

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62532:2011

<https://standards.iteh.ai/catalog/standards/sist/d7c7f5b0-9ff8-4302-8d08-9924cfb6c24b/sist-en-62532-2011>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62532

May 2011

ICS 29.140.30

English version

**Fluorescent induction lamps -
Safety specifications
(IEC 62532:2011)**

Lampes à fluorescence à induction -
Spécifications de sécurité
(CEI 62532:2011)

Leuchtstoff-Induktionslampen -
Sicherheitsanforderungen
(IEC 62532:2011)

This European Standard was approved by CENELEC on 2011-03-07. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 34A/1422/FDIS, future edition 1 of IEC 62532, prepared by SC 34A, Lamps, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62532 on 2011-03-07.

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

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-12-07
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-03-07

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62532:2011 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 60112:2003	NOTE	Harmonized as EN 60112:2003 (not modified).
IEC 60529:1989	NOTE	Harmonized as EN 60529:1991 (not modified).
IEC 60664-1:2007	NOTE	Harmonized as EN 60664-1:2007 (not modified).
IEC 61199:1999	NOTE	Harmonized as EN 61199:1999 (not modified).
IEC 62471:2006	NOTE	Harmonized as EN 62471:2008 (not modified).

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	-	Lamp caps and holders together with gauges for the control of interchangeability and safety	-	-
IEC 60360	1998	Standard method of measurement of lamp cap temperature rise	EN 60360	1998
IEC 60598-1 (mod)	2008	Luminaires - Part 1: General requirements and tests	EN 60598-1 + A11	2008 2009
IEC 60695-2-10	-	Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10	-
IEC 60695-2-11	-	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	-
IEC 60901	-	Single-capped fluorescent lamps - Performance specifications	EN 60901	-
IEC 61347-1 (mod)	-	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	-

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62532:2011

<https://standards.iteh.ai/catalog/standards/sist/d7c7f5b0-9ff8-4302-8d08-9924cfb6c24b/sist-en-62532-2011>



IEC 62532

Edition 1.0 2011-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Fluorescent induction lamps – Safety specifications

Lampes à fluorescence à induction – Spécifications de sécurité

[SIST EN 62532:2011](https://standards.iteh.ai/catalog/standards/sist/d7c7f5b0-9ff8-4302-8d08-9924cfb6c24b/sist-en-62532-2011)

<https://standards.iteh.ai/catalog/standards/sist/d7c7f5b0-9ff8-4302-8d08-9924cfb6c24b/sist-en-62532-2011>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

T

ICS 29.140.30

ISBN 978-2-88912-352-0

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Safety requirements	8
4.1 General	8
4.2 Marking	8
4.2.1 Marking of the lamps	8
4.2.2 Requirements	9
4.3 Requirements for mechanical and electrical connections	9
4.3.1 Construction and assembly of the lamp	9
4.3.2 Requirements for electrical connections	9
4.3.3 Caps and holders	9
4.4 Insulation resistance	9
4.4.1 Test method to determine insulation resistance after humidity treatment.....	9
4.4.2 Requirement for the insulation resistance	10
4.5 Electric strength	10
4.5.1 Test method to determine the electric strength	10
4.5.2 Requirement for the electric strength	10
4.5.3 Compliance	10
4.6 Parts which can become accidentally live	10
4.6.1 Metal parts intended to be insulated	10
4.6.2 Live parts that project from the lamp	10
4.6.3 Methods to show compliance	11
4.7 Resistance to heat and fire	11
4.8 Creepage distances and clearances for lamps.....	11
4.9 Temperature rise of the measuring points.....	11
4.10 Endurance	11
4.11 UV radiation	11
4.12 Information for luminaire design	11
4.13 Information for ballast design	11
5 Assessment.....	11
Annex A (informative) Schematic drawings of induction lamps	12
Annex B (informative) Information for luminaire design	15
Annex C (normative) Schematic drawings for insulation resistance test	16
Annex D (informative) Information for ballast design	17
Annex E (normative) Information for thermal test	19
Annex F (normative) Values and method of measurement of the maximum temperature rise of the measurement points	21
Bibliography.....	25

Figure A.1 – Schematic drawing of an internal coupled induction lamp (operating frequency 2 500 kHz to 3 000 kHz)	12
Figure A.2 – Schematic drawing of an internal coupled induction lamp (operating frequency 120 kHz to 145 kHz)	13
Figure A.3 – Schematic drawing of an external coupled induction lamp (operating frequency 225 kHz to 275 kHz)	14
Figure C.1 – Test set up for measurement insulation resistance of internal coupled induction lamp	16
Figure C.2 – Test set up for measurement of insulation resistance external coupled induction lamp	16
Figure F.1 – Temperature test point of internal coupled induction lamp (operating frequency 2 500 kHz to 3 000 kHz)	22
Figure F.2 – Temperature test point of internal coupled induction lamp (operating frequency 120 kHz to 145 kHz)	23
Figure F.3 – Temperature test points of external coupled induction lamp (operating frequency 225 kHz to 275 kHz)	24
Table 1 – Requirements for the electric strength	10
Table B.1 – Maximum temperature at measurement point(s) under operating condition	15
Table D.1 – Maximum operating voltage of induction lamps between lamp terminals and between lamp terminals and ground	17
Table D.2 – Maximum voltage between lamp terminals	18
Table E.1 – Heating test temperature levels	19
Table F.1 – Maximum temperature rise of the lamp temperature test points	21
Table F.2 – Dimensions of the heat sink of internally coupled induction lamps	23

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FLUORESCENT INDUCTION LAMPS –
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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62532 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/1422/FDIS	34A/1446/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.

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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 62532:2011](#)

<https://standards.iteh.ai/catalog/standards/sist/d7c7f5b0-9ff8-4302-8d08-9924cfb6c24b/sist-en-62532-2011>

FLUORESCENT INDUCTION LAMPS – SAFETY SPECIFICATIONS

1 Scope

This International Standard specifies the safety requirements for fluorescent induction lamps for general lighting purposes.

It also specifies the method a manufacturer should use to show compliance with the requirements of this standard on the basis of whole production appraisal in association with his test records on finished products. This method can also be applied for certification purposes.

Details of a batch test procedure, which can be used to make limited assessment of batches, are also given in this standard.

The schematic drawings of the systems are shown in Annex A.

NOTE Self-ballasted induction lamps (where the discharge vessel, the power coupler and the control gear are integrated in the same product) are excluded from the scope of this standard.

iTech STANDARD PREVIEW
(standards.iteh.ai)

2 Normative references

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.

IEC 60061, *Lamp caps and holders together with gauges for the control of interchangeability and safety*

IEC 60360:1998, *Standard method of measurement of lamp cap temperature rise*

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

IEC 60901, *Single-capped fluorescent lamps. Performance specifications*

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

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

IEC 61347-1, *Lamp control gear – Part 1: General and safety requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

induction lamp

assembly of a low pressure mercury discharge vessel and an inductive power coupler