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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

Sixty-first session

Geneva, 30 March - 3 April 2009

Item 3(a) of the provisional agenda

**REGULATION No. 37**  
**(Filament lamps)**

**Proposal for Supplement 34 to the 03 series of amendments**

**Submitted by the expert from the Working Party "Brussels 1952" \*/**

The text reproduced below was prepared by the expert from the Working Party "Brussels 1952" (GTB) in order to introduce into Regulation No. 37 the provisions for a new category of filament light source HS5A. The proposal is based on the current text of the Regulation including draft Supplement 33 to the 03 series of amendments. The modifications to the current text of Regulation No. 37 are marked in bold characters.

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\*/ 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.

A. PROPOSAL

Annex 1,

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

"

Group 1

Without general restrictions:

| <u>Category</u>           | <u>Sheet number(s)</u> |
|---------------------------|------------------------|
| ...                       |                        |
| HS5                       | HS5/1 to 4             |
| <b>HS5A</b> <u>*****/</u> | <b>HS5A/1 to 3</b>     |
| HS6 <u>*****/</u>         | HS6/1 to 4             |
| ...                       |                        |

"

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

"

| <u>Sheet number(s)</u> |
|------------------------|
| ...                    |
| HS5/1 to 4             |
| <b>HS5A/1 to 3</b>     |
| HS6/1 to 4             |
| ...                    |

"

Insert footnote \*\*\*\*\*/, to read:

\*\*\*\*\*/      **Not for use in headlamps other than Regulation 113 class C headlamps "**

Insert new sheets HS5A/1 to 3, between sheet HS5/4 and sheet HS6/1, to read (see next pages):

" Sheet HS5A/1  
**CATEGORY HS5A**  
The drawings are intended only to illustrate the essential dimensions (in mm) of the filament lamp

FILAMENT LAMP FOR MOTORCYCLES

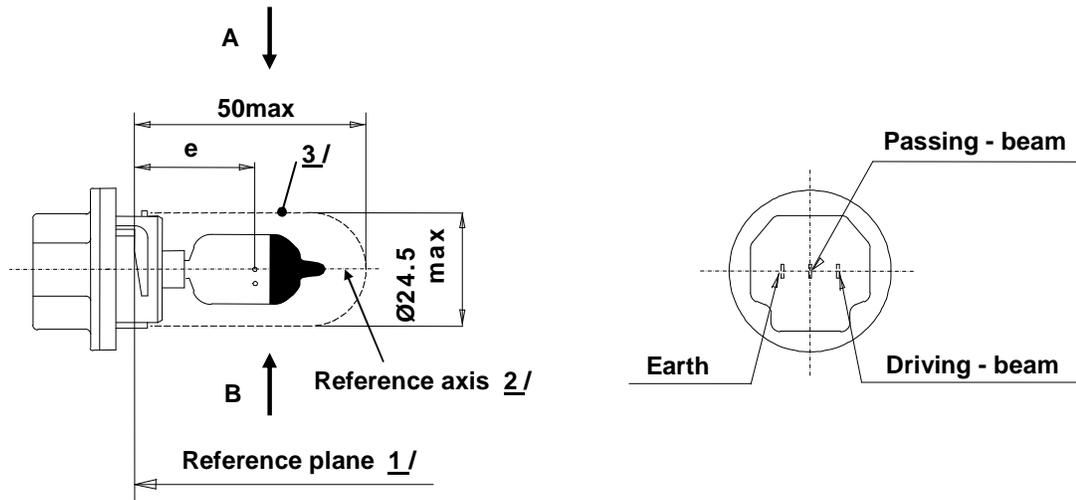


Figure 1 Main drawing

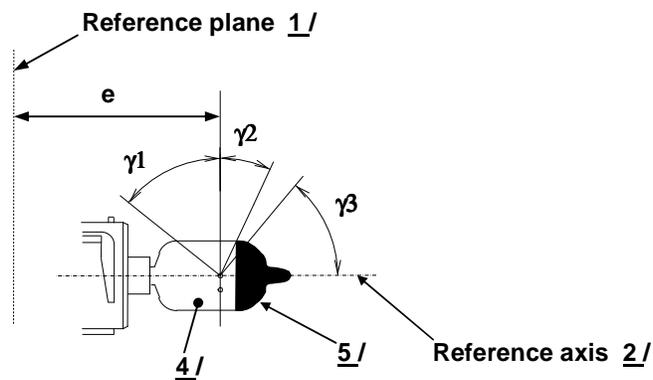
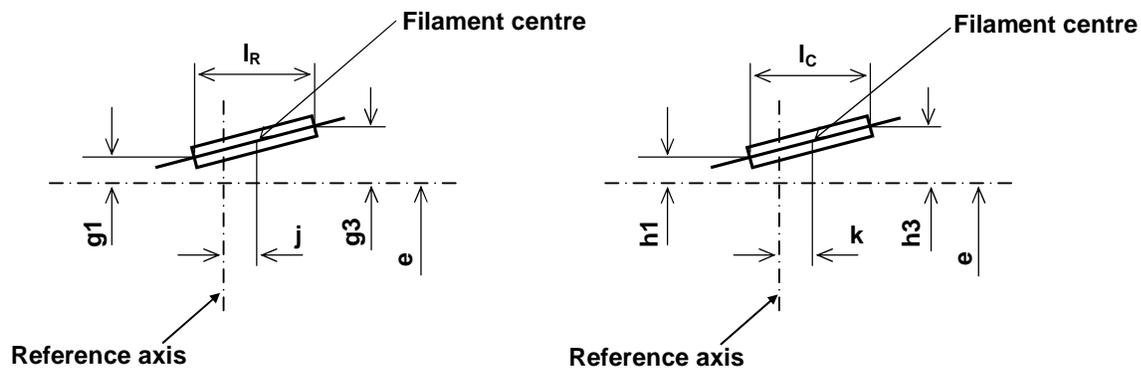


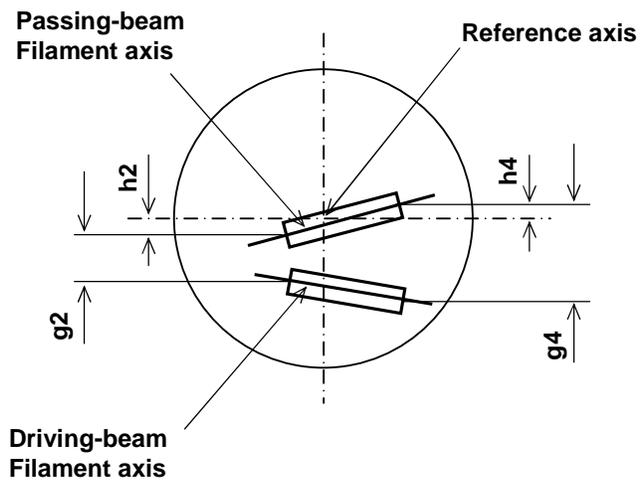
Figure 2 Distortion free area 4/ and black top 5/

- 1/ The reference plane is defined by three ramps inside surface.
- 2/ The reference axis is perpendicular to the reference plane and passing through the centre of the 23 mm cap diameter.
- 3/ Glass bulb and supports shall not exceed the envelope as indicated in figure 1. The envelope is concentric to the reference axis.
- 4/ Glass bulb shall be optically distortion free within the angles  $\gamma_1$  and  $\gamma_2$ . This requirement applies to the whole bulb circumference within the angles  $\gamma_1$  and  $\gamma_2$ .
- 5/ The obscuration shall extend at least to angle  $\gamma_3$  and shall extend at least to the cylindrical part of the bulb on the whole top circumference.



View B driving-beam filament

View A passing-beam filament



Top view of driving-beam and passing-beam filament

Figure 3  
Filament position and dimensions

CATEGORY HS5A

Sheet HS5A/3

| Dimensions in mm                                                       |               | Filament lamps of normal production |         | Standard filament lamp |         |         |
|------------------------------------------------------------------------|---------------|-------------------------------------|---------|------------------------|---------|---------|
|                                                                        |               | 12V                                 |         | 12V                    |         |         |
| e                                                                      | 26            | —                                   |         | —                      |         |         |
| l <sub>c</sub>                                                         | <u>6/</u> 4.6 | ±0.5                                |         | ± 0.3                  |         |         |
| k                                                                      | 0             | ±0.4                                |         | ± 0.2                  |         |         |
| h1, h3                                                                 | 0             | ±0.3                                |         | ± 0.15                 |         |         |
| h2, h4                                                                 | 0             | ±0.4                                |         | ± 0.2                  |         |         |
| l <sub>R</sub>                                                         | <u>6/</u> 4.6 | ±0.5                                |         | ± 0.3                  |         |         |
| j                                                                      | 0             | ±0.6                                |         | ± 0.3                  |         |         |
| g1, g3                                                                 | 0             | ±0.6                                |         | ± 0.3                  |         |         |
| g2, g4                                                                 | 2.5           | ±0.4                                |         | ± 0.2                  |         |         |
| γ1                                                                     | 50° min.      | -                                   |         | -                      |         |         |
| γ2                                                                     | 23° min.      | -                                   |         | -                      |         |         |
| γ3                                                                     | 50° min.      | -                                   |         | -                      |         |         |
| Cap PX23t in accordance with IEC Publication 60061 (sheet 7004-138A-1) |               |                                     |         |                        |         |         |
| ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS                             |               |                                     |         |                        |         |         |
| Rated values                                                           | Voltage       | V                                   | 12      |                        | 12      |         |
|                                                                        | Wattage       | W                                   | 45      | 40                     | 45      | 40      |
| Test voltage                                                           |               | V                                   | 13.2    |                        | 13.2    |         |
| Objective Values                                                       | Wattage       | W                                   | 50 max. | 45 max.                | 50 max. | 45 max. |
|                                                                        | Luminous flux | lm                                  | 750     | 640                    |         |         |
|                                                                        |               | ±%                                  |         | 15                     | 15      |         |
| Reference luminous at approximately                                    |               | 12V                                 |         |                        | 550 lm  | 470 lm  |
|                                                                        |               | 13.2V                               |         |                        | 750 lm  | 640 lm  |

6/ The positions of the first and the last turn of the filament are defined by the intersections of the outside of the first and the outside of the last light-emitting turn, respectively, with the plane parallel to and 26 mm distant from the reference plane.

7/ The values indicated in the left-hand columns relate to the driving-beam filament and those indicated in the right-hand columns to the passing-beam filament. "

B. JUSTIFICATION

This filament lamp is developed as an advanced HS5 with superior performance, so the fundamental structure of this filament lamp is the same as HS5 except for the non-interchangeable structure of cap.

The aim of this filament lamp is to give more design freedom for the headlamps of class C of Regulation No. 113, which can be installed on motorcycles of more than 125cc and up to 125cc. In view of this, the wattage and lumen values of this filament lamp are intended to bridge between HS5 and H4.

The filament position accuracy of the HS5 is comparable with H4 and HS1. In addition, as for the HS5, the C6/C6 filament configuration of this filament lamp shows better performance in anti-vibration which is important in certain categories of motorcycle. This also provides better optical performance in vertically oblong shaped reflectors to achieve a wide beam pattern.

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