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INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

One-hundred-and-fiftieth session
Geneva, 9-12 March 2010
Item 4.2.16 of the provisional agenda

1958 AGREEMENT

Consideration of draft amendments to existing Regulations

Proposal for Supplement 35 to the 03 series of amendments to Regulation No. 37 (Filament lamps of power-driven vehicles and their trailers)

Submitted by the Working Party on Lighting and Light-Signalling */

The text reproduced below was adopted by the Working Party on Lighting and Light-Signalling (GRE) at its sixty-second session. It is based on ECE/TRANS/WP.29/GRE/2009/60 and ECE/TRANS/WP.29/GRE/2009/61, both not amended. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration (ECE/TRANS/WP.29/GRE/62, para. 5).

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

The list of contents, the annexes, amend to read:

Annex 1,

The list of categories of filament lamps, grouped, and their sheet numbers, amend to read:

"Group 2:

Only for use in signalling lamps, cornering lamps, reversing lamps and rear registration plate lamps:

Category	Sheet number(s)
C5W	C5W/1
…	
PSY24W	PSY24W/1 to 3
PW13W	P13W/1 to 3
PW16W	PC16W/1 to 3
PWR16W	PC16W/1 to 3
PWY16W	PC16W/1 to 3
PW19W	P19W/1 to 3
PWR19W	P19W/1 to 3
PWY19W	P19W/1 to 3
PW24W	P24W/1 to 3
PWR24W	P24W/1 to 3
PWY24W	P24W/1 to 3
PY19W	PY19W/1 to 3
…	
W5W	W5W/1
W10W	W10W/1
W15/5W	W15/5W/1 to 3
W16W	W16W/1
….	
WY5W	W5W/1
WY10W	W10W/1
WY16W	W16W/1
WY21W	WY21W/1 to 2

…."

List of sheets for filament lamps and their sequence in this annex, amend to read:

"

Sheet number(s)
…

C5W/1
…
W5W/1
W10W/1
W15/5W/1 to 3
…"

Sheets P13W/1 to P13W/3 (existing), replace by the new sheets P13W/1 to P13W/3, to read (see below):

Sheets PC16W/1 to PC16W/3 (existing), replace by the new sheets PC16W/1 to PC16W/3, to read (see below):

Sheets P19W/1 to P19W/3 (existing), replace by the new sheets P19W/1 to P19W/3, to read (see below):

Sheets P24W/1 to P24W/3 (existing), replace by the new sheets P24W/1 to P24W/3, to read (see below):

Sheet P13W/1

CATEGORIES P13W and PW13W

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

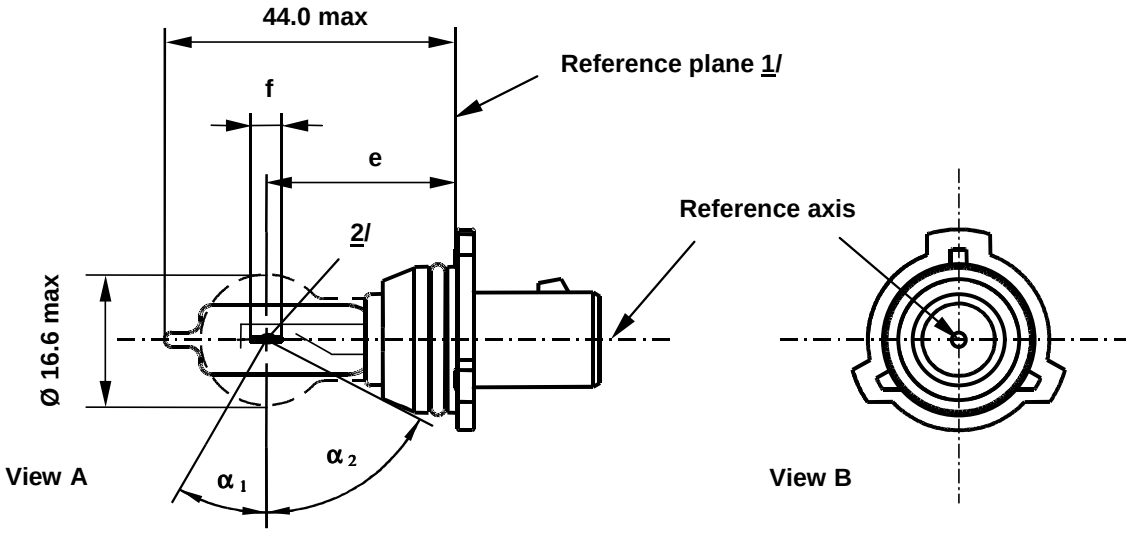


Figure 1 – Main drawing P13W

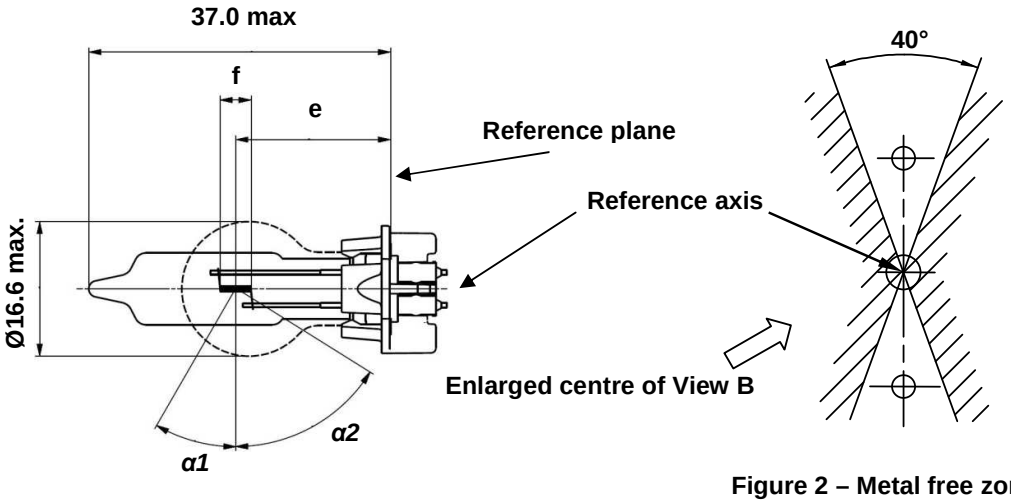


Figure 2 – Metal free zone 3/

Figure 3 – Main drawing PW13W

1/ The reference plane is defined by the meeting points of the cap-holder fit.

2/ No actual filament diameter restrictions apply but the objective is d max. = 1.0 mm.

3/ No opaque parts other than filament turns shall be located in the shaded area indicated in Figure 2. This applies to the rotational body within the angles $\alpha_1 + \alpha_2$.

Sheet P13W/2

CATEGORIES P13W and PW13W

Dimensions in mm			Filament lamps of normal production	Standard filament lamp
e 5/	P13W		25.0 4/	25.0 ± 0.25
	PW13W		19.25 4/	19.25 ± 0.25
f		5/	4.3 4/	4.3 ± 0.25
α_1		6/	30.0° min.	30.0° min.
α_2		6/	58.0° min.	58.0° min.
P13W	Cap PG18.5d-1		in accordance with IEC Publication 60061 (sheet 7004-147-1)	
PW13W	Cap WP3.3x14.5-7		in accordance with IEC Publication 60061 (sheet 7004-xxx-x)	
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS				
Rated values	Voltage	V	12	12
	Wattage	W	13	13
Test voltage		V	13.5	13.5
Objective values	Wattage	W	19 max.	19 max.
	Luminous flux	lm	250	
		±	+15% / –20%	
Reference luminous flux at approximately 13.5V				250 lm

4/ To be checked by means of a "Box-System"; sheet P13W/3.

5/ The ends of the filament are defined as the points where, when the viewing direction is perpendicular to the plane through the filament lead-in wires, the projection of the outside of the end turns crosses the filament axis.

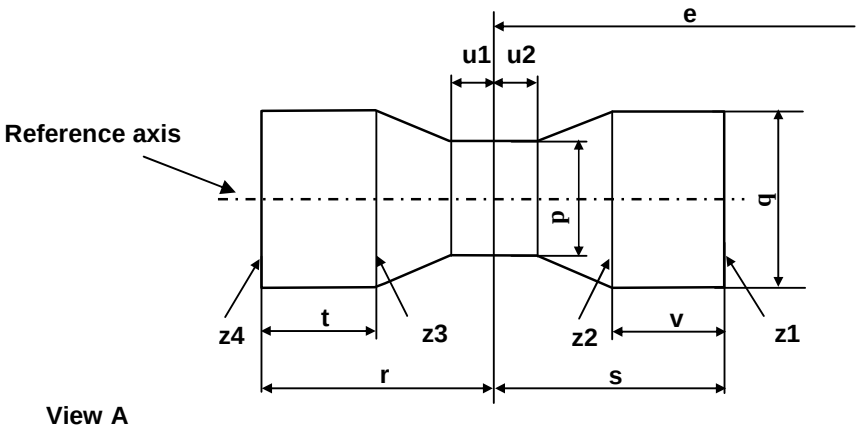
6/ No part of the cap beyond the reference plane shall interfere with angle α_2 as shown in Figure 1 on sheet P13W/1. The bulb shall be optically distortion free within the angles $\alpha_1 + \alpha_2$. These requirements apply to the whole bulb circumference.

Sheet P13W/3

CATEGORIES P13W and PW13W

Screen projection requirements

This test is used to determine, by checking whether the filament is correctly positioned relative to the reference axis and reference plane, whether a filament lamp complies with the requirements.



View A

	p	q	u1,u2	r,s	t,v
Filament lamps of normal production	1.7	1.9	0.3	2.6	0.9
Standard filament lamps	1.5	1.7	0.25	2.45	0.6

The filament position is checked in two mutually perpendicular planes, one of them being the plane through the lead-in wires.

The ends of the filament as defined on sheet P13W/2, note 4/, shall lie between Z1 and Z2 and between the lines Z3 and Z4.

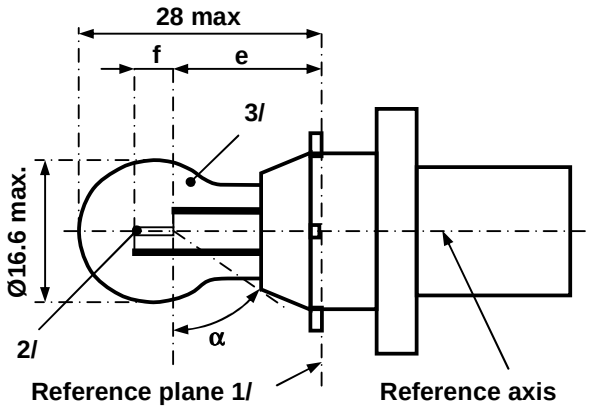
The filament shall lie entirely within the limits shown.

Sheet PC16W/1

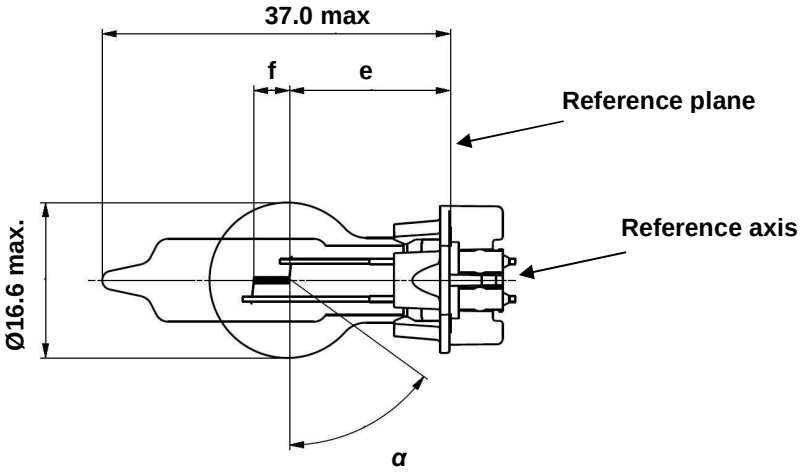
CATEGORIES PC16W, PCY16W, PCR16W, PW16W, PWY16W and PWR16W

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

PC16W,
PCY16W,
PCR16W



PW16W,
PWY16W,
PWR16W



1/ The reference plane is defined by the meeting points of the cap-holder fit.

2/ No actual filament diameter restrictions apply but the objective is d max. = 1.1 mm.

3/ The light emitted from normal production lamps shall be white for category PC16W and PW16W; amber for category PCY16W and PWY16W; red for category PCR16W and PWR16W. (see also note 7/).

Sheet PC16W/2

CATEGORIES PC16W, PCY16W, PCR16W, PW16W, PWY16W and PWR16W

Dimensions in mm			Filament lamps of normal production			Standard filament lamp
			min.	nom.	max.	7/
e 4/ 5/	PC16W PCY16W PCR16W			18.5		18.5
	PW16W PWY16W PWR16W			17.1		17.1
f 4/ 5/				4.0		4.0 ± 0.2
α 6/			54°			54° min.
PC16W PCY16W PCR16W	Cap PU20d-1 Cap PU20d-2 Cap PU20d-7		in accordance with IEC Publication 60061 (sheet 7004-157-1)			
PW16W PWY16W PWR16W	Cap WP3.3x14.5-8 Cap WP3.3x14.5-9 Cap WP3.3x14.5-10		in accordance with IEC Publication 60061 (sheet 7004-XXX-X)			
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS						
Rated values	Volts		12			12
	Watts		16			16
Test voltage	Volts		13.5			13.5
Objective values	Watts		17 max.			17 max.
	Luminous flux	PC16W PW16W	300 ± 15 %			
		PCY16W PWY16W	180 ± 20 %			
		PCR16W PWR16W	70 ± 20 %			
Reference luminous flux at approximately				13.5 V		White: 300 lm Amber: 180 lm Red: 70 lm

4/ The filament position is checked by means of a "Box-System"; sheet PC16W/3.

5/ The ends of the filament are defined as the points where, when the viewing direction is perpendicular to the plane through the filament lead-in wires as showed in the drawing on sheet PC16W/1, the projection of the outside of the end turns crosses the filament axis.

6/ No part of the cap beyond the reference plane shall interfere with angle α. The bulb shall be optically distortion free within the angle 2α + 180°.

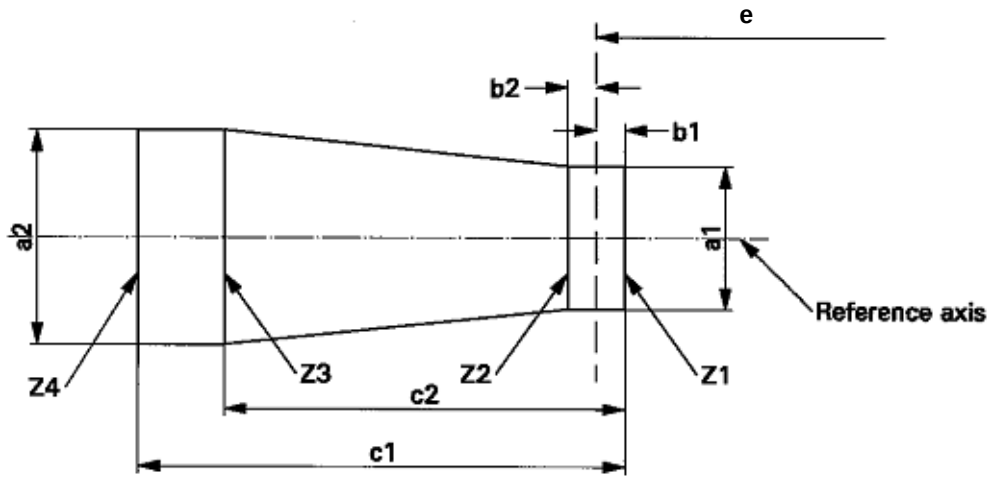
7/ The light emitted from standard filament lamps shall be white for category PC16W and PW16W; white or amber for category PCY16W and PWY16W; white or red for category PCR16W and PWR16W.

Sheet PC16W/3

CATEGORIES PC16W, PCY16W, PCR16W, PW16W, PWY16W and PWR16W

Screen projection requirements

This test is used to determine, by checking whether the filament is correctly positioned relative to the reference axis and reference plane, whether a filament lamp complies with the requirements.



PC16W, PCY16W, PCR16W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.9	3.9	0.5	5.2	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

PW16W, PWY16W and PWR16W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.5	2.5	0.4	5.2	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

The filament position is checked in two mutually perpendicular planes, one of them being the plane through the lead-in wires.

The ends of the filament as defined on sheet PC16W/2, note 5/, shall lie between Z1 and Z2 and between the lines Z3 and Z4.

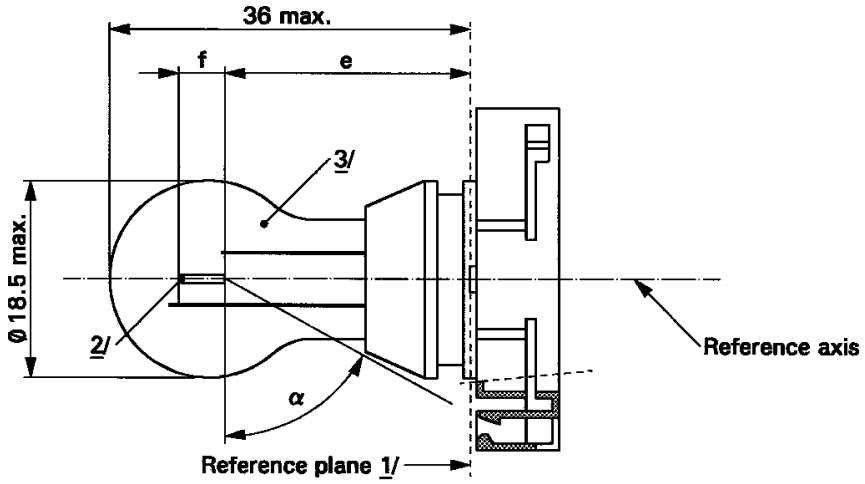
The filament shall lie entirely within the limits shown.

Sheet P19W/1

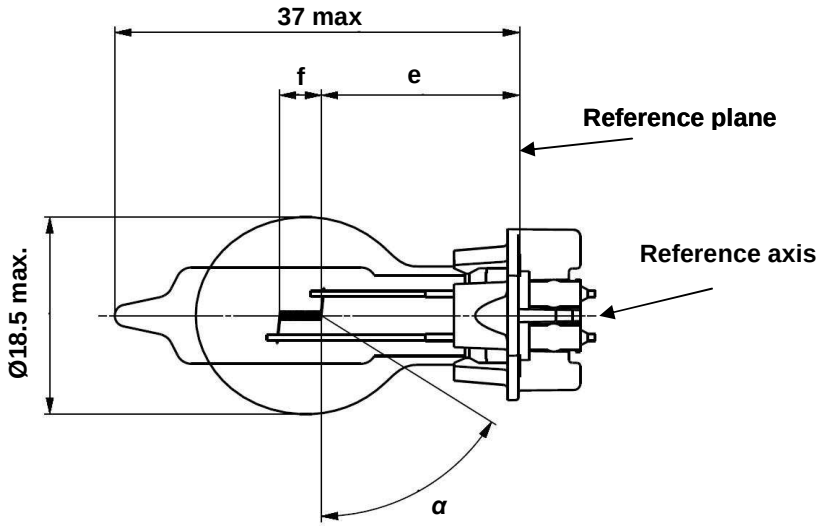
CATEGORIES P19W, PY19W, PR19W, PS19W, PSY19W, PSR19W, PW19W, PWY19W and PWR19W

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

P19W, PY19W, PR19W, PS19W, PSY19W, PSR19W



PW19W, PWY19W, PWR19W



1/ The reference plane is defined by the meeting points of the cap-holder fit.

2/ No actual filament diameter restrictions apply but the objective is d max. = 1.1 mm.

3/ The light emitted from normal production lamps shall be white for categories P19W, PS19W and PW19W; amber for categories PY19W, PSY19W and PWY19W; red for categories PR19W, PSR19W and PWR19W. (see also note 8/).

Sheet P19W/2

CATEGORIES P19W, PY19W, PR19W, PS19W, PSY19W, PSR19W, PW19W, PWY19W and PWR19W

Dimensions in mm 4/		Filament lamps of normal production			Standard filament lamp
		min.	nom.	max.	8/
e 5/ 6/	P19W, PS19W, PY19W, PSY19W, PR19W, PSR19W		24.0		24.0
	PW19W PWY19W PWR19W		18.1		18.1
f 5/ 6/			4.0		4.0 ± 0.2
α 7/		58°			58° min.
P19W Cap PGU20-1 PY19W Cap PGU20-2 PR19W Cap PGU20-5 PS19W Cap PG20-1 PSY19W Cap PG20-2 PSR19W Cap PG20-5		in accordance with IEC Publication 60061 (sheet 7004-127-2)			
PW19W Cap WP3.3x14.5-1 PWY19W Cap WP3.3x14.5-2 PWR19W Cap WP3.3x14.5-5		in accordance with IEC Publication 60061 (sheet 7004-xxx-x)			
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS					
Rated values	Volts	12			12
	Watts	19			19
Test voltage	Volts	13.5			13.5
Objective values	Watts	20 max.			20 max.
	Luminous flux P19W PS19W PW19W	350 ± 15 %			
	Luminous flux PY19W PSY19W PWY19W	215 ± 20 %			
	Luminous flux PR19W PSR19W PWR19W	80 ± 20 %			
Reference luminous flux at approximately 13.5 V					White: 350 lm Amber: 215 lm Red: 80 lm

4/ For categories PS19W, PSY19W and PSR19W, dimensions shall be checked with O-ring removed.

5/ The filament position is checked by means of a "Box-System"; sheet P19W/3.

6/ The ends of the filament are defined as the points where, when the viewing direction is perpendicular to the plane through the filament lead-in wires as showed in the drawing on sheet P19W/1, the projection of the outside of the end turns crosses the filament axis.

7/ No part of the cap beyond the reference plane shall interfere with angle α. The bulb shall be optically distortion free within the angle 2α + 180°.

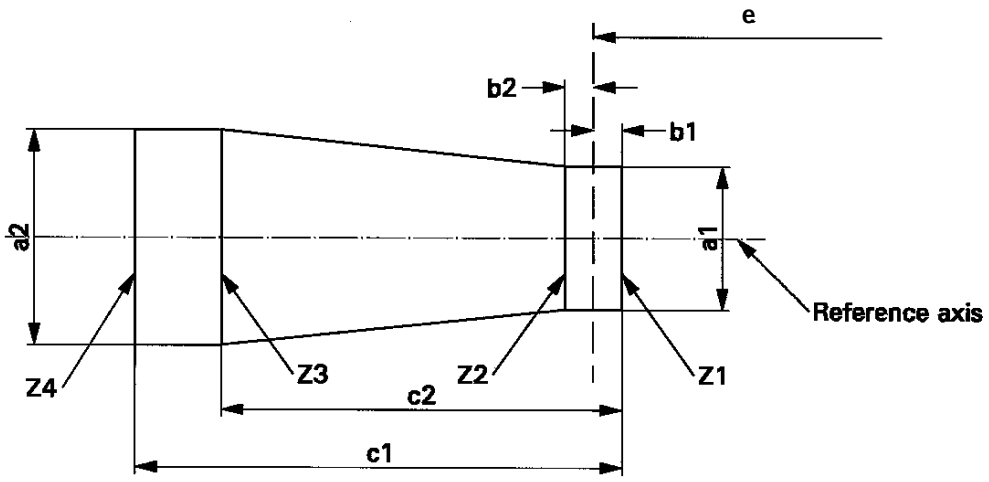
8/ The light emitted from standard filament lamps shall be white for categories P19W, PS19W and PW19W; white or amber for categories PY19W, PSY19W and PWY19W; white or red for categories PR19W, PSR19W and PWR19W.

Sheet P19W/3

CATEGORIES P19W, PY19W, PR19W, PS19W, PSY19W, PSR19W, PW19W, PWY19W and PWR19W

Screen projection requirements

This test is used to determine, by checking whether the filament is correctly positioned relative to the reference axis and reference plane, whether a filament lamp complies with the requirements.



P19W, PY19W, PR19W, PS19W, PSY19W, PSR19W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.9	3.9	0.5	5.2	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

PW19W, PWY19W and PWR19W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.5	2.5	0.4	5.2	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

The filament position is checked in two mutually perpendicular planes, one of them being the plane through the lead-in wires.

The ends of the filament as defined on sheet P19W/2, note 6/, shall lie between Z1 and Z2 and between the lines Z3 and Z4.

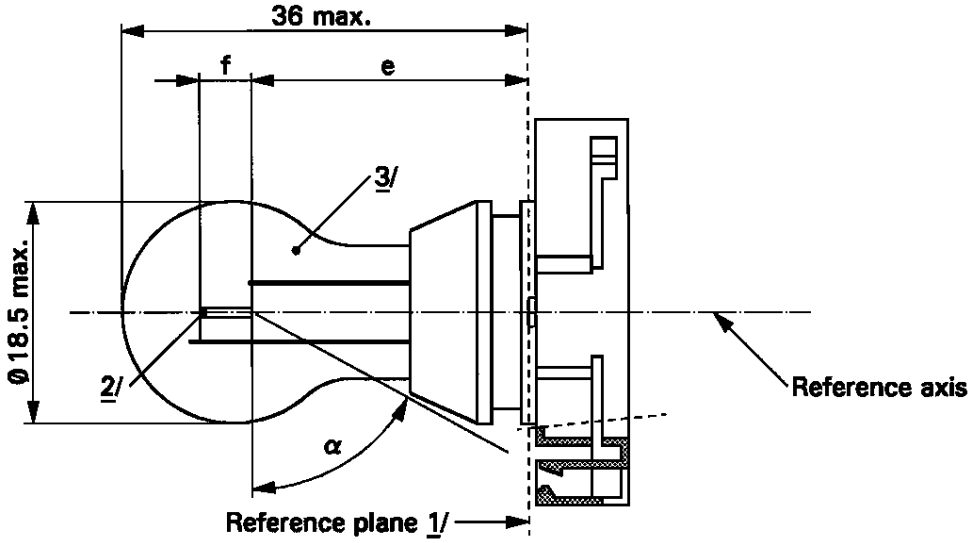
The filament shall lie entirely within the limits shown.

Sheet P24W/1

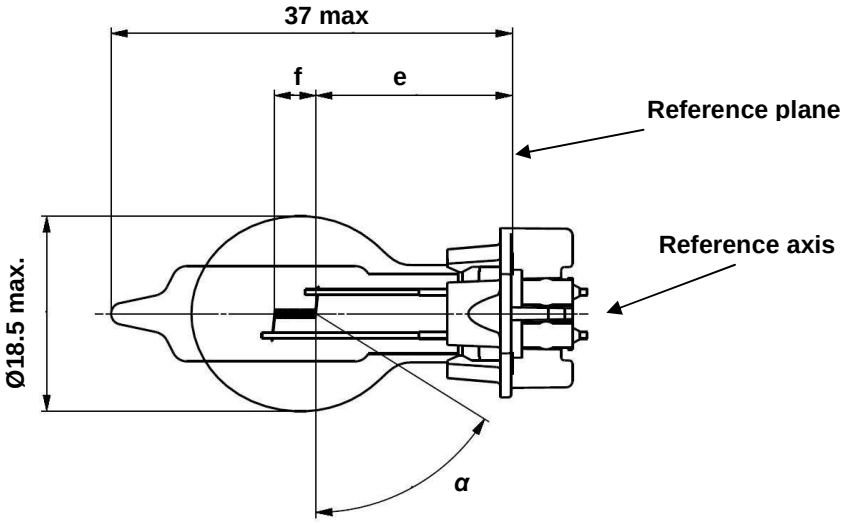
CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W, PSR24W, PW24W, PWY24W and PWR24W

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W, PSR24W



PW24W, PWY24W, PWR24W



1/ The reference plane is defined by the meeting points of the cap-holder fit.

2/ No actual filament diameter restrictions apply but the objective is d max. = 1.1 mm.

3/ The light emitted from normal production lamps shall be white for categories P24W, PX24W, PS24W, PSX24W and PW24W; amber for categories PY24W, PSY24W and PWY24W; red for categories PR24W, PSR24W and PWR24W. (See also note 8/)

Sheet P24W/2

CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W, PSR24W, PW24W, PWY24W and PWR24W

Dimensions in mm 4/		Filament lamps of normal production			Standard filament lamp
		min.	nom.	max.	8/
e 5/	P24W, PY24W, PR24W, PS24W, PSY24W, PSR24W, PX24W, PSX24W		24.0		24.0
6/	PW24W, PWY24W, PWR24W		18.1		18.1
f 5/,6/	P24W, PY24W, PR24W, PS24W, PSY24W, PSR24W, PW24W, PWY24W, PWR24W		4.0		4.0
	PX24W, PSX24W		4.2		4.2
α 7/		58.0 °			58.0° min.
P24W PX24W PY24W PR24W PS24W PSX24W PSY24W PSR24W	Cap PGU20-3 Cap PGU20-7 Cap PGU20-4 Cap PGU20-6 Cap PG20-3 Cap PG20-7 Cap PG20-4 Cap PG20-6	in accordance with IEC Publication 60061 (sheet 7004-127-2)			
PW24W PWY24W PWR24W	Cap WP3.3x14.5-3 Cap WP3.3x14.5-4 Cap WP3.3x14.5-6	in accordance with IEC Publication 60061 (sheet 7004-XXX-X)			

ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS				
Rated values	Volts		12	12
	Watts		24	24
Test voltage	Volts		13.5	13.5
Objective values	Watts		25 max.	25 max.
	Luminous Flux	P24W PS24W PW24W	500 +10/-20 %	
		PX24W PSX24W	500 +10/-15 %	
		PY24W PSY24W PWY24W	300 +15/-25 %	
		PR24W PSR24W PWR24W	115 +15/-25 %	

Reference luminous flux at approximately		
	12 V	White: 345 lm
	13.2 V	White: 465 lm
	13.5 V	White: 500 lm Amber: 300 lm Red: 115 lm

4/ For categories PS24W, PSX24W, PSY24W and PSR24W, dimensions shall be checked with O-ring removed.

5/ The filament position is checked by means of a “box-system”; sheet P24W/3.

6/ The ends of the filament are defined as the points where, when the viewing direction is perpendicular to the plane through the filament lead-in wires as showed in the drawing on sheet P24W/1, the projection of the outside of the end turns crosses the filament axis.

7/ No part of the cap beyond the reference plane shall interfere with angle α. The bulb shall be optically distortion free within the angle 2α + 180°.

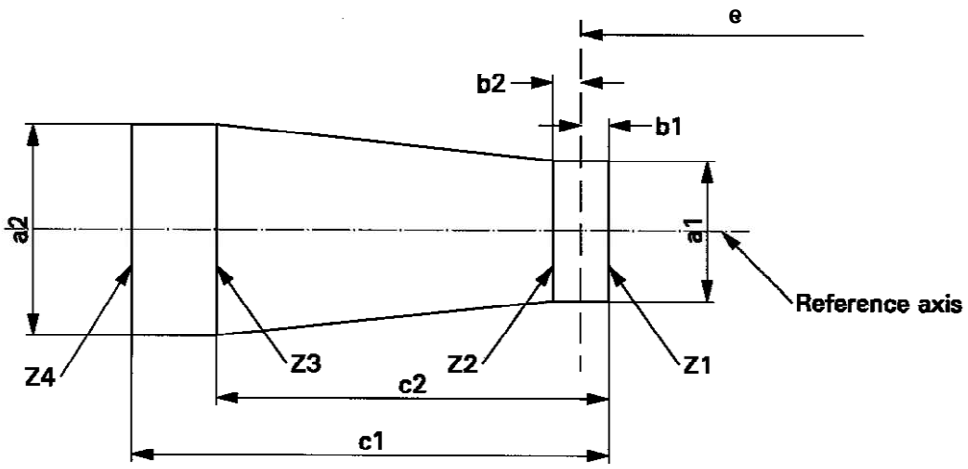
8/ The light emitted from standard filament lamps shall be white for categories P24W, PX24W, PS24W, PSX24W and PW24W; white or amber for categories PY24W, PSY24W and PWY24W; white or red for categories PR24W, PSR24W and PWR24W.

Sheet P24W/3

CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W, PSR24W, PW24W, PWY24W and PWR24W

Screen projection requirements

This test is used to determine, by checking whether the filament is correctly positioned relative to the reference axis and reference plane, whether a filament lamp complies with the requirements.



P24W, PY24W, PR24W, PS24W, PSY24W, PSR24W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.9	3.9	0.5	5.2	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

PW24W, PWY24W, PWR24W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	2.5	2.5	0.4	5.0	3.8
Standard filament lamps	1.5	1.7	0.25	4.7	3.8

PX24W, PSX24W	a1	a2	b1, b2	c1	c2
Filament lamps of normal production	1.9	1.9	0.35	5.0	4.0
Standard filament lamps	1.5	1.5	0.25	4.7	4.0

The filament position is checked in two mutually perpendicular planes, one of them being the plane through the lead-in wires.

The ends of the filament as defined on sheet P24W/2, note 6/, shall lie between Z1 and Z2 and between the lines Z3 and Z4.

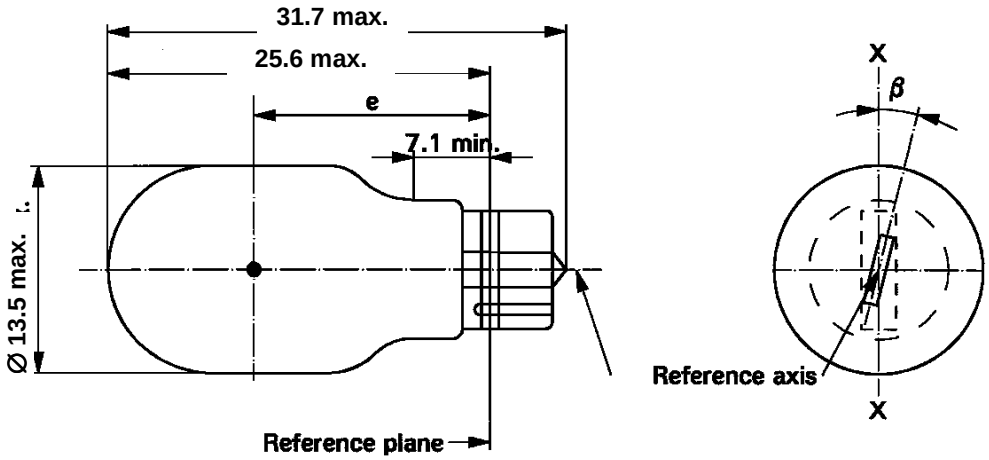
The filament shall lie entirely within the limits shown.

Insert a new sheet W10W/1, between sheet W5W/1 and sheet W15/5W/1, to read:
(see next pages).

Replace sheet W16W /1, by a new sheet, to read: (see next pages).

" **CATEGORIES W10W and WY10W** **Sheet W10W/1**

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

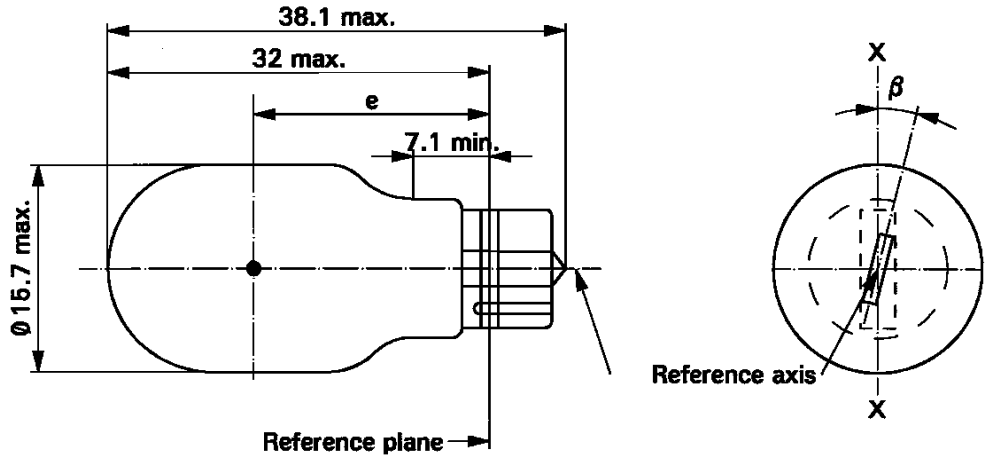


Dimensions in mm			Filament lamps of normal production			Standard filament lamp
			min.	nom.	max.	
e			15.5	17.0	18.5	17.0 ± 0.3
Lateral deviation 1/					1.0	0.5 max.
β			-15°	0°	+ 15°	0° ± 5°
Cap W2.1x9.5d in accordance with IEC Publication 60061 (sheet 7004-91-3)						
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS						
Rated values	Volts		6		12	12
	Watts		10			10
Test voltage	Volts		6.75		13.5	13.5
Objective values	Watts		11 max.			11 max.
	Luminous flux	White	125 ± 20 %			
		Amber	75 ± 20 %			
Reference luminous flux at approximately 13.5 V:						White: 125 lm
						Amber: 75 lm

1/ Maximum lateral deviation of filament centre from two mutually perpendicular planes both containing the reference axis and one containing axis X-X."

" **CATEGORIES W16W AND WY16W** **Sheet W16W/1**

The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp



Dimensions in mm			Filament lamps of normal production			Standard filament lamp
			min.	nom.	max.	
e			18.3	20.6	22.9	20.6 ± 0.3
Lateral deviation 1/					1.0	0.5 max.
β			-15°	0°	+ 15°	0° ± 5°
Cap W2.1x9.5d in accordance with IEC Publication 60061 (sheet 7004-91-3)						
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS						
Rated values	Volts		12			12
	Watts		16			16
Test voltage	Volts		13.5			13.5
Objective values	Watts		21.35 max.			21.35 max.
	Luminous flux	White	310 ± 20 %			
		Amber	190 ± 20 %			
Reference luminous flux at approximately 13.5 V:						White: 310 lm
						Amber: 190 lm

1/ Maximum lateral deviation of filament centre from two mutually perpendicular planes both containing the reference axis and one containing axis X-X."

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