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Organic light emitting diode (OLED) Light sources for general lighting - Safety - Part 1: General requirements and tests

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 29.140.99

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EUROPÄISCHE NORM

EN IEC 62868-1

November 2021

ICS 29.140.99

Supersedes EN 62868:2015 and all of its amendments and corrigenda (if any)

English Version

Organic light emitting diode (OLED) Light sources for general lighting - Safety - Part 1: General requirements and tests (IEC 62868-1:2020)

Sources lumineuses à diodes électroluminescentes organiques (OLED) destinées à l'éclairage général - Sécurité - Partie 1: Exigences générales et essais (IEC 62868-1:2020)

Organische Licht emittierende Dioden (OLED) Lichtquellen für die Allgemeinbeleuchtung - Sicherheit - Teil 1: Allgemeine Anforderungen und Prüfungen (IEC 62868-1:2020)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 34A/2177/FDIS, future edition 1 of IEC 62868-1, prepared by SC 34A "Electric light sources" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62868-1:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-05-05
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-11-05

This document supersedes EN 62868:2015 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association.

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The text of the International Standard IEC 62868-1:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60050 (series)	NOTE	Harmonized as EN IEC 63223 (series)[1]
IEC 60598 (series)	NOTE	Harmonized as EN 60598 (series)
IEC 62868-2 (series)	NOTE	Harmonized as EN IEC 62868-2 (series)[2]

[1] To be published. Stage at the time of publication: prEN IEC 63223 (series).

[2] To be published. Stage at the time of publication: FprEN IEC 62868-2 (series).

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-6	2007	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60598-1 (mod)	2014	Luminaires - Part 1: General requirements and tests	EN 60598-1	2015
+ A1	2017		+ A1	2018
IEC 62504	-	General lighting - Light emitting diode (LED) products and related equipment - Terms and definitions	EN 62504	-
IEC TR 62854	2014	Sharp edge testing apparatus and test procedure for lighting equipment - Tests for sharpness of edge	-	-
IEC TS 62972	-	General lighting - Organic light emitting diode (OLED) products and related equipment - Terms and definitions	-	-
ISO 4046-4	2016	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

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IEC 62868-1

Edition 1.0 2020-05

INTERNATIONAL STANDARD

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Organic light emitting diode (OLED) light sources for general lighting – Safety – Part 1: General requirements and tests

Sources lumineuses à diodes électroluminescentes organiques (OLED) destinées à l'éclairage général – Sécurité – Partie 1: Exigences générales et essais



IEC 62868-1:2020-05(en-fr)

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INTERNATIONAL STANDARD

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Organic light emitting diode (OLED) light sources for general lighting – Safety – Part 1: General requirements and tests

Sources lumineuses à diodes électroluminescentes organiques (OLED) destinées à l'éclairage général – Sécurité – Partie 1: Exigences générales et essais

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CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 8
4 General 9
4.1 General requirements 9
4.2 General test requirements 9
5 Marking 10
5.1 Contents and location 10
5.2 Durability and legibility of marking 10
6 Construction 11
6.1 General 11
6.2 Mechanical strength 11
6.3 Internal short circuit 11
6.4 Wireways 12
6.5 Resistance to dust, solid objects and moisture 12
7 Mechanical hazard 12
8 Fault conditions 12
9 Insulation resistance and electric strength 13
9.1 Insulation resistance 13
9.2 Electric strength 13
10 Thermal stress 13
11 Creepage distances and clearances 13
12 Resistance to heat and fire 13
12.1 Resistance to heat 13
12.2 Resistance to fire 14
13 Photobiological safety 14
14 Terminals 14
15 Information for luminaire design 14
Annex A (informative) Construction of OLED panels 15
Annex B (informative) Information for luminaire design 17
Annex C (normative) Method of provoking an internal short circuit 18
C.1 Method for an OLED panel with glass substrates 18
C.2 Method for an OLED panel with flexible plastic substrates 18
Annex D (informative) Overview of the OLED lighting system consisting of OLED panel or module 19
Annex E (informative) Classification of OLED modules 20
E.1 Power supply classification 20
E.2 Installation method classification 20
Bibliography 21

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Figure A.1 – Schematic diagram of OLED tile for lighting 15
Figure A.2 – Schematic diagram of OLED panel (Example 1) for lighting 15
Figure A.3 – Schematic diagram of OLED panel (Example 2) for lighting 16
Figure A.4 – Schematic diagram of OLED panel (Example 3) for lighting 16
Figure D.1 – Schematic diagram of OLED lighting system consisting of OLED panel or module 19

Table 1 – Contents and location of marking 10

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ORGANIC LIGHT EMITTING DIODE (OLED) LIGHT SOURCES FOR GENERAL LIGHTING – SAFETY –

Part 1: General requirements and tests

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62868-1 has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This first edition cancels and replaces IEC 62868 published in 2014.

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

FDIS	Report on voting
34A/2177/FDIS	34A/2185/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.

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A list of all parts in the IEC 62868 series, published under the general title *Organic light emitting diode (OLED) light sources for general lighting – Safety*, can be found on the IEC website.

In this document, the following print types are used:

– requirements: roman type,

– *test specifications: italic type,*

– notes: smaller roman type.

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INTRODUCTION

This part of IEC 62868 provides a set of general safety requirements and tests of OLED light sources which are applicable to general indoor lightings. This document specifies the requirements and tests for simple OLED light sources which do not include active electronic components and consist of rigid substrates. It applies to the common requirements and tests to verify the safety of all types of OLED light sources such as OLED modules and flexible OLED panels. This document applies to OLED panels and tiles which consist of rigid substrates. It also applies to any OLED light sources which are not specified in IEC 62868-2 (all parts)[1].

The parts which make up the IEC 62868-2 series, in referring to any clauses of this document, specify the extent of application of this document; they also include additional requirements and tests as necessary.

Where the requirements of any clauses of this document are referred to in the various parts that make up the IEC 62868-2 series by the phrase "The requirements of Clause n of IEC 62868-1 apply", this phrase will be interpreted as meaning that all requirements of the clauses in question of this document apply, except any which are clearly inapplicable to a particular type of OLED light source covered by the Part n of the IEC 62868-2 series concerned.

The safety requirements of this document are intended to ensure that electrical lightings constructed in accordance with this document do not endanger the safety of users or properties when the light sources are properly installed, maintained and used in applications.

Particular requirements and tests for OLED light sources which include any active electronic components and consist of flexible substrate will be the subject of a separate standard, as the need arises.

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[1] Under preparation. Stage at the time of publication IEC AFDIS 62868-2-1:2020, IEC AFDIS 62868-2-2:2020 and IEC ACDV 62868-2-3:2020.

ORGANIC LIGHT EMITTING DIODE (OLED) LIGHT SOURCES FOR GENERAL LIGHTING – SAFETY –

Part 1: General requirements and tests

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1 Scope

This part of IEC 62868 specifies general safety requirements of OLED products for use on DC supplies up to 1000 V or AC supplies up to 1000 V at 50 Hz or 60 Hz for indoors and similar general lighting purposes.

This document applies to any OLED light sources which are not covered by IEC 62868-2 (all parts).

NOTE 1 Only test methods for DC operated OLED light sources are provided in this document. Provisions for AC operated OLED products are under consideration.

NOTE 2 The construction of OLED tiles and panels is illustrated in Figure A.1 to Figure A.4 in Annex A.

NOTE 3 The OLED lighting system consisting of OLED panels or modules is illustrated in Annex D.

NOTE 4 This document applies to OLED light sources (tiles, panels, modules) which are composed of OLED luminaires or OLED lamps, and it is intended so that the OLED light source in accordance with this document fits in IEC 60598 (all parts) as a component of lighting equipment, in combination with other components.

NOTE 5 Where an appropriate Part 2 of IEC 62868 for an OLED light source does not exist, the nearest applicable Part 2 of IEC 62868 can be used as a guide to the requirements and tests.

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 60598-1:2014, *Luminaires – Part 1: General requirements and tests*
IEC 60598-1:2014/AMD1:2017

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 62504, *General lighting – Light emitting diode (LED) products and related equipment – Terms and definitions*

IEC TR 62854:2014, *Sharp edge testing apparatus and test procedure for lighting equipment – Tests for sharpness of edge*

IEC TS 62972, *General lighting – Organic light emitting diode (OLED) products and related equipment – Terms and definitions*

ISO 4046-4:2016, *Paper, board, pulps and related terms – Vocabulary – Part 4: Paper and board grades and converted products*