



SLOVENSKI STANDARD
SIST EN 60432-3:2004

01-januar-2004

Sijalke - Varnostne zahteve - 3. del: Halogenske sijalke (razen za vozila) (IEC 60432-3:2002)

Incandescent lamps - Safety specifications - Part 3: Tungsten-halogen lamps (non-vehicle)

Glühlampen - Sicherheitsanforderungen - Teil 3: Halogen-Glühlampen (Fahrzeuglampen ausgenommen)

Lampes à incandescence - Prescriptions de sécurité - Partie 3: Lampes tungstène-halogène (véhicules exceptés)

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Ta slovenski standard je istoveten z: EN 60432-3:2003

ICS:

29.140.20 Žarnice z žarilno nitko Incandescent lamps

SIST EN 60432-3:2004

en

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EUROPEAN STANDARD

EN 60432-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2003

ICS 29.140.20

English version

**Incandescent lamps -
Safety specifications
Part 3: Tungsten-halogen lamps (non-vehicle)
(IEC 60432-3:2002)**

Lampes à incandescence -
Prescriptions de sécurité
Partie 3: Lampes tungstène-halogène
(véhicules exceptés)
(CEI 60432-3:2002)

Glühlampen -
Sicherheitsanforderungen
Teil 3: Halogen-Glühlampen
(Fahrzeuglampen ausgenommen)
(IEC 60432-3:2002)

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This European Standard was approved by CENELEC on 2003-03-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 34A/1011/FDIS, future edition 1 of IEC 60432-3, 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 60432-3 on 2003-03-01.

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) 2003-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-03-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes A, B, D, F and ZA are normative and annexes C and E are informative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60432-3:2002 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:

<u>SIST EN 60432-3:2004</u>		
IEC 60127-2	NOTE	Harmonized as EN 60127-2:1991 (not modified).
IEC 60269-3-1	NOTE	Harmonized as HD 630.3.1 S3:2002 (modified).
IEC 60335-2-56	NOTE	Harmonized as EN 60335-2-56:2003 (not modified).
IEC 60432-1	NOTE	Harmonized as EN 60432-1:2000 (modified).
IEC 60432-2	NOTE	Harmonized as EN 60432-2:2000 (modified).
IEC 60598-1	NOTE	Harmonized as EN 60598-1:2000 (modified).
IEC 60598-2	NOTE	Harmonized as 60598-2-x series (partly modified).
IEC 60682	NOTE	Harmonized as EN 60682:1993 (not modified).
IEC 60838-1	NOTE	Harmonized as EN 60838-1:1998 (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60050-845	1987	International Electrotechnical Vocabulary (IEV) Chapter 845: Lighting	-	-
IEC 60061-1 (mod)	- ¹⁾	Lamp caps and holders together with gauges for the control of interchangeability and safety Part 1: Lamp caps	EN 60061-1	1993 ²⁾
IEC 60061-3 (mod)	- ¹⁾	Part 3: Gauges	EN 60061-3	1993 ²⁾
IEC 60061-4 (mod)	- ¹⁾	Part 4: Guidelines and general information	EN 60061-4	1992 ²⁾
IEC 60357	- ¹⁾	Tungsten halogen lamps (non-vehicle) - Performance specifications	EN 60357	2003 ²⁾

1) Undated reference.

2) Valid edition at date of issue.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60432-3

Première édition
First edition
2002-12

Lampes à incandescence –
Prescriptions de sécurité –

Partie 3:
Lampes tungstène-halogène
(véhicules exceptés)

(standards.iteh.ai)
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Part 3:
Tungsten-halogen lamps
(non-vehicle)

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INCANDESCENT LAMPS –
SAFETY SPECIFICATIONS –**

Part 3: Tungsten halogen lamps (non-vehicle)

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60432-3 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/1011/FDIS	34A/1019/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 2005. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INCANDESCENT LAMPS – SAFETY SPECIFICATIONS –

Part 3: Tungsten halogen lamps (non-vehicle)

1 General

1.1 Scope

This part of IEC 60432 specifies the safety requirements for single-capped and double-capped tungsten halogen lamps, having rated voltages of up to 250 V, used for the following applications:

- Projection (including cinematograph and still projection)
- Photographic (including studio)
- Floodlighting
- Special purpose
- General purpose
- Stage lighting

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This International Standard does not apply to general purpose single-capped tungsten halogen lamps, covered by IEC 60432-2, that are used as replacement for conventional tungsten filament lamps.

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1.2 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 60050-845:1987, *International Electrotechnical Vocabulary (IEV) – Chapter 845: Lighting*

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 60061-4, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 4: Guidelines and general information*

IEC 60357, *Tungsten halogen lamps (non-vehicle)*

1.3 Definitions

For the purpose of this International Standard, the definitions given in IEC 60050(845), as well as the following apply:

1.3.1**tungsten halogen lamp**

gas-filled lamp containing halogens or halogen compounds, the filament being of tungsten

1.3.2**single-capped tungsten halogen lamp**

tungsten halogen lamp having a single cap or base

1.3.3**double-capped tungsten halogen lamp**

tungsten halogen lamp having a cap or base on each end of the lamp

1.3.4**extra low voltage tungsten halogen lamp**

tungsten halogen lamp with a rated voltage lower than 50 V

NOTE Abbreviated: ELV tungsten halogen lamp

1.3.5**extra low voltage low-pressure tungsten halogen lamp**

tungsten halogen lamp with a gas pressure below a certain value and a rated voltage less than or equal to 12 V

1.3.6**self-shielded tungsten halogen lamp**

tungsten halogen lamp for which the luminaire needs no protective shield

NOTE Abbreviated: self-shielded lamp

Examples of self-shielded tungsten halogen lamps are:

- ELV tungsten halogen lamps with integral outer envelope;
- ELV low-pressure tungsten halogen lamps;
- mains voltage tungsten halogen lamps which conform to IEC 60432-2;
- mains voltage tungsten halogen lamps which conform to the relevant clauses of this standard.

1.3.7**outer envelope**

transparent or translucent enclosure containing a tungsten halogen light source

NOTE The enclosure can also consist of a reflector with integral front cover

1.3.8**rated voltage**

voltage or voltage range specified in this standard or assigned by the manufacturer or responsible vendor

NOTE If lamps are marked with a voltage range, they are appropriate for use on any supply voltage within that range.

1.3.9**test voltage**

rated voltage unless otherwise specified

NOTE If lamps are marked with a voltage range, the test voltage is the mean of the voltage range, unless otherwise specified.

1.3.10**rated wattage**

wattage specified in this standard or assigned by the manufacturer or responsible vendor

1.3.11**rated current**

current specified in this standard or assigned by the manufacturer or responsible vendor

1.3.12**test current**

rated current unless otherwise specified

1.3.13**specific effective radiant UV power**

effective power of the UV radiation of a lamp related to its luminous flux

Unit: mW/klm

For a reflector lamp, this is the effective irradiance of the UV radiation related to the illuminance.

Unit: mW/(m²·klx)

NOTE The effective power (or irradiance) of the UV radiation is obtained by weighting the spectral power distribution of the lamp with the action spectrum published by the American Conference of Governmental Industrial Hygienists (ACGIH), which is endorsed by the World Health Organization (WHO) and recommended by the International Radiation Protection Association (IRPA). For references, see Bibliography.

1.3.14**maximum pinch temperature**

maximum temperature which the components in the pinch/seal of a lamp are designed to withstand over the expected life of the lamp

1.3.15**maximum lamp cap-contact, base-pin or base-post temperature**

maximum temperature of the lamp cap-contact, base-pin or base-post, which should be observed to safeguard electrical contact over the expected life of the lamp

1.3.16**maximum cap temperature**

maximum temperature for which the components in the cap area of a lamp are designed to withstand over the expected life of the lamp

1.3.17**maximum reflector-rim temperature**

maximum temperature for which the connection between front cover and reflector is designed to withstand over the expected life of the lamp

1.3.18**group**

lamps for the same application as defined by the scope of this standard

1.3.19**type**

lamps of the same group having the same nominal wattage, bulb shape and cap