SVENSK STANDARD SS-EN 61167

Fastställd	Utgåva	Sida	Ansvarig kommitté
2011-11-09	2	1 (1+158)	SEK TK 34

Belysningsmateriel – Metallhalogenlampor – Prestandafordringar

Metal halide lamps – Performance specification

Som svensk standard gäller europastandarden EN 61167:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61167:2011.

Nationellt förord

Europastandarden EN 61167:2011

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61167, Second edition, 2011 - Metal halide lamps - Performance specification**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61167, utgåva 1, 1994, SS-EN 61167/A1, utgåva 1, 1995, SS-EN 61167/A2, utgåva 1, 1997 och SS-EN 61167/A3, utgåva 1, 1998 gäller ej fr o m 2014-05-04.

ICS 29.140.30

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61167

May 2011

ICS 29.140.30

Supersedes EN 61167:1994 + A1:1995 + A2:1997 + A3:1998

English version

Metal halide lamps - Performance specification

(IEC 61167:2011)

Lampes aux halogénures métalliques - Spécifications de performance
(CEI 61167:2011)

Halogen-Metalldampflampen - Anforderungen an die Arbeitsweise
(IEC 61167:2011)

This European Standard was approved by CENELEC on 2011-05-04. 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

Ref. No. EN 61167:2011 E

SEK Svensk Elstandard

Foreword

The text of document 34A/1442/FDIS, future edition 2 of IEC 61167, 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 61167 on 2011-05-04.

This European Standard supersedes EN 61167:1994 + A1:1995 + A2:1997 + A3:1998.

Compared to EN 61167:1994, measurement methods for electrical and photometric parameters are included and safety related requirements are deleted as far as they are now covered by EN 62035. Modern kind of ignition (e.g. aggregated pulse widths) and operation (low frequency square wave) is added with extensive description of methods of calculation for peak current ratio. At the same time, a review was made on lamps in the market which are fit for standardising, leading to a big number of new lamp data sheets in the range of 20 W up to 250 W lamp power.

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)	2012-02-04
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-05-04

NOTE In this standard, the following print types are used:

– Requirements proper: in roman type.

– *Test specifications: in italic type*.

– Explanatory matter: in smaller roman type.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61167:2011 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 60081:1997 A1:2000 A2:2003	NOTE Harmonized as EN 60081:1998 (not modified). A1:2002 (modified) A2:2003 (not modified)
IEC 60188	NOTE Harmonized as EN 60188.
IEC 60357:2002	NOTE Harmonized as EN 60357:2003 (modified).
IEC 60682	NOTE Harmonized as EN 60682.
IEC 61231	NOTE Harmonized as EN 61231.

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.

Publication	Year	Title	EN/HD	Year
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	EN 60061-1	-
IEC 60598-1	-	Luminaires - Part 1: General requirements and tests	EN 60598-1	-
IEC 60923	-	Auxiliaries for lamps - Ballasts for discharge lamps (excluding tubular fluorescent lamps) - Performance requirements	EN 60923	-
IEC 60927	-	Auxiliaries for lamps - Starting devices (other than glow starters) - Performance requirements	EN 60927	-
IEC/TR 61341	-	Method of measurement of centre beam intensity and beam angle(s) of reflector lamps	FprEN 61341[1)]	-
IEC 62035	-	Discharge lamps (excluding fluorescent lamps) - Safety specifications	EN 62035	-
IEC 62471	-	Photobiological safety of lamps and lamp systems	EN 62471	--
CIE 84	-	The measurement of luminous flux	-	-

[1)] At draft stage.

CONTENTS

INTRODUCTION

Since IEC 62035 *Discharge lamps (excluding fluorescent lamps) – Safety specifications* was published in 1999, the related lamp specific performance standards like IEC 61167 needed to be reviewed in an editorial action, splitting performance and safety requirements, but also to include all items in abeyance, stored for this occasion. The separation has already been carried out with other HID lamps. So, in some instances, the “pilot” text of IEC 60188 has been used. Moreover, the measurement part has been introduced with the assistance of IEC 60188 and IEC 60081.

It may also be noted that the colour coordinates for CCT 3000 K and 4200 K were adjusted to a point two units below Planck in order to take account of the life time shift to higher *y*-values.

Apart from these basic changes which were needed for long time, the new technique of low frequency square wave (LFSW) operation was implemented. This has led to additional pages to the existing lamp data sheets and several annexes describing and specifying the requirements. Further, detailed requirements and measurement methods for the ignition (break down/take-over/run-up) were introduced. Intense discussions took place on measurement and specification of the peak-current ratio during ignition and steady state. Workshops were held in order to come to a broad worldwide acceptance of the concepts. The Workshops were open for experts from lamp and control gear side in order to accommodate the interface between control gear and lamp to these requirements.

IEC SC34A MT PRESCO took the opportunity to add further lamp types which were considered of having market relevance and needing normative support.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning the lamp given in standard sheets 1039-1, 1041-1, 1080-1 and 1082-1.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent has assured the IEC that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of these patents is registered with the IEC. Information may be obtained from:

Panasonic Corporation
1-1 Saiwai-cho,
Takatsuki City,
Osaka 569-1193,
Japan

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.

ISO (www.iso.org/patents) and IEC (http://www.iec.ch/tctools/patent_decl.htm) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.

METAL HALIDE LAMPS – PERFORMANCE SPECIFICATION

1 Scope

This International Standard specifies the performance requirements for metal halide lamps for general lighting purposes.

For some of the requirements given in this standard, reference is made to “the relevant lamp data sheet”. For some lamps, these data sheets are contained in this standard. For other lamps, falling under the scope of this standard, the relevant data are supplied by the lamp manufacturer or responsible vendor.

The requirements of this standard relate only to type testing.

NOTE The requirements and tolerances permitted by this standard correspond to testing of a type test sample submitted by the manufacturer for that purpose. In principle this type test sample should consist of units having characteristics typical of the manufacturer’s production and being as close to the production centre point values as possible.

It may be expected with the tolerances given in the standard that product manufactured in accordance with the type test sample will comply with the standard for the majority of production. Due to the production spread however, it is inevitable that there will sometimes be products outside the specified tolerances. For guidance on sampling plans and procedures for inspection by attributes, see IEC 60410.

2 Normative references

The following reference 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 reference document (including any amendments) applies.

IEC 60050-845:1987, *International Electrotechnical Vocabulary – 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 60598-1, *Luminaires – General requirements and tests*

IEC 60923, *Auxiliaries for lamps – Ballasts for discharge lamps (excluding tubular fluorescent lamps) – Performance requirements*

IEC 60927, *Auxiliaries for lamps – Starting devices (other than glow starters) – Performance requirements*

IEC/TR 61341, *Method of measurement of centre beam intensity and beam angle(s) of reflector lamps*

IEC 62035, *Discharge lamps (excluding fluorescent lamps) – Safety specifications*

IEC 62471, *Photobiological safety of lamp and lamp systems*

CIE 84, *The measurement of luminous flux*