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# INTERNATIONAL STANDARD



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

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

### Part 6-1: Measuring methods of optical and electro-optical parameters

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International Standard IEC 62341-6-1 has been prepared by IEC technical committee 110: Electronic display devices.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) extends the applicability of the measuring methods to include OLED displays that have multi-primary or red, green, blue and white sub-pixels;
- b) adds a method to characterize how the luminance is affected by the amount of content on the screen;
- c) adds a method to determine the dark room colour gamut volume in the CIELAB colour space.

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

FDIS	Report on voting
110/816/FDIS	110/830/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 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 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

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A bilingual version of this publication may be issued at a later date.

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## ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

### Part 6-1: Measuring methods of optical and electro-optical parameters

#### 1 Scope

This part of IEC 62341 specifies the standard measurement conditions and measuring methods for determining optical and electro-optical parameters of organic light-emitting diode (OLED) display modules and, where specified, OLED display panels, ~~in the following areas~~. These methods are limited to flat displays measured in a dark room.

- ~~a) luminance and uniformity;~~
- ~~b) dark room contrast ratio;~~
- ~~c) chromaticity, colour uniformity, colour gamut and white field correlated colour temperature;~~
- ~~d) power consumption.~~

#### 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 – Part 850: Lighting* (available at [www.electropedia.org](http://www.electropedia.org))

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

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

IEC 62341-6-2:2015, *Organic light emitting diode (OLED) displays – Part 6-2: Measuring methods of visual quality and ambient performance*

CIE 15-2:1986 2004, *Colorimetry*, ~~(second 3rd edition)~~

CIE S 014-1/E:2006, *Colorimetry – Part 1: CIE Standard Colorimetric Observers*



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## Organic light emitting diode (OLED) displays – Part 6-1: Measuring methods of optical and electro-optical parameters

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## ORGANIC LIGHT EMITTING DIODE (OLED) DISPLAYS –

### Part 6-1: Measuring methods of optical and electro-optical parameters

#### 1 Scope

This part of IEC 62341 specifies the standard measurement conditions and measuring methods for determining optical and electro-optical parameters of organic light-emitting diode (OLED) display modules and, where specified, OLED display panels. These methods are limited to flat displays measured in a dark room.

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IEC 62341-6-2:2015, *Organic light emitting diode (OLED) displays – Part 6-2: Measuring methods of visual quality and ambient performance*

CIE 15:2004, *Colorimetry, 3rd edition*

CIE S 014-1, *Colorimetry – Part 1: CIE Standard Colorimetric Observers*