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SIST EN 61199:1996

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EUROPEAN STANDARD

EN 61199

NORME EUROPEENNE

EUROPÄISCHE NORM

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Descriptors: Lighting equipment, fluorescent lamp, lamp cap, safety, specification, insulation resistance, electric strength, heat resistance, heating, quality assessment, marking

ENGLISH VERSION

Single-capped fluorescent lamps
Safety specifications
(IEC 1199:1993)

Lampes à fluorescence à culot
unique - Prescriptions de
sécurité
(CEI 1199:1993)

Einseitig gesockelte
Leuchtstofflampen
Sicherheitsanforderungen
(IEC 1199:1993)

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This European Standard was approved by CENELEC on 1993-12-08. 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, 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(CO)657, as prepared by Sub-Committee 34: Lamps, of IEC Technical Committee N° 34A: Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote in December 1992.

The reference document was approved by CENELEC as EN 61199 on 8 December 1993.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-12-01
- latest date of withdrawal of conflicting national standards (dow) 1994-12-01

For products which have complied with the relevant national standard before 1994-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-12-01.

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A, B, D, E, F, G and ZA are normative and annex C is informative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1199:1993 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT 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.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
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61-1 (mod)	1969	Lamp caps and holders together with gauges for the control of interchangeability and safety Part 1: Lamp caps	EN 60061-1*	1993
61-2 (mod)	1969	Part 2: Lampholders	EN 60061-2*	1993
61-3 (mod)	1969	Part 3: Gauges	EN 60061-3*	1993
410	1973	Sampling plans and procedures for inspection by attributes	-	-
529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
598-1 (mod)	1992	Luminaires - Part 1: General requirements and tests	EN 60598-1	1993
695-2-1	1991*	Fire hazard testing - Part 2: Test methods - Section 1: Glow-wire test and guidance	-	-
901	1987	Single-capped fluorescent lamps	EN 60901	1990
A1	1989	Safety and performance requirements (Corrigendum June 1992)	A1	1990

* EN 60061-1 includes supplements A:1970 to N:1992 to IEC 61-1
EN 60061-2 includes supplements A:1970 to K:1992 to IEC 61-2
EN 60061-3 includes supplements A:1970 to M:1992 to IEC 61-3
IEC 695-2-1:1980 is harmonized as HD 444.2.1 S1:1983

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CEI
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Première édition
First edition
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Lampes à fluorescence à culot unique –
Prescriptions de sécurité

Single-capped fluorescent lamps –
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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SINGLE-CAPPED FLUORESCENT LAMPS –
SAFETY SPECIFICATIONS

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 cooperation 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, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use 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.

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International Standard IEC 1199 has been prepared by sub-committee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

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

DIS	Report on voting
34A(CO)657	34A(CO)695

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

Annexes A, B, D, E and G form an integral part of this standard.

Annex C is for information only.

SINGLE-CAPPED FLUORESCENT LAMPS – SAFETY SPECIFICATIONS

SECTION 1: GENERAL

1.1 Scope

This International Standard IEC 1199 specifies the safety requirements for single-capped fluorescent lamps for general lighting purposes of all groups having 2G7, 2GX7, GR8, G10q, GR10q, GX10q, GY10q, 2G11, G23, GX23, G24, GX32 and 2G13 caps.

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.

Requirements for batch testing are included in order to enable the assessment of batches presumed to contain unsafe lamps. As some safety requirements cannot be checked by batch testing and as there is often no previous knowledge of the manufacturer's quality, batch testing cannot be used for certification purposes nor in any way for an approval of a batch. Where a batch is found to be acceptable, a testing agency may only conclude that there are no reasons to reject a batch on safety grounds.

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NOTE - Compliance with this standard concerns only safety criteria and does not take into account the performance of single-capped fluorescent lamps for general lighting purposes with respect to luminous flux, colour, starting and operational characteristics.

For this information, readers are referred to IEC 901.

The next edition of IEC 901 will contain only performance requirements.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and 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. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 61-1: 1969, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps*

IEC 61-2: 1969, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 2: Lampholders*

IEC 61-3: 1969, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3: Gauges*

IEC 410: 1973, *Sampling plans and procedures for inspection by attributes*

IEC 529: 1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 598-1: 1992, *Luminaires – Part 1: General requirements and tests*

IEC 695-2-1: 1991, *Fire hazard testing – Part 2: Test methods – Section 1: Glow wire test and guidance*

IEC 901: 1987, *Single-capped fluorescent lamps. Safety and performance requirements – Amedment No. 1 (1989)*

1.3 Definitions

For the purposes of this International Standard, the following definitions apply.

1.3.1 single-capped fluorescent lamp: Low-pressure mercury discharge lamp having a single cap in which most of the light from the lamp is emitted by a layer of fluorescent material excited by the ultra-violet radiation from the discharge.

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1.3.2 group: Lamps having the same electrical and cathode characteristics, the same physical dimensions and the same starting method.

1.3.3 type: Lamps of the same group having the same photometric and colour characteristics.

1.3.4 family: Lamp groups which are distinguished by common features of materials, components, tube diameter and/or method of processing.

1.3.5 nominal wattage: Wattage used to designate the lamp.

1.3.6 design test: Test made on a sample for the purpose of checking compliance of the design of a family, group or a number of groups with the requirements of the relevant clause.

1.3.7 periodic test: Test, or series of tests, repeated at intervals in order to check that a product does not deviate in certain respects from the given design.

1.3.8 running test: Test repeated at frequent intervals to provide data for assessment.

1.3.9 batch: All lamps of one family and/or group and identified as such and put forward at one time for test or checking compliance.

1.3.10 whole production: Production during a period of twelve months of all types of lamps within the scope of this standard and nominated in a list of the manufacturer for inclusion in the certificate.

SECTION 2: SAFETY REQUIREMENTS

2.1 General

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

In general, compliance is checked by carrying out all the tests specified.

2.2 Marking

2.2.1 The following information shall be legibly and durably marked on the lamps:

- a) mark of origin (this may take the form of a trade mark, the manufacturer's name or the name of the responsible vendor);
- b) the nominal wattage (marked "W" or "watts") or any other indication which identifies the lamp.

2.2.2 Compliance is checked by the following:

- a) presence and legibility of the marking by visual inspection;
- b) durability of marking by applying the following test on unused lamps.

The area of the marking on the lamp shall be rubbed by hand with a smooth cloth dampened with water for a period of 15 s.

After this test, the marking shall still be legible.

2.3 Mechanical requirements for caps

2.3.1 Construction and assembly

Caps shall be so constructed and assembled to the tube(s) that the whole assembly remains intact and attached during and after operation.

Compliance is checked by carrying out the tests given in annex A.

At the end of the tests, the caps shall show no damage that impairs safety.

2.3.2 Dimensional requirements for caps

2.3.2.1 Lamps shall use standardized caps in accordance with the dimensional requirements of IEC 61-1.

2.3.2.2 Compliance is checked by using the gauges shown in table 1.