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Item 4.2.12. of the provisional agenda

1958 AGREEMENT

Consideration of draft amendments to existing Regulations

Proposal for Supplement 29 to the 03 series of Amendments to Regulation No. 37

(Filament lamps for use in approved lamp units)

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 fifty-seventh session. It is based on ECE/TRANS/WP.29/GRE/2007/13, as amended by para. 9 of the report, ECE/TRANS/WP.29/GRE/2007/14, not amended, and ECE/TRANS/WP.29/GRE/2006/36, not amended. It is submitted to WP.29 and AC.1 for consideration (ECE/TRANS/WP.29/GRE/57, paragraphs 9, 10 and 11).

Annex 1,

In the title of Annex 1, the footnote */, amend to read:

*/ Tables, Electrical and Photometric characteristics:
Voltage is expressed in V;
Wattage is expressed in W;
Luminous flux is expressed in lm.

In a case that for a category of filament lamp more than one value of reference luminous flux is specified, the value at approximately 12 V for approval of a lighting device and 13.5 V for approval of a light-signalling device shall be applied unless otherwise specified by the regulation used for the approval of the device."

The list of categories of filament lamps and their sheets, amend to read (including deletion of the reference to footnote ****/ for categories H21W, PSX24W and PX24W and footnote ****/ as well as insertion of a reference to a new footnote *****/ for category HS6 and footnote *****/):

<u>"Category</u>	<u>Sheet number(s)</u>
....	...
	HS5/1 to 4
	HS6/1 to 4
	P13W/1 to 3
...	...
H14	H14/1 to 4
H21W <u>**/</u>	H21W/1 to 2
H27W/1	H27W/1
....	...
HS5	HS5/1 to 4
HS6 <u>*****/</u>	HS6/1 to 4
PSX24W <u>**/</u>	P24W/1 to 3
PX24W <u>**/</u>	P24W/1 to 3
R2 <u>*****/</u>	R2/1 to 3
...	...
only for signalling lamps:	
....
H6W	H6W/1
HY6W	H6W/1
HY21W	H21W/1 to 2
P13W	P13W/1 to 3
.... "	

*****/ Not for use in Regulation No. 112 headlamps."

Sheet H1/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,150
	13.2 V	1,550"

Sheet H3/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,100
	13.2 V	1,450"

Sheet H4/2, the table, the last row (corresponding to standard filament lamps), amend to read:

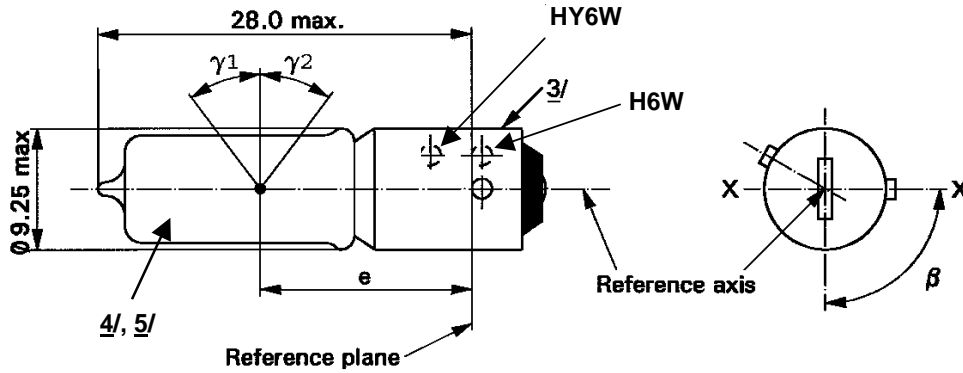
"

Reference luminous flux at approximately	12 V	1,250	750
	13.2 V	1,650	1,000"

Sheets H6W/1, amend to read:

" CATEGORIES H6W AND HY6W Sheet H6W/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		14.25	15.0	15.75	15.0 ± 0.25
Lateral deviation	<u>1/</u>			0.75	0.4 max
α		82.5°	90°	97.5°	90° ± 5°
γ1, γ2	<u>2/</u>	30°			30° min.
Cap:	H6W: BAX9s HY6W: BAZ9s	in accordance with IEC Publication 60061 (sheet 7004-8-1) in accordance with IEC Publication 60061 (sheet 7004-150-1)			
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS					
Rated values	Volts	12			12
	Watts	6			6
Test voltage	Volts	13.5			13.5
Objective values	Watts	7.35 max.			7.35 max.
	Luminous flux	H6W	125 ± 12 %		
		HY6W	75 ± 17 %		
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.
- 2/ In the area between the outer legs of the angles γ1 and γ2, the bulb shall have no optically distorting areas and the curvature of the bulb shall have a radius not less than 50 per cent of the actual bulb diameter.
- 3/ Over the entire length of the cap there shall be no projections or soldering exceeding the permissible maximum diameter of the cap.
- 4/ The light emitted from filament lamps of normal production shall be white for category H6W and amber for category HY6W.
- 5/ The light emitted from standard filament lamps shall be white for category H6W and amber or white for

category HY6W.

Sheet H7/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,100
	13.2 V	1,500"

Sheet H8/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	600
	13.2 V	800"

Sheet H9/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,500
	13.2 V	2,100"

Sheet H10/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	600
	13.2 V	850"

Sheet H11/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,000
	13.2 V	1,350"

Sheet H12/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	775
	13.2 V	1,050"

Sheet H13/4, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	800	1,200
	13.2 V	1,100	1,700"

Sheet H14/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

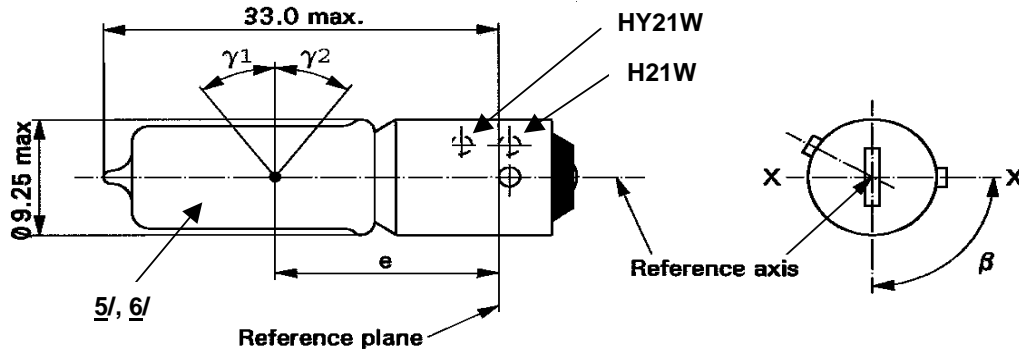
Reference luminous flux at approximately	12 V	860	1,300
	13.2 V	1,150	1,750"

Sheet H21W/1, amend to read:

CATEGORIES H21W AND HY21W

Sheet H21W/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			20.0 <u>1/</u>		20.0 ± 0.25
f	12 V			3.8	3.8 + 0/ - 1
	24 V			4.5	
Lateral deviation <u>2/</u>				<u>1/</u>	0.0 ± 0.15 <u>3/</u>
β		82.5°	90°	97.5°	90° ± 5°
γ1, γ2 <u>4/</u>		45°			45° min.
Cap:		H21W: BAY9s	in accordance with IEC Publication 60061 (sheet 7004-9-1)		
		HY21W: BAW9s	in accordance with IEC Publication 60061 (sheet 7004-149-1)		
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS					
Rated values	Volts		12	24	12
	Watts		21	21	21
Test voltage	Volts		13.5	28.0	13.5
Objective values	Watts		26.25 max.	29.4 max.	26.25 max.
	Luminous flux	H21W	600 ± 12 %	600 ± 15 %	
		HY21W	300 ± 17 %	300 ± 20 %	
Reference luminous flux at approximately				12 V	White: 415 lm
				13.2 V	White: 560 lm
				13.5 V	White: 600 lm

1/ To be checked by means of a "Box system", sheet H21W/2.

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

3/ The lateral deviation with respect to the plane perpendicular to axis X-X is measured in the position described in paragraph 1. of the test procedure specified on sheet H21W/2.

4/ In the area between the outer legs of the angles γ1 and γ2, the bulb shall have no optical distorting areas and the curvature of the bulb shall have a radius not less than 50 per cent of the actual bulb diameter.

5/ The light emitted from filament lamps of normal production shall be white for category H21W and amber for category HY21W.

6/ The light emitted from standard filament lamps shall be white for category H21W and amber or white for category HY21W."

Sheet H21W/2, the title, amend to read: "CATEGORIES H21W AND HY21W"

Sheet H27W/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	350 lm
	13.2 V	450 lm
	13.5 V	477 lm"

Sheet HB3/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,300
	13.2 V	1,860"

Sheet HB4/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	825
	13.2 V	1,095"

Sheet HIR1/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,840
	13.2 V	2,500"

Sheet HIR2/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	1,355
	13.2 V	1,875"

Sheet HS1/2, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous flux at approximately	12 V	700	450
	13.2 V	825	525"

Sheet HS5/3, the table, the last row (corresponding to standard filament lamps), amend to read:

"

Reference luminous at approximately	12 V	460	380
	13.2 V	620	515"

Insert new sheets HS6/1 to 4, between sheet HS5/4 and sheet P13W/1, to read:

"CATEGORY HS6

Sheet HS6/1

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

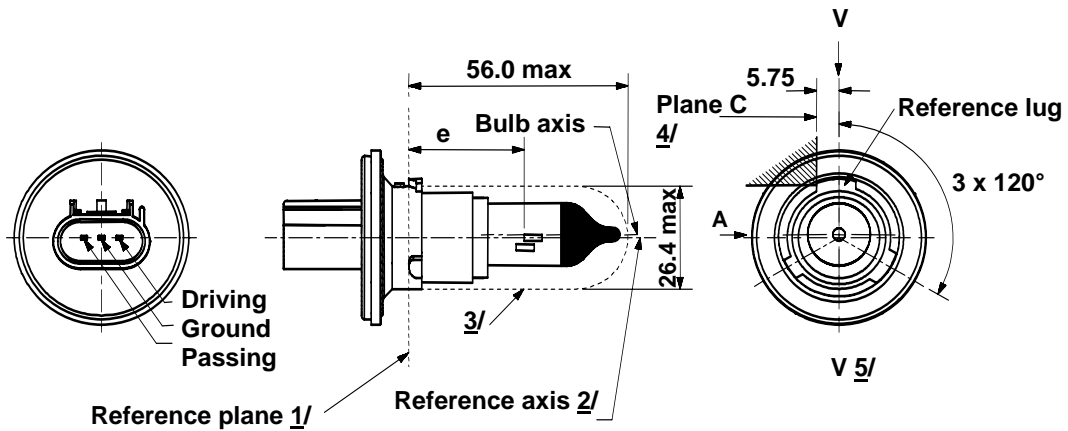


Figure 1 - Main drawings

- 1/ The reference plane formed by the underside of the three radiused tabs of the cap.
- 2/ The reference axis is perpendicular to the reference plane and crosses the intersection of the two perpendiculars as indicated in Figure 2 on sheet HS6/2.
- 3/ Glass bulb and supports shall not exceed the envelope as indicated. The envelope is concentric to the reference axis.
- 4/ The filament lamp shall be rotated in the measuring holder until the reference lug contacts plane C of the holder.
- 5/ Plane V-V is the plane perpendicular to the reference plane passing through the reference axis and parallel to plane C."

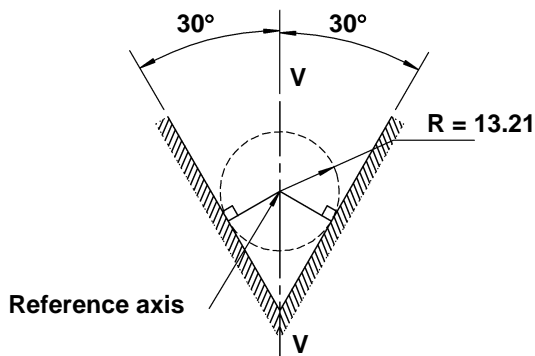


Figure 2
Definition of reference axis 2/

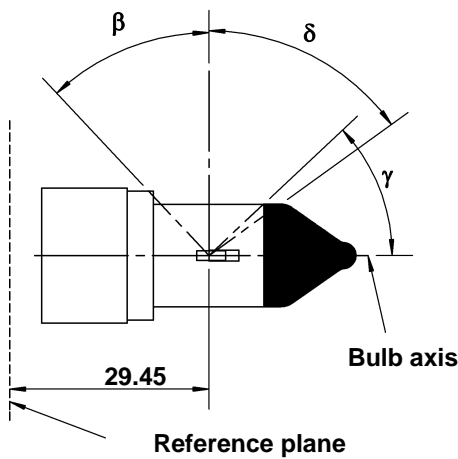
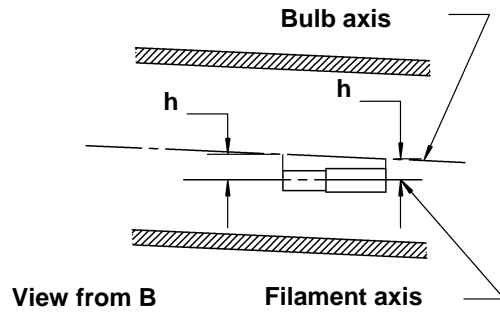
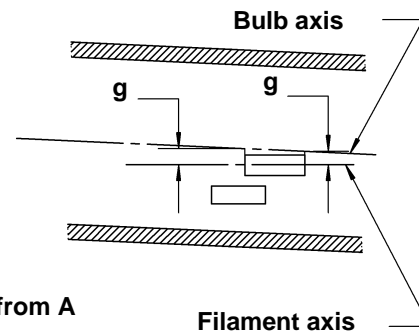


Figure 3
Undistorted area 6/
and opaque coating 7/



View from B
Bulb axis
Filament axis



View from A
Bulb axis
Filament axis

Figure 4
Bulb offset 8/

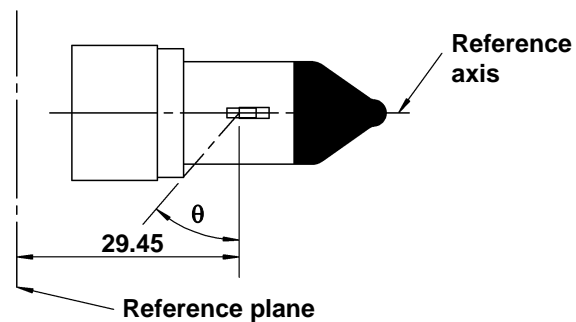


Figure 5
Light blocking toward cap 9/

- 6/ Glass bulb shall be optically distortion-free axially and cylindrically within the angles β and δ . This requirement applies to the whole bulb circumference within the angles β and δ and does not need to be verified in the area covered by the opaque coating.
- 7/ The opaque coating shall extend at least to the cylindrical part of the bulb on the whole bulb top circumference. It shall moreover extend at least to a plane parallel to the reference plane where γ crosses the outer bulb surface as shown in Figure 3 (view in direction B as indicated on sheet HS6/1).
- 8/ Offset of passing-beam filament in relation to the bulb axis is measured in two planes parallel to the reference plane where the projection of the outside end turns nearest to and farthest from the reference plane crosses the passing-beam filament axis.
- 9/ Light shall be blocked over the cap end of the bulb extending to angle θ . This requirement applies in all directions around the reference axis.

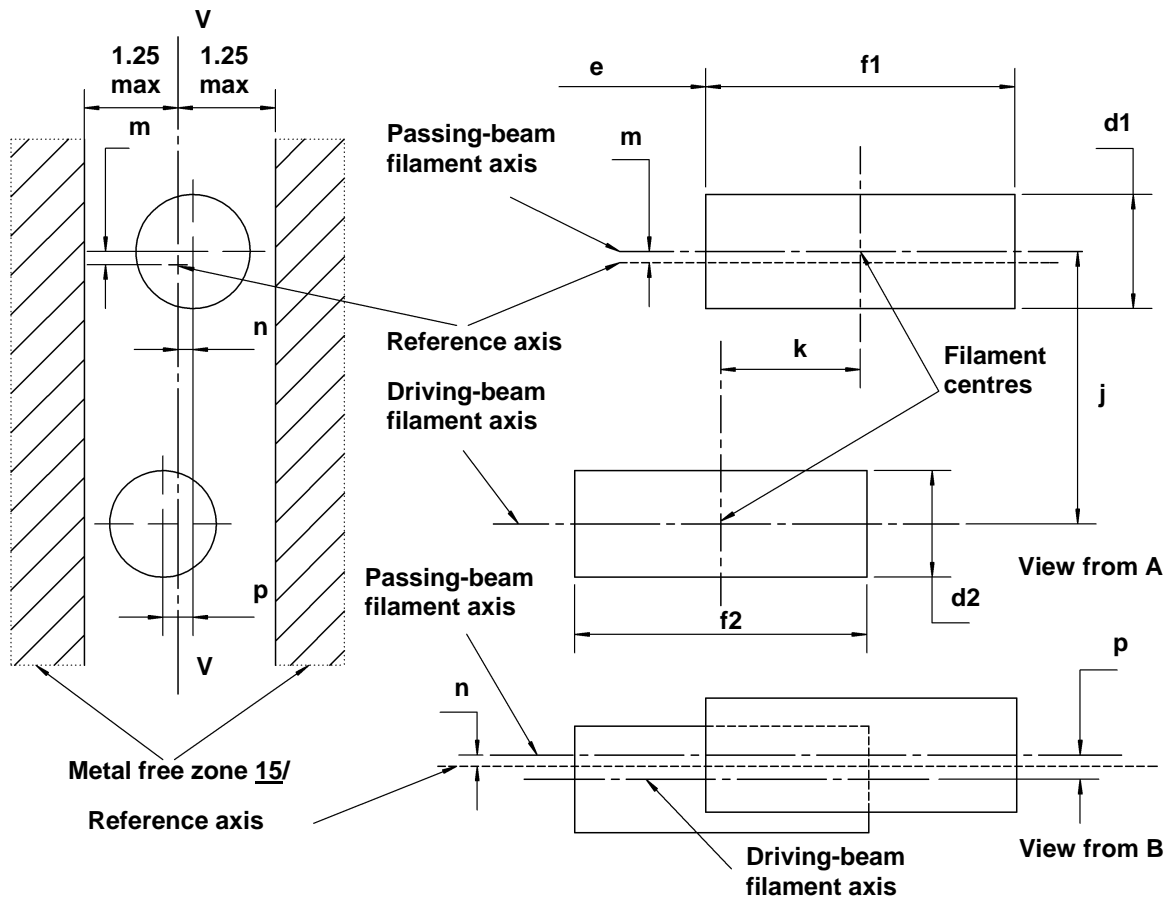


Figure 6
Position and dimensions of filaments 10/ 11/ 12/ 13/ 14/

- 10/ Dimensions j , k and p are measured from the centre of the passing-beam filament to the centre of the driving-beam filament.
- 11/ Dimensions m and n are measured from the reference axis to the centre of the passing-beam filament.
- 12/ Both filaments axis are to be held within a 2° tilt with respect to the reference axis about the centre of the respective filament.
- 13/ Note concerning the filament diameters: for the same manufacturer, the design filament diameter of standard (étalon) filament lamp and filament lamp of normal production shall be the same.
- 14/ For both the driving-beam and the passing-beam filament distortion shall not exceed ± 5 per cent of filament diameter from a cylinder.
- 15/ The metal free zone limits the location of lead wires within the optical path. No metal parts shall be located in the shaded area as seen in Figure 6.

CATEGORY HS6

Sheet HS6/4

Dimensions in mm			Tolerance			
			Filaments lamps of normal production		Standard filament lamp	
d1	<u>13/ 17/</u>	1.4 max.	-		-	
d2	<u>13/ 17/</u>	1.4 max.	-		-	
e	<u>16/</u>	29.45	± 0.20		± 0.10	
f1	<u>16/</u>	4.4	± 0.50		± 0.25	
f2	<u>16/</u>	4.4	± 0.50		± 0.25	
g	<u>8/ 17/</u>	0.5 d1	± 0.50		± 0.30	
h	<u>8/</u>	0	± 0.40		± 0.20	
j	<u>10/</u>	2.5	± 0.30		± 0.20	
k	<u>10/</u>	2.0	± 0.20		± 0.10	
m	<u>11/</u>	0	± 0.24		± 0.20	
n	<u>11/</u>	0	± 0.24		± 0.20	
p	<u>10/</u>	0	± 0.30		± 0.20	
β		42° min.	-		-	
δ		52° min.	-		-	
γ		43°	+0° / -5°		+0° / -5°	
θ	<u>9/</u>	41°	± 4°		± 4°	
Cap: PX26.4t in accordance with IEC Publication 60061 (sheet 7004-[xxx-x])						
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS <u>18/</u>						
Rated values	Volts	12		12		
	Watts	40	35	40	35	
Test voltage	Volts	13.2		13.2		
Objective values	Watts	45 max.	40 max.	45 max.	40 max.	
	Luminous flux	900 ± 15 %	600 ± 15 %			
Reference luminous flux at approximately		12 V		630/420		
		13.2 V		900/600		

16/ The ends of the filament are defined as the points where, when the viewing direction is direction A as shown on sheet HS6/1, the projection of the outside of the end turns crosses the filament axis.

17/ d1 is the actual diameter of the passing-beam filament.

d2 is the actual diameter of the driving-beam filament.

18/ The values indicated in the left-hand columns relate to the driving-beam filament and those indicated in the right-hand columns

Sheet P24W/2, the table, the last row (corresponding to standard filament lamps), amend to read:
"

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"

Sheet S1/S2/2, the table, the last row (corresponding to standard filament lamps), amend to read:
"

Reference luminous flux	S1	at approximately	6 V	398	284
	S2	at approximately	12 V	568	426
			13.2 V	634	457
			13.5 V	650	465"
