SLOVENSKI STANDARD
SIST EN 60810:2001

01-marec-2001

Lamps for road vehicles - Performance requirements

Lamps for road vehicles - Performance requirements

Lampen für Straßenfahrzeuge - Anforderungen an die Arbeitsweise

Lampes pour véhicules routiers - Prescriptions de performances

Ta slovenski standard je istoveten z: **EN 60810:1994**

ICS:

29.140.20	Žarnice z žarilno nitko	Incandescent lamps
43.040.20	Naprave za osvetlitev, signalizacijo in opozarjanje	Lighting, signalling and warning devices

SIST EN 60810:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60810

December 1994

ICS 29.140.20

Supersedes HD 503 S2:1993

Descriptors: Road vehicle, electrical equipment, signalling lamp, incandescent lamp, characteristic

English version

Lamps for road vehicles
Performance requirements
(IEC 810:1993)

Lampes pour véhicules routiers
Prescriptions de performances
(CEI 810:1993)

Lampen für Straßenfahrzeuge
Anforderungen bezüglich des
Betriebsverhaltens
(IEC 810:1993)

This European Standard was approved by CENELEC on 1994-10-04. 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, 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 the International Standard IEC 810:1993, prepared by IEC SC 34A, Lampes, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60810 on 1994-10-04 without any modification.

This European Standard supersedes HD 503 S2:1993.

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) 1995-07-15
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1995-07-15

Annexes designated "normative" are part of the body of the standard.
In this standard, annexes A, B, C and ZA are normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 810:1993 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
50(845)	1987	International Electrotechnical Vocabulary (IEV) Chapter 845: Lighting	-	-
68-2-6 + A1 + A2	1982 1983 1985	Environmental testing Part 2: Tests - Test Fc and guidance: Vibration (sinusoidal)	HD 323.2.6 S2	1988
68-2-47	1982	Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ga) and guidance	EN 60068-2-47	1993
410	1973	Sampling plans and procedures for inspection by attributes	-	-
682 + A1	1980 1987	Standard method of measuring the pinch temperature of quartz-tungsten-halogen lamps	EN 60682	1993
809, mod + A1 + A2 + A3 + corr. Jan.	1985 1987 1989 1992 1993	Lamps for road vehicles - Dimensional, electrical and luminous requirements	HD 494 S4	1994

Other publication quoted:

ISO 2854	1976	Statistical interpretation of data - Techniques of estimation and tests relating to means and variances
ISO 3951	1989	Sampling procedures and charts ofr inspection by variables for percent non-conforming
ISO 7227	1987	Road vehicles - Lighting - Lighting and light signalling devices - Vocabulary

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Lampes pour véhicules routiers –

Prescriptions de performances

Lamps for road vehicles –

Performance requirements

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LAMPS FOR ROAD VEHICLES – PERFORMANCE REQUIREMENTS

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.

International Standard IEC 810 has been prepared by sub-committee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This second edition cancels and replaces the first edition issued in 1986 and amendments 1 (1988) and 2 (1992).

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

DIS	Report on voting
34A(CO)688	34A(CO)696

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 and C form an integral part of this standard.

LAMPS FOR ROAD VEHICLES – PERFORMANCE REQUIREMENTS

Section 1: General

1.1 Scope

This standard is one of a series of IEC standards for filament lamps to be used in head-lamps, fog-lamps and signalling lamps of road vehicles.

NOTE - For road vehicle lighting equipment it is common practice to use the term "filament lamp" for incandescent lamps (see ISO 7227). This is regarded in this standard.

It specifies performance requirements and test methods for the measurement of performance characteristics such as life, lumen maintenance, torsion strength, glass bulb strength and vibration resistance; moreover, information on temperature limits, maximum filament lamp outlines and maximum tolerable voltage surges is given for the guidance of lighting and electrical equipment design.

These performance requirements are additional to the basic requirements specified in IEC 809. The performance requirements are not intended to be used by authorities for type approval or conformity of production assessment.

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 to the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50(845): 1987, *International Electrotechnical Vocabulary (IEV) – Chapter 845: Lighting*

IEC 68-2-6: 1982, *Environmental testing – Part 2: Tests – Test Fc and guidance: Vibration (sinusoidal)*
Amendment No. 2 (1985)

IEC 68-2-47: 1982, *Environmental testing – Part 2: Tests – Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ga) and guidance*

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

IEC 682: 1980, *Standard method of measuring the pinch temperature of quartz-tungsten-halogen lamps*
Amendment No. 1 (1987)

IEC 809: 1985, *Lamps for road vehicles. Dimensional, electrical and luminous requirements*
Amendment No. 1 (1987)
Amendment No. 2 (1989)
Amendment No. 3 (1992)

ISO 2854: 1976, *Statistical interpretation of data – Techniques of estimation and tests relating to means and variances*

ISO 3951: 1989, *Sampling procedures and charts for inspection by variables for percent non-conforming*

ISO 7227: 1987, *Road vehicles – Lighting and light signalling devices – Vocabulary*

1.3 Definitions

In addition to the definitions in IEC 809 the following definitions apply.

1.3.1 **life:** The total time for which a filament lamp has been operated before it becomes useless or is considered to be so according to one of the following criteria:

1) The end of life is the time until the filament fails.

2) The life of a dual filament lamp is the time until either filament fails, if the filament lamp is tested in a switching cycle involving alternative operation of both filaments.

Filament lamp life is expressed in hours.

1.3.2 **characteristic life *T*:** The characteristic life *T* is a constant of the Weibull-distribution and indicates the time up to which 63,2 % of a number of tested filament lamps of the same type have ended their individual lives.

1.3.3 **life B3:** Life B3 is a constant of the Weibull distribution indicating the time during which 3 % of a number of the tested filament lamps of the same type have reached the end of their individual lives.

1.3.4 **lumen maintenance:** Ratio of the luminous flux of a filament lamp at a given time in its life to its initial luminous flux, the filament lamp being operated under specific conditions.

1.3.5 **initial luminous flux:** Luminous flux of a filament lamp measured after ageing as specified in annex C of IEC 809.

1.3.6 **rated value:** Value of a characteristic specified for operation of a filament lamp at test voltage and/or other specified conditions.

1.3.7 **pinch temperature limit:** The maximum admissible pinch temperature to ensure satisfactory filament lamp performance in service.