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Working Party on Lighting and Light-Signalling

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Item 3 of the provisional agenda

Regulation No. 37 (Filament lamps)

Proposal for Supplement 39 to the 03 series to Regulation No. 37

Submitted by the experts 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 a new filament light source, category H17. It is based on the current text of the Regulation including draft Supplement 38 to the 03 series of amendments. The modifications to the existing text of the Regulation are marked in bold characters.

* 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 list of sheets, amend to read:

"...

Group 1

Without general restrictions:

<u>Category</u>	<u>Sheet number(s)</u>
...	
H16B	H16/1 to 4
H17	H17/1 to 6
H21W <u>*2/</u>	H21W/1 to 2
...	
...	

List of sheets for filament lamps and their sequence in this annex:

<u>Sheet number(s)</u>
...
H16/1 to 4
H17/1 to 6
H6W/1
...
..."

Annex 1, insert sheets H17/1 to 6 in between sheet H16/4 and sheet H6W/1, to read:

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

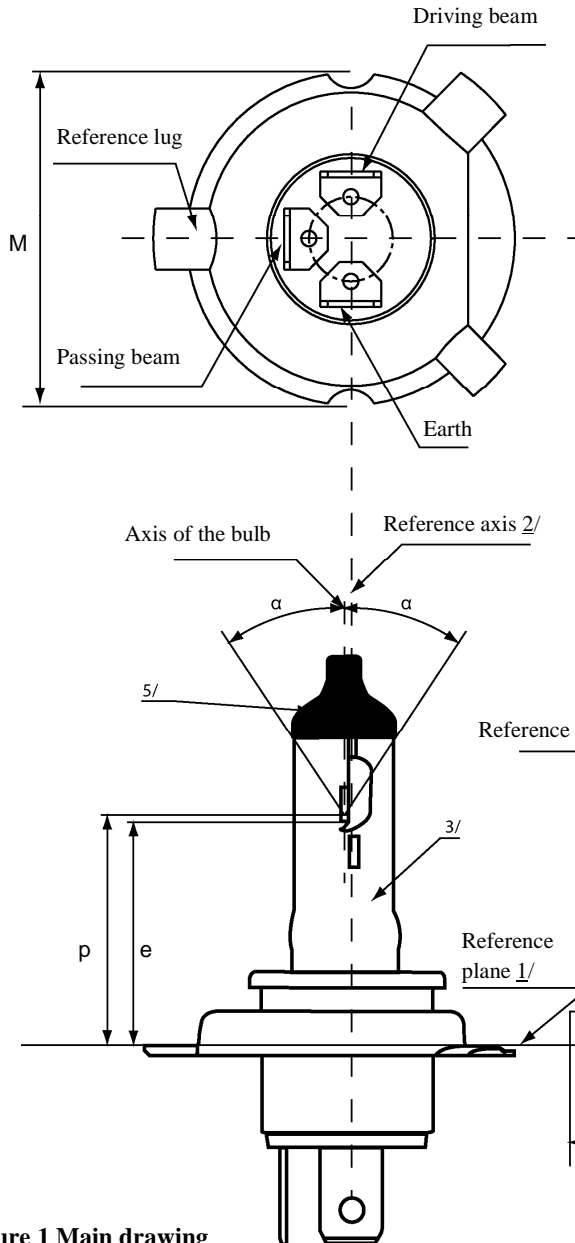


Figure 1 Main drawing

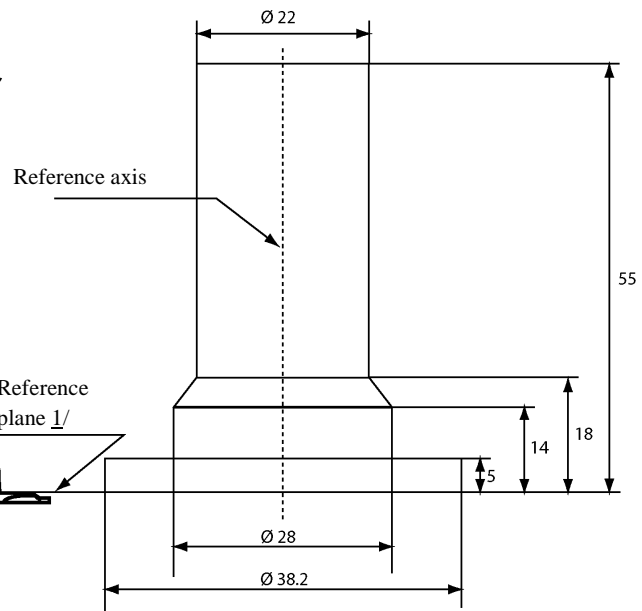


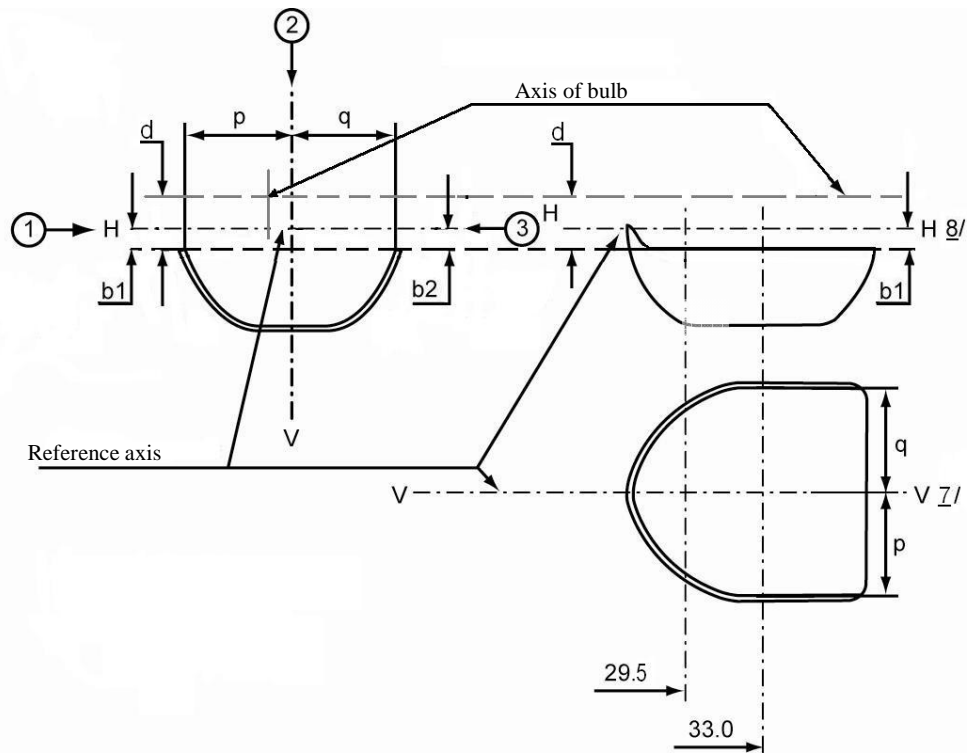
Figure 2 Maximum lamp outlines 4/

For the notes see sheet H17/6

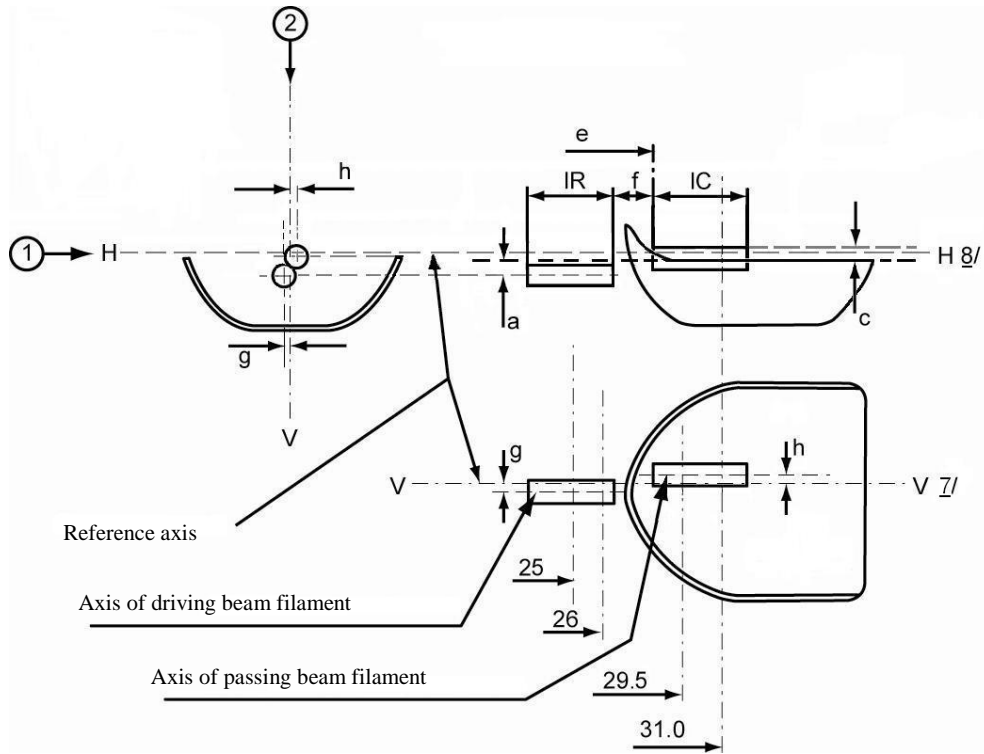
Dimensions in mm	Filament lamps of normal production		Standard filament lamp		
	12 V		12 V		
e	28.5 + 0.35 / - 0.15		28.5 + 0.20 / - 0.0		
p	28.95		28.95		
□	max. 40°		max. 40°		
Cap PU43t-4 in accordance with IEC Publication 60061 (sheet 7004-[xxx])					
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS					
Rated values	Volts	12 <u>6/</u>		12 <u>6/</u>	
	Watts	35	35	35	35
Test voltage	Volts	13.2	13.2	13.2	13.2
Objective values	Watts	37 max.	37 max.	37 max.	37 max.
	Luminous flux	900 ± 10%	600 ± 10%		
Reference luminous flux at approximately			12.0 V	700	450
			13.2 V	900	600

For note 6/ see sheet H17/6

Position of the shield



Position of filaments



CATEGORY H17

Sheet H17/5

Table of the dimensions (in mm) referred to in the drawings on sheets H17/3 and H17/4

Reference ^{*/}	Dimension ^{**/}	Tolerance	
		Filament lamps of normal production	Standard filament lamp
a/25.0	0.3	± 0.40	± 0.20
a/26.0	0.3	± 0.35	± 0.20
b1/29.5	0.0	± 0.30	± 0.25
b1/33.0	b1/29.5 mv	± 0.30	± 0.15
b2/29.5	0.0	± 0.30	± 0.25
b2/33.0	b2/29.5 mv	± 0.30	± 0.15
c/29.5	0.5	± 0.25	± 0.15
c/31.0	c/29.5 mv	± 0.25	± 0.15
d	min. 0.1	-	-
e <u>11/</u>	28.5	+ 0.35 / - 0.15	+ 0.20 / -0.0
f <u>9/ 10/ 11/</u>	1.7	± 0.30	± 0.15
g/25.0	0	± 0.50	± 0.30
g/26.0	0	± 0.40	± 0.25
h/29.5	0	± 0.40	± 0.25
h/31.0	h/29.5 mv	± 0.30	± 0.15
lR <u>9/ 12/</u>	4.0	± 0.40	± 0.20
lC <u>9/ 10/</u>	4.2	± 0.40	± 0.20
p/33.0	Depends on the shape of the shield	-	-
q/33.0	(p+q)/2	± 0.60	± 0.30

^{*/} ".../25.0" means dimension to be measured at the distance from the reference plane indicated in mm after the stroke.

^{**/} "29.5 mv" means the value measured at a distance of 29.5 mm from the reference plane.

For the notes see sheet H17/6

- 1/ The reference plane is the plane formed by the seating points of the three lugs of the cap ring.
- 2/ The reference axis is perpendicular to the reference plane and passes through the centre of the circle of diameter "M".
- 3/ The light emitted from standard filament lamps and from normal production lamps shall be white.
- 4/ The bulb and supports shall not exceed the envelope as in figure 2.
- 5/ The obscuration shall extend at least as far as the cylindrical part of the bulb. It shall also overlap the internal shield when the latter is viewed in a direction perpendicular to the reference axis.
- 6/ The value indicated in the left hand column relate to the driving-beam filament. Those indicated in the right-hand column relate to the passing beam filament.
- 7/ Plane V-V is the plane perpendicular to the reference plane and passing through the reference axis and through the intersection of the circle of diameter "M" with the axis of the reference lug.
- 8/ Plane H-H is the plane perpendicular to both the reference plane and plane V-V and passing through the reference axis.
- 9/ The end turns of the filament are defined as being the first luminous turn and the last luminous turn that are at substantially the correct helix angle.
- 10/ For the passing-beam filament, the points to be measured are the intersections, seen in direction 1 , of the lateral edge of the shield with the outside of the end turns defined under note 9/.
- 11/ "e" denotes the distance from the reference plane to the beginning of the passing filament as defined above.
- 12/ For the driving-beam filament the points to be measured are the intersections, seen in direction 1 , of a plane, parallel to plane H-H and situated at a distance of 0.3 mm below it, with the end turns defined under note 9/.

Additional explanations to sheets H17/3 and H17/4

The dimensions below are measured in three directions:

- 1 for dimensions b1, a, c, d, e, f, lR and lC.
- 2 for dimensions g, h, p and q.
- 3 for dimension b2.

Dimensions p and q are measured in planes parallel to and 33.0 mm away from the reference plane.

Dimensions b1, b2 are measured in planes parallel to and 29.5 mm and 33.0 mm away from the reference plane.

Dimensions c and h are measured in planes parallel to and 29.5 mm and 31.0 mm away from the reference plane.

Dimensions a and g are measured in planes parallel to and 25.0 mm and 26.0 mm away from the reference plane.

Note: For the method of measurement, see Appendix E of IEC Publication 60809."

II. Justification

1. There are a growing number of 2-wheelers around the world while the available number of light source categories of new technology is limited. The following application needs were identified: an improved beam performance, small head lamp dimensions, robustness against vibrations, robustness against voltage fluctuations and system cost effectiveness. These market and application needs have been translated into a proposal for a new category H17.
 2. The proposed category is suitable to fulfil these needs and is characterized by an optimized vibration-resistant design with a high precision filament and a baffle, a high efficient burner that has influence on the power consumption, on the luminance and on the lifetime.
 3. Though aiming at two-wheelers in the first place, the light source category with a horizontal baffle orientation and displacement of the filament to avoid stray light is also suitable as a low beam contributor (bend lighting) and in front fog lamps; the second filament is also suitable as a high beam contributor or in Daytime Running Lamps.
 4. A proposal for the cap has been sent to IEC.
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