

SLOVENSKI STANDARD

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Nadomešča:

SIST EN 60432-1:1995

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Sijalke - Varnostne specifikacije - 1. del: Sijalke za uporabo v stanovanjih in podobnih primerih splošne razsvetljave (IEC 60432-1:1999, spremenjen)

Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes

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Glühlampen - Sicherheitsanforderungen - Teil 1: Glühlampen für den Hausgebrauch und ähnliche allgemeine Beleuchtungszwecke

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Lampes à incandescence - Prescriptions de sécurité - Partie 1: Lampes à filament de tungstène pour usage domestique et éclairage général similaire

Ta slovenski standard je istoveten z: EN 60432-1:2000

ICS:

29.140.20 Žarnice z žarilno nitko Incandescent lamps

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60432-1

January 2000

ICS 29.140.20

Supersedes EN 60432-1:1994 and its amendments

English version

Incandescent lamps - Safety specifications
Part 1: Tungsten filament lamps for domestic and
similar general lighting purposes
(IEC 60432-1:1999, modified)

Lampes à incandescence
Prescriptions de sécurité
Partie 1: Lampes à filament de
tungstène pour usage domestique
et éclairage général similaire
(CEI 60432-1:1999, modifiée)

Glühlampen - Sicherheitsanforderungen
Teil 1: Glühlampen für den
Hausgebrauch und ähnliche allgemeine
Beleuchtungszwecke
(IEC 60432-1:1999, modifiziert)

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This European Standard was approved by CENELEC on 2000-01-01. 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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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/873/FDIS, future edition 2 of IEC 60432-1, 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, together with the common modifications of the previous edition, as EN 60432-1 on 2000-01-01.

This European Standard supersedes EN 60432-1:1994, with its corrigendum April 1995 and its amendments A1:1997 and A2:1997.

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) 2000-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-01-01

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

Annexes designated "informative" are given for information only.

In this standard, annexes A to J and ZA are normative and annex K is informative.

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60432-1:1999 was approved by CENELEC as a European Standard with agreed common modifications, as given below.

COMMON MODIFICATIONS

Lamps with the following caps are excluded from this European Standard as they do not comply with European safety requirements.

E12
E17
E26

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 60061-1 + supplements (mod)	1969	Lamp caps and holders together with gauges for the control of interchangeability and safety Part 1: Lamp caps	EN 60061-1 + amendments	1993
IEC 60061-3 + supplements (mod)	1969	Part 3: Gauges	EN 60061-3 + amendments	1993
IEC 60064 (mod)	1993	Tungsten filament lamps for domestic and similar general lighting purposes Performance requirements	EN 60064	1995
IEC 60360	1998	Standard method of measurement of lamp cap temperature rise	EN 60360	1998
IEC 60410	1973	Sampling plans and procedures for inspection by attributes	-	-
IEC 60432-2	1999	Incandescent lamps - Safety specifications Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes	EN 60432-2	2000
IEC 60598-1 (mod)	1996	Luminaires Part 1: General requirements and tests	EN 60598-1 + corr. June + A12 + A13	1997 1999 1998 1999
IEC 60887	1988	Glass bulb designation system for lamps	-	-
ISO 3951	1989	Sampling procedures and charts for inspection by variables for percent non-conforming	-	-

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60432-1

Deuxième édition
Second edition
1999-08

**Lampes à incandescence –
Prescriptions de sécurité –**

**Partie 1:
Lampes à filament de tungstène pour usage
domestique et éclairage général similaire**

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**Incandescent lamps –
Safety specifications –**

**Part 1:
Tungsten filament lamps for domestic and
similar general lighting purposes**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INCANDESCENT LAMPS –
SAFETY SPECIFICATIONS –**

**Part 1: Tungsten filament lamps for domestic and
similar general lighting purposes**

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 reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 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 60432-1 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/873/FDIS	34A/887/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 3.

This second edition cancels and replaces the first edition of IEC 60432-1, published in 1993, its Amendment 1 (1995) and Amendment 2 (1997). It constitutes a technical revision.

Annexes A through J form an integral part of this standard.

Annex K is for information only.

The committee has decided that this publication remains valid until 2003-09.

At this date, in accordance with the committee's decision, the publication will be

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

INCANDESCENT LAMPS – SAFETY SPECIFICATIONS –

Part 1: Tungsten filament lamps for domestic and similar general lighting purposes

1 General

1.1 Scope

International Standard IEC 60432-1 specifies the safety and interchangeability requirements of tungsten filament incandescent lamps for general lighting service having:

- rated wattage up to and including 200 W;
- rated voltage of 50 V to 250 V inclusive;
- bulbs of the A, B, C, G, M, P, PS, PAR or R shapes* , or other bulb shapes where the lamps are intended to serve the same purpose as lamps with the foregoing bulb shapes;
- bulbs with all kinds of finishes;
- caps B15d, B22d, E12, E14, E17, E26** , E26d, E26/50×39, E27 or E27/51×39.

As far as is reasonably practicable, this standard is also applicable to lamps with bulbs and caps other than those mentioned above, but which serve the same purpose.

This standard specifies the method a manufacturer should use to show that his product conforms to 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.

This standard is concerned with safety criteria only and does not take into account the performance of tungsten filament lamps with respect to luminous flux, life or power consumption characteristics. Readers should refer to IEC 60064 for such characteristics with respect to types normally used for general lighting service.

* See IEC 60887 for description of the letter symbols. Associated traditional names are:

- | | |
|-----------------------|---------------------------|
| – Pear shape | = A, PS |
| – Mushroom | = M |
| – Candle | = B, C (in North America) |
| – Round bulb | = P |
| – Globular | = G |
| – Reflector | = R |
| – Parabolic reflector | = PAR |

** There are two variations of E26 caps which are not fully compatible. In this standard separate references are made to E26/24 caps used in North America and E26/25 caps used in Japan.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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 60064: *Tungsten filament lamps for domestic and similar general lighting purposes. Performance requirements*

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

IEC 60410: *Sampling plans and procedures for inspection by attributes*

IEC 60432-2: *Incandescent lamps – Safety specification – Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes*

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

IEC 60887: *Glass bulb designation system for lamps*

ISO 3951: *Sampling procedures and charts for inspection by variables for percent non-conforming*

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1.3 Definitions

For the purpose of this International Standard the following definitions apply.

1.3.1

category

all lamps of one manufacturer having the same general construction (bulb shape, external dimensions, cap type, filament type), rated voltage, rated wattage and finish

For the purposes of this standard:

- a) clear, frosted and coatings equivalent to a frosted finish are considered to be the same;
- b) various coloured and white finishes are not considered to be the same.

NOTE – Lamps differing only by their caps (e.g. E27 and B22d) are of different “categories”, but of the same “type” as defined in IEC 60064.

1.3.2

type

lamps which, independent of the type of cap, are identical in photometric and electrical characteristics

1.3.3**class**

all lamps of one manufacturer having the same general construction (bulb shape, external dimensions, cap type, filament type), rated wattage and finish and differing only by their rated voltages, when these voltages fall within the same voltage range (e.g. 100 V to 150 V, 200 V to 250 V)

1.3.4**rated voltage**

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

(If lamps are marked with a voltage range, it shall be interpreted that they are appropriate for use on any supply voltage within that range.)

1.3.5**test voltage**

rated voltage unless otherwise specified

(If lamps are marked with a voltage range, the test voltage shall be taken as the mean of the voltage range unless otherwise specified.)

1.3.6**rated wattage**

wattage specified in the relevant lamp standard or assigned by the manufacturer or responsible vendor

1.3.7**end of life**

instant when the energized lamp ceases to emit light

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1.3.8**cap temperature rise (Δt_s)**

surface temperature rise, above ambient temperature, of a standard test lampholder fitted to the lamp's cap, when measured in accordance with the standard method described in IEC 60360

1.3.9**design test**

test made on a sample, for the purposes of checking compliance of the design of a category, class or group of categories with the requirements of the relevant clause

1.3.10**periodic test**

test repeated at intervals in order to check that the product does not deviate in certain respects from the given design

1.3.11**running test**

test applied at frequent intervals in order to provide data for assessment

1.3.12**batch**

all the lamps of one category, identified as such, and put forward at one time for checking compliance

1.3.13**whole production**

production of all types of lamps within the scope of this standard manufactured during a period of 12 months and nominated by the manufacturer in a list for inclusion in the control, this list being incorporated in the certificate when certification is in operation

1.3.14**bowl mirror lamp**

lamp with part of its bulb coated with reflecting material so as to reflect a substantial part of the light in the general direction of the lamp cap

1.3.15**maximum cap temperature**

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

1.3.16**lamp neck reference diameter**

that diameter of a lamp which is of influence on the protection against accidental contact and which is measured at a defined distance from the solder contact plate

For E14 capped lamps, this distance is 30 mm.

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2 Requirements**2.1 General**

Lamps shall be so designed and constructed that in normal use they present no danger to the user or surroundings.

Lamps shall satisfy the requirements of this clause.

2.2 Marking**2.2.1 Mandatory markings**

The following information shall be marked on the lamps and shall be legible and durable when subjected to the test procedure in A.1:

- a) mark of origin (this may take the form of a trade mark, the manufacturer's name or the name of responsible vendor);
- b) the rated voltage or the rated voltage range, marked as "V" or "volts";
- c) the rated wattage, marked as "W" or "watts".

For lamps with 40 mm diameter bulbs or larger and with a realized wattage of 14 W or less, the wattage need not be marked.

The rated voltage marking for lamps intended for use on United Kingdom supply voltages may be 240 volts or 240 V.

NOTE – The United Kingdom implementation of 230 V European harmonization process allows supply voltages to remain at 240 V.