

**Ballastseadist sisaldavad üldtarbevalgustuse
valgusdiodlambid pingega üle 50 V. Ohutusnõuded**

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2012

E 62560:2011

EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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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)

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

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

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CENELEC

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

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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- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-10-15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.

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

IEC 60400 NOTE Harmonized as EN 60400.

IEC 60968 NOTE Harmonized as EN 60968.

COMMON MODIFICATIONS

Lamps with the following caps are excluded from EN 62560:2012 as they do not comply with European safety requirements:

- E11;
- E12;
- E17;
- E26.

Delete from the contents page the line on Annex B.

Delete from Clause 5.2 the item a).

Include in Clause 14 the Corrigendum January 2012.

Delete Annex B.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced 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 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 60061-1	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 1: Lamp caps	EN 60061-1	-
IEC 60061-3	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 3: Gauges	EN 60061-3	-
IEC 60360	-	Standard method of measurement of lamp cap temperature rise	EN 60360	-
IEC 60432-1	-	Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	EN 60432-1	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60598-1 (mod) + corr. October + corr. December -	2008 2011 2011 -	Luminaires - Part 1: General requirements and tests	EN 60598-1 + A11	2008 2009
IEC 60695-2-10	2000	Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10	2001
IEC 60695-2-11 + corr. January	2000 2001	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2001
IEC 60695-2-12	2000	Fire hazard testing - Part 2-12: Glowing/hot-wire based test methods - Glow-wire flammability test method for materials	EN 60695-2-12 ¹⁾	2001
IEC 60695-2-13	2000	Fire hazard testing - Part 2-13: Glowing/hot-wire based test methods - Glow-wire ignitability test method for materials	EN 60695-2-13 ²⁾	2001
IEC 61199	1999	Single-capped fluorescent lamps - Safety specifications	EN 61199 ³⁾	1999

¹⁾ EN 60695-2-12 is superseded by EN 60695-2-12:2010, which is based on IEC 60695-2-12:2010.

²⁾ EN 60695-2-13 is superseded by EN 60695-2-13:2010, which is based on IEC 60695-2-13:2010 + corrigendum Feb. 2012.

³⁾ EN 61199 is superseded by EN 61199:2011, which is based on IEC 61199:2011.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61347-1 (mod)	2007	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2008
IEC 62031	2008	LED modules for general lighting - Safety specifications	EN 62031	2008
IEC/TR 62471-2	-	Photobiological safety of lamps and lamp systems - Part 2: Guidance on manufacturing requirements relating to non-laser optical radiation safety	-	-
IEC/TS 62504	-	General lighting - LEDs and LED modules - Terms and definitions	-	-
ISO 4046-4	2002	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

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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.

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 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.

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*

IEC 60432-1, *Incandescent lamps – Safety specifications – Part 1: Tungsten filament lamps for domestic and similar general lighting purposes*

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 61347-1:2007, *Lamp controlgear – Part 1: General and safety requirements*

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

IEC/TR 62471-2, *Photobiological safety of lamps and lamp systems – Part 2: Guidance on manufacturing requirements relating to non-laser optical radiation safety*

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

3.5

cap temperature rise

Δt_s

surface temperature rise (above ambient) of a standard test lampholder fitted to the lamp, when measured in accordance with the standard method, in case of an Edison screw cap or a bayonet cap

NOTE The standard method for Edison screw cap or bayonet cap is that given in IEC 60360.

3.6

live part

conductive part which may cause an electric shock in normal use

¹ To be published.