Irish Standard
I.S. EN 62341-5-2:2013

Organic light emitting diode (OLED) displays -- Part 5-2: Mechanical endurance testing methods (IEC 62341 -5-2:2013 (EQV))

I.S. EN 62341-5-2:2013

Incorporating amendments/corrigenda issued since publication:

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English version

Organic light emitting diode (OLED) displays - Part 5-2: Mechanical endurance testing methods

(IEC 62341-5-2:2013)

Afficheurs à diodes électroluminescentes organiques (OLED) - Partie 5-2: Méthodes d'essais d'endurance mécanique (CEI 62341-5-2:2013)

Anzeigen mit organischen Leuchtdioden (OLED) - Teil 5-2: Prüfverfahren für mechanische Belastbarkeit (IEC 62341-5-2:2013)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 110/472/FDIS, future edition 1 of IEC 62341-5-2, prepared by IEC TC 110 "Electronic display devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62341-5-2:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-05-13
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-08-13

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Endorsement notice

The text of the International Standard IEC 62341-5-2:2013 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-6	2007	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60068-2-27	2008	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	2009
IEC 61747-5	1998	Liquid crystal and solid-state display devices - Part 5: Environmental, endurance and mechanical test methods	EN 61747-5	1998
IEC 61747-5-3 (mod)	2009	Liquid crystal display devices - Part 5-3: Environmental, endurance and mechanical test methods - Glass strength and reliability	EN 61747-5-3	2010
IEC 62341-1-2	2007	Organic light emitting diode displays - Part 1-2: Terminology and letter symbols	EN 62341-1-2	2009
IEC 62341-5	2009	Organic Light Emitting Diode (OLED) displays - Part 5: Environmental testing methods	EN 62341-5	2009
IEC 62341-6-1	2009	Organic light emitting diode (OLED) displays - Part 6-1: Measuring methods of optical and electro-optical parameters	EN 62341-6-1	2011
IEC 62341-6-2	2012	Organic light emitting diode (OLED) displays - Part 6-2: Measuring methods of visual quality and ambient performance	EN 62341-6-2	2012
ISO 2206	1987	Packaging - Complete, filled transport packages - Identification of parts when testing	EN 22206	1992
ISO 2248	1985	Packaging - Complete, filled transport packages - Vertical impact test by dropping	EN 22248	1992

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

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FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62341-5-2 has been prepared by IEC technical committee 110: Electronic display devices.

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

FDIS	Report on voting
110/472/FDIS	110/486/RVD

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

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

A list of all parts in the IEC 62341 series, published under the general title *Organic light emitting diode (OLED) displays*, can be found on the IEC website.

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

Part 5-2: Mechanical endurance testing methods

1 Scope

This part of IEC 62341 defines testing methods for evaluating mechanical endurance quality of Organic Light Emitting Diode (OLED) display panels and modules or their packaged form for transportation. It takes into account, wherever possible, the environmental testing methods outlined in specific parts of IEC 60068. The object of this standard is to establish uniform preferred test methods for judging the mechanical endurance properties of OLED display devices.

There are generally two categories of mechanical endurance tests: those relating to the product usage environment and those relating to the transportation environment in packaged form. Vibration, shock, quasistatic strength, four-point bending test and peel strength test are introduced here for usage environment, while transportation drop test is applicable to the transportation environment. Mechanical endurance tests may also be categorized into mobile application, notebook computer or monitor application and large size TV application. Special considerations or limitations of test methods according to the size or application of the specimen will be noted.

NOTE This standard is established separately from IEC 61747-5-3, because the technology of organic light emitting diodes is considerably different from that of liquid crystal devices in such matters as:

– used materials and structure;

– operation principles;

– measuring methods.

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.

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests–Test Fc: Vibration (sinusoidal)*

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: Tests–Test Ea and guidance: Shock*

IEC 61747-5:1998, *Liquid crystal and solid-state display devices – Part 5: Environmental, endurance and mechanical test methods*

IEC 61747-5-3:2009, *Liquid crystal display devices – Part 5-3: Environmental, endurance and mechanical test methods – Glass strength and reliability*

IEC 62341-1-2:2007, *Organic light emitting diode displays – Part 1-2: Terminology and letter symbols*

IEC 62341-5:2009, *Organic light emitting diode (OLED) displays – Part 5: Environmental testing methods*

IEC 62341-6-1:2009, *Organic light emitting diode (OLED) displays – Part 6-1: Measuring methods of optical and electro-optical parameters*