

**KAHESOKLILISED LEEDLAMBID SIRGETE  
LUMINOFOORLAMPIDE ASENDAMISEKS.  
OHUTUSNÕUDED**

**Double-capped LED lamps for general lighting services  
- Safety specifications**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|   |  |
|---|--|
| See Eesti standard EVS-EN 62776:2015 sisaldab Euroopa standardi EN 62776:2015 ingliskeelset teksti.                 | This Estonian standard EVS-EN 62776:2015 consists of the English text of the European standard EN 62776:2015.                      |
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ICS 29.140

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ICS 29.140.99

English Version

**Double-capped LED lamps designed to retrofit linear fluorescent  
lamps - Safety specifications  
(IEC 62776:2014 + COR1:2015)**

Lampes à LED à deux culots conçues pour remplacer des  
lampes à fluorescence linéaires - Spécifications de sécurité  
(IEC 62776:2014 + COR1:2015)

Zweiseitig gesockelte LED-Lampen als Ersatz (Retrofit) für  
zweiseitig gesockelte Leuchtstofflampen -  
Sicherheitsanforderungen  
(IEC 62776:2014 + COR1:2015)

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

The text of document 34A/1795/FDIS, future edition 1 of IEC 62776 + corrigendum March 2015, 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 62776:2015.

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) 2015-10-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-01-15

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 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 62776:2014 + corrigendum March 2015 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 60529:1989         | NOTE | Harmonized as EN 60529:1991 (not modified).         |
| IEC 60529:1989/A1:1999 | NOTE | Harmonized as EN 60529:1991/A1:2000 (not modified). |
| IEC 60529:1989/A2:2013 | NOTE | Harmonized as EN 60529:1991/A2:2013 (not modified). |
| IEC 62471              | NOTE | Harmonized as EN 62471.                             |

## 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 1 When 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](http://www.cenelec.eu)

| <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 60061-4                       | -            | Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 4: Guidelines and general information | EN 60061-4    | -                  |
| IEC 60081                         | -            | Double-capped fluorescent lamps - Performance specifications   | EN 60081      | -                  |
| IEC 60155                         | -            | Glow-starters for fluorescent lamps  | EN 60155      | -                  |
| IEC 60360                         | -            | Standard method of measurement of lamp cap temperature rise  | EN 60360      | -                  |
| IEC 60417-DB                      | -            | Graphical symbols for use on equipment   | -             | -                  |
| IEC 60598-1                       | -            | Luminaires - Part 1: General requirements and tests  | EN 60598-1    | -                  |
| IEC 60695-2-10                    | 2013         | Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure                     | EN 60695-2-10 | 2013               |
| IEC 60695-2-11<br>+ corr. January | 2000<br>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 <sup>1)</sup> |

<sup>1)</sup> Superseded by EN 60695-2-11:2014 (IEC 60695-2-11:2014): DOW = 2017-03-13.

| <u>Publication</u> | <u>Year</u>        | <u>Title</u>  | <u>EN/HD</u> | <u>Year</u>        |
|--------------------|--------------------|---|--------------|--------------------|
| IEC 60921          | -                  | Ballasts for tubular fluorescent lamps -<br>Performance requirements  | EN 60921     | -                  |
| IEC 61195          | -                  | Double-capped fluorescent lamps -<br>Safety specifications  | EN 61195     | -                  |
| IEC 61347-1        | 2015               | Lamp controlgear -<br>Part 1: General and safety requirements   | EN 61347-1   | 201X <sup>2)</sup> |
| IEC 61347-2-8      | -                  | Lamp controlgear -<br>Part 2-8: Particular requirements for<br>ballasts for fluorescent lamps                       | EN 61347-2-8 | -                  |
| IEC 62031          | -                  | LED modules for general lighting - Safety<br>specifications   | EN 62031     | -                  |
| IEC 62504          | -                  | General lighting - Light emitting diode<br>(LED) products and related equipment -<br><br>Terms and definitions      | EN 62504     | -                  |
| IEC/TR 62778       | -                  | Application of IEC 62471 for the<br>assessment of blue light hazard to light<br>sources and luminaires              | -            | -                  |
| ISO 4046-4         | 2002 <sup>3)</sup> | Paper, board, pulps and related terms -<br>Vocabulary -<br>Part 4: Paper and board grades and<br>converted products | -            | -                  |

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2) To be published.

3) Withdrawn publication.

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## INTRODUCTION

Double-capped fluorescent lamps are installed in big volume in office lighting, street lighting, industrial lighting and much more. Double-capped LED lamps are intended as a possible replacement for G5- or G13-capped fluorescent lamps. This standard safeguards that the change from fluorescent lamp to LED lamp and the backward change from LED lamp to fluorescent lamp is carried out with safe LED lamps and under specified exchange conditions.

The establishing of a safety standard for double-capped LED lamps does not exclude future relocation as a part of IEC 60968, self-ballasted lamps (if re-edited as an umbrella standard), and further inclusion of requirements for conversion type double-capped LED lamps.

This proposal covers double-capped LED lamps with cap G5 and G13 only, where the fluorescent tube is replaced by a tubular LED lamp, without modifications to the luminaire. Only in case of electromagnetic controlgear, the starter is replaced by a LED starter.