation for the preparation of drawing for optical elements and system’. Other parts in this series are:

Part 1	General
Part 2	Surface form tolerances
Part 3	Centering tolerances
Part 4	Surface imperfections
Part 5	Surface texture
Part 6	Surface treatment and coating
Part 7	Non-tolerance data

Part 8	Aspheric surfaces
Part 9	Wave front deformation tolerance
Part 10	Diffractive surfaces
Part 11	Laser irradiation damage threshold
Part 13	General description of surfaces and components

The text of ISO standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current-practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 10110-1 Optics and photonics — Preparation of drawings for optical elements and systems — Part 1 : General	IS 5920 (Part 1) : XXXX/ISO 10110-1 : 2019 — Optics and Photonics — Preparation of Drawings for Optical Elements and Systems : Part 1 General	Identical
ISO 10110-11 Optics and photonics — Preparation of drawings for optical elements and systems — Part 11 : Non-toleranced data	IS 5920 (Part 7) : XXXX/ISO 10110-11 : 2019 — Optics and Photonics — Preparation of Drawings for Optical Elements and Systems : Part 11 Non-toleranced data	Identical

The technical committee has reviewed the provisions of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard.

<i>International Standard</i>	<i>Title</i>
ISO 9802	Raw optical glass — Vocabulary
ISO 12123	Optics and photonics — Specification of raw optical glass
ISO 14999-4	Interferometric measurement of optical elements and optical systems — Part 4: Interpretation and evaluation of tolerances specified in ISO 10110

**NOTE:** The technical content of draft standard is not available on website. For details, please refer to ISO 10110-18 : 2018 or contact:

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