

Second draft for Regulation 87
to demonstrate the application of
the HRD
this document based on the
Informal document GRE-66-13
from Canada

17. October 2014

Regulation No. 87

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF DAYTIME RUNNING
LAMPS FOR POWER-DRIVEN VEHICLES

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1. SCOPE

This Regulation applies to daytime running lamps for vehicles of category L, M, N and T 1/.

2. DEFINITIONS

For the purpose of this Regulation:

The definitions including the definition for daytime running lamps and the definition of type etc. given in the Horizontal Reference Document (HRD) shall apply to this Regulation;

3. APPLICATION FOR APPROVAL

3.1. The applicant shall follow instructions stated in paragraph 3. of the HRD.

3.2. The drawings required by paragraph 3. of the HRD shall also identify the illuminating surface of the device.

4. MARKINGS

4.1. The applicant shall follow instructions stated in paragraph 4. of the HRD.

5. APPROVAL

5.1. General

The applicant shall follow instructions stated in paragraph 5. of the HRD.

5.2. Composition of the approval mark

5.2.1. The applicant shall follow instructions stated in paragraph 5.. of the HRD.

5.2.2. The approval mark has also include letters "RL", identifying the device as daytime running lamp.

1/ As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3), (document TRANS/WP.29/78/Rev.1/Amend.2 as last amended by Amend.4).

5.3. Arrangement of the approval mark

Follow the corresponding instructions in paragraph 5.3. and Annex 1 of the HRD.

Annex 2, to this Regulation and in addition Annex 1 of the HRD gives examples specific to this regulation of arrangements of approval marks for grouped, combined or reciprocally incorporated lamps with all the above-mentioned additional symbols.

6. GENERAL SPECIFICATIONS

Follow instructions in paragraph 6.**and 7** of the HRD.

7. INTENSITY OF LIGHT

7.1. The luminous intensity of the light emitted by each lamp shall not be less than 400 cd in the axis of reference.

7.2. Outside the reference axis and within the angular fields defined in the arrangement diagram in Annex 7 to this Regulation, the intensity of the light emitted by each lamp must:

7.2.1. In each direction corresponding to the points in the table of standard light distribution reproduced in Annex 3 to this Regulation, be not less than the minimum specified in paragraph 7.1. above, multiplied by the percentage specified in the said table of the direction in question, and

7.2.2. not exceed 1,200 cd in any direction the lamp is visible.

7.3. Moreover, throughout the field defined in the diagram in Annex 7, the intensity of the light emitted must not be less than 1.0 cd.

7.4. In the case of a lamp containing more than one light source the lamp shall comply with the minimum intensity required when any one light source has failed and when all light sources are illuminated the maximum intensity shall not be exceeded.

A group of light sources, wired so that the failure of any one of them causes all of them to stop emitting light, shall be considered to be one light source.

8. APPARENT SURFACE

The area of the apparent surface in the direction of the axis of reference of the lamp shall be not less than 25 cm² and not more than 200 cm².

9. COLOUR OF LIGHT

9.1. Follow instructions in paragraph 7 and Annex 4 of the HRD.

9.2. The colour must be white.

10. TEST PROCEDURE

Follow instructions in paragraph 7. and Annex 7 of the HRD.

11. HEAT RESISTANCE TEST

Follow instructions in Annex 7 and part A of Annex 10. of the HRD.

12. MODIFICATIONS OF A TYPE OF DAYTIME RUNNING LAMP AND
EXTENSION OF APPROVAL

Follow instructions in paragraph **10**, of the HRD.

13. CONFORMITY OF PRODUCTION

Devices approved in accordance with this Regulation and the referred HDR shall be so manufactured as to conform to the type approved and to meet the requirements set forth by this Regulation and the Horizontal Reference Document as described in paragraph 11 of the HRD.

14. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

See paragraph **12**. of the HDR.

15. PRODUCTION DEFINITELY DISCONTINUED

See paragraph **13**. of the HDR.

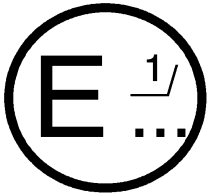
16. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR
CONDUCTING APPROVAL TESTS AND OF ADMINISTRATIVE
DEPARTMENTS

Follow instructions in paragraph **14**. of the HRD.

Annex 1

COMMUNICATION

(Maximum format: A4 (210 x 297 mm))



issued by :

Name of administration:

.....
.....
.....

concerning: 2/

- APPROVAL GRANTED
- APPROVAL EXTENDED
- APPROVAL REFUSED
- APPROVAL WITHDRAWN
- PRODUCTION DEFINITELY DISCONTINUED

of a type of daytime running lamp pursuant to Regulation No. 87

Approval No.

Extension No.

1. Trade name or mark of the device:
2. Manufacturer's name for the type of device:.....
.....
3. Manufacturer's name and address:
4. If applicable, name and address of the manufacturer's representative:.....
.....
5. Submitted for approval on:
6. Technical Service responsible for conducting approval tests:.....
.....
7. Date of test report issued by that service:
8. Number of test report issued by that service:

9. Concise description:
By category of lamp:
Number, category and kind of light source(s): 3/.....
Voltage and wattage:
- Application of an electronic light source control gear:
(a) being part of the lamp yes/no 2/
(b) being not part of the lamp yes/no 2/
- Input voltage supplied by an electronic light source control gear:
- Electronic light source control gear manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):
.....
10. Position of the approval mark:.....
11. Reason (s) for extension (if applicable):.....
12. Approval granted/refused/extended/withdrawn: 2/
13. Place:
14. Date:
15. Signature:.....
16. The following documents, bearing the approval number shown above, are available on request:
.....
.....
.....
.....

1/ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

3/ For daytime running lamps with non-replaceable light sources indicate the number and total wattage of the light sources used.

Annex 2

EXAMPLE OF ARRANGEMENT OF THE APPROVAL MARK

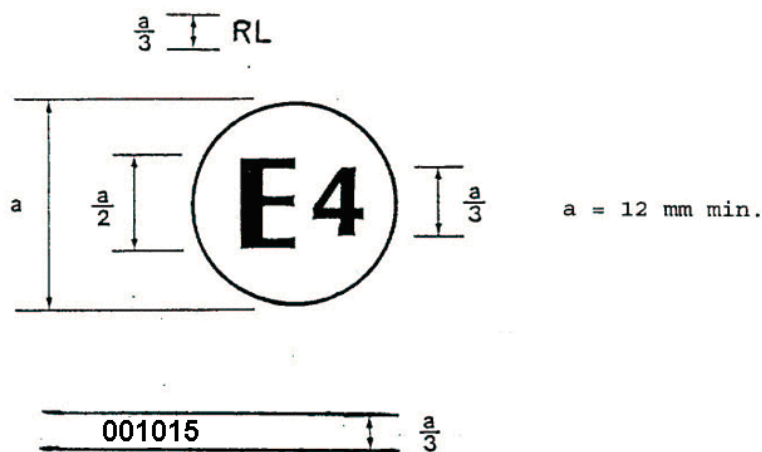


Figure 1

The daytime running lamp bearing the approval mark shown above has been approved in the Netherlands (E4) under number 001015. The approval number indicates that the approval was granted according to the requirements of this Regulation in its original (unamended) form.

Note: The approval number and the additional symbol must be placed close to the circle and either above or below the "E" or to the left or right of that letter. The digits of the approval number must be on the same side of the "E" and face the same direction. The use of roman numerals as approval numbers should be avoided so as to prevent any confusion with other symbols.

Light source modules

MD E3 17325

The light source module bearing the identification code shown above has been approved together with a lamp approved in Italy (E3) under approval number 17325.

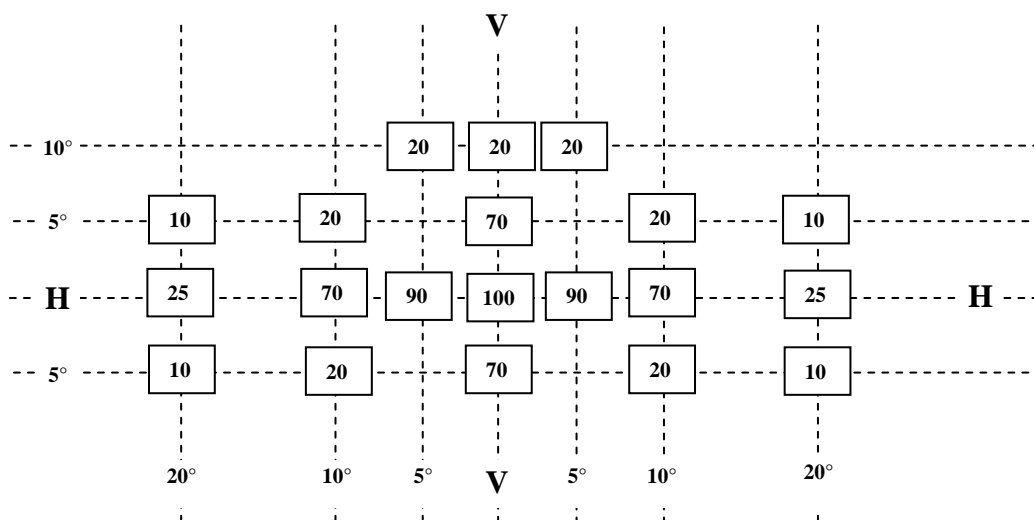
Further examples are stated in Annex 1 of the HRD.

Annex 3

PHOTOMETRIC MEASUREMENTS

1. In addition with the following paragraph the photometric measurements are carried out according to Annex 5 of the HRD.

2. Table of standard light distribution



5.1. The direction $H = 0^\circ$ and $V = 0^\circ$ corresponds to the reference axis. (On the vehicle, it is horizontal, parallel to the median longitudinal plane of the vehicle and oriented in the required direction of visibility). It passes through the centre of reference. The values shown in the table give, for the various directions of measurement, the minimum intensities as a percentage of the minimum required in the axis for each lamp (in the direction $H = 0^\circ$ and $V = 0^\circ$).

5.2. Within the field of light distribution, above schematically shown as a grid, the light pattern should be substantially uniform, i.e. in so far as the light intensity in each direction of a part of the field formed by the grid lines shall meet at least the lowest minimum value being shown on the grid lines surrounding the questioned direction as a percentage.

Annex 4

Minimum requirements for conformity of production control procedures

The minimum requirements for conformity of production control procedures set forth in **Annex 2** to the HRD shall be complied with;

Annex 5

Minimum requirements for sampling by an inspector

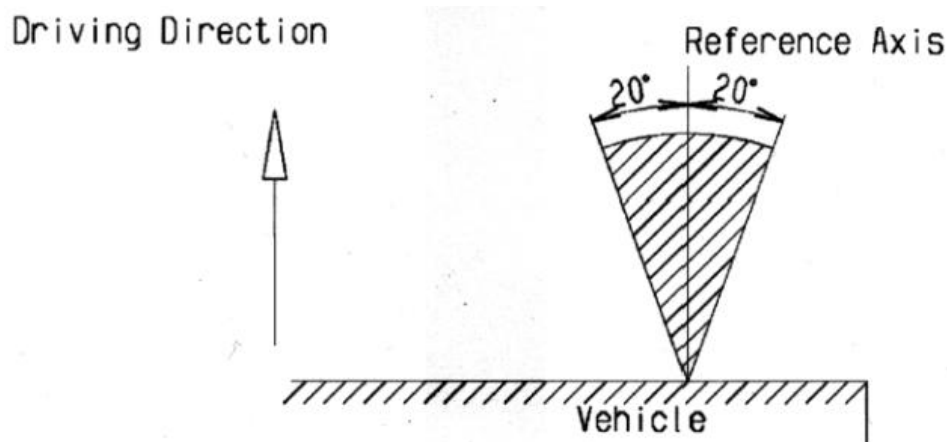
The minimum requirements for sampling by an inspector set forth in **Annex 3** to the Horizontal Reference Document shall be complied with;

Annex 6

MINIMUM ANGLES REQUIRED FOR LIGHT DISTRIBUTION IN SPACE

In all cases, the minimum vertical angles of light distribution in space are 10° above and 5° below the horizontal for DRL devices included in the Regulation.

Minimum horizontal angles of light distribution in space:



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