

BS EN 62595-1-2:2012



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LCD backlight unit

Part 1-2: Terminology and letter symbols

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The UK participation in its preparation was entrusted to Technical Committee EPL/47, Semiconductors.

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Partie 1-2 : Terminologie et symboles
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Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 110/275/CDV, future edition 1 of IEC 62595-1-2, prepared by IEC TC 110, "Flat panel display devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62595-1-2:2012.

The following dates are fixed:

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-01-18

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The text of the International Standard IEC 62595-1-2:2011 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050	Series	International electrotechnical vocabulary	-	-

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LCD BACKLIGHT UNIT –

Part 1-2: Terminology and letter symbols

1 Scope

This part of IEC 62595 gives preferred terms, their definitions and symbols for backlight unit (BLU) and related display panel lighting systems including frontlight; with the object of using the same terminology when publications are prepared in different countries.

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 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-845:1987¹ and the following apply.

3.1 Classification of terms

Terms for backlight units (BLUs) are classified as follows:

- a) fundamental terms;
- b) terms related to passive optical components;
- c) terms related to light sources ;
- d) terms related to light source drivers;
- e) terms related to frontlight unit;
- f) terms related to performances and specifications ;
- g) terms related to backlight dimming.

The following definitions are applied for international standardization of the backlight units.

3.2 Fundamental terms

3.2.1

backlight unit

BLU

illumination unit (arbitrary shape) with unique optical characteristics that is set at the rear of a transmissive or transreflective display panel for the purpose of image recognition on the panel

Note 1 to entry: For an example, see Figure A.1.

¹ Identical to CIE 17.4.

3.2.2

edge-lit backlight unit

side-lit backlight unit

edge-light backlight unit

side-light backlight unit

backlight unit in which an optically transparent media (light-guide plate) is used in proximity with the light source for introducing the light from the side surface of the media

Note 1 to entry: For an example, see Figure A.2.

3.2.3

direct-lit backlight unit

direct-view backlight unit

backlight unit in which a light chamber is used in combination with light sources that are mounted inside the chamber to illuminate a transmissive LCD panel mounted on the chamber for modulating spatially the displayed two-dimensional information on the panel for the purpose of image recognition

Note 1 to entry: For an example, see Figure A.3.

3.2.4

side-driven direct-lit backlight unit

backlight unit in which a light chamber is used in combination with light sources that are mounted on the inner sides of the chamber to illuminate a panel mounted on the chamber for modulating spatially the displayed two-dimensional information on the panel for the purpose of image recognition

3.2.5

static backlight unit

single or integrated flat illumination system that operates with direct or alternative current and possesses a unique optical characteristic

3.2.6

dynamic backlight unit

single or integrated illumination units that possess a unique electro-optical and spatial characteristics which change with the local picture contents of the display panel

3.2.7

blinking backlight unit

backlight unit that is intentionally, usually regularly or periodically, switched on and off for synchronically illuminating a display panel

3.2.8

scanning backlight unit

backlight unit that is divided spatially into few line blocks and regularly or periodically switched on and off block by block for synchronous illumination of the display panel

3.2.9

spatio-temporal backlight unit

backlight unit that is divided spatially into few horizontal blocks and regularly or periodically switched on and off from top to bottom under a time chart for illuminating or flashing red, green, or blue light in synchronization with a field-sequential colour display

3.2.10

field alternative backlight unit

backlight unit that includes a single light-guide plate (LGP) with distinctive upper and lower light sources or a plate that is spatially divided into two upper and lower plates for cooperation with a display panel for illuminating or flashing alternatively the panel with respect to displayed half image by the upper or lower part of the panel

3.2.11

single-side emission backlight unit

backlight unit that emits light from a single side (front or rear) for illuminating a single display panel

3.2.12

double-side emission backlight unit

backlight unit that emits light from both front and rear for illuminating two display panels

3.2.13

segmented backlight unit

backlight unit that is block-wised or segmented two-dimensionally to be synchronized with a display panel for illuminating individually each block or segment of the display

3.2.14

quasi-monochromatic backlight unit

backlight unit that uses only quasi-monochromatic light source for illuminating transmissive passive display panel

3.2.15

multi-colour backlight unit

backlight unit that consists of few primaries or quasi-monochromatic light sources for illuminating a display that is used for wide colour gamut display of printer, professional design monitor or field alternative wide colour gamut display panel

3.2.16

mobility enhanced backlight unit

backlight unit that employs light materials and few optical components for the sake of enhancing lightness for mobility

3.2.17

corner driven backlight unit

edge-lit backlight unit in which the light is driven from the corner of a rectangular light-guide plate using single or few light sources

3.2.18

stack backlight unit

backlight unit in which more than a single light control media or light-guide plate is used in stack form in the structure for light controlling

3.2.19

colour reproduction backlight unit

backlight unit that uses primaries for the sake of colour production on a display panel

3.2.20

RG-white backlight unit

backlight unit that uses RG-white LEDs as light sources

3.2.21

RGW backlight unit

backlight unit that uses distinct red, green and pseudo-white LEDs as light sources

3.2.22

three primaries (R,G,B) backlight unit

backlight unit that uses three primary colours of red, green, and blue quasi-monochromatic LEDs as light sources