

STN	Svetelné zdroje do cestných vozidiel. Rozmery, elektrické a svetelné požiadavky.	STN EN 60809 36 0180
------------	---	--

Lamps for road vehicles - Dimensional, electrical and luminous requirements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/15

Obsahuje: EN 60809:2015, IEC 60809:2014

Oznámením tejto normy sa od 20.01.2018 ruší
STN EN 60809 (36 0180) z júla 2001

121268

EUROPEAN STANDARD

EN 60809

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2015

ICS 43.040.20; 29.140.20

Supersedes EN 60809:1996

English Version

Lamps for road vehicles - Dimensional, electrical and luminous requirements (IEC 60809:2014)

Lampes pour véhicules routiers - Exigences dimensionnelles, électriques et lumineuses
(IEC 60809:2014)

Lampen für Straßenfahrzeuge - Maße, elektrische und lichttechnische Anforderungen
(IEC 60809:2014)

This European Standard was approved by CENELEC on 2015-01-20. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 34A/1798/FDIS, future edition 3 of IEC 60809, prepared by SC 34A "Lamps", of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60809:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-10-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-01-20

This document supersedes EN 60809:1996.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60809:2014 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050	series	International electrotechnical vocabulary	-	-
IEC 60051-1	-	Direct acting indicating analogue electrical measuring instruments and their accessories - Part 1: Definitions and general requirements common to all parts	EN 60051-1	-
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 60810	2014	Lamps for road vehicles - Performance requirements	EN 60810	2015
IEC 60983	-	Miniature lamps	EN 60983	-
IEC 62504	-	General lighting - Light emitting diode (LED) products and related equipment - Terms and definitions	EN 62504	-
CIE 15	2004	Colorimetry	-	-
UNECE 1958 Agreement	-	Agreement concerning the adoption of uniform technical prescription for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions	-	-
UNECE 4	-	1958 Agreement, Addendum 3: Regulation No. 4: Uniform provisions concerning the approval of devices for the illumination of rear registration plates of power-driven vehicles and their trailers	-	-
UNECE 6	-	1958 Agreement, Addendum 5: Regulation No. 6: Uniform provisions concerning the approval of direction indicators for power-driven vehicles and their trailers	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
UNECE 7	-	1958 Agreement, Addendum 6: Regulation No. 7: Uniform provisions concerning the approval of front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles (except motor cycles) and their trailers	-	-
UNECE 23	-	1958 Agreement, Addendum 22: Regulation No. 23: Uniform provisions concerning the approval of reversing and manoeuvring lamps for power-driven vehicles and their trailers	-	-
UNECE 37	-	1958 Agreement, Addendum 36: Regulation No. 37: Uniform provisions concerning the approval of filament lamps for use in approved lamp units of power-driven vehicles and of their trailers	-	-
UNECE 38	-	1958 Agreement, Addendum 37: Regulation No. 38: Uniform provisions concerning the approval of rear fog lamps for power-driven vehicles and their trailers	-	-
UNECE 50	-	1958 Agreement, Addendum 49: Regulation No. 50: Uniform provisions concerning the approval of front position lamps, rear position lamps, stop lamps, direction indicators and rear-registration-plate illuminating devices for vehicles of category L	-	-
UNECE 77	-	1958 Agreement, Addendum 76: Regulation No. 77: Uniform provisions concerning the approval of parking lamps for power-driven vehicles	-	-
UNECE 87	-	1958 Agreement, Addendum 86: Regulation No. 87: Uniform provisions concerning the approval of daytime running lamps for power-driven vehicles	-	-
UNECE 91	-	1958 Agreement, Addendum 90: Regulation No. 91: Uniform provisions concerning the approval of side-marker lamps for motor vehicles and their trailers	-	-
UNECE 99	-	1958 Agreement, Addendum 98: Regulation No. 99: Uniform provisions concerning the approval of gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles	-	-
UNECE 101	-	1958 Agreement, Addendum 100: Regulation No. 101: Uniform provisions concerning the approval of passenger cars powered by an internal combustion engine only, or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range, and of categories M ₁ and N ₁ vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range	-	-
UNECE 119	-	1958 Agreement, Addendum 118: Regulation No. 119: Uniform provisions concerning the approval of cornering lamps for power-driven vehicles	-	-
UNECE 128	-	1958 Agreement, Addendum 127: Regulation No. 128: Uniform provisions concerning the approval of light emitting diode (LED) light sources for use in approved lamp units on power-driven vehicles and their trailers	-	-



IEC 60809

Edition 3.0 2014-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Lamps for road vehicles – Dimensional, electrical and luminous requirements

Lampes pour véhicules routiers – Exigences dimensionnelles, électriques et lumineuses





THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
 3, rue de Varembe
 CH-1211 Geneva 20
 Switzerland

Tel.: +41 22 919 02 11
 Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue

Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 14 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

Plus de 55 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.



IEC 60809

Edition 3.0 2014-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Lamps for road vehicles – Dimensional, electrical and luminous requirements

Lampes pour véhicules routiers – Exigences dimensionnelles, électriques et lumineuses

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE **XC**
CODE PRIX

ICS 29.140.20; 43.040.20

ISBN 978-2-8322-1966-9

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	7
1 Scope.....	9
2 Normative references.....	9
3 Terms and definitions	11
4 Requirements and test conditions for filament lamps	14
4.1 General requirements.....	14
4.2 Lamp marking	14
4.3 Bulbs	14
4.4 Colour.....	15
4.4.1 Colour of light	15
4.4.2 Colour endurance	16
4.4.3 Coated bulb	16
4.5 Lamp dimensions	16
4.6 Caps and bases	16
4.7 Initial electrical and luminous requirements	17
4.8 Check on optical quality.....	17
4.8.1 General	17
4.8.2 12 V lamps emitting white light	17
4.8.3 6 V and 24 V lamps emitting white light	17
4.8.4 Lamps emitting selective-yellow light	17
4.9 UV radiation	18
4.10 Standard (étalon) filament lamps	18
4.11 Non-replaceable filament lamps	18
4.11.1 General	18
4.11.2 Fixation.....	19
4.11.3 Lifetime	19
4.11.4 Colour endurance	20
4.11.5 Luminous flux and colour maintenance.....	20
4.11.6 Vibration and shock resistance.....	20
5 Requirements and test conditions for discharge lamps	21
5.1 General requirements.....	21
5.2 Lamp marking	21
5.3 Bulbs	21
5.4 Caps	21
5.5 Position and dimensions of electrodes, arc and black stripes	22
5.5.1 Measurements	22
5.5.2 Electrodes	22
5.5.3 Arc	22
5.5.4 Black stripes	22
5.6 Starting, run-up and hot-restrike characteristics.....	22
5.6.1 Starting.....	22
5.6.2 Run-up	22
5.6.3 Hot-restrike.....	23
5.6.4 Compliance.....	23
5.7 Electrical and photometric characteristics	23
5.7.1 Voltage and wattage	23

5.7.2	Luminous flux	23
5.7.3	Compliance.....	23
5.8	Colour.....	23
5.9	UV radiation	24
5.10	Standard (étalon) discharge lamps	25
6	Requirements and test conditions for LED light sources	25
6.1	General requirements.....	25
6.2	Light source marking.....	25
6.3	Optical surfaces	26
6.4	Colour of light	26
6.5	Lamp dimensions	26
6.6	Caps and bases	26
6.7	Initial electrical and photometrical requirements.....	26
6.8	Red content	26
6.9	UV radiation	26
6.10	Standard (étalon) light sources	26
7	Sampling and conditions of compliance.....	27
8	Lamp data sheets	27
8.1	General.....	27
8.2	List of specific lamp types	27
Annex A (normative)	Filament shape, length and position	51
A.1	General.....	51
A.2	Filaments shown as points	51
A.3	Line filaments.....	51
A.4	Coiled-coil filaments.....	51
A.5	Extreme filament turns	51
A.6	Filament extremities	51
A.6.1	General	51
A.6.2	Axial filaments	51
A.6.3	Transverse filaments.....	51
A.7	Determination of filament length	52
A.8	Filament offsets	52
A.9	Lateral deviation.....	52
A.10	Filament location check system (box system)	52
Annex B (normative)	Measurement method of the colour of filament lamps	55
B.1	General.....	55
B.2	Colour.....	55
B.3	Measuring directions	55
B.3.1	General	55
B.3.2	Filament lamps used in headlamps	55
B.3.3	Filament lamps used in light signalling devices	56
Annex C (normative)	Test conditions for electrical and luminous characteristics.....	57
C.1	Filament lamps.....	57
C.1.1	Ageing	57
C.1.2	Test conditions	57
C.1.3	Electrical instrumentation	57
C.1.4	Photometry	57
C.2	LED light sources	57

C.2.1	Test conditions	57
C.2.2	Luminous flux	57
C.2.3	Normalized luminous intensity	58
C.2.4	Colour	58
C.2.5	Power consumption	58
Annex D (normative)	Method of measuring internal elements of R2 lamps	59
D.1	General test conditions	59
D.1.1	Measurement position	59
D.1.2	Ageing	59
D.1.3	Test condition	59
D.2	Reference axis, reference plane and planes for measurements	59
D.2.1	Reference axis	59
D.2.2	Reference plane	59
D.2.3	Plane V-V	59
D.2.4	Plane H-H	59
D.2.5	Plane X-X	59
D.2.6	Plane Y1-Y1	59
D.2.7	Plane Y2-Y2	59
D.3	Viewing directions (see Figure D.1)	60
D.3.1	Viewing direction ①	60
D.3.2	Viewing direction ②	60
D.3.3	Viewing direction ③	60
D.4	Measuring points (MP)	60
D.5	Dimensions to be measured	61
Annex E (normative)	Method of measuring internal elements of H4 and HS1 lamps	64
E.1	General test conditions	64
E.1.1	Measurement position	64
E.1.2	Ageing	64
E.1.3	Test condition	64
E.2	Reference axis, reference plane and planes for measurements	64
E.2.1	Reference axis	64
E.2.2	Reference plane	64
E.2.3	Plane V-V	64
E.2.4	Plane H-H	64
E.2.5	Plane X-X	64
E.2.6	Plane Y1-Y1	64
E.2.7	Plane Y2-Y2	65
E.2.8	Plane Y3-Y3	65
E.2.9	Plane Y4-Y4	65
E.2.10	Plane Y5-Y5	65
E.3	Viewing directions (see Figure E.1)	65
E.3.1	Viewing direction ①	65
E.3.2	Viewing direction ②	65
E.3.3	Viewing direction ③	65
E.4	Measuring points (MP)	65
E.4.1	Shield and filaments (see Figure E.2)	65
E.4.2	Top obscuration (see Figure E.3)	66
E.5	Dimensions to be measured	66
Annex F (normative)	Method of measuring internal elements of HB1 lamps	70

F.1	General test conditions.....	70
F.1.1	Measurement position.....	70
F.1.2	Ageing.....	70
F.1.3	Test condition.....	70
F.2	Dipped beam filament location.....	70
F.2.1	Horizontal location.....	70
F.2.2	Vertical location.....	70
F.2.3	Axial location.....	70
F.3	Main beam filament location.....	70
F.3.1	Horizontal location.....	70
F.3.2	Vertical location.....	70
F.3.3	Axial location.....	71
Annex G (informative) Optical set-up for the measurement of the position and form of the arc and of the position of the electrodes of discharge lamps.....		72
Annex H (normative) Measurement method of electrical and photometric characteristics of discharge lamps.....		73
H.1	General.....	73
H.2	Ballast.....	73
H.3	Burning position.....	73
H.4	Ageing.....	73
H.5	Supply voltage.....	73
H.6	Starting test.....	73
H.7	Run-up test.....	73
H.8	Hot restrike test.....	74
H.9	Electrical and photometric test.....	74
H.10	Colour.....	74
Annex I (informative) Overview of lamp types and their applications.....		75
Annex J (normative) Test conditions for colour endurance measurements.....		77
J.1	General.....	77
J.2	Calibration and ageing.....	77
J.3	Test voltage.....	78
J.4	Operating position.....	78
J.5	Test rack.....	78
J.6	Operating cycles.....	78
J.7	Closure.....	81
Figure A.1 – Determination of apexes, filament length and filament offsets (A and B).....		53
Figure A.2 – Determination of filament centre.....		53
Figure A.3 – Determination of lateral deviations (A and B) and tolerance on the light centre length (C).....		54
Figure B.1 – Positions of the colorimetric receiver when measuring lamps used in headlamps.....		56
Figure B.2 – Positions of the colorimetric receiver when measuring lamps used in light signalling devices.....		56
Figure D.1 – Viewing directions, seen from the top of the lamp.....		62
Figure D.2 – Position of measuring points of R2 lamps.....		63
Figure E.1 – Viewing directions, seen from the top of the lamp.....		67
Figure E.2 – Position of measuring points of H4 and HS1 lamps.....		68

Figure E.3 – Top obscuration	69
Figure F.1 – Side view, view from ③ ^{ab}	71
Figure F.2 – Plan view, view from ④ ^a	71
Figure G.1 – Optical system	72
Figure J.1 – Side view of box.....	78
Figure J.2 – Front view of box	78
Figure J.3 – Temperature in the climate chamber during one operating cycle	79
Figure J.4 – Relative humidity in the climate chamber during one operating cycle	79
Figure J.5 – Switching modes of filament lamps for intermittent operation during one operating cycle.....	80
Figure J.6 – Switching modes of filament lamps for intermittent and continuous operation during one operating cycle	80
Figure J.7 – Switching modes of filament lamps for continuous operation during one operating cycle.....	81
Figure J.8 – Switching modes of filament lamps for intermittent and continuous operation during one operating cycle	81
Table 1 – Lifetime of non-replaceable filament lamps	20
Table 2 – Spectral weighting function	25
Table C.1 – Luminous flux tolerance limits.....	58
Table D.1 – Dimensions to be measured for R2 lamps.....	61
Table E.1 – Dimensions to be measured for H4 and HS1 lamps.....	67
Table J.1 – Applicable switching modes.....	77
Table J.2 – Applicable boxes of the test racks	77
Table J.3 – Dimensions of the applicable boxes and the relative position of the centre of the filament.....	78
Table J.4 – Timing during one operating cycle	79
Table J.5 – Switching modes of the filament lamps	80

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LAMPS FOR ROAD VEHICLES –
DIMENSIONAL, ELECTRICAL AND LUMINOUS REQUIREMENTS**
FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60809 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/1798/FDIS	34A/1819/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 third edition cancels and replaces the second edition (1995), its Amendment 1 (1996), its Amendment 2 (2002), its Amendment 3 (2004), its Amendment 4 (2009) and its Amendment 5 (2012). This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the introduction of requirements for non-replaceable filament lamps;
- b) the introduction of requirements for LED light sources.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2. However, as the original editable data sheets and some figures from previous editions were not available, they have been reproduced in their old format which does not comply fully with the current drafting rules.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

LAMPS FOR ROAD VEHICLES – DIMENSIONAL, ELECTRICAL AND LUMINOUS REQUIREMENTS

1 Scope

This International Standard is applicable to replaceable and standardised lamps (filament lamps, discharge lamps and LED light sources) to be used in headlamps, fog-lamps and signalling lamps for road vehicles. In some applications, these lamps may be installed as non-replaceable.

This standard is especially applicable to those lamps which are the subject of legislation. In particular, it includes the lamps contained in Regulations No. 37, No. 99, No. 128 and its series of amendments of the Geneva Agreement of 20 March 1958 of the United Nations Economic Commission for Europe (UNECE). However, the standard may be used for other lamps falling under the scope of this standard, as well as lamps which are subject of legislation but not contained in Regulations No. 37, No. 99 and No. 128, e.g. the non-replaceable (filament) lamps and LED modules.

For replaceable and standardised lamps, the standard specifies the technical requirements with methods of tests and basic interchangeability (dimensional, electrical and luminous) for lamps of normal production and for standard (étalon) lamps.

For most of the requirements given in this standard, reference is made to the “relevant lamp data sheet”. For all lamps listed in Clause 8, data sheets are contained in this standard or included by reference. For other lamps, the relevant data are supplied by the lamp manufacturer or responsible vendor. It could be based on national legislation.

Other requirements to replaceable and standardised lamps such as lamp life, luminous flux maintenance, torsion strength and resistance to vibration and shock are specified in IEC 60810. Such requirements to non-replaceable lamps are given in this standard.

For some test methods, reference is made to IEC 60810.

Road vehicle lamps for supplementary purposes which are not the subject of legislation are specified in IEC 60983.

In countries which legislate for approval, for example under the terms of the aforementioned UN Regulations, it is suggested that reference is made to this standard for assessment of compliance. IEC 60810 and IEC 60983 are not intended for that purpose.

NOTE 1 In various vocabularies and standards, different terms are used for “incandescent lamp”, “discharge lamp” and “LED lamp”. In this standard “filament lamp”, “discharge lamp” and “LED light source” are used. However, where only “lamp” is written all three kinds of lamp are meant, unless the context clearly shows that it applies to one kind only.

NOTE 2 Wherever the term “device” is used, it is meant to designate equipment which is used as luminaire. It can take the form and purpose of a headlight or signal light.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org/>)

IEC 60051-1, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 1: Definitions and general requirements common to all parts*

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps*

IEC 60810:2014, *Lamps for road vehicles – Performance requirements*

IEC 60983, *Miniature lamps*

IEC 62504, *General lighting – Light emitting diode (LED) products and related equipment – Terms and definitions*

CIE 15:2004, *Colorimetry*

United Nations, *Agreement concerning the adoption of uniform technical prescription for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions*¹

Available from Internet: www.unece.org/trans/main/wp29/wp29regs.html (website checked 2014-08-12)

Addendum 3: Regulation No. 4, *Uniform provisions concerning the approval of devices for the illumination of rear registration plates of power-driven vehicles and their trailers*

Addendum 5: Regulation No. 6, *Uniform provisions concerning the approval of direction indicators for power-driven vehicles and their trailers*

Addendum 6: Regulation No. 7, *Uniform provisions concerning the approval of front and rear position lamps, stop-lamps and end-outline marker lamps for motor vehicles (except motor cycles) and their trailers*

Addendum 22: Regulation No. 23, *Uniform provisions concerning the approval of reversing and manoeuvring lamps for power-driven vehicles and their trailers*

Addendum 36: Regulation No. 37, *Uniform provisions concerning the approval of filament lamps for use in approved lamp units of power-driven vehicles and of their trailers*

Addendum 37: Regulation No. 38, *Uniform provisions concerning the approval of rear fog lamps for power-driven vehicles and their trailers*

Addendum 49: Regulation No. 50, *Uniform provisions concerning the approval of front position lamps, rear position lamps, stop lamps, direction indicators and rear-registration-plate illuminating devices for vehicles of category L*

Addendum 76: Regulation No. 77, *Uniform provisions concerning the approval of parking lamps for power-driven vehicles*

¹ Also known as *The 1958 Agreement*. In the text of this standard the regulations under this agreement are referred to as, for example, UN Regulation 37 or R 37.

Addendum 86: Regulation No. 87, *Uniform provisions concerning the approval of daytime running lamps for power-driven vehicles*

Addendum 90: Regulation No. 91, *Uniform provisions concerning the approval of side-marker lamps for motor vehicles and their trailers*

Addendum 98: Regulation No. 99, *Uniform provisions concerning the approval of gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles*

Addendum 100: Regulation No. 101, *Uniform provisions concerning the approval of passenger cars powered by an internal combustion engine only, or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range, and of categories M_1 and N_1 vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range*

Addendum 118: Regulation No. 119, *Uniform provisions concerning the approval of cornering lamps for power-driven vehicles*

Addendum 127: Regulation No. 128, *Uniform provisions concerning the approval of light emitting diode (LED) light sources for use in approved lamp units on power-driven vehicles and their trailers*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN