

Specification for Miniature lamps

The European Standard EN 60983:1996, with the incorporation of amendment A1:2005, has the status of a British Standard

ICS 29.140.20

National foreword

The preparation of this British Standard was entrusted to Technical Committee CPL/34/1, Electric lamps, upon which the following bodies were represented:

- British Lighting Association for the Preparation of Standards (BRITLAPS)
- Chartered Institution of Building Services Engineers
- Electricity Association
- Engineering Equipment and Materials Users' Association
- Institution of Lighting Engineers
- Lighting Industry Federation Ltd.
- London Regional Transport
- National Illumination Committee of Great Britain
- Society of Motor Manufacturers and Traders Limited

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Amendments issued since publication

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National foreword

This British Standard has been prepared by Technical Committee CPL/34/1 and is the English language version of EN 60983:1996 *Miniature lamps*, including amendment A1:2005, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 983:1995, including amendment 1:2005, published by the International Electrotechnical Commission (IEC).

Section four of this standard, *Lamps for miners' caplights*, supersedes BS 535:1987 *Light sources for miners' portable electric lamps*, which is withdrawn.

The amendment by which each page of the European standard was introduced is indicated by an extension to the shoulder heading at the top of the page (e.g. EN 60061-2 : 1993/A24 : 2001. Where no such extension appears, the page is part of the original European standard.

To facilitate updating, the data sheets in this standard do not carry page numbers but appear in numerical order according to the IEC reference code which appears at the foot of each sheet. In this code, the first set of digits represents the number of the IEC base document followed by the letters "IEC"; the second set represents the data sheet number and the third digit represents the edition number.

Cross-references

Publication referred to	Corresponding British Standard
EN 50033:1991	BS EN 50033:1991 <i>Specification for construction and testing of miners' caplamps in relation to the risk of explosion, for mines susceptible to firedamp</i>
	BS EN 60061 <i>Specification for lamp caps and holders together with gauges for the control of interchangeability and safety</i>
EN 60061-1:1993 (IEC 61-1:1969)	BS EN 60061-1:1993 <i>Lamp caps</i>
HD 494 S4:1994 (IEC 809)	BS 6737:1986 <i>Specification for dimensional, electrical and luminous requirements for lamps for road vehicles</i>
	BS 6001 <i>Sampling procedures for inspection by attributes</i>
ISO 2859-1:1989	Part 1:1991 <i>Specification for sampling plans indexed by acceptable quantity level (AQL) for lot-by-lot inspection</i>

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 48, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

ICS 29.140.20

Descriptors: Lighting equipment, lamp, halogen lamp, miniature lamp, definition, electrical characteristics, photometric characteristics, dimension, interchangeability, dimensional tolerances, life, mechanical strength

English version

Miniature lamps

(IEC 60983:1995)

Lampes miniatures
(CEI 60983:1995)

Kleinlampen
(IEC 60983:1995)

This European Standard was approved by CENELEC on 1996-03-05. 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.

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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

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Ref. No. EN 60983:1996 E

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Foreword to amendment A1

Foreword

The text of the International Standard IEC 983:1995, prepared by SC 34A, Lamps, of IEC TC 34, Lamps and related equipment, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60983 on 1996-03-05 without any modification.

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) 1997-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-03-01

Annexes designated “normative” are part of the body of the standard. Annexes designated “informative” are given for information only. In this standard, Annex A and Annex ZA are normative and Annex B is informative. Annex ZA has been added by CENELEC.

Foreword to amendment A1

The text of document 34A/1123/FDIS, future amendment 1 to IEC 60983:1995, 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 amendment A1 to EN 60983:1996 on 2005-04-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2006-01-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2008-04-01

Endorsement notice

The text of amendment 1:2005 to the International Standard IEC 60983:1995 was approved by CENELEC as an amendment to the European Standard without any modification.

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Section 1. General

1.1 Scope

This International Standard specifies requirements for miniature halogen and non-halogen lamps with a nominal voltage up to 30 V and a nominal wattage up to 25 W. It covers:

- lamps to be used in road vehicles not subject to regulation and which therefore are not included in IEC 60809 (section 2);
- lamps for electric torches (section 3);
- lamps for miners' caplights (section 4).

Aircraft lamps are standardized in IEC 60434.

This standard specifies dimensional, electrical and photometric requirements as well as requirements concerning life and mechanical strength.

NOTE Requirements are for production lamps. Individual lamps might not be completely within these requirements. Where conditions of compliance are required, they are specified in the relevant section.

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.

This Standard may also be used for future developments, e.g. where the light is produced by light emitting diodes (LED).

1.2 Normative references

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.

IEC 6050-845:1987, *International Electrotechnical Vocabulary (IEV) — Chapter 845: Lighting*

EC 60061-1:1969, *Lamp caps and holders together with gauges for the control of interchangeability and safety — Part 1: Lamp caps*

IEC 60434:1973, *Aircraft electrical filament lamps* Amendment No. 1 (1981), Amendment No. 2 (1984)

IEC 60809:1985, *Lamps for road vehicles — Dimensional, electrical and luminous requirements* Amendment No. 1 (1987), Amendment No. 2 (1989), Amendment No. 3 (1992)

ISO 2859: *Sampling procedures for inspection by attributes*

EN 50033, *Electrical apparatus for potentially explosive atmospheres — Caplights for mines susceptible to firedamp* [European standards]

1.3 Definitions

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

1.3.1

lamp (incandescent)

source made in order to produce light by means of an element heated to incandescence by the passage of an electric current [A combination of IEV 845-07-03 and IEV 845-07-04.]

1.3.2

tungsten halogen lamp

gas-filled lamp containing halogens or halogen compounds, the filament being tungsten [IEV 845-07-10]

1.3.3

nominal voltage

voltage used to designate a lamp

1.3.4

nominal wattage

wattage used to designate a lamp

1.3.5

test voltage

voltage for which some characteristics of a lamp are specified and at which they shall be tested

1.3.6

rated value

quantity value for specified operating conditions of a component, device or equipment assigned by a manufacturer or specified in a product standard

1.3.7

tolerance

allowable variation from a specified value, generally expressed in per cent of this value

1.3.8

limit value

lowest and/or highest value for characteristics a lamp has to comply with when operated under test conditions

1.3.9

Initial readings

photometric and electrical values measured at the end of the ageing period

1.3.10

ageing period

period of time for which an unused lamp is operated in order to stabilize its photometric and electrical characteristics

1.3.11

life

the total time for which a lamp has been operated before it becomes useless, or is considered to be so, according to specific criteria. [IEV 845-07-61]

NOTE Lamp life is normally expressed in hours.

1.3.12**average life**

arithmetic mean of a number of individual life test results for lamps of the same type

1.3.13**truncated average life**

arithmetic mean of a number of individual life test results, where the test for the purpose of this calculation is considered to be terminated after a predetermined period

1.3.14**lumen maintenance**

ratio of the luminous flux of a lamp at a given time in its life to its initial luminous flux, the lamp being operated at test voltage. [IEV 845-07-65, modified]

NOTE The ratio is generally expressed in per cent.

1.3.15**reference plane**

plane defined with reference to the cap or base and with respect to which the position of certain parts of the lamp are measured

1.3.16**reference axis**

axis defined with reference to the cap or base and with respect to which the position of certain parts of the lamp are measured

1.3.17**light centre length (LCL)**

distance between the centre of the rectangle enclosing the luminous filament section or a defined point of the filament and the reference plane

1.3.18**type**

lamps which differ in such essential characteristics as voltage, wattage or bulb design form different types. They are specified on the same lamp data sheet by different type numbers, e.g. 983-IEC-2251 and 983-IEC-2252 on lamp data sheet 983-IEC-2250

1.4 Marking

Each lamp shall be legibly and durably marked with an identification to ensure correct replacement. Details for marking requirements and compliance conditions are specified in each section

1.5 Requirements and tests**1.5.1 Lamp dimensions**

The outer lamp dimensions and the light centre length shall comply with the requirements specified on the relevant lamp data sheet.

1.5.2 Bulbs

Bulbs shall not contain scores or spots which might impair the optical performance of the lamp.

1.5.3 Caps

Caps shall comply with the requirements specified on the relevant standard sheet(s) of IEC 61.

Further requirements are specified in the relevant sections of this standard.

1.6 Data sheets**1.6.1 Numbering system for data sheets and lamps**

The first number represents the number of this standard “983” followed by the letters “IEC”.

The second number consists of a four-digit group. The first digit represents the relevant section of this standard, the second and third digits represent the sheet identifier and the fourth digit represents the lamp type except zero which is reserved as part of the sheet identifier.

The third number represents the edition of the data sheet page. In cases where a data sheet has more than one page, it is possible for the pages to have different edition numbers with the data sheet numbering remaining the same.

1.7 Recommended instructions for the use of halogen lamps

It is recommended that the following points are included in any instructions for use if supplied with tungsten halogen lamps covered by this standard:

- tungsten halogen lamps operate at high bulb temperatures and care should be taken to avoid touching the bulb under any circumstances;
- if lamps with a quartz bulb are touched, they should be cleaned before use with a lint-free cloth moistened with spirit (alcohol);
- lamps with scratched or otherwise damaged bulbs should not be used.

NOTE In some instances, lamp manufacturers give information that the lamp contains gas under pressure and recommend protective measures when handling it.

Section 2. Lamps for supplementary purposes in road vehicles

2.1 Scope

This section covers miniature lamps to be used in road vehicles which are not the subject of regulation and therefore are not included in IEC 809. It specifies the basic requirements (dimensional, electrical and luminous) as well as life and torsion strength.

2.2 Definitions

For the purposes of this section, the definitions of section 1 apply, together with the following:

2.2.1 Designation

- | | |
|-----|---|
| EUR | means type standardized in European countries; |
| JIS | means type standardized by Japanese Industrial Standards; |
| SAE | means type standardized by the Society of Automotive Engineers. |

2.3 Marking

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

- trade name or mark of the manufacturer or the responsible vendor;
- trade number or lamp designation and/or nominal voltage.

In addition other information may be marked, e.g. nominal wattage.

Compliance is checked by rubbing by hand with a smooth cloth, dampened with water, for a period of 15 s.

After this test the marking shall be legible.

2.4 Technical requirements and test procedures

Lamps shall comply with the general requirements given in clause 1.5.

2.4.1 Initial readings

After the ageing period, wattage and luminous flux of a lamp operated at test voltage shall comply with the requirements specified on the relevant data sheet. A suitable integrating photometer shall be used for measuring the luminous flux.

2.4.2 Life

During the life test, lamps shall be operated at test voltage on d.c. or a.c. with a frequency between 40 Hz and 60 Hz, with reference axis and filament axis in a horizontal position at room temperature not exceeding 30 °C.

There must be no fluctuations of the supply voltage. However, momentary fluctuations (≤ 1 min), not exceeding ± 1 % of the test voltage, are allowed.

The test shall be terminated at 150 % of the life specified on the relevant lamp data sheet. Such terminated lamps shall be deemed to have a life of 150 % of the specified value.

The average life of the test sample shall be not less than:

- for a sample size of 13 to 19 lamps: 90 % of the life value specified on the relevant lamp data sheet;
- for a sample size of 20 to 25 lamps: 92,5 % of the life value specified on the relevant lamp data sheet.

2.4.3 Lumen maintenance

The lumen maintenance, if required, shall comply with the value specified on the relevant lamp data sheet.

Lamps which fail to comply are deemed to have a life of 75 % of rated life.

2.4.4 Torsion strength

When a torsion strength is specified on the relevant data sheet for a lamp type, each lamp shall withstand the specified torsion strength without visible relative movement between the cap and the bulb.

For the test cap shall be retained firmly without distortion and the torque shall be gradually increased in clockwise direction until the specified value is reached.

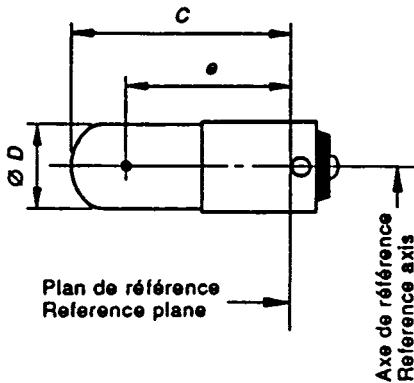
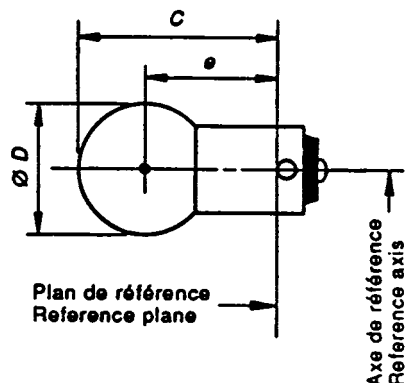
2.4.5 Electrical and photometric measurements

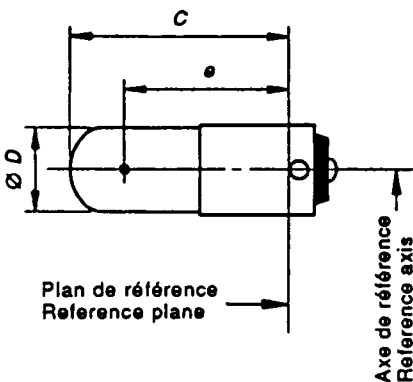
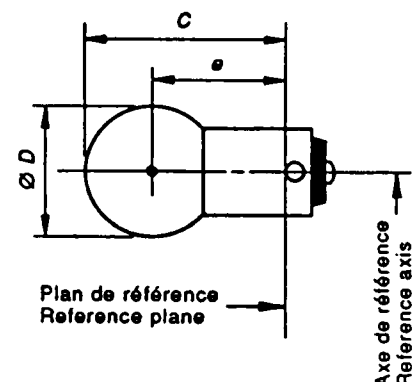
Electrical and photometric measurements shall be carried out at the test voltage.

2.5 Data sheets: Road vehicle lamps

2.5.1 List of lamps covered by the different data sheets

Designation	Nominal voltage V	Nominal wattage W	Cap/base	Type	data sheet number
T2W	6	2	BA9s	60983-IEC-2011	60983-IEC-2010
–	6	3	BA9s	60983-IEC-2012	
T2W	12	2	BA9s	60983-IEC-2051	60983-IEC-2050
SAE57	12	3	BA9s	60983-IEC-2052	
R4W SAE1895	12	4	BA9s	60983-IEC-2053	
T3W	24	3	BA9s	60983-IEC-2101	60983-IEC-2100
–	24	3	BA9s	60983-IEC-2102	
H5W	12	5	BA9s	60983-IEC-2151	60983-IEC-2150
H10W	12	10	BA9s	60983-IEC-2152	
H20W	12	20	BS9s	60983-IEC-2153	
W1.2W SAE14	12	1,2	W2×4.6d	60983-IEC-2201	60983-IEC-2200
W2W	12	2	W2×4.6d	60983-IEC-2202	
W2.2W SAE161	12	2,2	W2.1×9.5d	60983-IEC-2251	60983-IEC-2250
W2.5W	24	2,5	W2.1×9.5d	60983-IEC-2252	
TX1.4W	12	1,4	Special	60983-IEC-2301	60983-IEC-2300
–	12	1,1	BX8.4d	60983-IEC-2401	60983-IEC-2400
–	12	1,2	BX8.4d	60983-IEC-2402	
–	12	1,3	BX8.4d	60983-IEC-2403	
–	12	1,5	BX8.4d	60983-IEC-2404	
–	12	1,9	BX8.4d	60983-IEC-2405	
–	12	2,0	BX8.4d	60983-IEC-2406	
–	12	2,3	BX8.4d	60983-IEC-2407	

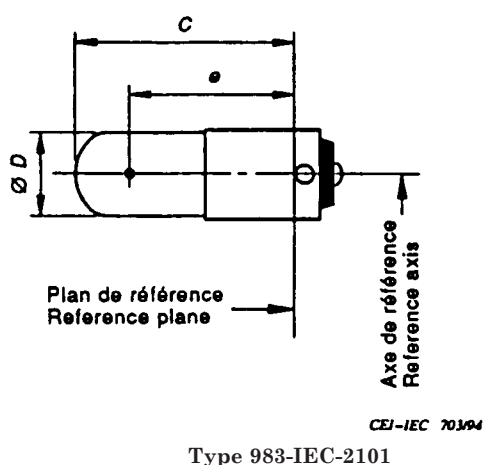
	LAMPE MINIATURE FEUILLE DE CARACTÉRISTIQUES LAMPE POUR VÉHICULES ROUTIERS CULOT: BA9s	MINIATURE LAMP DATA SHEET ROAD VEHICLE LAMP CAP: BA9s																																													
<table border="1"> <thead> <tr> <th colspan="2">Caractéristiques Characteristics</th><th colspan="2">Spécifications et tolérances Specifications and tolerances</th></tr> <tr> <th>Type</th><th></th><th>983-IEC-2011</th><th>983-IEC-2012</th></tr> </thead> <tbody> <tr> <td>Désignation/Designation: EUR/JIS/SAE</td><td></td><td>T2W/-/-</td><td>-/-/-</td></tr> <tr> <td>Tension nominale Nominal voltage</td><td>V</td><td>6</td><td>6</td></tr> <tr> <td>Puissance nominale Nominal wattage</td><td>W</td><td>2</td><td>3</td></tr> <tr> <td>Tension d'essai Test voltage</td><td>V</td><td>6,75</td><td>6,75</td></tr> <tr> <td>Puissance d'essai Rated wattage</td><td>W</td><td>2,0 ± 15 %</td><td>3,0 ± 15 %</td></tr> <tr> <td>Flux lumineux assigné Rated luminous flux</td><td>lm</td><td>12,5 ± 30 %</td><td>26,5 ± 25 %</td></tr> <tr> <td>Durée moyenne tronquée assignée Rated truncated average life</td><td>h</td><td>1 000^a</td><td>500</td></tr> <tr> <td>Résistance à la torsion Torsion strength</td><td>Nm</td><td>0,3 min.</td><td>0,3 min.</td></tr> <tr> <td>Dimensions D e C</td><td>mm</td><td>8,8 max 13 ± 1,5 18 max.</td><td>11,7 max 12,7 approx. 17,8 max.</td></tr> </tbody> </table> ^a A l'étude Under consideration				Caractéristiques Characteristics		Spécifications et tolérances Specifications and tolerances		Type		983-IEC-2011	983-IEC-2012	Désignation/Designation: EUR/JIS/SAE		T2W/-/-	-/-/-	Tension nominale Nominal voltage	V	6	6	Puissance nominale Nominal wattage	W	2	3	Tension d'essai Test voltage	V	6,75	6,75	Puissance d'essai Rated wattage	W	2,0 ± 15 %	3,0 ± 15 %	Flux lumineux assigné Rated luminous flux	lm	12,5 ± 30 %	26,5 ± 25 %	Durée moyenne tronquée assignée Rated truncated average life	h	1 000 ^a	500	Résistance à la torsion Torsion strength	Nm	0,3 min.	0,3 min.	Dimensions D e C	mm	8,8 max 13 ± 1,5 18 max.	11,7 max 12,7 approx. 17,8 max.
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<i>Le dessin a pour seul but d'indiquer les dimensions essentielles pour l'interchangeabilité.</i> <i>The drawing is intended only to indicate the dimensions essential for interchangeability.</i>  CEI-IEC 70394 Type 983-IEC-2011 Culot BA9s selon la feuille 7004-14, CEI 61 Le culot ne doit avoir ni protubérances ni soudures dépassant le diamètre maximal admissible du culot sur sa longueur totale.  CEI-IEC 70494 Type 983-IEC-2012 Cap BA9s according to sheet 7004-14, IEC 61 Over the entire length of the cap there shall be no projections or soldering exceeding the permissible maximum diameter of the cap.																																															
Publication CEI 983 IEC Publication 983		983-IEC-2010-1	Date:1995																																												

LAMPE MINIATURE FEUILLE DE CARACTÉRISTIQUES LAMPE POUR VÉHICULES ROUTIERS CULOT: BA9s		MINIATURE LAMP DATA SHEET ROAD VEHICLE LAMP CAP: BA9s			
Caractéristiques Characteristics		Spécifications et tolérances Specifications and tolerances			
Type		983-IEC-2051	983-IEC-2052	983-IEC-2053	
Désignation/Designation: EUR/JIS/SAE		T2W/—/—	—/—/57	R4W/—/1895	
Tension nominale Nominal voltage	V	12	12	12	
Puissance nominale Nominal wattage	W	2	3	4	
Tension d'essai Test voltage	V	13,5	13,5	13,5	
Puissance assignée Rated wattage	W	2,0 ± 15 %	3,2 ± 15 %	3,6 ± 15 %	
Flux lumineux assigné Rated luminous flux	lm	12,5 ± 30 %	22 ± 25 %	22 ± 20 %	
Durée moyenne tronquée assignée Rated truncated average life	h	1 000 ^a	500	2 000	
Résistance à la torsion Torsion strength	Nm	0,3 min.	0,3 min.	0,3 min	
Dimensions	mm				
<i>D</i>		8,8 max.	11,7 max.	11,7 max.	
<i>e</i>		13±1,0	12,7 approx.	12,7 approx.	
<i>C</i>		18,0 max.	17,8 max.	17,8 max.	
^a A l'étude Under consideration					
<i>Le dessin a pour seul but d'indiquer les dimensions essentielles pour l'interchangeabilité.</i> <i>The drawing is intended only to indicate the dimensions essential for interchangeability.</i>					
 CEI-IEC 70394		Type 983-IEC-2051			
 CEI-IEC 70494		Type 983-IEC-2052, -2053			
Culot BA9s selon la feuille 7004-14, CEI 61		Cap BA9s according to sheet 7004-14, IEC 61			
Le culot ne doit avoir ni protubérances ni soudures dépassant le diamètre maximal admissible du culot sur sa longueur totale.		Over the entire length of the cap there shall be no projections or soldering exceeding the permissible maximum diameter of the cap.			
Publication CEI 983 IEC Publication 983		983-IEC-2050-1			Date:1995

	LAMPE MINIATURE FEUILLE DE CARACTÉRISTIQUES LAMPE POUR VÉHICULES ROUTIERS CULOT: BA9s	MINIATURE LAMP DATA SHEET ROAD VEHICLE LAMP CAP: BA9s	
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Caractéristiques Characteristics		Spécifications et tolérances Specifications and tolerances	
Type		983-IEC-2101	983-IEC-2102
Désignation/Designation: EUR/JIS/SAE		T3W/-/-	-/-/-
Tension nominale Nominal voltage	V	24	24
Puissance nominale Nominal wattage	W	3	3
Tension d'essai Test voltage	V	28,0	28,0
Puissance assignée Rated wattage	W	3,0 ± 15 %	3,1 ± 15 %
Flux lumineux assigné Rated luminous flux	lm	17 ± 30 %	20 ± 25 %
Durée moyenne tronquée assignée Rated truncated average life	h	1 000	500 ^a
Résistance à la torsion Torsion strength	Nm	0,3 min.	0,3 min.
Dimensions mm			
<i>D</i>		8,8 max.	11,7 max.
<i>e</i>		13 ± 1,5	12,7 approx.
<i>C</i>		18,0 max.	17,8 max.
^a A l'étude Under consideration			

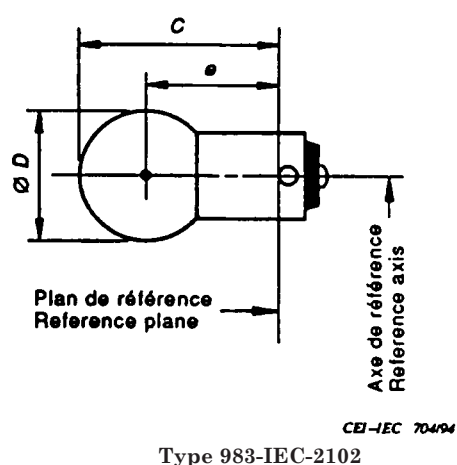
Le dessin a pour seul but d'indiquer les dimensions essentielles pour l'interchangeabilité.
The drawing is intended only to indicate the dimensions essential for interchangeability.



Culot BA9s selon la feuille 7004-14, CEI 61

Le culot ne doit avoir ni protubérances ni soudures dépassant le diamètre maximal admissible du culot sur sa longueur totale.

Publication CEI 983
IEC Publication 983



Cap BA9s according to sheet 7004-14, IEC 61

Over the entire length of the cap there shall be no projections or soldering exceeding the permissible maximum diameter of the cap.

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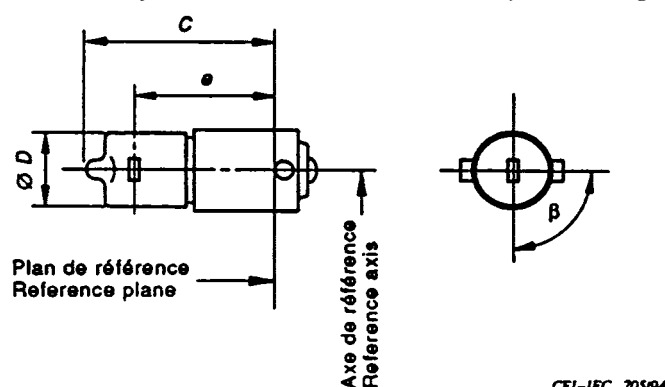
Date:1995

	LAMPE MINIATURE FEUILLE DE CARACTÉRISTIQUES LAMPE POUR VÉHICULES ROUTIERS CULOT: BA9s	MINIATURE LAMP DATA SHEET ROAD VEHICLE LAMP CAP: BA9s	
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Caractéristiques Characteristics		Spécifications et tolérances Specifications and tolerances		
Type		983-IEC-2151	983-IEC-2152	983-IEC-2153
Désignation/Designation: EUR/JIS/SAE		H5W/-/-	H10W/-/-	H20W/-/-
Tension nominale Nominal voltage	V	12	12	12
Puissance nominale Nominal wattage	W	5	10	20
Tension d'essai Test voltage	V	13,5	13,5	13,5
Puissance assignée Rated wattage	W	5 ± 6 %	11 ± 6 %	22,5 ± 6 %
Flux lumineux assigné Rated luminous flux	lm	80 ± 10 %	200 ± 10 %	470 ± 10 %
Durée moyenne tronquée assignée Rated truncated average life	h	240	240	240
Dimensions	mm			
<i>D</i>		9 max.	9 max	9 max
<i>e</i>		15,0 ± 1,0	15,0 ± 1,0	15,0 ± 1,0
<i>C</i>		27 max.	27 max.	27 max.
Ecart latéral β	[°]	90 ± 10	90 ± 10	90 ± 10
Lateral deviation ^a		± 1,0	± 1,0	± 1,0

^a Ecart latéral maximal du centre du filament par rapport à deux plans réciproquement perpendiculaires contenant l'axe de référence et dont l'un des plans contient l'axe des ergots.
Maximum lateral deviation of filament centre from two mutually perpendicular planes both containing the reference axis and one containing the axis of pins.

Le dessin a pour seul but d'indiquer les dimensions essentielles pour l'interchangeabilité.
The drawing is intended only to indicate the dimensions essential for interchangeability.



Culot BA9s selon la feuille 7004-14, CEI 61

Cap BA9s according to sheet 7004-14, IEC 61

Le culot ne doit avoir ni protubérances ni soudures dépassant le diamètre maximal admissible du culot sur sa longueur totale.

Over the entire length of the cap there shall be no projections or soldering exceeding the permissible maximum diameter of the cap.

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983-IEC-2150-1

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