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**ECONOMIC COMMISSION FOR EUROPE**

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World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Lighting and Light-Signalling (GRE)

(Fifty-fifth session, 3-7 October 2005,  
agenda item 18.1.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 37

(Filament lamps)

Transmitted by the expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the expert from GTB in order to clarify their position with regard to the category of filament lamp to be used in front fog lamps. It is based on a document without a symbol (informal document No. GRE-54-7), distributed at the fifty-fourth GRE session. It supersedes document TRANS/WP.29/GRE/2005/3, and is a complement to TRANS/WP.29/GRE/2004/19/Rev.1. The modifications to the existing text of the Regulation are marked in **bold** characters.

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Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

**A. PROPOSAL**

Annex 1.

The list of categories of filament lamps and their sheets, amend to read:

| "....<br>..... | Category                   |             | Sheet number(s)    |
|----------------|----------------------------|-------------|--------------------|
| .....          | H9                         | <u>***/</u> | H9/1 to 4          |
| .....          | H9B                        | <u>***/</u> | H9/1 to 4          |
| ....           | H14                        |             | H14/1 to 4         |
| .....          | <b>H21W</b>                | <u>**/</u>  | <b>H21W/1 to 2</b> |
| .....          | H27W/1                     |             | H27W/1 to 3        |
| ....           | HIR1                       | <u>***/</u> | HIR1/1 to 3        |
| ....           | HS5                        |             | HS5/1 to 4         |
| .....          | <b>PSX24W</b>              | <u>**/</u>  | <b>P24W/1 to 3</b> |
| .....          | <b>PX24W</b>               | <u>**/</u>  | <b>P24W/1 to 3</b> |
| .....          | R2                         |             | R2/1 to 3          |
| .....          |                            |             |                    |
|                | only for signalling lamps: |             |                    |
| ....           | H6W                        |             | H6W/1              |
| .....          | P13W                       |             | P13W/1 to 3        |
| ....."         |                            |             |                    |

Insert new footnotes \*\*/ and \*\*\*/, to read:

- \*\*/ **Not for use in passing beam headlamps.**
- \*\*\*/ **Not for use in front fog lamps marked "B" as defined in Regulation No. 19."**

Sheet H21W/1, the table, amend to read (adding a value for the flux at approximately 12V):

"....

|  |            |               |
|--|------------|---------------|
| Reference luminous flux at approximately | <b>12V</b> | <b>415 lm</b> |
|  | 13.5 V     | 600 lm        |

...."

Sheet H27W/2, the table amend to read (adding a value for the flux at approximately 12V):

"....

|  |             |               |
|--|-------------|---------------|
| Reference luminous flux at approximately | <b>12 V</b> | <b>350 lm</b> |
|  | 13.5 V      | 477 lm        |

...."

Sheet P19W/2, the table, amend to read:

" ....

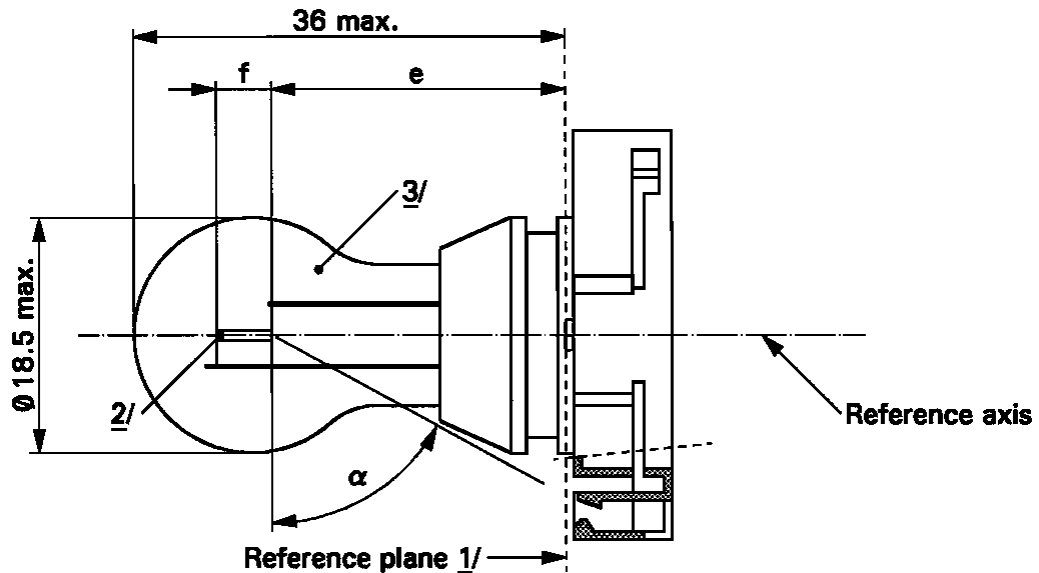
|          |           |            |  |  |                 |
|----------|-----------|------------|--|--|-----------------|
| $\alpha$ | <u>7/</u> | <b>58°</b> |  |  | <b>58° min.</b> |
|----------|-----------|------------|--|--|-----------------|

..."

Sheets from P24W/1 to P24W/3, amend to read: (see next pages)

**"CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W and PSR24W**

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



- 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 and **PSX24W**; amber for categories PY24W and PSY24W; red for the categories PR24W and PSR24W. (See also note 8/)

**CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W and PSR24W**

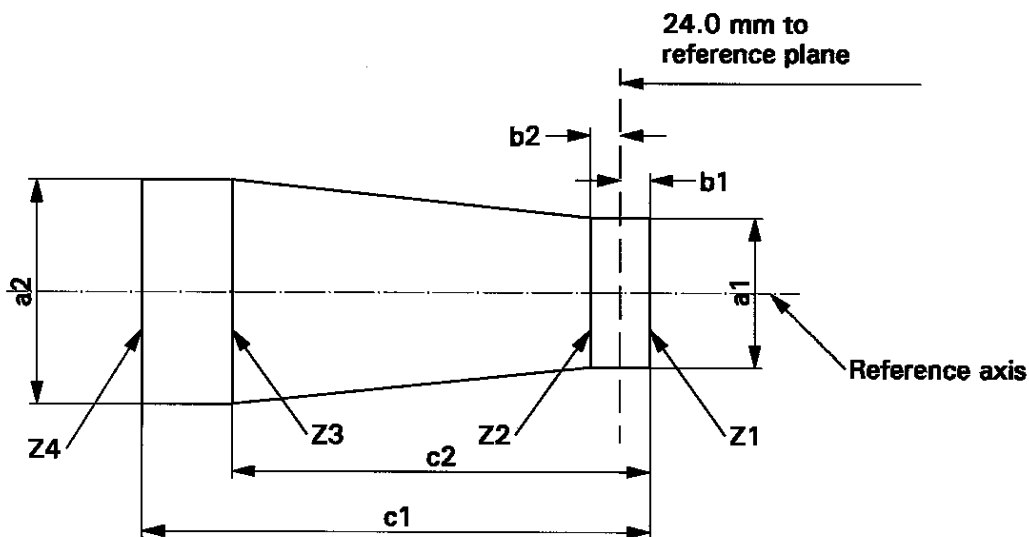
| Dimensions in mm   |                       | Filament lamps of normal production                         |                               |   | Standard filament lamp |  |
|--|-----------------------|---|-------------------------------|---|------------------------|--|
|  |                       | min.  | nom.                          | max.  | <u>8/</u>              |  |
| e  |                       | <u>5/</u> <u>6/</u>   | 24.0                          |   | 24.0                   |  |
| f  | <u>5/</u> , <u>6/</u> | <b>P24W, PY24W, PR24W, PS24W, PSY24W, PSR24W</b>            | 4.0                           |   | <b>4.0</b>             |  |
|  |                       | <b>PX24W, PSX24W</b>  | <b>4.2</b>                    |   | <b>4.2</b>             |  |
| $\alpha$   |                       | <u>7/</u>   | <b>58.0°</b>                  |   | <b>58.0° min.</b>      |  |
| P24W Cap PGU20-3<br><b>PX24W Cap PGU20-7</b><br>PY24W Cap PGU20-4<br>PR24W Cap PGU20-6<br>PS24W Cap PG20-3<br><b>PSX24W Cap PG20-7</b><br>PSY24W Cap PG20-4<br>PSR24W Cap PG20-6 |                       | in accordance with IEC Publication 60061 (sheet 7004-127-2) |                               |   |                        |  |
| <b>ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS</b>  |                       |   |                               |   |                        |  |
| Rated values   |                       | Volts   | 12                            |   | 12                     |  |
|  |                       | Watts   | 24                            |   | 24                     |  |
| Test voltage   |                       | Volts   | 13.5                          |   | 13.5                   |  |
| Objective values   |                       | Watts   |                               | 25 max.                                       |                        |  |
|  |                       | Luminous flux   | P24W<br>PS24W                 | 500 +10/-20 %                                 |                        |  |
|  |                       |   | <b>PX24W</b><br><b>PSX24W</b> | 500 +10/- <b>15</b> %                         |                        |  |
|  |                       |   | PY24W<br>PSY24W               | 300 +15/-25 %                                 |                        |  |
|  |                       |   | PR24W<br>PSR24W               | 115 +15/-25 %                                 |                        |  |
| Reference luminous flux at approximately   |                       |   | <b>12 V</b>                   | <b>White: 345 lm</b>                          |                        |  |
|  |                       |   | 13.5 V                        | White: 500 lm<br>Amber: 300 lm<br>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 shown 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  $\alpha$ . The bulb shall be optically distortion free within the angle  $2\alpha + 180^\circ$ .
- 8/ The light emitted from standard filament lamps shall be white for categories P24W, **PX24W**, PS24W and **PSX24W**; white or amber for categories PY24W and PSY24W; white or red for categories PR24W and PSR24W.

**CATEGORIES P24W, PX24W, PY24W, PR24W, PS24W, PSX24W, PSY24W and PSR24W**

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.



| <b>P24W, PY24W, PR24W, PS24W, PSY24W, PSR24W</b> | 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 |

| <b>PX24W, PSX24W</b>                | a1         | a2         | b1, b2      | c1         | c2         |
|-------------------------------------|------------|------------|-------------|------------|------------|
| Filament lamps of normal production | <b>1.9</b> | <b>1.9</b> | <b>0.35</b> | <b>5.0</b> | <b>4.0</b> |
| Standard filament lamps             | 1.5        | <b>1.5</b> | 0.25        | 4.7        | <b>4.0</b> |

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."

**B. JUSTIFICATION**

During the fifty-second GRE session, it was decided to revise TRANS/WP.29/GRE/2004/19, in order to allow a front fog lamp with non-removable filament lamp according to Regulation No. 37, using the wording of Regulation No. 112. This has been done with the proposal

TRANS/WP.29/GRE/2004/19/Rev.1. Moreover, the applicable list of light source categories was removed and replaced by a reference to Regulation No. 37.

In addition, it was proposed to modify Regulation No. 37 in order to allow or to forbid some categories of filament lamps for the existing Regulation No. 19.

Categories H9, H9B and HIR1 are proposed to be excluded from front fog lamps as having a luminous flux of above 2000 lm while current Regulation No. 19 does not require a cleaning device. Categories proposed to be allowed for front fog lamps are H21W and P(S)X24W. Studies have shown that these light source categories can be used for front fog lamps and other lighting devices; the tolerances are in the order of magnitude of e.g. H1 and H3.

For the reason of deletion of the list of applicable light sources and their luminous flux at approximately 12V from Regulation No. 19, this luminous flux needs to be added as a reference luminous flux to the sheets for some categories in Regulation No. 37.

Some small change to the angle " $\alpha$ " of the P19W and P24W families is proposed to create some room for improvement around the cap and to "harmonize" with the same angle of P13W.

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