

36 Parking lamps

Refer to: R77 00-S16

36.1 Effective date and Scope:

36.1.1 Effective date from 2006/7/1, new types of parking lamps using in vehicles of category symbols M, N and O, and from 2008/7/1 all types of parking lamps using in vehicles of category symbols M, N and O, shall comply with this regulation and shall be use bulbs that is conform with "Filament lamps" and/or "LED light sources" of this Direction(according to paragraph 36.1.2, it shall exclude paragraph 36.2.1).

36.1.2 Effective date from 2017/1/1, new types of parking lamps using in vehicles of category symbols M, N and O, and from 2019/1/1, existing types of parking lamps using in vehicles of category symbols M, N and O, except the applicants applying for low volume safety approval and applying for vehicle-by-vehicle low volume, shall provide documents declared to conform to 36.2.1. of this regulation, and certification institution may do a reality check when necessary.

36.1.3 For the vehicles imported by authorities, organizations, institutes or individuals for self-use only could exempt from Regulation of "parking lamps". Effective date from 2017/1/1, for the vehicles imported by authorities, organizations, institutes or individuals for self-use, if the vehicle registered and owned by the importer for more than six months from abroad, it could exempt from the regulation of "parking lamps".

36.1.4 For the low volume type safety approval, maximum 20% deviation of the levels of intensity standard of this test is allowed, and if the light source is LED, it can omit the failure conditions test.

36.2 Parking lamps means the lamp conform to 36.2.1 Specifications marked and used to draw attention to the presence of a stationary vehicle.

36.2.1 Specifications marked

36.2.1.1 Means the marks shall be clearly legible on the outside of the marking material and shall be indelible to include below:

36.2.1.1.1 Brand (or marking), type of replaceable light sources (and/or MD(or MODULE) the light source module specific

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identification code), non-replaceable light sources or light source module(s), bear the marking of the rated voltage (or range of voltage) and rated wattage.

36.2.1.1.2 The light source module must to mark brand (or marking), MD (or MODULE) the light source module specific identification code, rated voltage (or ranged voltage) and rated wattage. However this provision does not apply to the LED is non-replaceable.

36.2.1.1.3 When a lamp emits a light of amber colour towards the front and rear, the lamp must be marked with an arrow indicating its orientation, the arrow showing the front of the vehicle;

36.2.1.1.4 On devices with reduced light distribution in conformity to paragraph 36.4.2 to this Regulation a vertical arrow starting from a horizontal segment and directed downwards (figure as below , “a” is at least 5 mm).



36.2.1.1.5 The marking according to paragraphs 36.2.1.1.3. and 36.2.1.1.4. above shall be clearly legible and be indelible even when the parking lamps are fitted on the vehicles.

36.3 Parking lamps shall according to suitable variants and range of principle :

36.3.1 The same brand

36.3.2 The same characteristics of the optical system (levels of intensity, light distribution angles, category of light source, light source module, etc.) , however , if light source or filter's color is change that it doesn't mean to change the variants.

36.4 Photometric measurements :

36.4.1 In the reference axis, intensity of forward facing parking lamps

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Minimum (cd): 2

Maximum (cd): 60

36.4.2 In the reference axis, intensity of rearward facing parking lamps

Minimum (cd): 2

Maximum (cd): 30

In the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the photometric intensity is verified only up to an angle of 5 degrees downwards.

36.4.3 In the case of a single 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. All light sources connected in series are considered to be one light source.

36.4.4 Within the field of light distribution schematically shown as a grid in Figure 1, the light pattern should be substantially uniform.

36.4.5 Outside the reference axis and within the angular fields, the intensity of the light emitted shall, in each direction corresponding to the points in the luminous intensity distribution reproduced in Figure 1, be not less than the value shown in the said figure for the direction in question, expressed as a percentage of the minimum specified in paragraph 36.4.1 and 36.4.2. In any direction within the space from which the light in question is visible, not exceed the maximum specified in paragraph 36.4.1 and 36.4.2.

36.4.6 A luminous intensity of 60 cd shall be permitted for parking lamps directed to the rear reciprocally incorporated with stop-lamps below a plane forming an angle of 5° with and downward from the horizontal plane.

36.4.7 Angles required for light distribution in space of the lamps: Horizontal angles are shown in Figure2 and Figure3. In all cases, the minimum vertical angles of light distribution in space are 15 degrees above and 15 degrees below the horizontal except for lamps intended to be installed with their H plane at a mounting height less than 750 mm above the ground, for which they are 15 degrees above and 5 degrees below the horizontal.

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36.4.8 In the case of light source modules, it shall be checked that:

36.4.8.1 The design of the light source module(s) shall be such as:

36.4.8.1.1 that each light source module can only be fitted in no other position than the designated and correct one and can only be removed with the use of tool(s);

36.4.8.1.2 If there are more than one light source module used in the housing for a device, light source modules having different characteristics can not be interchanged within the same lamp housing.

36.4.8.2 The light source module(s) shall be tamperproof.

36.4.8.3 A light source module shall be so designed that regardless of the use of tool(s), it shall not be mechanically interchangeable with any replaceable approved light source.

36.4.9 For replaceable light sources:

- (a) In the case of filament lamp(s), that is necessary to produce the reference luminous flux required for that category of filament lamp.
- (b) In the case of LED light source(s) of 6.75 V, 13.5 V or 28.0 V; the luminous flux value produced shall be corrected. The correction factor is the ratio between the objective luminous flux and the value of the luminous flux found at the voltage applied.
- (c) When equipped with light sources at 6.75 V, 13.5 V or 28.0 V, the luminous intensity values produced shall be corrected. For filament lamps the correction factor is the ratio between the reference luminous flux and the mean value of the luminous flux found at the voltage applied (6.75 V, 13.5 V or 28.0 V). For LED light sources the correction factor is the ratio between the objective luminous flux and the mean value of the luminous flux found at the voltage applied (6.75 V, 13.5V or 28.0 V). The actual luminous fluxes of each light source used shall not deviate more than +/- 5 per cent from the mean value. Alternatively and in case of filament lamps only, a standard filament lamp may be used in turn, in each of the individual positions, operated at its reference flux, the individual measurements in each position being added together.

36.5 Trichromatic coordinate : The colour of the light emitted inside the field shall be red, white or orange (amber) defined in “The installation of

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lighting and light-signaling devices” of “Directions”(see Figure 1). Outside this field, no sharp variation of colour shall be observed. However, for lamps equipped with non-replaceable light sources (filament lamps and other), the colorimetric characteristics should be verified with the light sources present in the lamp.

36.6 In the case of replaceable light source(s):

- 36.6.1 Any category or categories of light source(s) approved according to “Filament lamps” and/or “LED light sources may be used, it’s shall concern about relevant special restriction.
- 36.6.2 The design of the device shall be such that the light source can be fixed in no other position but the correct one.
- 36.6.3 The light source holder shall conform to the characteristics given in IEC Publication 60061. The holder data sheet relevant to the category of light source used, applies.

36.7 Test procedure

- 36.7.1 All measurements, photometric and colorimetric shall be carried out with an uncoloured or coloured standard light source of the category prescribed for the device, supplied with the voltage;
 - 36.7.1.1 In the case of lamps with non-replaceable light sources: 6.75 V and 13.5 V respectively.
 - 36.7.1.2 In the case of a system that uses an electronic light source control gear being part of the lamp applying at the input terminals of the lamp the voltage declared by the manufacturer or, if not indicated, 6.75 V, 13.5 V or 28.0 V, respectively.
 - 36.7.1.3 In the case of a system that uses an electronic light source control gear not being part of the lamp, the voltage declared by the manufacturer shall be applied to the input terminals of the lamp.
- 36.7.2 The test laboratory shall require from the manufacturer the light source control gear needed to supply the light source and the applicable functions.
- 36.7.3 The limits of the apparent surface in the direction of the reference axis of a light signalling device shall be determined.

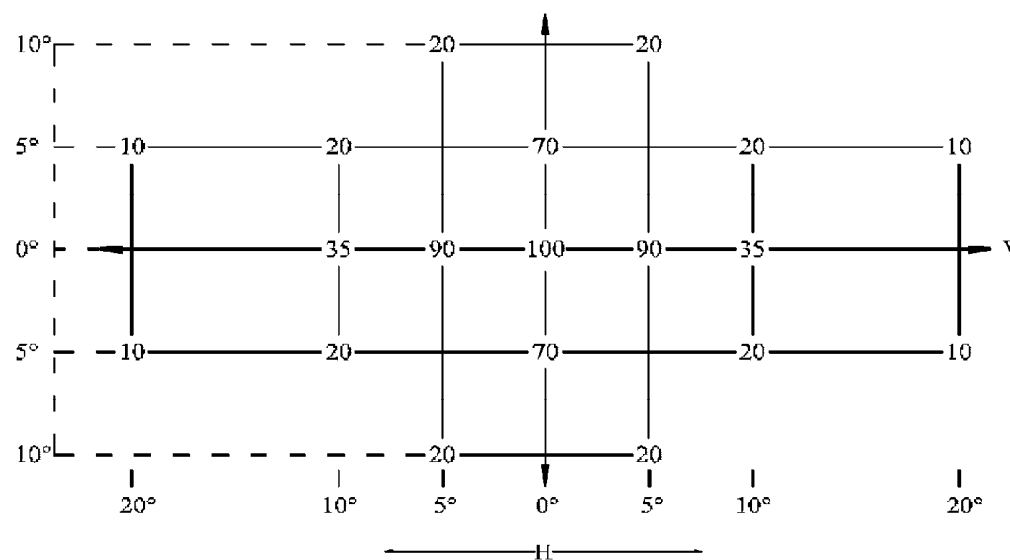


Figure 1. The minimum light intensity distribution of angular positions in percentage

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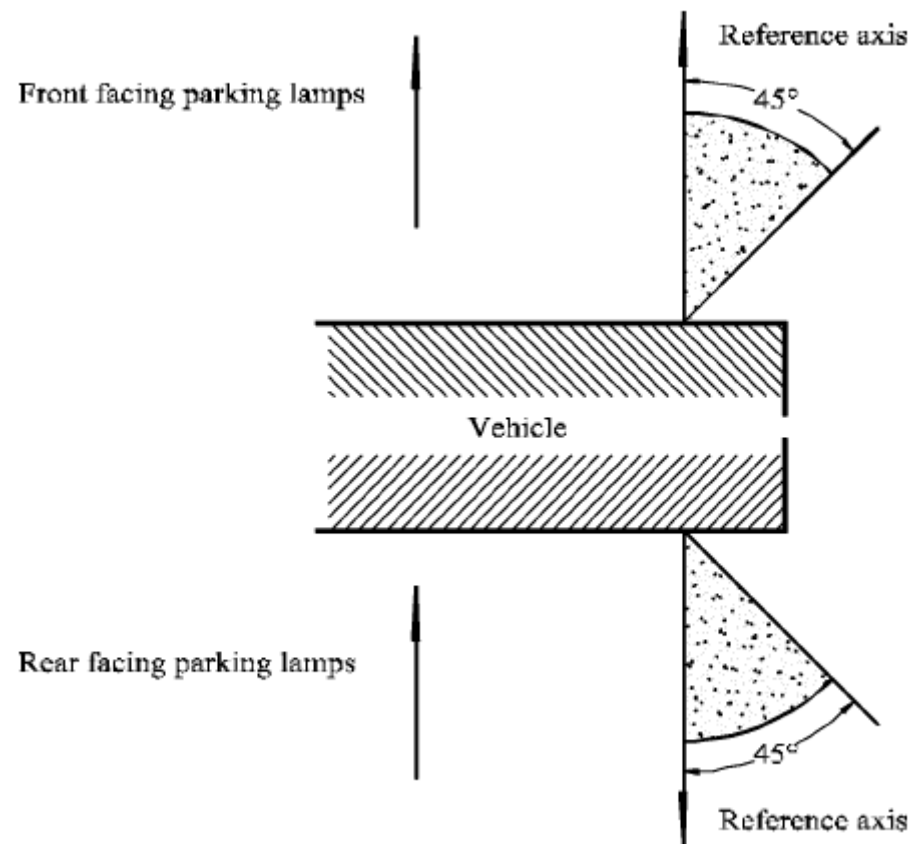


Figure 2. Horizontal angles required for the light distribution in space (1)

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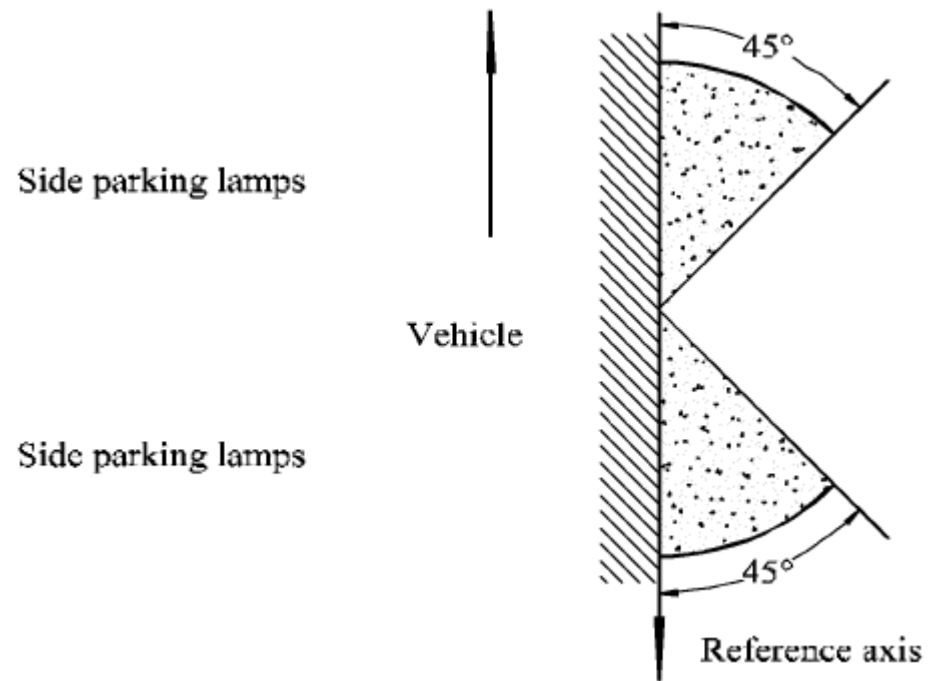


Figure 3. Horizontal angles required for the light distribution in space (2)