INTERNATIONAL STANDARD

ISO 9345

First edition
2019-03

Microscopes — Interfacing dimensions for imaging components

Microscopes — Dimensions d'interfaçage pour composants d'imagerie

Reference number
ISO 9345:2019(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 5, *Microscopes and endoscopes*.

This first edition of ISO 9345 cancels and replaces ISO 8038:2013, ISO 9345-1:2012, ISO 9345-2:2014, and ISO 10937:2000.

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.

Microscopes — Interfacing dimensions for imaging components

1 Scope

This document specifies optically and mechanically related dimensions for imaging components of a microscope such as

a) the dimensions related to objective, eyepiece and tube lens,

b) the dimensions of screw thread types for connecting a microscope objective to the nosepiece, and

c) the diameters of interchangeable eyepieces and corresponding viewing tubes of microscopes.

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 10934-1, *Optics and optical instruments — Vocabulary for microscopy — Part 1: Light microscopy*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10934-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
parfocalizing distance of the objective
l_1
distance in air between the object plane (i.e. the uncovered surface of the object) and the locating flange of the objective, when the microscope is in its working position

Note 1 to entry: See Figure 1, Figure 2 and Footnote b in Table 1.

[SOURCE: ISO 10934-1:2002, 2.80.2.4; modified — the symbol l_1 added in the definition; Note from ISO 10934-1:2002 omitted, and Note 1 to entry added.]

3.2
objective to primary image distance
l_2
distance in air between the objective locating surface (of the nosepiece) and the primary image plane

Note 1 to entry: It commonly has a value either 150 mm or infinity. It is a hypothetical value applied to microscopes designed for infinity-corrected objectives.

Note 2 to entry: See Figure 1, 2 and Table 1.

[SOURCE: ISO 10934-1:2002, 2.80.2.1, modified — the symbol l_2 added, Note 1 to entry modified, and Note 2 to entry added.]