



**SLOVENSKI STANDARD**  
**oSIST prEN 50107-3:2016**

**01-julij-2016**

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**Standard za proizvod, ki zajema svetlobne znake z razelektritvenimi sijalkami in/ali diodami LED (svetleče diode) in/ali EL (elektroluminescenčnimi) svetlobnimi viri z nazivno napetostjo, ki ne presega 1000 V, razen splošne, cestne ali zasilne razsvetljave**

Product standard covering luminous signs with discharge lamps and/or LED (light emitting diodes) and/or EL (electroluminescent) light sources with a nominal voltage not exceeding 1000 V, with the exclusion of general lighting, traffic- or emergency related purpose

**Ta slovenski standard je istoveten z: prEN 50107-3:2016**

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**ICS:**

29.140.30      Fluorescenčne sijalke. Sijalke      Fluorescent lamps.  
Discharge lamps

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**en**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
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ICS 29.140.30

English Version

**Product standard covering luminous signs with discharge lamps and/or LED (light emitting diodes) and/or EL (electroluminescent) lightsources with a nominal voltage not exceeding 1000 V, with the exclusion of general lighting, traffic- or emergency related purpose**

To be completed

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This draft European Standard is submitted to CENELEC members for enquiry.  
Deadline for CENELEC: 2016-07-29.

It has been drawn up by CLC/BTTF 142-1.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CENELEC in three official versions (English, French, German).  
A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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54 **European foreword**

55 This document (prEN 50107-3:2016) has been prepared by CLC/BTTF 142-1 "Product requirements for low  
56 voltage cold cathode and LED installations".

57  
58 This document is currently submitted to the Enquiry.

59  
60 The following dates are proposed:

- 61
- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
  - latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
  - latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

prEN 50107-3:2016 (E)

## 62 1 Scope

63 A luminous sign, light-artwork or architectural accent lighting (finished functional sign, abbreviated: sign) shall  
64 comply with this product standard.

65  
66 The finished functional sign as a product fulfilling its intended purpose as luminous sign can be achieved by  
67 combining products with similar purpose through installatio (according to HD 384/HD 60364 series) in order  
68 to yield a new product by itself.

69  
70 NOTE 1: The scope of this product standard is specified by the areas C, D and E in the figure of Annex A.

71  
72 NOTE 2: Even if the physical execution of a particular luminous sign might qualify the luminous sign to meet the  
73 requirements of a luminaire according to EN 60598, the exclusion of general lighting, traffic and emergency related  
74 purpose is intended to avoid the requirements of EN 60598 which are impracticable and/or impossible to fulfill for most  
75 luminous signs. To cover the special safety problems related with luminous signs, the present product standard is  
76 intended.

## 77 2 Normative references

78 The following documents, in whole or in part, are normatively referenced in this document and are  
79 indispensable for its application. For dated references, only the edition cited applies. For undated references,  
80 the latest edition of the referenced document (including any amendments) applies.

81  
82 EN 50107-1:2002, *Signs and luminous-discharge-tube installations operating from a no-load rated output  
83 voltage exceeding 1 kV but not exceeding 10 kV – Part 1: General requirements*

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85 EN 50107-2, *Signs and luminous-discharge-tube installations operating from a no-load rated output voltage  
86 exceeding 1 kV but not exceeding 10 kV – Part 2: Requirements for earth-leakage and open-circuit  
87 protective devices*

88  
89 EN 60081, *Double-capped fluorescent lamps – Performance specifications* (IEC 60081)

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91 EN 60529:1991, *Degrees of protection provided by enclosures (IP Code)* (IEC 60529:1989)

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93 EN 60901, *Single-capped fluorescent lamps – Performance specifications* (IEC 60901)

94  
95 EN 60921, *Ballasts for tubular fluorescent lamps – Performance requirements* (IEC 60921)

96  
97 EN 60929, *AC-supplied electronic ballasts for tubular fluorescent lamps – Performance requirements  
98 (IEC 60929)*

99  
100 EN 61050, *Transformers for tubular discharge lamps having a no-load output voltage exceeding 1 kV  
101 (generally called neon-transformers) – General and safety requirements* (IEC 61050)

102  
103 EN 61195, *Double-capped fluorescent lamps – Safety specifications* (IEC 61195)

104  
105 EN 61199, *Single-capped fluorescent lamps – Safety specifications* (IEC 61199)

106  
107 EN 61347-1:2008, *Lamp controlgear – Part 1: General and safety requirements* (IEC 61347-1:2007)

108  
109 EN 61347-2-2:2001 + corr. Jul. 2003 + A1:2006 + corr. Nov. 2006 + A2:2006, *Lamp controlgear –  
110 Part 2-2: Particular requirements for d.c. or a.c. supplied electronic step-down converters for filament lamps  
111 (IEC 61347-2-2:2000 + A1:2005 + A2:2006)*

112  
113 EN 61347-2-3, *Lamp controlgear – Part 2-3: Particular requirements for a.c. supplied electronic ballasts for  
114 fluorescent lamps* (IEC 61347-2-3)

115  
116 EN 61347-2-8, *Lamp controlgear – Part 2-8: Particular requirements for ballasts for fluorescent lamps  
117 (IEC 61347-2-8)*

- 118  
 119 EN 61347-2-10:2001, *Lamp controlgear – Part 2-10: Particular requirements for electronic inverters and*  
 120 *converters for high-frequency operation of cold start tubular discharge lamps (neon tubes)*  
 121 (IEC 61347-2-10:2000)  
 122  
 123 EN 61347-2-13:2006, *Lamp controlgear – Part 2-13: Particular requirements for d.c. or a.c. supplied*  
 124 *electronic controlgear for LED modules* (IEC 61347-2-13:2006)  
 125  
 126 EN 62031:2008, *LED modules for general lighting – Safety specifications* (IEC 62031:2008)  
 127  
 128 EN 62384, *DC or AC supplied electronic control gear for LED modules – Performance requirements*  
 129 (IEC 62384)  
 130  
 131 EN 62532, *Fluorescent induction lamps – Safety specifications* (IEC 62532)  
 132  
 133 HD 384/60364 (all parts), *Electrical installations of buildings / Low-voltage electrical installations* (IEC 60364 ,  
 134 all parts)

### 135 **3 Terms and definitions**

136 For the purposes of this document, the terms and definitions given in IEC 60050-826 (IEV) and the following  
 137 apply.

138

#### 139 **3.1 General**

##### 140 **3.1.1**

##### 141 **luminous sign**

142 system with light sources which is intended as finished functional sign, light-artworks, and/or decorative  
 143 lighting with the exclusion of general lighting, traffic- or emergency related purpose, for indoor and/or outdoor  
 144 operation, consisting of a combination of some products with similar purpose (apparatus, devices and  
 145 components), through manufacturing or installation in order to yield the luminous sign as new product by  
 146 itself

147  
 148 Note 1 to entry: See Annex A as guide to applicability of product and/or installation standard.  
 149

##### 150 **3.1.2**

##### 151 **no-load rated output voltage**

152 maximum rated voltage between the output terminals(s) of the transformer, inverter, converter, ballast or  
 153 power supplies connected to the rated supply voltage at rated frequency, with no load on the output circuit

154  
 155 [SOURCE: EN 50107-1:2002]  
 156

157 Note 1 to entry: For output circuits supplied by transformers, it is the peak value divided by the square root of 2 (see  
 158 EN 61050).

159  
 160 Note 2 to entry: For inverters or converters with sinusoidal waveform, it is the maximum rated voltage between the  
 161 output terminals (see EN 61347-2-10). For other waveforms it is the r.m.s. value or the equivalent value deduced from  
 162 the peak value, obtained by mathematical calculation.  
 163

##### 164 **3.1.3**

##### 165 **creepage distance**

166 shortest distance along the surface of a solid installation material between two conductive parts

167  
 168 [SOURCE: EN 60664-1:2007, 3.3]  
 169

##### 170 **3.1.4**

##### 171 **clearance**

172 shortest distance in air between two conductive parts

173  
 174 [SOURCE: EN 60664-1:2007, 3.2]

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### 3.1.5

#### **insulating sleeve**

insulation designed to be placed over the exposed output-voltage connections at tube electrodes or over cable-end insulators

### 3.1.6

#### **electrical skilled person for luminous signs**

person qualified in sign practice who has knowledge and experience in the production, installation, testing, maintenance of the technologies in use, in the installation of luminous signs and who takes responsibility for the product and its testing in accordance with the standards

### 3.1.7

#### **output circuit**

part of the device or installation between the output terminals of controlgear including the light sources and cables

[SOURCE: EN 50107-1:2002, 3.14, mod.]

## 3.2 Light sources

### 3.2.1

#### **discharge lamp**

device with purpose of generating visible or invisible light by means of recombination/relaxation of excited or ionized gas atoms as primary process

Note 1 to entry: The process can be a multi-step process involving fluorescence of solid-state materials or gases as secondary process.

### 3.2.2

#### **electroluminescent light source**

device with purpose of generating visible or invisible light by means of recombination/relaxation of excited atoms within a solid-state body, wherein the excitation is caused by an electric field

Note 1 to entry: An LED is a special form of electroluminescent light source employing two different semiconductors forming a P-N-junction.

### 3.2.3

#### **hot-cathode-fluorescent lamp**

low-pressure discharge lamp with or without mercury, utilising electrodes operating by thermo-ionic emission of electrons, and in which most of the light is emitted by one or several layers of phosphors excited by the ultra-violet radiation from the discharge

[SOURCE: IEC 845-07-26, mod.] (from EN 60081)

### 3.2.4

#### **luminous-discharge tube**

(common: Neon tube, Cold Cathode tube)

tube, or other vessel or device, which is constructed of translucent material, hermetically sealed, and designed for the emission of light arising from the passage of an electric current through a gas or vapour contained within it

Note 1 to entry: The tube may be with or without an internal fluorescent coating.

[SOURCE: EN 50107-1:2002, 3.1, mod.]

### 3.2.5

#### **Light-Emitting Diode (LED)**

solid state device embodying a p-n junction, emitting optical radiation when excited by an electric current

[SOURCE: IEC 845-04-40 and EN 62031:2008, 3.1]