

Transmitted jointly by the experts
from GTB and SAE

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(65th GRE, 28-31 March 2011,
agenda item 10)

Proposal to correct ECE/TRANS/WP.29/GRE/2011/28

Note: The text reproduced below was prepared jointly by the experts from GTB and the Society of Automotive Engineers (SAE) in order to correct the proposed light source category D7S, as proposed by SAE to GRE in document GRE/2011/28. The proposal is an administrative change of the light source category name from D7S to D8S. This document has to be seen as a correction to document ECE/TRANS/WP.29/GRE/2011/28 in the sense that only the proposed category name is changed from D7S to D8S. The modifications to the current text of Regulation No. 99 are marked in bold characters.

I. Proposal

Annex 1, list of categories of gas-discharge light sources and their sheet numbers, amend to read:

“

<i>Light source category</i>	<i>Sheet numbers</i>
D1R	DxR/1 to 7
D1S	DxS/1 to 6
D2R	DxR/1 to 7
D2S	DxS/1 to 6
D3R	DxR/1 to 7
D3S	DxS/1 to 6
D4R	DxR/1 to 7
D4S	DxS/1 to 6
D5S	D5S/1 to 5
D6S	D6S/1 to 5
D8S	D8S/1 to 5

”

Annex 1, list of sheets for gas-discharge light sources and their sequence in this annex, amend to read:

“

<i>Sheet numbers</i>	
DxR/1 to 7	(Sheet DxR/6: two pages)
DxS/1 to 6	
D5S/1 to 5	
D6S/1 to 5	
D8S/1 to 5	

”

Insert new sheets D8S/1 to 5 after D6S/5, to read:

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

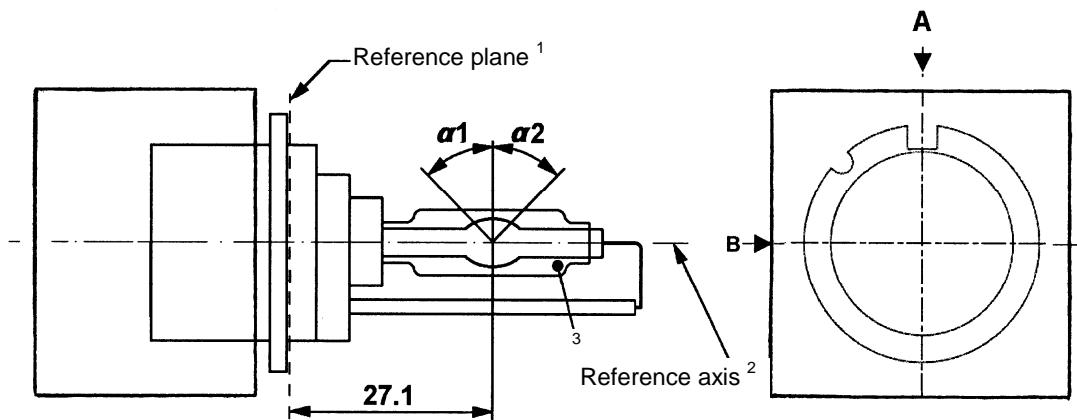


Figure 1
Category **D8S** - Cap PK32d-1

- 1 The reference plane is defined by the positions on the surface of the holder on which the three supporting bosses of the cap ring will rest.
- 2 See sheet **D8S/2**.
- 3 When measured at a distance of 27.1 mm from the reference plane and with respect to the mid-point of the inner bulb, the outer bulb shall have an eccentricity of 1 mm max.

Figure 2
Definition of reference axis ¹

The cap shall be pushed in this direction

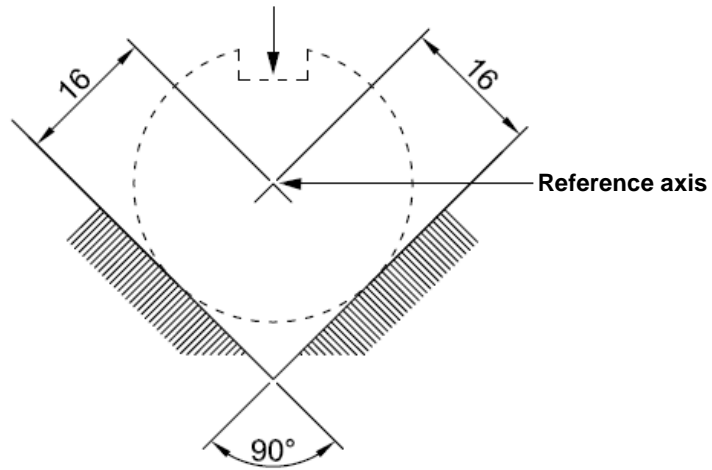
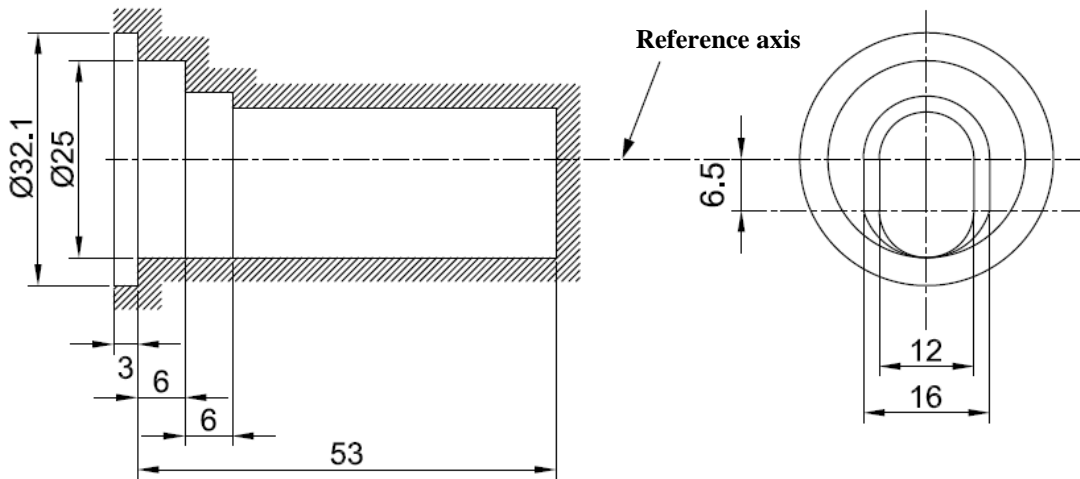


Figure 3
Maximum lamp outline ²



¹ The reference axis is perpendicular to the reference plane and crosses the intersection of the two parallel lines as indicated in figure 2.

² Glass bulb and supports shall not exceed the envelope, as indicated in figure 3. The envelope is concentric with the reference axis.

<i>Dimensions</i>		<i>Production light sources</i>	<i>Standard light sources</i>
Position of the electrodes		Sheet D8S/4	
Position and form of the arc		Sheet D8S/5	
$\alpha 1, \alpha 2$ ¹		55° min.	55° min.
D8S: Cap PK32d-1 in accordance with IEC Publication 60061 (sheet 7004-111-[4])			
ELECTRICAL AND PHOTOMETRIC CHARACTERISTICS			
Rated voltage of the ballast	V	12 ²	12
Rated wattage	W	25	25
Test voltage	V	13.2	13.2
Objective lamp voltage	V	42 ± 9	42 ± 4
Objective lamp wattage	W	25 ± 3	25 ± 0.5
Objective Luminous flux	lm	2000 ± 300	2000 ± 100
Chromaticity coordinates	Objective		x = 0.375 y = 0.375
	Tolerance area ³	Boundaries	x = 0.345 y = 0.150 + 0.640 x
			x = 0.405 y = 0.050 + 0.750 x
		Intersection points	x = 0.345 y = 0.371
			x = 0.405 y = 0.409
			x = 0.405 y = 0.354
x = 0.345 y = 0.309			
Hot-restrike switch-off time	s	10	10

¹ The part of the bulb within the angles $\alpha 1$ and $\alpha 2$ shall be the light emitting part. This part shall be as homogeneous in form as possible and shall be optically distortion free. This applies to the whole bulb circumference within the angles $\alpha 1$ and $\alpha 2$.

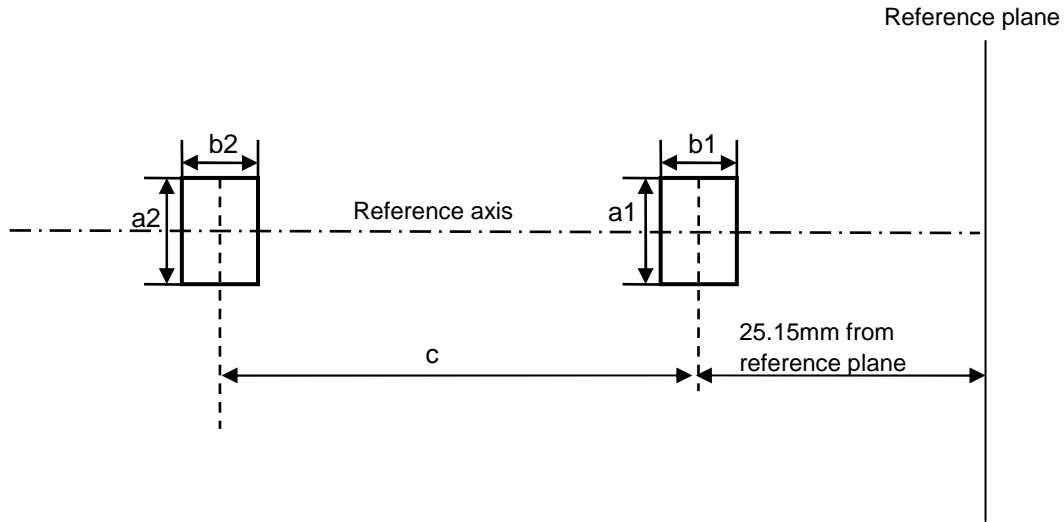
² Application voltages of ballasts may differ from 12 V.

³ See Annex 4.

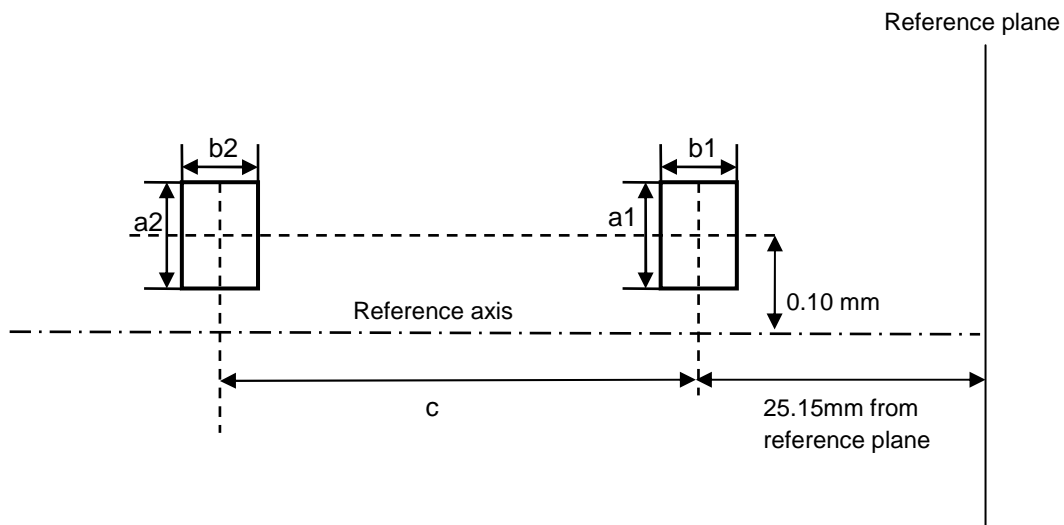
Position of the electrodes

This test is used to determine whether the electrodes are correctly positioned relative to the reference axis and the reference plane.

Top view (schematic):



Side view (schematic):



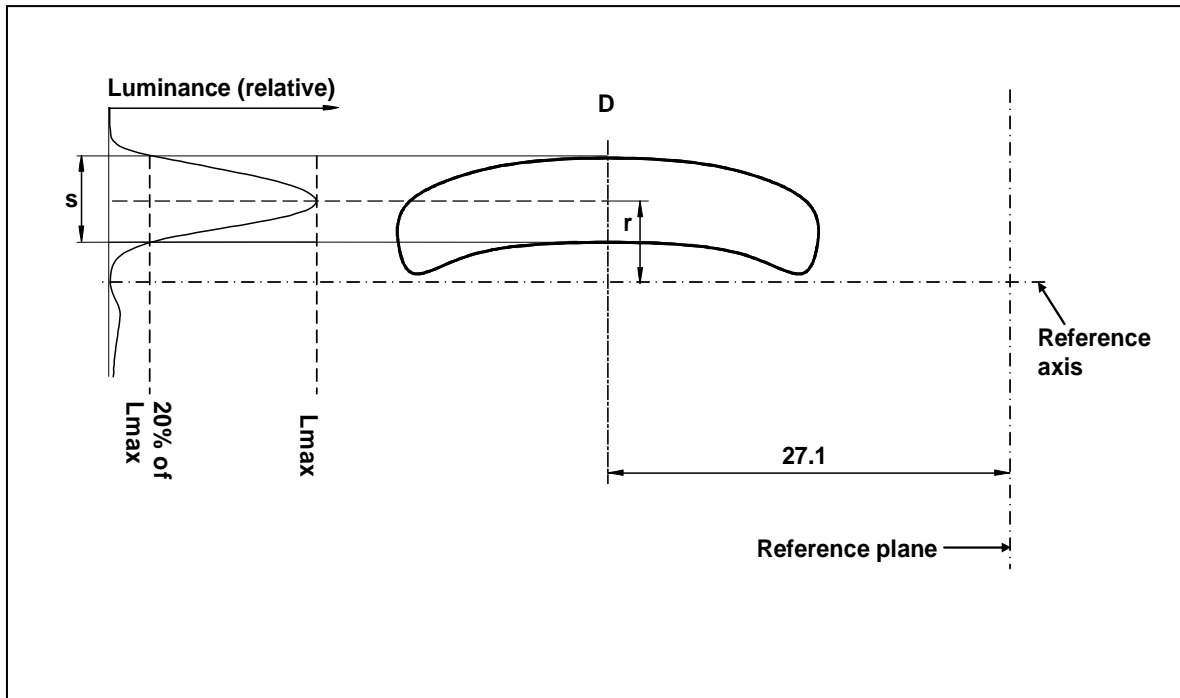
Measuring direction: light source side and top view

Dimension in mm	Production light sources	Standard light sources
a1	0.30	0.20
a2	0.50	0.25
b1	0.30	0.15
b2	0.60	0.30
c	3.90	3.90

The arc attachment point to the electrode nearest to the reference plane shall be positioned in the area defined by a1 and b1. The arc attachment point to the electrode furthest from the reference plane shall be positioned in the area defined by a2 and b2.

Position and form of the arc

This test is used to determine the form of the arc and its position relative to the reference axis and the reference plane by measuring its bending and diffusion in the cross section at a distance 27.1 mm from the reference plane.



Relative luminance distribution in the central cross section D.

The form of the arc is for illustration purpose only.

Measuring direction: light source side view

When measuring the relative luminance distribution in the central cross section as indicated in the drawing above, the maximum value shall be located within the distance r from the reference axis. The point of 20 per cent of the maximum value shall be within s .

<i>Dimension in mm</i>	<i>Production light sources</i>	<i>Standard light sources</i>
r (arc bending)	0.50 +/- 0.25	0.50 +/- 0.15
s (arc diffusion)	0.70 +/- 0.25	0.70 +/- 0.15

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II. Justification

Nowadays automotive light sources see ever increasing global applications. Consequently proposals for new light sources are developed, discussed and reviewed in groups of experts spanning a broad and global platform.

The 25W HID category light source in this proposal has undergone a parallel-path review in GTB and in expert groups within the SAE Lighting Committee. As harmonization has become increasingly important, UNECE regulatory developments and proposals are customarily discussed and reviewed in the SAE Lighting Committee in the dedicated International Lighting Standards Advisory Group. Consisting of a global base of lighting experts and individual contributors from all areas of automotive lighting, the SAE Lighting Committee, with its advisory groups, and GTB have a substantially similar expert-base to evaluate light source proposals.

The organizations employ different internal processes and in this instance the SAE review allowed for its expert to submit ECE/TRANS/WP.29/GRE/2011/28 as a formal proposal to GRE. In the mean time, GTB through its discussion and development process has reached the same conclusion and fully endorses the proposal. It was therefore decided to make the proposal a joint GTB-SAE submission.

The proposal, ECE/TRANS/WP.29/GRE/2011/28, for category D7S was submitted to GRE in December 2010. However, it has since become known that the D7S name is reserved for a category with different technical specifications which are currently still under review. In order to assure future worldwide harmonized naming, the D7S category name has been replaced by D8S in the whole document.
