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### Economic Commission for Europe

#### Inland Transport Committee

#### World Forum for Harmonization of Vehicle Regulations

##### Sixty-eighth session

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Item 3 of the provisional agenda

##### Regulation No. 37 (Filament lamps)

### **Proposal for Supplement 41 to 03 series of amendments to Regulation No. 37 (Filament lamps)**

#### **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) introducing into Regulation No. 37, a new category of amber dual filament light sources PY21/5W. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## I. Proposal

*Annex 1, the list of categories of filament lamps and their sheets, amend to read:*

"....

Group 2

...

PY21W

**PY21/5W**

PY24W

..."

PY21W/1

**PY21/5W/1 to 3**

P24W/1 to 3

(P21W/2)

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

"....

....

PY21W/1

**PY21/5W/1 to 3**

PY27/7W/1

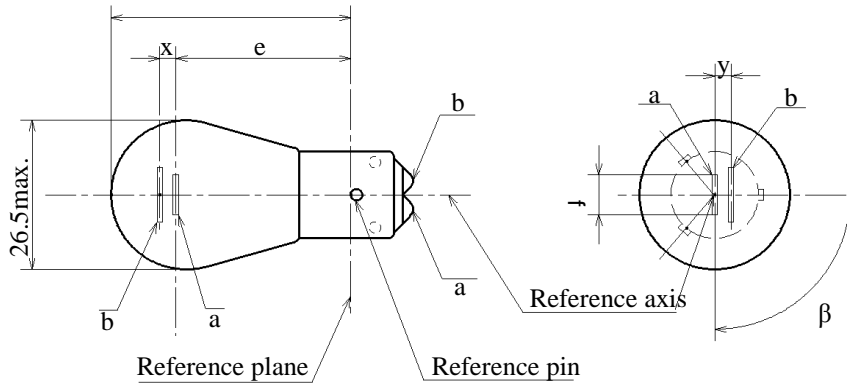
..."

*Insert new sheets PY21/5W/1 to 3, between sheet PY21W/1 and sheet PY27/7W/1, to read: (see next pages)*

Category PY21/5W

Sheet PY21/5W/1

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



<i>Dime</i>				rd filament lamp
e				4/
f				28.6 ± 0.3
Lateral deviat				7.0 + 0/- 2
x, y				0.3 max.
β				2.8 ± 0.3
[Cap BA15d-3				90° ± 5°
Electrical and photometric characteristics				
Rated values	Volts	12		12
	Watts	21	5	21/5
Test voltage	Volts	13.5		13.5
Objective values	Watts	26.5 max.	6.6 max.	26.5 and 6.6 max.
	Luminous flux	270	21	
	± %	20	20	
Reference luminous flux at approximately 13.5 V				White: 440 lm and 35 lm Amber: 270 lm and 21 lm

1/ These dimensions shall be checked by means of a "box-system". See sheets PY21/5W/2 and PY21/5W/3. "x" and "y" refer to the major (high-wattage) filament, not to the reference axis.  
 2/ Maximum lateral deviation of the major (high wattage) filament centre from two mutually perpendicular planes both containing the reference axis and one containing the axis of the reference pin.  
 3/ The light emitted from normal production lamps shall be amber (see also note 4/).  
 4/ The light emitted from standard filament lamps shall be white or amber.

## Screen projection requirements

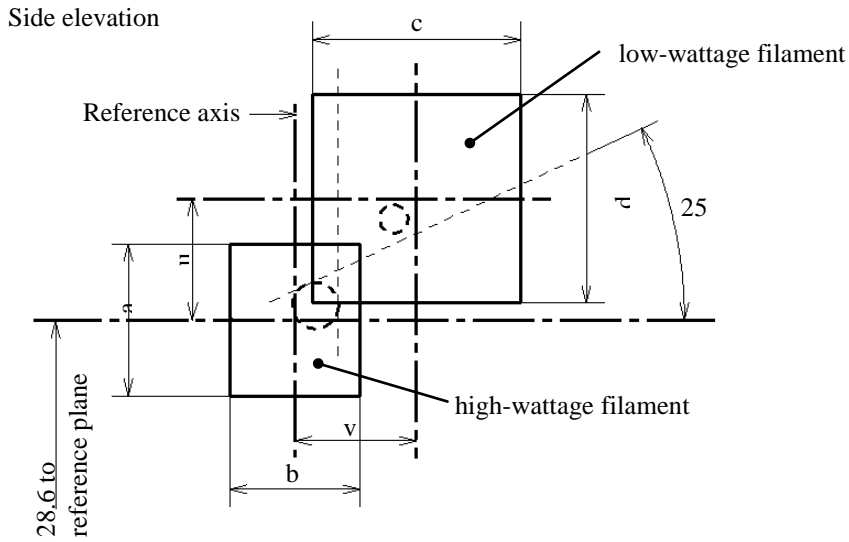
This test is used to determine, by checking whether:

- (a) the major (high wattage) filament is correctly positioned relative to the reference axis and reference plane and has an axis perpendicular, within  $\pm 15^\circ$ , to the plane through the centres of the pins and the reference axis; and whether
- (b) the minor (low wattage) filament is correctly positioned relative to the major (high wattage) filament, whether a filament lamp complies with the requirements.

## Test procedure and requirements

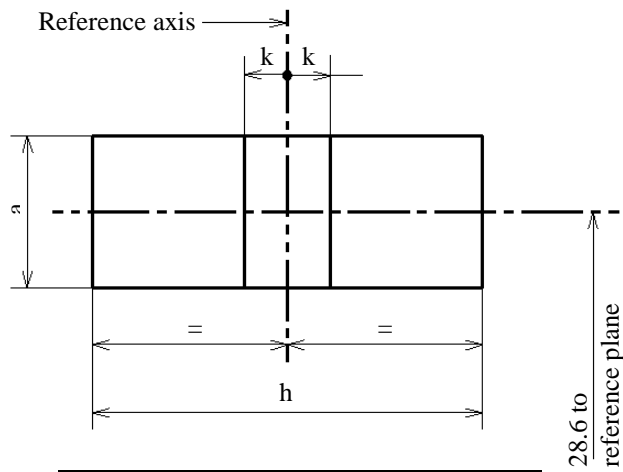
1. The filament lamp is placed in a holder capable of being rotated about its axis and having either a calibrated scale or fixed stops corresponding to the angular displacement tolerance limits. (i.e.  $15^\circ$ ). The holder is then so rotated that an end view of the major filament is seen on the screen on which the image of the filament is projected. The end view of that filament shall be obtained within the angular displacement tolerance limits.
2. Side elevation  
The filament lamp placed with the cap down, the reference axis vertical, the reference pin to the right and the major filament seen end-on:
  - 2.1. the projection of the major filament shall lie entirely within a rectangle of height "a" and width "b", having its centre at the theoretical position of the centre of the filament;
  - 2.2. the projection of the minor filament shall lie entirely:
    - 2.2.1. within a rectangle of width "c" and height "d" having its centre at a distance "v" to the right of and at a distance "u" above the theoretical position of the centre of the major filament;
    - 2.2.2. above a straight line tangential to the upper edge of the projection of the major filament and rising from left to right at an angle of  $25^\circ$ .
    - 2.2.3. to the right of the projection of the major filament
3. Front elevation  
The filament lamp being placed with the cap down and the reference axis vertical, the filament lamp being viewed in a direction at right angles to axis of the major filament:
  - 3.1. the projection of the major filament shall lie entirely within a rectangle of height "a" and width "h", centred on the theoretical position of the centre of the filament;
  - 3.2. the centre of the major filament shall not be offset by more than distance "k" from the reference axis.
  - 3.3. the centre of the minor filament axis shall not be offset from the reference axis by more than  $\pm 2$  mm ( $\pm 0.4$  mm for standard filament lamps).

Dimensions in mm



Reference	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>u</i>	<i>v</i>
Dimensions	3.5	3.0	4.8		2.8	

Front elevation



Reference	<i>a</i>	<i>h</i>	<i>k</i>
Dimensions	3.5	9.0	1.0

"

## **II. Justification**

1. During the 153rd session of the World Forum for Harmonization of Vehicle Regulations (WP.29), the proposal to permit the use of amber front position lamps for motorcycles was adopted. This proposal aims at introducing into Regulation No. 37 a new category of amber dual filament light sources PY21/5W that is intended to cover simultaneously the front position lamp and the direction indicator lamp of motorcycles.

2. The fundamental structure of this filament lamp is the same as of P21/5W except for the colour, the luminous flux and the non-interchangeable structure of cap. The length of lamp and position of the filament are basically the same but the values deviate due to the different position of the reference pin.

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