SLOVENSKI STANDARD
SIST EN 62326-20:2016

01-julij-2016

Plošče tiskanih vezij - 20. del: Tiskana vezja za visoko sijave svetleče diode

Printed boards - Part 20: Printed circuit board for high-brightness LEDs

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Ta slovenski standard je istoveten z: EN 62326-20:2016

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Cartes imprimées - Partie 20: Cartes de circuits imprimés destinées aux LED à haute luminosité (IEC 62326-20:2016)

Leiterplatten - Teil 20: Elektronische Leiterplatte für Hochleistungs-LEDs (IEC 62326-20:2016)

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European foreword

The text of document 91/1311/FDIS, future edition 1 of IEC 62326-20, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62326-20:2016.

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)	2016-12-09
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-03-09

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

IEC 60068-1	NOTE	Harmonized as EN 60068-1.
IEC 60068-2-1	NOTE	Harmonized as EN 60068-2-1.
IEC 60068-2-2	NOTE	Harmonized as EN 60068-2-2.
IEC 60068-2-6	NOTE	Harmonized as EN 60068-2-6.
IEC 60068-2-20	NOTE	Harmonized as EN 60068-2-20.
IEC 60068-2-21	NOTE	Harmonized as EN 60068-2-21.
IEC 60068-2-30	NOTE	Harmonized as EN 60068-2-30.
IEC 60068-2-38	NOTE	Harmonized as EN 60068-2-38.
IEC 60068-2-53	NOTE	Harmonized as EN 60068-2-53.
IEC 60068-2-58	NOTE	Harmonized as EN 60068-2-58.
IEC 60068-2-64	NOTE	Harmonized as EN 60068-2-64.
IEC 60068-2-66	NOTE	Harmonized as EN 60068-2-66.
IEC 60068-2-78	NOTE	Harmonized as EN 60068-2-78.
IEC 60068-2-80	NOTE	Harmonized as EN 60068-2-80.
IEC 61189-1	NOTE	Harmonized as EN 61189-1.

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IEC 61189-2	NOTE	Harmonized as EN 61189-2.
IEC 61189-11	NOTE	Harmonized as EN 61189-11.
IEC 61189-3-913	NOTE	Harmonized as EN 61189-3-913.
IEC 61190-1-1	NOTE	Harmonized as EN 61190-1-1.
IEC 61190-1-2	NOTE	Harmonized as EN 61190-1-2.
IEC 61190-1-3	NOTE	Harmonized as EN 61190-1-3.
IEC 61249-2-8	NOTE	Harmonized as EN 61249-2-8.
IEC 62137-1-3	NOTE	Harmonized as EN 62137-1-3.
IEC 62137-1-4	NOTE	Harmonized as EN 62137-1-4.
IEC 62326-1	NOTE	Harmonized as EN 62326-1.
IEC 62326-4	NOTE	Harmonized as EN 62326-4.
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ISO 3599	NOTE	Harmonized as EN ISO 3599.
ISO 3611	NOTE	Harmonized as EN ISO 3611.
ISO 4957	NOTE	Harmonized as EN ISO 4957.
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ISO 8512-1	NOTE	Harmonized as EN ISO 8512-1.
ISO 8512-2	NOTE	Harmonized as EN ISO 8512-2.
ISO 9445-1	NOTE	Harmonized as EN ISO 9445-1.
ISO 9453	NOTE	Harmonized as EN ISO 9453.
ISO 9454-1	NOTE	Harmonized as EN ISO 9454-1.
ISO 9455 (series)	NOTE	Harmonized as EN ISO 9455 (series).
ISO 13385-1	NOTE	Harmonized as EN ISO 13385-1.
ISO 15184	NOTE	Harmonized as EN ISO 15184.

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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.

Publication	Year	Title	EN/HD	Year
IEC 60194	-	Printed board design, manufacture and assembly - Terms and definitions	EN 60194	-
IEC 61189-3	2007	Test methods for electrical materials, printed boards and other interconnection structures and assemblies -- Part 3: Test methods for interconnection structures (printed boards)	EN 61189-3	2008
IEC 61249-2-6	-	Materials for printed boards and other interconnecting structures -- Part 2-6: Reinforced base materials, clad and unclad - Brominated epoxide non-woven/woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad	EN 61249-2-6	-
IEC 61249-2-7	-	Materials for printed boards and other interconnecting structures -- Part 2-7: Reinforced base materials, clad and unclad - Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test), copper-clad	EN 61249-2-7	-
IEC 62878-1-1	-	Device embedded substrate - Generic specification - Test method	EN 62878-1-1	-

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PRINTED BOARDS –

Part 20: Printed circuit boards for high-brightness LEDs

FOREWORD

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International Standard IEC 62326-20 has been prepared by IEC technical committee 91: Electronics assembly technology.

This first edition cancels and replaces the IEC/PAS 62326-20 published in 2011, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) this edition focuses on the technical content of the printed circuit board for high-brightness LEDs;
b) the figures related to the printed circuit board for high-brightness LEDs have been refined.

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

FDIS	Report on voting
91/1311/FDIS	91/1330/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.

A list of all parts in the IEC 62326 series, published under the general title *Printed boards*, can be found on the IEC website.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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PRINTED BOARDS –

Part 20: Printed circuit boards for high-brightness LEDs

1 Scope

This part of IEC 62326 specifies the properties of the printed circuit board (hereafter described as PCB) for high-brightness LEDs. Many aspects of the PCB for high-brightness LEDs are identical with those of ordinary PCBs, therefore, some aspects of this standard also describe general aspects.

2 Normative references

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.

IEC 60194, *Printed board design, manufacture and assembly – Terms and definitions*

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IEC 61189-3:2007, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 3: Test methods for interconnection structures (printed boards)*

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IEC 61249-2-6, *Materials for printed boards and other interconnecting structures – Part 2-6: Reinforced base materials, clad and unclad – Brominated epoxide non-woven/woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad*

IEC 61249-2-7, *Materials for printed boards and other interconnecting structures – Part 2-7: Reinforced base materials clad and unclad – Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test), copper-clad*

IEC 62878-1-1, *Device embedded substrate – Part 1-1: Generic specification – Test methods*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60194 apply.

3.2 Abbreviations

AABUS As Agreed Between User amd Supplier

BGA Ball Grid Array

CCL Copper Clad Laminate

COB Chip On Board

CSP Chip size package

HID High Intensity Discharge

LED Light Emitting Diode

PCB Printed Circuit Board

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PWB Printed Wiring Board

4 Classification and class of the printed circuit board for high-brightness LEDs

The PCB for high-brightness LEDs specified in this standard shall satisfy the specifications A to C in Table 1 and Figure 1 in the following way. The materials used in the materials of PWB are not specified, however, they shall be agreed between user and supplier (hereafter referred to as AABUS) depending on the application area of the boards in question. Figure 1 gives an example of classification and their application by base materials, for printed circuit boards for high-brightness LEDs and final products.

Table 1 – Application and classification

Primary classification (thermal conductivity)	Definition	Secondary classification (insulation property)	Definition	Thermal conductivity parameter W/(mK)	Heat transfer parameter W/(m²K)	Thermal impedance (Km²/W)
A	Standard boards	I	No specification	<1	<10	Thermal impedance can be calculated from the measurement of thermal conductivity and the inverse heat transfer parameter.
		II	Electric strength <1 000 V			
		III	Electric strength ≥1 000 V			
B	Thermal conductive boards	I	No specification	≥1	<10	
		II	Electric strength <1,000 V			
		III	Electric strength ≥1 000 V			
C	High thermal conductive boards	I	No specification	≥1	≥10	
		II	Electric strength <1 000 V			
		III	Electric strength ≥1 000 V			

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