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FINAL VERSION

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LED-binning –
Part 1: General requirements and white colour grid intended for automotive applications

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Partie 1: Exigences générales et matrice de couleur blanche destinées aux applications automobiles

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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This Consolidated version of IEC 62707-1 bears the edition number 1.1. It consists of the first edition (2013-12) [documents 34A/1702/FDIS and 34A/1736/RVD] and its amendment 1 (2018-08) [documents 34A/2098/FDIS and 34A/2107/RVD]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 62707-1 has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

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

A list of all parts in the IEC 62707 series, published under the general title *LED-binning*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment 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- withdrawn,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.

LED-BINNING –

Part 1: General requirements and white colour grid intended for automotive application

1 Scope

This part of IEC 62707 specifies general requirements, a grid and a corresponding code for the colour binning of white LED packages emitting incoherent, visible radiation. It applies for LED packages intended for automotive applications.

Other parts of the IEC 62707 series covering chromaticity of coloured LED packages, luminous flux/luminous intensity, colour rendering and forward voltage are in preparation or under consideration.

NOTE 1 This International Standard does not apply for LED modules, LED lamps and LED luminaires.

NOTE 2 Even though the words "white light" are used, the purpose of this International Standard is not to define "white light", but to specify a grid and a corresponding colour code for the colour binning of white LED packages emitting incoherent, visible radiation. The area covered by the grid may differ from the definition of white light given in other standards or regulations.

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/TS 62504, *General lighting – LEDs and LED modules – Terms and definitions*

3 Terms and Definitions

For the purposes of this document, the terms and definitions given in IEC/TS 62504, as well as the following apply.

3.1
bin
restricted range of LED package performance characteristics used to delimit a subset of LED packages near a nominal LED package performance as identified by chromaticity, photometric performance and forward voltage

3.2
grid
entity representing colour coordinates and specified by a set of grid points

3.3
grid point
colour coordinate in *u*', *v*' colour space (or its equivalent in the *x*, *y* colour space) identified by two discrete indices, the first index *p* counting steps along the Planckian locus, and its extension beyond the high temperature boundary towards blue colours and second index *j* along Judd isothermal lines

Note 1 to entry: The *u*', *v*' colour space is specified in ISO 11664-5 CIE S 014-5/E. The *x*, *y* colour space is specified in ISO 11664-1 CIE S 014-1/E.