***भारतीय मानक***

***Indian Standard***

**IS 5920 (Part 1) : 2024**

**ISO 10110-1 : 2019**

प्रकाशिकी और फोटोनिक्स — प्रकाशीय तत्वों और प्रणालियों के लिए आरेखण तैयार करना

भाग 1 सामान्य

( ***पहला पुनरीक्षण*** )

**Optics and Photonics —Preparation of Drawings for Optical Elements and Systems**

**Part 1 General**

( *First Revision* )

ICS 01.100.20; 37.020

© BIS 2024

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI - 110002

[www.bis.gov.in](http://www.bis.org.in) [www.standardsbis.in](http://www.standardsbis.in)

**March 2024 Price Group**

Optics and Photonics sectional committee, PGD 39

NATIONAL FOREWORD

This Indian Standard (Part 1) which is identical with ISO 10110 - 1: 2019 ‘Optics and photonics — Preparation of drawings for optical elements and systems — Part 1 : General’ issued by the International Organization for Standardization (ISO) was 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 drawing indication for optical elements and systems. It also specifies the presentation in drawings of the characteristics, including the tolerances of optical elements and systems.

This standard supersedes the originally published Indian Standard IS 5920 : 1970 ‘Recommendations for the preparation of drawings for optical elements and systems’.

This standard has been published in thirteen parts. The other parts in this series are:

Part 2 Surface form tolerances

Part 3 [Centring tolerances](https://www.iso.org/en/contents/data/standard/05/57/55772.html)

Part 4 Surface imperfections

Part 5 Surface texture

Part 6 Surface treatment and coating

Part 7 Non-toleranced data

Part 8 Aspheric surfaces

Part 9 Wavefront deformation tolerance

Part 10 Diffractive surfaces

Part 11 Laser irradiation damage threshold

Part 12 Stress birefringence, bubbles and inclusions, homogeneity, and striae

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:

1. Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
2. 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:

|  |  |  |
| --- | --- | --- |
| *International Standard* | *Corresponding Indian Standard* | *Degree of Equivalence* |
| ISO 128-24 Technical drawings — General principles of presentation — Part 24 : Lines on mechanical engineering drawings | IS 10714 (Part 2) : 2018/ ISO 128-2:2022 Technical product documentation— General principles of representation : Part 2: Basic conventions for lines | Identical |
| ISO 10110-6 Optics and photonics — Preparation of drawings for optical elements and systems — Part 6 : Centring tolerances | IS 5920 (Part 3) : 2024/ISO 10110-6 : 2015 Optics and photonics — Preparation of drawings for optical elements and systems : Part 6 Centring tolerances | Identical |
| ISO 10110-11 Optics and photonics — Preparation of drawings for optical elements and systems— Part 11 : Non-toleranced data | IS 5920 (Part 7) : 2024/ISO 10110-11 : 2016 Optics and photonics — Preparation of drawings for optical elements and systems : Part 11 Non-toleranced data | Identical |
| ISO 10110-12 Optics and photonics — Preparation of drawings for optical elements and systems — Part 12 : Aspheric surfaces | IS 5920 (Part 8) : 2024/ISO 10110-12 : 2019 Optics and photonics —Preparation of drawings for optical elements and systems : Part 12 Aspheric surfaces | Identical |
| ISO 10110-18 Optics and photonics — Preparation of drawings for optical elements and systems — Part 18 : Stress birefringence, bubbles and inclusions, homogeneity, and striae | IS 5920 (Part 12) : 2024/ISO 10110-18 Optics and photonics — Preparation of drawings for optical elements and systems : Part 18 Stress birefringence, bubbles and inclusions, homogeneity, and striae | Identical |
| ISO 10110-19 Optics and photonics — Preparation of drawings for optical elements and systems — Part 19 : General description of surfaces and components | IS 5920 (Part 13) : 2024/ISO 10110-19 Optics and photonics — Preparation of drawings for optical elements and systems : Part 19 General description of surfaces and components | Identical |
| ISO 80000-1 Quantities and units — Part 1 : General | IS/ISO 80000-1 : 2009 Quantities and units : Part 1 General | Identical |
| ISO 12123:2018 Optics and photonics — Specification of raw optical glass | IS XXXX : XXXX/ISO 12123:2018 Optics and photonics — Specification of raw optical glass | Identical |