

**BALLASTSEADIST SISALDAVAD ÜLDTARBEVALGUSTUSE
VALGUSDIOODLAMBID PINGEGA ÜLE 50 V.
OHUTUSNÕUDED**

**Self-ballasted LED-lamps for general lighting services by
voltage > 50 V - Safety specifications (IEC 62560:2011,
modified + corrigendum Jan. 2012 +
IEC 62560:2011/A1:2015, modified)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 62560:2012 +A1+A11:2019 sisaldab Euroopa standardi EN 62560:2012 ingliskeelset teksti ja selle muudatuste A1:2015 ja A11:2019 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 62560:2012 +A1+A11:2019 consists of the English text of the European standard EN 62560:2012 and its amendments A1:2015 and A11:2019.</p>
<p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.12.2012, muudatused A1 03.07.2015 ja A11 01.03.2019.</p>	<p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.</p> <p>Date of Availability of the European standard is 07.12.2012, for A1 03.07.2015 and A11 01.03.2019.</p>
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**Self-ballasted LED-lamps for general lighting services by voltage > 50 V -
Safety specifications**

(IEC 62560:2011, modified + corrigendum Jan. 2012 +
IEC 62560:2011/A1:2015, modified)

Lampes à DEL autoballastées pour
l'éclairage général fonctionnant à des
tensions > 50 V -
Spécifications de sécurité
(CEI 62560:2011, modifiée +
corrigendum Jan. 2012 +
IEC 62560:2011/A1:2015, modifiée)

LED-Lampen mit eingebautem
Vorschaltgerät für
Allgemeinbeleuchtung für Spannungen
> 50 V -
Sicherheitsanforderungen
(IEC 62560:2011, modifiziert +
corrigendum Jan. 2012 +
IEC 62560:2011/A1:2015, modifiziert)

This European Standard was approved by CENELEC on 2012-10-15. Amendment A1 was approved by CENELEC on 2015-05-04. Amendment A11 was approved by CENELEC on 2019-05-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Foreword

This document (EN 62560:2012) consists of the text of IEC 62560:2011 + corrigendum Jan. 2012, prepared by SC 34A, "Lamps, of IEC/TC 34, Lamps and related equipment", together with the common modifications prepared by CLC/SR 34A "Lamps".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-10-15
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-10-15

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

This European Standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 62560:2011 + corrigendum Jan. 2012 was approved by CENELEC as a European Standard with agreed common modifications.

EN 62560:2012/A1 foreword

The text of document 34A/1836/FDIS, future IEC 62560:2011/A1, prepared by SC 34A "Lamps" of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62560:2012/A1:2015.

A draft amendment, which covers common modifications to IEC 62560:2011/A1 (34A/1836/FDIS), was prepared by CLC/TC 34A "Lamps" and approved by CENELEC.

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) 2016-05-04
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This European Standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

Annex A The text of the International Standard IEC 62560:2011/A1:2015 was approved by CENELEC as a European Standard with agreed common modifications.

EN 62560:2012/A11 foreword

This document (EN 62560:2012/A11:2019) has been prepared by CLC/TC 34 "*Lamps and related equipment*".

The following dates are fixed:

- latest date by which this document has to be implemented at (dop) 2019-12-26
national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this (dow) 2021-12-26
document have to be withdrawn

Clauses, subclauses, notes, tables, figures and annexes, which are additional to those in IEC 62560:2011 and EN 62560:2012/A1:2015 are prefixed "Z".

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This document has been prepared under mandates given to CENELEC by the European Commission and the European Free Trade Association, and covers the Principal Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2014/35/EU).

For the relationship with EU Directives see informative Annex ZZA, which are integral parts of this document.

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 General requirements and general test requirements.....	9
5 Marking	10
6 Interchangeability.....	11
6.1 Cap interchangeability.....	11
6.2 Bending moment and mass imparted by the lamp at the lamp holder	12
7 Protection against accidental contact with live parts	12
7.Z1 General	12
7.Z2 Fixing of conductors	14
7.Z2.1 Requirements	14
7.Z2.2 Compliance criteria.....	14
8 Insulation resistance and electric strength after humidity treatment	15
8.1 General.....	15
8.2 Insulation resistance	15
8.3 Electric strength	15
9 Mechanical strength	15
9.1 Requirements.....	15
9.2 Tests.....	16
9.2.1 Torsion resistance of unused lamps.....	16
9.2.2 Torsion resistance of lamps after a defined time of usage.....	18
9.2.3 Externally applied axial pull and bending moment.....	18
9.3 Compliance criteria	19
9.4 Axial strength of Edison caps	19
10 Cap temperature rise.....	19
11 Resistance to heat.....	20
12 Resistance to flame and ignition	21
13 Fault conditions	21
13.1 General requirements.....	21
13.2 Test conditions.....	21
13.3 Compliance	22
14 Creepage distances and clearances	22
15 Abnormal operation	23
16 Test conditions for dimmable lamps.....	24
17 Photobiological safety	24
17.1 UV radiation	24
17.2 Blue light hazard	24
17.3 Infrared radiation.....	24
18 Ingress protection.....	24
18.1 Requirements.....	24
18.2 Tests.....	24

19 Information for luminaire design	25
Annex A (informative) Information for luminaire design	26
Annex B (normative) Lamps with operating position limitations (see 5.2)	27
Annex ZA (normative) Normative references to international publications with their corresponding European publications	28
Annex ZZA (informative) Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered	30
Bibliography.....	32
Figure 1 – Dimming not allowed.....	10
ⓘ Figure 6 – Lamp not suitable for use under moisture ⓘ.....	10
Figure 2 – Standard test finger (according to IEC 60529).....	13
Figure 3 – Holder for torque test on lamps with screw caps (from IEC 60432-1, Figure C.2)	16
Figure 4 – Holder for torque test on lamps with bayonet caps (from IEC 60432-1, Figure C.1)	17
Figure 7 – Test equipment for applying an axial force	19
Figure 5 – Ball-pressure test apparatus	20
Figure 8 – Test circuit for testing a non-dimmable lamp at a dimmer or electronic switch	23
Table 1 – Interchangeability gauges and lamp cap dimensions	11
Table 2 – Bending moments and masses	12
Table 3 – Torque test values for unused lamps	18
Table 4 – Values for axial force.....	19

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SELF-BALLASTED LED-LAMPS FOR GENERAL
LIGHTING SERVICES BY VOLTAGE > 50 V –
SAFETY SPECIFICATIONS**

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 62560 has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

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

FDIS	Report on voting
34A/1425/FDIS	34A/1447/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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

In this standard, the following print types are used:

- requirements proper: in roman type.
- *test specifications: in italic type.*

The committee has decided that the contents of this publication 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.

The contents of the corrigenda 1 (January 2012) and 2 (July 2015) have been included in this copy.

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INTRODUCTION

There will be and are already LED products in the market which substitute existing lamps, either as retrofit mains voltage incandescent or self-ballasted fluorescent lamps or as replacement for tungsten halogen lamps below 50 V.

The present document takes up the supply voltage range from > 50 V up to 250 V. A proposal for a safety standard for LED lamps with voltages ≤ 50 V may follow in due time.

Future work will also consequently comprise performance standards for all kind of LED lamps, including minimum photometric requirements for type testing.

Due to the urgent need of establishing this standard, it will be a stand-alone standard for the time being, not excluding a future relocation as a part of IEC 60968, self-ballasted lamps.

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SELF-BALLASTED LED-LAMPS FOR GENERAL LIGHTING SERVICES BY VOLTAGE > 50 V – SAFETY SPECIFICATIONS

1 Scope

This International Standard specifies the safety and interchangeability requirements, together with the test methods and conditions required to show compliance of LED-lamps with integrated means for stable operation (self-ballasted LED-lamps), intended for domestic and similar general lighting purposes, having:

- a rated wattage up to 60 W;
- a rated voltage of > 50 V up to 250 V;
- caps according to Table 1.

The requirements of this standard relate only to type testing.

Recommendations for whole product testing or batch testing are identical to those given in Annex C of IEC 62031.

NOTE 1 Where in this standard the term “lamp(s)” is used, it is understood to stand for “self-ballasted LED-lamp(s)”, except where it is obviously assigned to other types of lamps.

NOTE 2 This standard includes photobiological safety.

NOTE Z1 Radio equipment can be part of the Self-Ballasted lamp.

2 Normative references

The following reference documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the reference document (including any amendments) applies.

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1 : Lamp caps*

IEC 60061-3, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3 : Gauges*

IEC 60360, *Standard method of measurement of lamp cap temperature rise*

Deleted text

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1:2008, *Luminaires – Part 1: General requirements and tests*

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods; Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end products*

IEC 60695-2-12:2000, *Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods; Glow-wire flammability test method for materials*

IEC 60695-2-13:2000, *Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods; Glow-wire ignitability test method for materials*

IEC 61199:1999, *Single-capped fluorescent lamps – Safety specifications*

IEC 61347-1:—, *Lamp controlgear – Part 1: General and safety requirements*

IEC 62031:2008, *LED modules for general lighting – Safety requirements*

IEC TR 62778: 2014, *Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires*

Deleted text

IEC/TS 62504, *Terms and definitions of LEDs and LED modules in general lighting*¹

ISO 4046-4:2002, *Paper, board, pulp and related terms – Vocabulary – Part 4: Paper and board grades and converted products*

3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC/TS 62504 (in preparation), IEC 62031 and the following apply.

3.1

self-ballasted LED-lamp

unit which cannot be dismantled without being permanently damaged, provided with a lamp cap and incorporating a LED light source and any additional elements necessary for stable operation of the light source

NOTE Lamp caps are given in IEC 60061-1.

3.2

rated voltage

voltage or voltage range marked on the lamp

3.3

rated wattage

wattage marked on the lamp

3.4

rated frequency

frequency marked on the lamp

¹ To be published.