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Durability test methods for electronic displays – Part 3-5: Mechanical tests – Surface durability

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FOREWORD

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International Standard IEC 63211-3-5 has been prepared by IEC technical committee 110: Electronic displays.

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

FDIS	Report on voting
110/1222/FDIS	110/1244/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63211 series, published under the general title *Durability test methods for electronic displays*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This document relates to the common durability test methods applicable in the field of electronic displays, which may overlap with some of the parts of existing TC 110 documents that describe the durability test methods of the individual technologies, such as LCD, OLED, PDP and others. This document is intended to be used as the reference document in future standards and in revisions of existing. The existing standards will be revised in their maintenance time to refer to this document to the largest extent possible.

DURABILITY TEST METHODS FOR ELECTRONIC DISPLAYS –

Part 3-5: Mechanical tests – Surface durability

1 Scope

This part of IEC 63211 defines common procedures for surface durability mechanical test methods. This document generally describes the test equipment and procedures used for each method when applied on all levels, from parts (i.e. outermost surface parts of products, display panels and modules) to final products (i.e. finished displays or products).

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 for this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62341-6-3, *Organic light emitting diode (OLED) displays – Part 6-3: Measuring methods of image quality*

IEC 62368-1, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

IEC 62715-5-3, *Flexible display devices – Part 5-3: Visual assessment of image quality and defects*

IEC 62977-2-2, *Electronic displays – Part 2-2: Measurements of optical characteristics – Ambient performance*

ISO 15184, *Paints and varnishes – Determination of film hardness by pencil test*

ISO 19252, *Plastics – Determination of scratch properties*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
scratch
mark or groove created by a sharp or pointed object cutting a surface in a single one-directional lateral movement of the object

3.2
abrasion
process of wearing away or deformation of a surface by repeatedly rubbing the surface