

INTERNATIONAL STANDARD



**Organic light emitting diode (OLED) displays –
Part 5-3: Measuring methods of image sticking and lifetime**



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.120; 31.260

ISBN 978-2-8322-7455-2

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CONTENTS

FOREWORD	4
1 Scope	6
2 Normative references	6
3 Terms, definitions and abbreviated terms	6
3.1 Terms and definitions.....	6
3.2 Abbreviated terms.....	7
4 Measuring configuration	7
4.1 General.....	7
4.2 Light measuring device	8
5 Standard measuring conditions.....	8
5.1 Standard measuring environmental conditions	8
5.2 Standard measuring darkroom conditions	8
5.3 Standard setup conditions.....	8
5.3.1 General	8
5.3.2 Adjustment of OLED display	8
5.3.3 Starting conditions of measurements	9
5.3.4 Test patterns	9
5.3.5 Conditions of measuring equipment	11
6 Measuring methods of image sticking	11
6.1 Purpose	11
6.2 Measuring method	11
6.2.1 Measuring equipment	11
6.2.2 Measuring procedure	11
6.3 Analysis and report.....	12
6.3.1 Analysis.....	12
6.3.2 Report	14
7 Measuring methods of the luminance lifetime	16
7.1 Purpose	16
7.2 Measuring method	16
7.2.1 Measuring equipment	16
7.2.2 Measuring procedure	16
7.2.3 Estimation of luminance lifetime	17
Annex A (informative) Calculating method for equivalent signal level to reflect the characteristics of the OLED display	19
A.1 Purpose	19
A.2 Determining the equivalent signal level	19
A.2.1 General	19
A.2.2 Calculation of the normalized luminance intensity.....	19
A.2.3 Examples of extracted equivalent signal level.....	22
Annex B (informative) Colour difference with CIEDE2000	25
B.1 Purpose	25
B.2 Calculation of colour difference.....	25
Bibliography.....	26
Figure 1 – Measuring system and arrangement.....	7

Figure 2 – Test pattern for SDR displays.....	9
Figure 3 – Image sticking measuring area.....	10
Figure 4 – Test pattern for HDR displays	11
Figure 5 – Example of the resulting image after image stress	12
Figure 6 – Example of luminance behavior in operation for an OLED display module	16
Figure 7 – Example of lifetime estimation with the extrapolation method	17
Figure 8 – Examples of estimated lifetime depending on the time elapsed	18
Figure A.1 – Measured 10 mA/cm ² to 80 mA/cm ² OLED degradation values and corresponding modelled functions with $m = 1 / 1,7$	20
Figure A.2 – Example of accumulated colour intensity of IEC 62087:2011 10-min video loop in RGB subpixel format with equivalent signal distribution chart based on the left images.....	23
Figure A.3 – Example of accumulated colour intensity of the IEC 62087:2011 10-min video loop in W, R, G, and B format, with equivalent signal distribution chart based on the left images	24
Table 1 – Examples of maximum and average code value extracted from video samples	10
Table 2 – Information on test pattern	14
Table 3 – Example of typical value.....	15
Table 4 – Reporting format of the image sticking data at target time	15
Table 5 – Reporting format of the image sticking time with threshold	15
Table A.1 – Examples of the maximum and the average equivalent signal levels (8 bits).....	22

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

Part 5-3: Measuring methods of image sticking and lifetime

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International Standard IEC 62341-5-3 has been prepared by IEC technical committee 110: Electronic displays.

This second edition replaces the first edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the measurement vehicle for lifetime is only for the module;
- b) the measurement method for monitor or TV devices is modified;
- c) the digital signage display is included as an example of OLED devices;
- d) the measurement method with HDR (high dynamic range) for image sticking is added;
- e) the analysis method with CIEDE 2000 is added for image sticking;
- f) the information method for evaluating image sticking is modified.

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

FDIS	Report on voting
110/1134/FDIS	110/1154/RVD

Full information on the voting for the approval on 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 the parts in the IEC 62341 series, 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

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

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ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

Part 5-3: Measuring methods of image sticking and lifetime

1 Scope

This part of IEC 62341 specifies the standard measuring methods for determining the image sticking and lifetime of organic light emitting diode (OLED) display panels and modules, except finalized display products for end customers, such as TV sets, monitor sets and mobile phones. The measuring method for the lifetime mainly applies to modules.

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.

IEC 60050-845, *International Electrotechnical Vocabulary (IEV) – Part 845: Lighting* (available at <<http://www.electropedia.org>>)

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

IEC 62341-6-1:2017, *Organic light emitting diode (OLED) displays – Part 6-1: Measuring methods of optical and electro-optical parameters*

ISO 11664-1, *Colorimetry – Part 1: CIE standard colorimetric observers*

CIE 15, *Colorimetry*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62341-1-2 and IEC 60050-845 and the following 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>

3.1.1

equivalent current density

average current density of a certain pixel calculated from a varying luminance per frame image in a moving picture so that luminance degradation becomes similar at the same time

Note 1 to entry: See Annex A.