
**Microscopes — Microscopes
with digital imaging displays —
Information provided to the user
regarding imaging performance**

*Microscopes — Microscopes avec écrans d'affichage numérique —
Informations fournies à l'utilisateur concernant la performance
d'affichage*

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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 5, *Microscopes and endoscopes*.

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Microscopes — Microscopes with digital imaging displays — Information provided to the user regarding imaging performance

1 Scope

This International Standard specifies the minimum information to be provided to the user by the manufacturers of microscopes with digital displays regarding imaging performance.

It further specifies terms and definitions for describing the optical performance of the digital imaging path of microscopy systems including the observation of the image on digital displays.

NOTE Terms and definitions for the direct visual observation with eyepieces are specified in ISO 8039 and ISO 10934-1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

ISO 10934-2, *Optics and optical instruments — Vocabulary for microscopy — Part 2: Advanced techniques in light microscopy*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10934-1, ISO 10934-2 and the following apply.

NOTE Terms shown in italics within a definition or a note are defined elsewhere within this International Standard or in ISO 10934.

3.1

digital microscopy system

instrument consisting of an *objective*, an *image sensor* (3.2) and a *digital display* (3.3) to make visible minute details that are not seen with unaided eye

Note 1 to entry: The system might include means for image enhancement, image analysis, archiving, etc.

3.2

image sensor

device to transform an optical image into a *digital image*

3.3

digital display

output device for the visual presentation of a *digital image* and other information

3.4

resolving power limit

maximum spatial frequency distinguishable in object space, expressed in lp/mm

Note 1 to entry: The resolving power actually achieved will always be lower than the resolving power limit due to reduced contrast, moiré patterns, etc. In addition, it depends on sensor type, object structure, illumination, etc.