

Proposal for Supplement 1 to the 01 series of Regulation No. 112

I. Proposal

Paragraph 6.1.3., *replace the existing text to read:*

“6.1.3. Apart from LED module(s), the headlamps shall be checked by means of an uncoloured standard (étalon) filament lamp designed for a rated voltage of 12 V.

6.1.3.1 During the checking of the headlamp, the voltage at the terminals of the filament lamp shall be regulated as to obtain the reference luminous flux at 13.2V as indicated for each filament lamp at the relevant data sheet of Regulation No. 37.

However if a filament lamp of category H9 or H9B is used for the principal passing beam, the applicant may choose the reference luminous flux at 12.2V or 13.2V as indicated in the relevant data sheet of Regulation No. 37 and a reference stating which voltage was chosen for type approval shall be made in item 9. in the communication form of Annex 1.

6.1.3.2 In order to protect the standard (étalon) filament lamp during the process of photometric measurement it is permissible to carry out the measurements at a luminous flux that differs from the reference luminous flux at 13.2V. If the test laboratory chooses to carry out measurements in such a manner the luminous intensity shall be corrected by multiplying the measured value by the individual factor F_{lamp} of the standard (étalon) filament lamp in order to verify the compliance with the photometric requirements where

$$F_{lamp} = \Phi_{reference} / \Phi_{test}$$

$\Phi_{reference}$ is the reference luminous flux at 13,2V as specified in the relevant data sheet of Regulation 37

Φ_{test} is the actual luminous flux used for the measurement.

However, where the reference luminous flux of 12.2V as specified in the data sheet for the category H9 or H9B is chosen, this procedure is not permitted.

6.1.3.3 The headlamp shall be considered acceptable if it meets the requirements of paragraph 6. with at least one standard (étalon) filament lamp, which may be submitted with the headlamp.”

Annex 1., *Paragraph 9, amend to read:*

"9. Brief description:

Category as described by the relevant marking: 3/

Number and category(s) of filament lamp(s):

Reference luminous flux used for the principal passing beam (lm):

Principal passing beam operated at approximately (V):

Measures according to paragraph 5.8. of this Regulation:

Number and specific identification code(s) of LED module(s)

Number and specific identification code(s) of electronic light source control gear(s)

Total objective luminous flux as described in paragraph 5.9. exceeds 2,000 lumen:
yes/no/does not apply

The adjustment of the cut-off has been determined at: 10 m/25 m/does not apply

The determination of the minimum sharpness of the "cut-off" has been carried out at: 10
m/25 m/does not apply ."

II. Justification

This proposal for amendment to Regulation 112 is intended to accompany the proposed amendments to Regulation No. 37 (ECE/TRANS/WP.29/GRE/2010/5) and Regulation No. 48 (ECE/TRANS/WP.29/GRE/2010/52) to allow the operation of the category H9 and H9B filament lamps at two distinct reference luminous flux values.

In some applications it is advantageous to operate the H9 light source at a reduced voltage level and hence at a lower luminous flux value, to achieve optimum light output and lifetime for the principal passing beam whilst the higher luminous flux value is used for the driving beam.

The normal approval procedure for the headlamp is unchanged, because two reference luminous flux values have been defined (the "etalon principle"). However, additional requirements have been added to the communication form to clearly identify the objective luminous flux and test voltages relating to the principal passing beam to provide the necessary information to satisfy the requirements in Regulation 48.

The modifications are based upon the existing text of the 01 series of Regulation 112 and are marked in bold or strikethrough characters.
