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colour inside

Electronic displays –
Part 2-11: Measurement of optical characteristics – Local luminance and uniformity

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ELECTRONIC DISPLAYS –

Part 2-11: Measurements of optical characteristics – Local luminance and uniformity

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IEC 62977-2-11 has been prepared by of IEC technical committee 110: Electronic displays. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
110/1566/FDIS	110/1591/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 International Standard 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 www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62977 series, published under the general title *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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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INTRODUCTION

Emissive displays are emerging as the most advanced displays featuring a high dynamic range from black to white luminance, as well as vivid colour for each pixel.

Various methods, which measure optical characteristics standardized in IEC TC 110, so far consider only a specified measurement area that covers more than 500 pixels. It is likely that optical performances reporting the spatially integrated data will have difficulty to represent the optical characteristics of each pixel.

For that to be possible, standardization related to the method of measuring luminance and uniformity from each pixel-to-pixel cluster within the specified local block which will cover at least 500 emission pixels regularly placed, will be identified.

This document assesses the consistent luminance and uniformity in the local block (for example, within a 4 % window box pattern and regularly scattered emission pixels) by comparing the changes in luminance variation and emissive ratio, where an emissive sequence of each pixel is controlled.

ELECTRONIC DISPLAYS –

Part 2-11: Measurements of optical characteristics – Local luminance and uniformity

1 Scope

This part of IEC 62977 specifies the local luminance and uniformity measurement methods of emissive displays. The light measuring device's (LMD) measurement field will cover more than 500 pixels of TVs, monitors or signage displays. The local luminance and uniformity measurement methods identify optical variations within the local block where over 500 emission pixels are regularly placed.

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 845: Lighting* (available at www.electropedia.org)

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

CIE 70-1987, *The Measurement of Absolute Luminous Intensity Distributions*