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INTERNATIONAL STANDARD

Household electric appliances - Specification of the properties of a digital system for measuring the performance

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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IEC 63350 has been prepared by subcommittee SC 59K: Performance of household and similar electrical cooking appliances, of IEC technical committee TC 59: Performance of household and similar electrical appliances.

This first edition cancels and replaces IEC TS 63350, published in 2022.

This edition includes the following significant technical changes with respect to IEC TS 63350:

a) Revision of 4.2: Movable items (e.g., containers, jigs, reference objects) can now be present in the assessment area provided that mitigation measures are applied and periodic verification against known reference artefacts is documented; the requirement to keep the assessment area as constant as possible is retained.
b) Addition of new supporting document: Note in 5.1 introduces the Fogra 52 profile (included in the reference colour supporting documents from the IEC SC 59K supporting documents web site) which is referencing the conditions of ISO 12647-7 [1] and ISO 12647-2 [2].
c) Four additional reference shades with hue angles > 130° are introduced in **5.3** for calibration (to enable accurate pixel-wise hue-angle measurement). These do not create new shade classes.
d) Revision of 6.2: Calculation of sampling positions remains unchanged, but the procedure changes to reflect better the actual test scenario.
e) Added reporting of input image colour channel data (7.7).

The text of this document is based on the following documents:

Draft	Report on voting
59K/429/FDIS	59K/431/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this document is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at https://www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at https://www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

This corrected version of IEC 63350:2026 incorporates the following correction:

– Addition of bibliographic reference numbers in the content

INTRODUCTION

IEC subcommittee 59K has agreed to make a collection of existing and future requirements on a digital system used in testing the performance of appliances under the scope of SC 59K, cooking appliances.

This document bundles the generic requirements given in IEC 60350-1 [3] and IEC 60350-2 [4] that are updated, aligned, and supplemented by further requirements. The reference colour system is changed from a proprietary colour system to the standardized and widely used CIELAB-based reference colour system.

The intention with this publication is to ensure that using a digital system, which complies with the stated requirements and described methods, leads to reproducible results.

Currently, this document focuses on test methods described in IEC 60350-1 [3] and IEC 60350-2 [4] but further applications based on visually detectable performance criteria can be supplemented.

1 Scope

This document specifies generic requirements for creating a digital system that is used for measuring the characteristics of visually detectable performance, such as browning intensity and lightness.

It defines the metrological requirements of this digital system and demonstrates the procedures for compliance. The digital system contains the measuring instrument, the software, and the reference materials necessary to realize the measurement process.

References to this document can be made by a customer when specifying the digital system and by the suppliers when specifying products offered.

Interested parties can agree to use this document as an input for satisfying measurement management system requirements in any activities.

NOTE 1 The principles of ISO 10012 [5] are followed to ensure the capability of the systems.

NOTE 2 Possible suppliers for the recommended digital system can be found in the supplementary file located at: https://www.iec.ch/sc59k/supportingdocuments.

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 12647-2, *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 2: Offset lithographic processes*

ISO 12647-7, *Graphic technology - Process control for the production of half-tone colour separations, proof and production prints - Part 7: Proofing processes working directly from digital data*

ISO 15076-1, *Image technology colour management - Architecture, profile format and data structure - Part 1: Based on ICC.1:2010*

CIE 15, *Colorimetry*

Bibliography

[1] ISO 12647-7, *Graphic technology - Process control for the production of half-tone colour separations, proof and production prints - Part 7: Proofing processes working directly from digital data*

[2] ISO 12647-2, *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 2: Offset lithographic processes*

[3] IEC 60350-1, *Household electric cooking appliances - Part 1: Ranges, ovens, steam ovens and grills - Methods for measuring performance*

[4] IEC 60350-2, *Household electric cooking appliances - Part 2: Hobs - Methods for measuring performance*

[5] ISO 10012, *Measurement management systems - Requirements for measurement processes and measuring equipment*

[6] ISO 11664 (all parts), *Colorimetry*

[7] ISO/CIE 11664-4, *Colorimetry - Part 4: CIE 1976 L*a*b* Colour space*

[8] ISO 13655, *Graphic technology - Spectral measurement and colorimetric computation for graphic arts images*

[9] IEC 61966-2-1, *Multimedia systems and equipment - Colour measurement and management - Part 2-1 Colour management - Default RGB colour space - sRGB*

[10] ISO/CIE 11664-6, *Colorimetry - Part 6: CIEDE2000 colour-difference formula*

[11] ISO 15076-1, *Image technology colour management - Architecture, profile format and data structure - Part 1: Based on ICC.1:2010*

[12] CIE 15, *Colorimetry*

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