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(One-hundred-and-thirty-fourth session,  
16-19 November 2004, agenda item 5.2.8.)

PROPOSAL FOR DRAFT SUPPLEMENT 25 TO THE 03 SERIES  
OF AMENDMENTS TO REGULATION No. 37

(Filament lamps)

Transmitted by the Working Party on Lighting and Light-Signalling (GRE)

Note: The text reproduced below was adopted by GRE at its fifty-second session and is transmitted for consideration to WP.29 and AC.1 (TRANS/WP.29/GRE/52, paras. 25 to 28). It is based on documents TRANS/WP.29/GRE/2004/2 and TRANS/WP.29/GRE/2004/16, not amended, and on TRANS/WP.29/GRE/2004/17, as amended by para. 27 of the report.

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<http://www.unece.org/trans/main/welcwp29.htm>

Insert a new paragraph 2.1.2.5., to read:

"2.1.2.5. halogen"

Paragraph 2.3.3., delete the reference to the footnote and the footnote pertinent to this paragraph.

Paragraph 3.10., amend to read (deletion of the last sentence):

"3.10. Standard filament lamps

Additional requirements for standard (étalon) filament lamps are given on the relevant data sheets of annex 1.

Bulbs of standard (étalon) filament lamps emitting white light shall not alter the CIE trichromatic coordinates of a luminous source having a colour temperature of 2856 K by more than 0.010 units in the x and/or y direction.

For standard (étalon) filament lamps emitting amber light, changes of the bulb temperature shall not affect the luminous flux which might impair photometric measurements of signalling devices"

Annex 1,

The list of categories of filament lamps and their sheet numbers, remove footnote \*\*/ and remove from all filament lamps emitting red light the reference to the footnote \*\*/.

The list of categories of filament lamps, amend to read:

".....

Category	Sheet number(s)
H21W	H21W/1 to 2
P13W	P13W1 to 3
P19W	P19W/1 to 3

....."

The list of sheets for filament lamps, amend to read:

".....  
Sheet  
number(s)  
.....  
HS5/1 to 4  
P13W/1 to 3  
P19W/1 to 3  
....."

Sheets H13/1 to 4, replace by new sheets H13/1 to 4; (see next pages).

Insert new sheets P13W/1 to 3 (between sheet HS5/4 and sheet P19W/1 as indicated in the "List of sheets" above), to read: (see next pages).

"

## CATEGORIES H13 AND H13A

Sheet H13/1

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

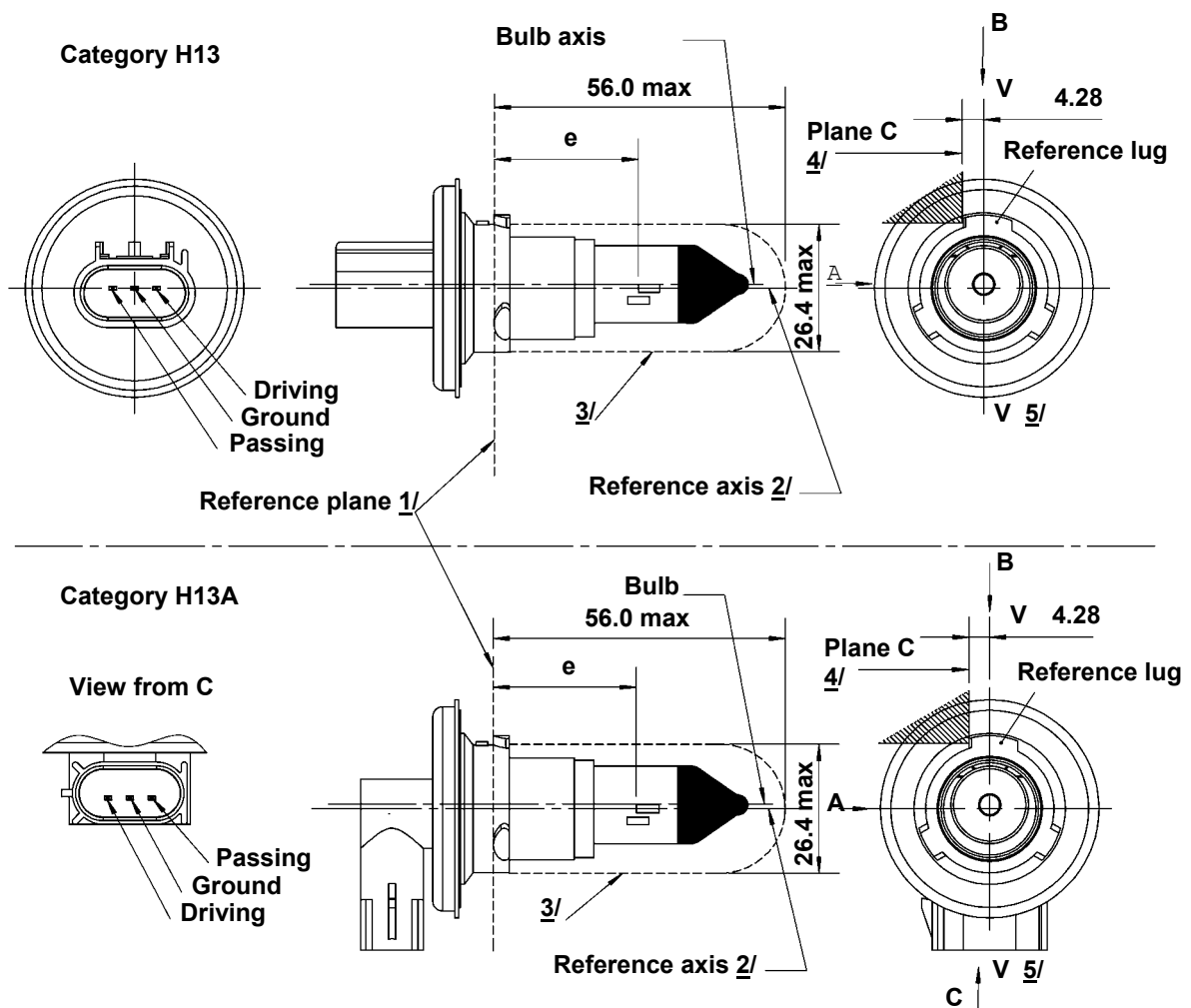


Figure 1 Main drawing

- 1/ The reference plane is the 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 H13/2.
- 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.

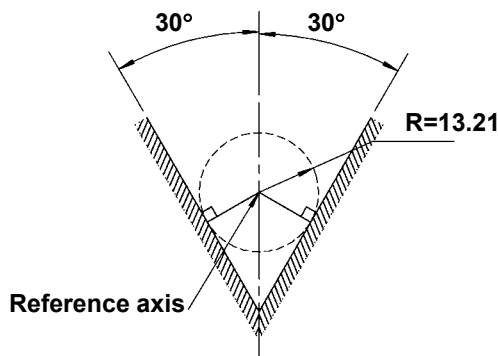


Figure 2  
Definition of reference axis 2/

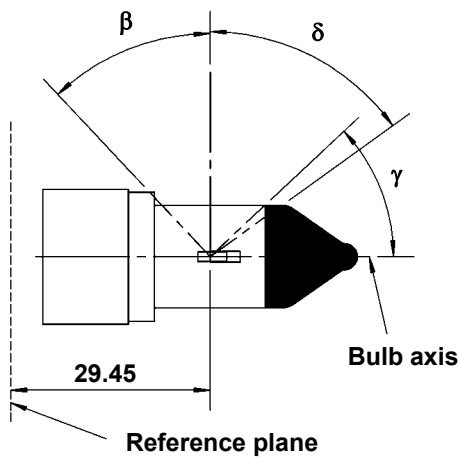
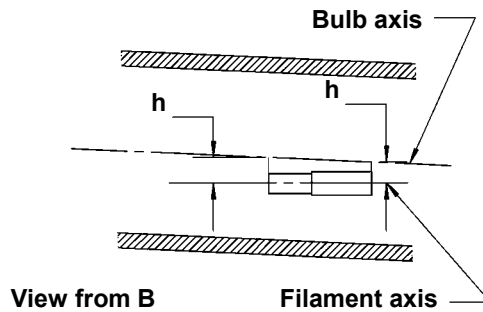
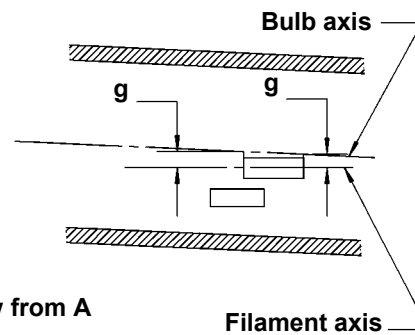


Figure 3  
Undistorted area 6/  
and opaque coating 7/



View from B



View from A

Figure 4  
Bulb offset 8/

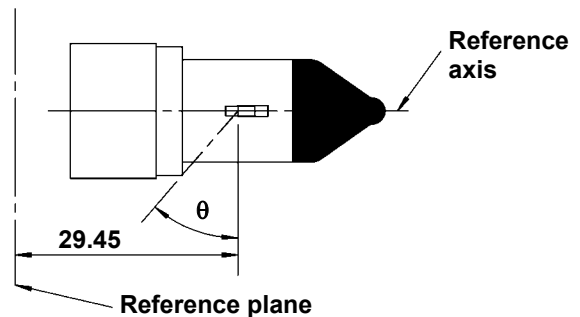


Figure 5  
Light blocking toward cap 9/

- 6/ Glass bulb shall be optically distortion-free axially within the angles  $\beta$  and  $\delta$ . This requirement applies to the whole bulb circumference within the angles  $\beta$  and  $\delta$ .
- 7/ The opaque coating shall extend to angle  $\gamma$  and shall extend at least to the cylindrical part of the bulb on the whole bulb circumference.
- 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  $\theta$ . This requirement applies in all directions around the reference axis.

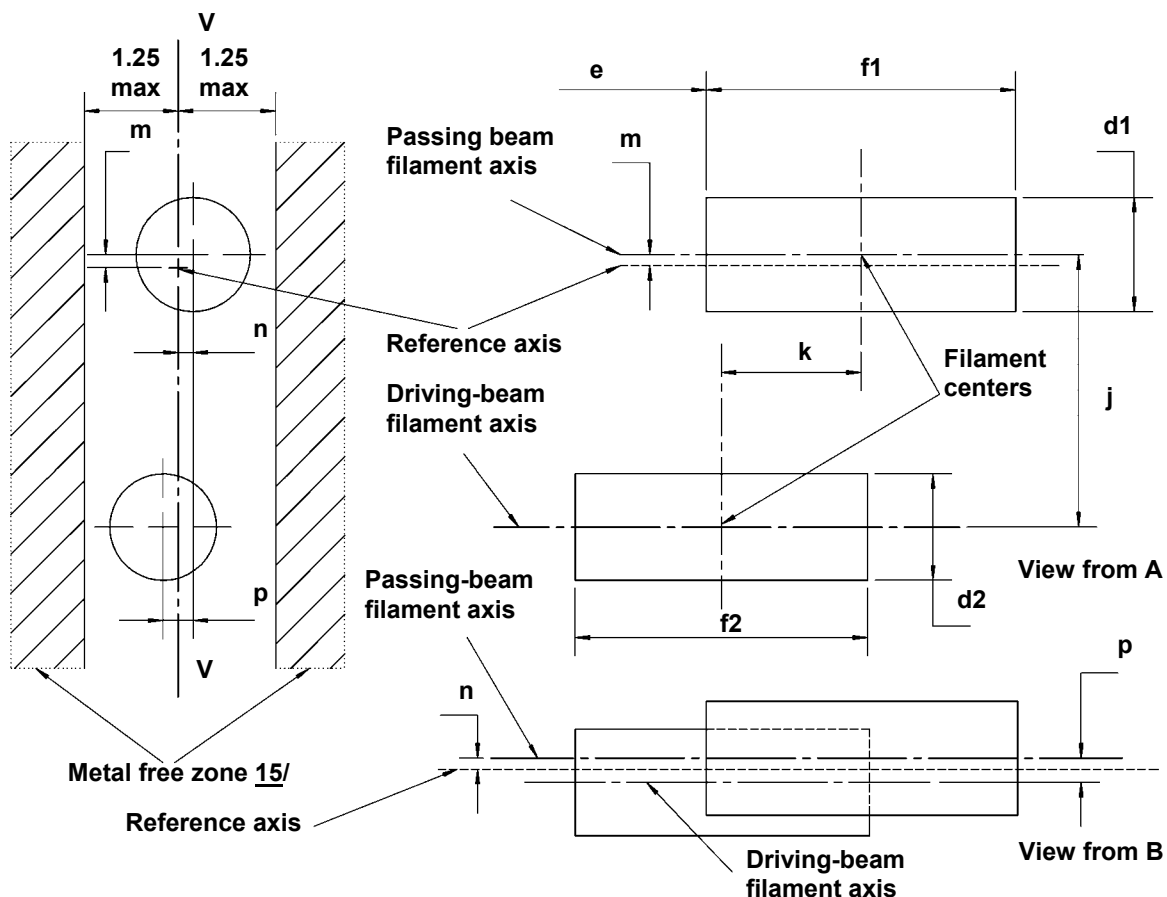


Figure 6

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  $2^\circ$  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 (etalon) 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  $\pm 5\%$  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.

## CATEGORIES H13 AND H13A

## Sheet H13/4

Dimensions in mm			Tolerance			
			Filaments lamps of normal production		Standard filament lamp	
d1	<u>13/ 17/</u>	1.8 max.	-		-	
d2	<u>13/ 17/</u>	1.8 max.	-		-	
e	<u>16/</u>	29.45	± 0.20		± 0.10	
f1	<u>16/</u>	4.6	± 0.50		± 0.25	
f2	<u>16/</u>	4.6	± 0.50		± 0.25	
g	<u>8/ 17/</u>	0.5 d1	± 0.40		± 0.20	
h	<u>8/</u>	0	± 0.30		± 0.15	
j	<u>10/</u>	2.5	± 0.20		± 0.10	
k	<u>10/</u>	2.0	± 0.20		± 0.10	
m	<u>11/</u>	0	± 0.20		± 0.13	
n	<u>11/</u>	0	± 0.20		± 0.13	
p	<u>10/</u>	0	± 0.08		± 0.08	
β		42° min.	-		-	
δ		52° min.	-		-	
γ		43°	+0° / -5°		+0° / -5°	
θ	<u>9/</u>	41°	± 4°		± 4°	
Cap:	H13: P26.4t H13A: PJ26.4t	in accordance with IEC Publication 60061 (sheet 7004-128-2)				
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS <u>18/</u>						
Rated values	Volts	12			12	
	Watts	55	60	55	60	
Test voltage	Volts	13.2			13.2	
Objective values	Watts	68 max.	75 max.	68 max.	75 max.	
	Luminous flux	1100 ± 15%	1700 ± 15%			
Reference luminous flux: 800/1200 lm at approximately 12 V						

16/ The ends of the filament are defined as the points where, when the viewing direction is direction A as shown on sheet H13/1, 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 passing-beam filament and those indicated in the right-hand columns to the driving-beam filament.

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

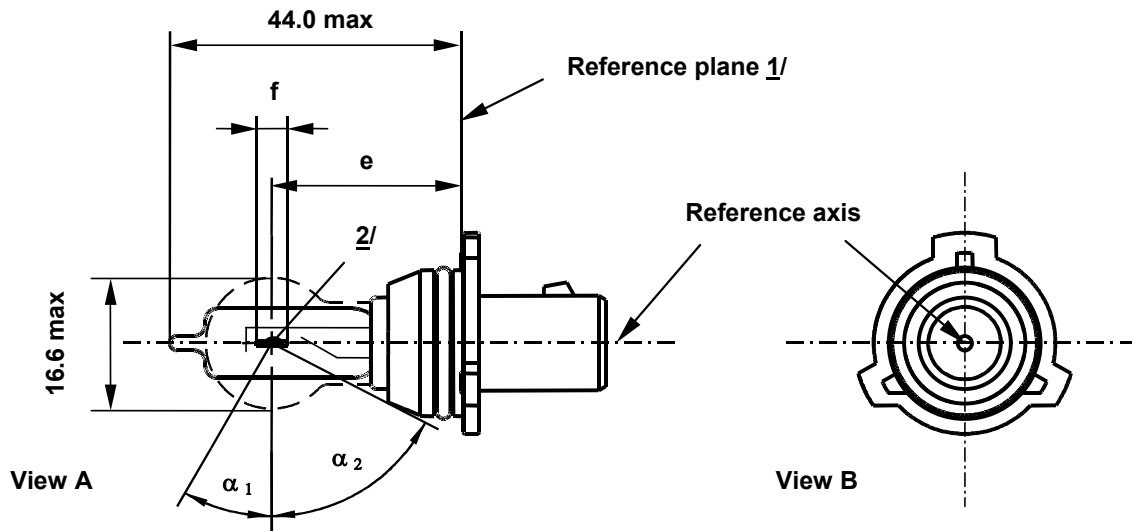


Figure 1 – Main drawing

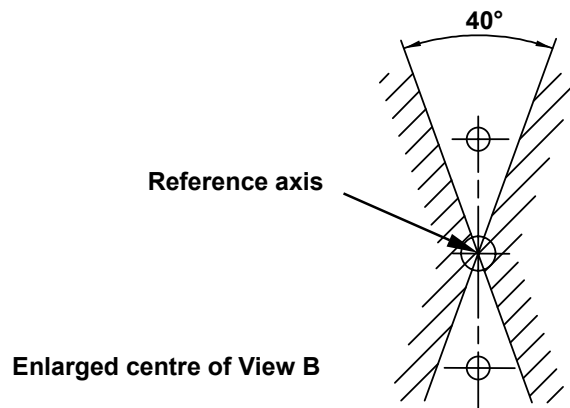


Figure 2 – Metal free zone 3/

- 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  $\alpha_1 + \alpha_2$ .



**CATEGORY P13W**

**Sheet P13W/2**

Dimensions in mm		Filament lamps of normal production		Standard filament lamp
e	<u>5/</u>	25.0	<u>4/</u>	25.0 ± 0.25
f	<u>5/</u>	4.3	<u>4/</u>	4.3 ± 0.25
$\alpha_1$	<u>6/</u>	30.0° min.		30.0° min.
$\alpha_2$	<u>6/</u>	58.0° min.		58.0° min.
Cap PG18.5d		in accordance with IEC Publication 60061 (sheet 7004-xxx-1)		
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

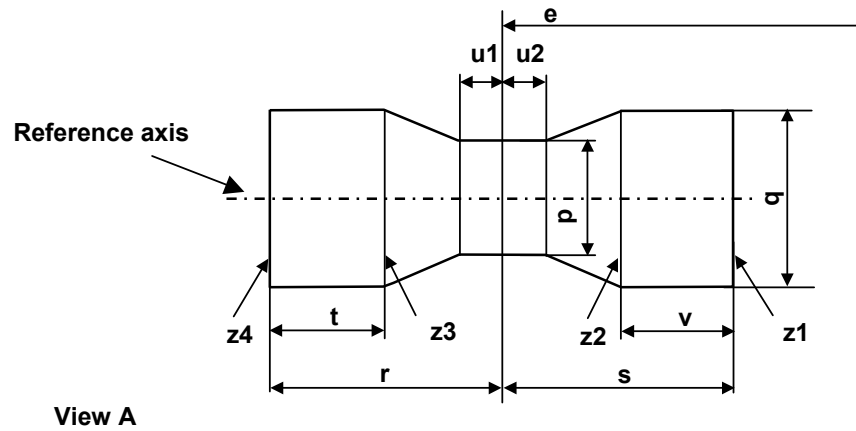
4/ To be checked by means of a "Box-System"; sheet P13W/3.

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  $\alpha_2$  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.

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.



	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.

..

Annex 2, item 9, amend to read:

"..... light emitted: White/selective-yellow/amber 2/  
Halogen filament lamp: yes/no 2/"

Annex 7, table 1, amend to read:

"Annex 7

SAMPLING AND COMPLIANCE LEVELS FOR MANUFACTURER TEST RECORDS

Table 1 - Characteristics

Grouping of characteristics	Grouping <u>*/</u> of test records between lamp types	Minimum 12 monthly sample per grouping <u>*/</u>	Acceptable level of non-compliance per grouping of characteristics (%)
Marking, legibility and durability	All types with the same external dimensions	315	1
Bulb quality	All types with the same bulb	315	1
Colour of the bulb	All coloured bulbs of the same design	315	
External lamp dimensions (excluding cap/base)	All types of the same category	200	1
Dimensions of caps and bases	All types of the same category	200	6.5
Dimensions related to internal elements <u>**/</u>	All lamps of one type	200	6.5
Initial readings, watts and lumens <u>**/</u>	All lamps of one type	200	1
Colour endurance test	All coated lamps of one type and one coating technology	20 <u>***/</u>	1

\*/ The assessment shall in general cover series production filament lamps from individual factories. A manufacturer may group together records concerning the same type from several factories, provided these operate under the same quality system and quality management.

\*\*/ In case a filament lamp has more than one inner element (filament, shield) the grouping of characteristics (dimensions, watts, lumens) applies to each element separately.

\*\*\*/ Representative distribution over categories, worst case, meaning a group of coated lamps using the same technology within the categories with the most stringent conditions for the coating."