

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(74) 2046 final

Brussels, 13 December 1974

Proposal for a

COUNCIL DIRECTIVE

on the approximation of the laws of the Member
States relating to side lights, rear lights and
stop lights for motor vehicles and their trailers

(submitted to the Council by the Commission)

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EXPLANATORY MEMORANDUM

This proposed Directive is to form part of the Community type-approval procedure referred to in Council Directive 70/156/EEC of 6 February 1970 (1).

This proposal concerns only technical requirements for the construction and testing of side lights, rear lights and stop lights of motor vehicles and their trailers, as technical requirements for their installation are included in another proposal concerning the installation of lighting and light signalling devices (2).

In drafting this directive the Commission was of the opinion that, in order to facilitate commercial exchanges beyond the borders of the Community, it was necessary to take into account existing international prescriptions and in particular those of the United Nation's Economic Commission for Europe (3). In this perspective the Commission has also examined the possibility to give to the marks granted by this organisation the same effects as of the EEC type approval mark. This possibility has been discarded as some Member States have not ratified to the Agreement of March 1958 of the United Nations concerning the adoption of uniform conditions of approval and reciprocal recognition of approval for motor vehicle equipment and parts, in which framework the activities of the Economic Commission for Europe are carried out. These particular Member States can therefore not defend their interests during the activities of this organisation.

Articles 1 - 6 institute the EEC component type-approval procedure. By means of this procedure the Directive tends to permit free movement of these lights within the Community by prohibiting the Member States from opposing their marketing, provided they satisfy the construction and testing requirements laid down in the Annexes and bear the EEC type-approval mark, a diagram of which appears in Annex I. This procedure includes a system of reciprocal notification of any grant, refusal, withdrawal or extension of type approval.

Article 7 incorporates the present Directive in the EEC type-approval procedure.

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- (1) O.J. No. L 42, 23 February 1970, page 1
 - (2) COM (73) 2024
 - (3) Regulation no. 7 "Uniform provisions concerning the approval of side lights, rear lights and stop lights of motor vehicle (except for motor cycles) and their trailers. (Doc. E/ECE/32A/E/ECE/TRANS/505/Rev. 1/Add 6).

Since certain Member States do not operate a type-approval system it is necessary to insert some provisions in order to ensure that vehicles complying with the requirements set out in the Directive can be used in these states. (Article 8) (1)

The directive is applicable to motor vehicles with at least four wheels and a maximum design speed exceeding 25 km/h (Article 9).

Article 10 contains the procedure for adapting directive to technical progress. This procedure is set out in Article 13 of the Council Directive of 6 February 1970 relating to the type-approval of motor vehicles and trailers.

Article 11 contains two deadlines: before expiry of the first deadline the Member States shall adopt and publish the measures necessary in order to comply with the Directive. The second deadline sets the date on which all of the Member States must simultaneously implement the common rules (Article 11 (1)).

Finally, the Commission must be informed in good time of all draft provisions drawn up by the Member States in the field referred to in the Directive in order to enable it to comment thereon (Article 11 (2)).

CONSULTATION OF THE EUROPEAN PARLIAMENT AND ECONOMIC AND SOCIAL COMMITTEE

Pursuant to the Rome Treaty, Article 100 (2), the opinion of these two institutions is required.

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- (1) OJ No L 73, 27 March 1972 "Documents concerning the accession to the European Communities of the Kingdom of Denmark, Ireland, and the United Kingdom of Great Britain and Northern Ireland". Act concerning the conditions of accession and adjustments to the Treaties - Annex I, title X.

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 100 thereof ;

Having regard to the proposal from the Commission ;

Having regard to the Opinion of the European Parliament ;

Having regard to the Opinion of the Economic and Social Committee ;

Whereas the technical requirements which motor vehicles must satisfy pursuant to national laws relate inter alia to side lights, rear lights and stop lights ;

Whereas those requirements differ from one Member State to another, whereas it is therefore necessary that all Member States adopt the same requirements either in addition to or in place of their existing requirements, in order, in particular, to allow the EEC type-approval procedure which was the subject of the Council Directive (70/156/EEC)⁽¹⁾ of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers to be applied in respect of each type of vehicle;

Whereas common requirements for the installation of lighting and light signalling devices on motor vehicles and trailers were laid down by the Council Directive of (2);

Whereas common requirements for the construction of other lighting and light signalling devices were or will be laid down at a later date;

Whereas a harmonized type-approval procedure for side lights, rear lights and stop lights makes it possible for each Member State to check compliance with the common construction and testing requirements and to inform the other Member States of its findings by sending a copy of the type-approval certificate completed for each type of side light, rear light and stop light ;

(1) O.J. No. L 42, 23 February 1970, p. 1.

(2) SOM (73) 2024

Whereas the placing of an EEC type-approval mark on lights manufactured in conformity with the approved type obviates any need for technical checks on these side lights, rear lights and stop lights in the other Member States;

Whereas to facilitate trade with the third countries it is advisable to take into account the technical requirements in this field adopted by the UN Economic Commission for Europe in its Regulation N° 19 (Uniform provisions concerning the approval of side lights, rear lights and stop lights -except for motor cycles - and their trailers), which is annexed to the Agreement of 20 March 1958;

Whereas the approximation of national laws relating to motor vehicles entails reciprocal recognition by Member States of the tests carried out by them individually on the basis of the common requirements; whereas if the system is to function properly these requirements must be applied by all Member States with effect from the same date ;

HAS ADOPTED THIS DIRECTIVE :

Article 1

1. Member States shall grant EEC type approval in respect of any type of side lights, rear lights and stop lights which satisfies the construction and testing requirements laid down in Annexes 0, I, IV and V hereto.
2. Every Member State which grants such type approval shall take the measures required in order to verify, insofar as is necessary and if need be in cooperation with the competent authorities in the other Member States, that production models conform to the approved type. Such verification shall be carried out by means of spot checks.

Article 2

Member States shall for each type of side lights, rear lights and stop lights which they approve pursuant to Article 1 issue to the manufacturer, or to his authorized representative, an EEC type-approval mark conforming to the model shown in Annex III hereto.

Member States shall take all appropriate measures to prevent the use of marks liable to create confusion between side lights, rear lights and stop lights which have been type-approved pursuant to Article 1 and other devices.

Article 3

1. No Member State may prohibit the placing on the market of side lights, rear lights and stop lights on grounds relating to their construction or method of functioning if they bear the EEC type-approval mark.
2. Nevertheless, a Member State may prohibit the placing on the market of side lights, rear lights and stop lights bearing the EEC type-approval mark which, by their design, do not conform to the approved prototype.

That State shall forthwith inform the other Member States and the Commission of the measures taken, specifying the reasons for its decision.

Article 4

The competent authorities of the relevant Member State shall within one month send to the competent authorities of the other Member States a copy of the type-approval certificates completed for each type of side lights, rear lights and stop lights which they approve or refuse to approve.

Article 5

1. If the Member State which has granted EEC type-approval finds that a number of side lights, rear lights and stop lights bearing the same EEC type-approval mark do not conform to the type which it has approved, it shall take the necessary measures to ensure that production models conform to the approval type. The competent authorities of that State shall advise those of the other Member States of the measures taken, which may where necessary extend to withdrawal of EEC component type-approval. The said authorities shall take the like measures if they are informed by the competent authorities of another Member State of such failure to conform.
2. The competent authorities of Member States shall inform each other within one month of any withdrawal of EEC type-approval, and of the reasons for such measure.

Article 6

All decisions taken pursuant to the provisions adopted in implementation of this Directive which refuse or withdraw EEC type-approval for side lights, rear lights and stop lights or prohibit their use shall set out in detail the reasons on which they are based. A decision shall be notified to the party concerned, who shall at the same time be informed of the remedies available to him under the laws in force in the Member States and of the time limits allowed for the exercise of such remedies.

Article 7.

No Member State may refuse to grant EEC type-approval or national type-approval of a vehicle on grounds relating to its side lights, rear lights and stop lights if these bear the EEC type-approval mark and are fitted in accordance with the requirements laid down in the Council Directive of (1) on the approximation of the laws of the Member States concerning the installation of lighting and light signalling devices on motor vehicles and trailers.

Article 8

No Member State may refuse or prohibit the sale or registration, entry into service or use of a vehicle on grounds relating to its side lights, rear lights and stop lights if these bear the EEC type-approval mark and are fitted in accordance with the requirements laid down in the Council Directive of (1) on the approximation of the laws of the Member States concerning the installation of lighting and light signalling devices on motor vehicles and trailers.

Article 9

For the purposes of this Directive, "vehicle" means any motor vehicle intended for use on the road, with or without bodywork, having at least four wheels and a maximum design speed exceeding 25 km/h, and any trailer of such vehicle, with the exception of vehicles which run on rails, agricultural tractors and machinery and public works vehicles.

Article 10

Any amendments necessary in order to adjust the provisions of this Directive so as to take account of technical progress shall be adopted in accordance with the procedure laid down in Article 13 of the Council Directive (70/156/EEC) of 6 February 1970 on the approximation of the laws of Member States relating to the type-approval of motor vehicles and their trailers.

(1) COM (73) 2024

Article 11

1. The Member States shall adopt and publish the provisions needed in order to comply with this Directive before 1 June 1976 and shall forthwith inform the Commission thereof. They shall apply such provisions with effect from 1 October 1976.
2. As soon as this Directive has been notified, the Member States shall see to it that the Commission is informed in sufficient time to enable it to submit its comments, of any draft laws, regulations or administrative provisions which they intend to adopt in the field covered by the Directive.

Article 12

This Directive is addressed to the Member States.

LIST OF ANNEXES

- Annex 0 - Definitions, general specifications, intensity of light emitted, test procedure, colour of light emitted, conformity of production, (x), notice about colour.
- Annex I - Side lights, rear lights and stop lights:
Minimum angles required for light distribution in space of these lights (x)
- Annex II - Model for an EEC type-approval certificate.
- Annex III - Conditions for EEC type-approval and marking.
- Annex IV - Photometric measurements. (x)
- Annex V - Colours of lights: trichromatic co-ordinates (x)

(x) The requirements of this annex correspond to the similar requirements of Regulation n° 7 of the Economic Commission for Europe (E/ECE/324/E/ECE/TRANS/505/Add.6), thus respecting the breakdown into items; Where an item of that Regulation has no counterpart in this Directive, its number is given in brackets as a token entry.

ANNEX O

DEFINITIONS, GENERAL SPECIFICATIONS, INTENSITY OF LIGHT EMITTED, TEST PROCEDURE, COLOUR OF LIGHT EMITTED, CONFORMITY OF PRODUCTION, NOTICE ABOUT COLOUR

1. Definitions

For the purposes of this Directive ;

- 1.1. "side light" means the light used to indicate the presence and the width of the vehicle when the latter is viewed from the front;
- 1.2. "rear light" means the light used to indicate the presence and the width of the vehicle when the latter is viewed from the rear;
- 1.3. "stop light" means the light used to indicate to other road users to the rear of the vehicle that the latter's driver is applying the service brake.
- 1.4. "Device" means a lighting or signalling device comprising a light source (and, in certain cases, an optical system), an illuminated area and a housing. A device may comprise one or more lights; if it comprises several lights, they may be:
 - 1.4.1. "grouped lights" means devices having separate illuminating surfaces and separate light sources, but a common lamp body;
 - 1.4.2. "combined lights" means devices having separate illuminating surfaces and separate light sources, but a common lamp body;
 - 1.4.3. "reciprocally incorporated lights" means devices having separate light sources (or a single light source operating under different conditions), totally or partially common illuminating surfaces and a common lamp body;

- 1.5. the following shall be considered to be
- 1.5.1 "a single light" any combination of two or more lights, whether identical or not, having the same function and colour, if it comprises devices, the projection of whose aggregate light-emitting surfaces in a given transverse plane occupies 60% or more of the area of the smallest rectangle circumscribing the projections of those light-emitting surfaces, provided that such combination is, where approval is required, approved as a single light.
- 1.5.2. "two lights" or "an even number of lights" : a single light-emitting surface in the shape of a band if placed symmetrically in relation to the median longitudinal plane of the vehicle and extending on both sides to within not less than 0.40 m of the extreme outer edge of the vehicle, if not less than 0.80 m long. The illumination of such a surface shall be provided by not less than two light sources placed as close as possible to its ends. The light-emitting surface may be constituted by a number of juxtaposed elements on condition that the projections of the several individual light-emitting surfaces in the transverse plane perpendicular to the median longitudinal plane of the vehicle occupy not less than 60% of the area of the smallest rectangle circumscribing the projections of those individual light-emitting surfaces.

(2.)

(3.)

(4.)

5. General specifications

- 5.1. Each sample shall conform to the specifications set forth in items 6. and 8. below.
- 5.2. The devices shall be so designed and constructed that in normal conditions of use, and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Directive.

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6. Intensity of light emitted

6.1. In the reference axis, the light emitted by each of the two samples shall be of not less than the minimum intensity and of not more than the maximum intensity specified below:

	<u>Minimum</u> (cd)	<u>Maximum</u> (cd)
6.1.1. Position (side lights)	4	60
6.1.2. Rear lights	2	12
6.1.3. Stop-lights		
6.1.3.1. with one level of illumination	40	100
6.1.3.2. with two levels of illumination		
6.1.3.2.1. (by day)	130	520
6.1.3.2.2. (by night)	30	80

6.2. Outside the reference axis and within the angular fields defined in the diagrams in Annex I to this Directive, the intensity of the light emitted by each of the two samples shall:

6.2.1. in each direction corresponding to the points in the light distribution table reproduced in Annex IV to this Directive be not less than the product of the minimum specified in item 6.1. above by the percentage specified in the said table for the direction in question;

6.2.2. in no direction within the space from which the indicator light is visible, exceed the maximum specified in item 6.1. above;

6.2.3. however, a luminous intensity of 60 cd shall be permitted for rear lights incorporated with stop-lights (see item 6.1.2. above) below a plane forming an angle of 5° with and downward from the horizontal plane;

6.2.4. moreover,

6.2.4.1. throughout the fields defined in Annex I, the intensity of the light emitted shall be not less than 0.05cd for position (side) lights and rear lights, 0.3 cd for stop-lights with one level of illumination, and for stop lights with two levels of illumination 0.3 cd by day and 0.07 cd by nights;

6.2.4.2. If a red rear light is incorporated with a stop light, the ratio between the luminous intensities actually measured of the two lights when turned on simultaneously and the intensity of the red rear light when turned on alone should be at least: 5 : 1 in the field delimited by the straight horizontal lines passing through $\pm 5^\circ$ V and the straight vertical lines passing through $\pm 10^\circ$ of the light distribution table. If the stop light has two levels of illumination, this requirement shall be satisfied when it is switched on at night;

6.2.4.3. the provisions of item 2.2. of Annex IV to this Directive on local variations of intensity shall be observed.

6.3. The intensities shall be measured with the bulb(s) continuously alight and, in the case of devices emitting selective-yellow, or red light, in coloured light.

6.4. Annex IV, to which reference is made in item 6.2.1. above, gives particulars of the methods of measurement to be used.

7. Test procedure

7.1. All measurements shall be made with an uncoloured standard lamp of the type recommended for the device, the supply voltage being so regulated as to produce the normal luminous flux prescribed for that type of lamp.

7.2. However, in the case of a stop light for which an additional device is used to obtain the night-time intensity, the voltage applied to the system for measuring the night-time intensity shall be that which was applied to the lamp for measuring the day-time intensity.

7.3. Where a red rear light is incorporated with a dual-intensity stop light and is designed to operate permanently with an additional device to regulate the intensity of the light emitted, measurement of the light emitted shall be performed with the same voltage applied to the system as would, if applied to the lamp, enable the lamp to produce the prescribed normal luminous flux.

8. Colour of light emitted

The colour of the light emitted, measured by using a source of light with a colour temperature of 2854 K (1) shall be within the limits of the co-ordinates prescribed for the colour in question in Annex V to this Directive.

9. Conformity of production

Every device bearing an EEC type-approval mark as provided for in this Directive shall conform to the type approved and shall comply with the photometric conditions specified in items 6. and 8. Nevertheless, in the case of a device picked at random from series production, the requirements as to minimum intensity of the light emitted (measured with a standard lamp as referred to in item 7. above) may be limited in each relevant direction to 80 per cent of the minimum values specified in items 6.1. and 6.2. above.

(10)

11. Notice on colour

The EEC type approval is granted if the colour of the light emitted is that laid down in item 3.13. of Annex I of the directive relating to the installation of lighting and light signalling devices on motor vehicles and trailers.

(1) Corresponding to illuminant A of the International Commission on Illumination (ICI)

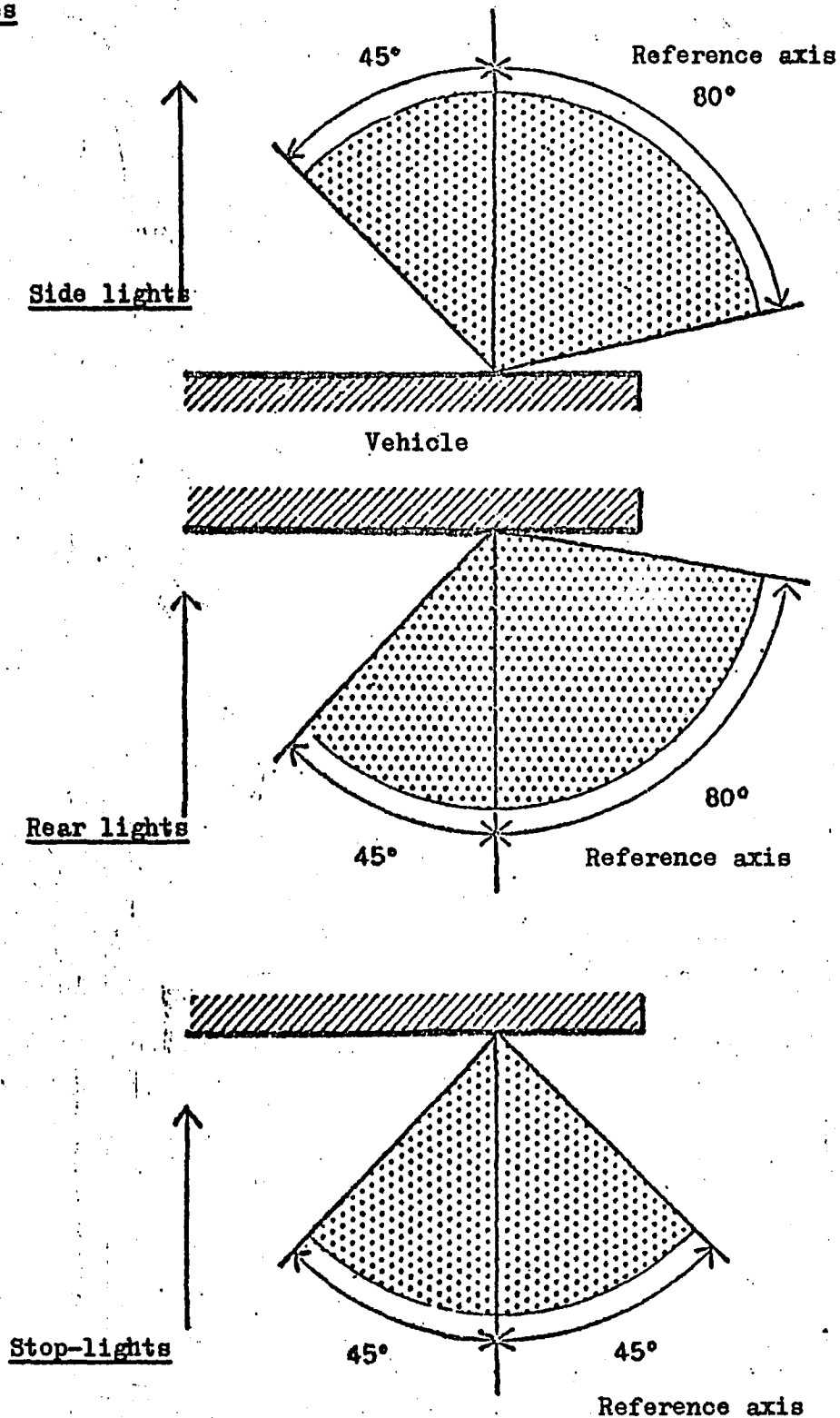
ANNEX I

SIDE LIGHTS, REAR LIGHTS AND STOP LIGHTS :

MINIMUM ANGLES REQUIRED FOR LIGHT DISTRIBUTION IN SPACE OF THESE LIGHTS (*)

In all cases, the minimum vertical angles of light distribution in space are 15° above and 15° below the horizontal.

Minimum horizontal angles of light distribution in space



(*) The angles shown in these diagrams are correct for devices to be mounted on the right side of the vehicle. The arrows point to the front of the vehicles.

ANNEX II

MODEL FOR AN EEC

TYPE-APPROVAL

CERTIFICATE (Max. format: A 4 (210 x 927 mm))

Name of competent authority

Notification concerning the grant, refusal or withdrawal of EEC type-approval, or the grant, refusal or withdrawal of the extension of EEC type-approval, in respect of a type of side lights, rear lights, stop lights.

Type-approval No.

1. Device (x)

- side light

- rear light

- stop light with one/two level(s) (x) of illumination

2. Type and number of lamps

3. Colour of light emitted: red, selective yellow, white (x)

4. For stop-light with two levels of illumination, indicate the system used to reduce the intensity by night (indication of main characteristics)

5. Trade name or mark

6. Name and address of manufacturer

7. If applicable, name and address of manufacturer's authorized representative

8. Submitted for EEC type-approval on

9. Technical service conducting EEC type-approval tests

10. Date of report issued by that service

11. Number of report issued by that service

(x) Delete items not applicable

12. Date of grant/refusal/withdrawal of EEC component type-approval (x)
13. Extension of EEC type-approval to devices emitting a red/selective yellow/white light (x)
14. Date of grant/refusal/withdrawal of the extension of EEC type-approval (x)
15. Single EEC type-approval, granted on the basis of Item 3.3. of Annex III for a lighting and light signalling device comprising several lights and/or lamps, and in particular
16. Date of refusal/withdrawal of the single EEC type-approval (x)
17. Place
18. Date
19. Signature
20. The attached drawing No. shows the geometrical position in which the device is to be mounted on the vehicle and the axis of reference and centre of reference of the device.

(x) Delete items not applicable

..... (17)

ANNEX III

CONDITIONS FOR EEC TYPE APPROVAL AND MARKINGS

1. Application for EEC type approval
- 1.1. Application for EEC type approval is submitted by the holder of the trade name or mark or by his representative.
- 1.2. In the case of a side light, the application for EEC type approval shall specify whether it is intended to emit uncoloured light or selective-yellow.
- 1.3. For each type of side light, rear light and stop light, the application shall be accompanied by the following:
 - 1.3.1. a brief technical specification stating, in particular, the type of lamp or lamps prescribed;
 - 1.3.2. in the case of a stop-light with two levels of illumination, an arrangement diagram and a specification of the characteristics of the system ensuring the two levels of illumination;
 - 1.3.3. drawings, in triplicate, in sufficient detail to permit identification of the type of the light and showing in what geometrical position the light is to be mounted on the vehicle; the axis of observation to be taken as the axis of reference in the tests (horizontal angle $H = 0$, vertical angle $V = 0$); and the point to be taken as the centre of reference in the said tests;
 - 1.3.4. two samples; if the lights are identical, but symmetrical and such that they can be mounted either on the right side or on the left side of the vehicle, the two samples submitted may be identical and be suitable for mounting only on the right or only on the left side of the vehicle; in the case of a stop-light with two levels of illumination, the application shall also be accompanied by two samples of the parts constituting the system which ensures two levels of illumination.

2. Markings

Devices submitted for EEC type-approval:

- 2.1. shall bear the trade name or mark of the applicant; this marking shall be clearly legible and indelible;
- 2.2. shall bear a clearly legible and indelible marking indicating the type or types of lamp recommended;
- 2.3. shall comprise a space of sufficient size for the EEC type-approval mark and the additional symbols prescribed in item 4.3. below; this space shall be shown in the drawings mentioned in item 1.3.3. above.

3. EEC component type-approval

- 3.1. If all the samples submitted in accordance with the provisions of point 1 satisfy the requirements of items 5, 6, 7, and 8 of ANNEX 0, EEC type-approval shall be granted and a type-approval number assigned.
- 3.2. This number shall not be assigned to any other type of side light, rear light or stop light.
- 3.3. Where EEC type-approval is requested for a type of lighting and light signalling device comprising a side light, a rear light or a stop light and other lights and lamps, a single EEC type - approval mark may be issued provided that the side light, the rear light or the stop light complies with the requirements of this Directive and that each of the other lights and lamps forming part of the lighting and light signalling device for which EEC type approval is requested complies with the specific Directive applying to it.

4. Marks

- 4.1. Every side light, rear light or stop light conforming to a type approved under this Directive shall bear an EEC type-approval mark.

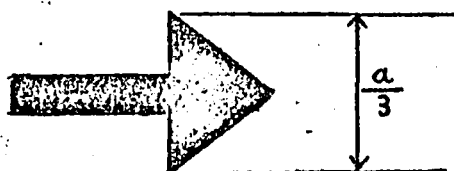
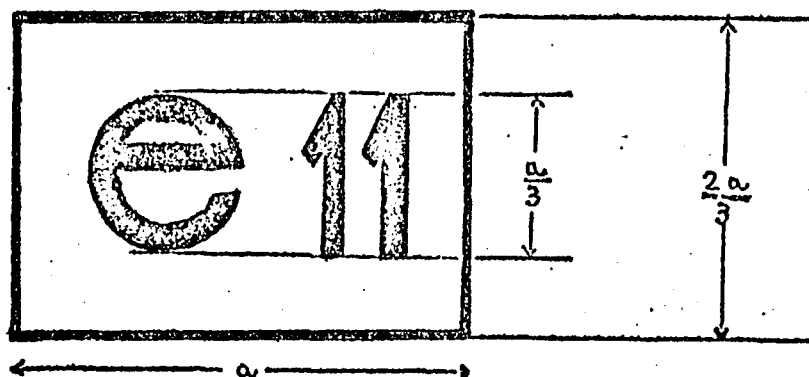
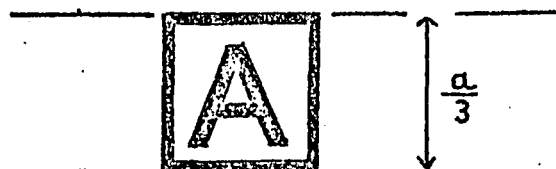
- 4.2. This mark shall consist of a rectangle surrounding the lower-case letter "e" followed by a number of distinctive letter identifying the Member State which has granted EEC type-approval:

1 for Germany
2 for France
3 for Italy
4 for the Netherlands
6 for Belgium
11 for the United Kingdom
13 for Luxembourg
DK for Denmark
IRL for Ireland

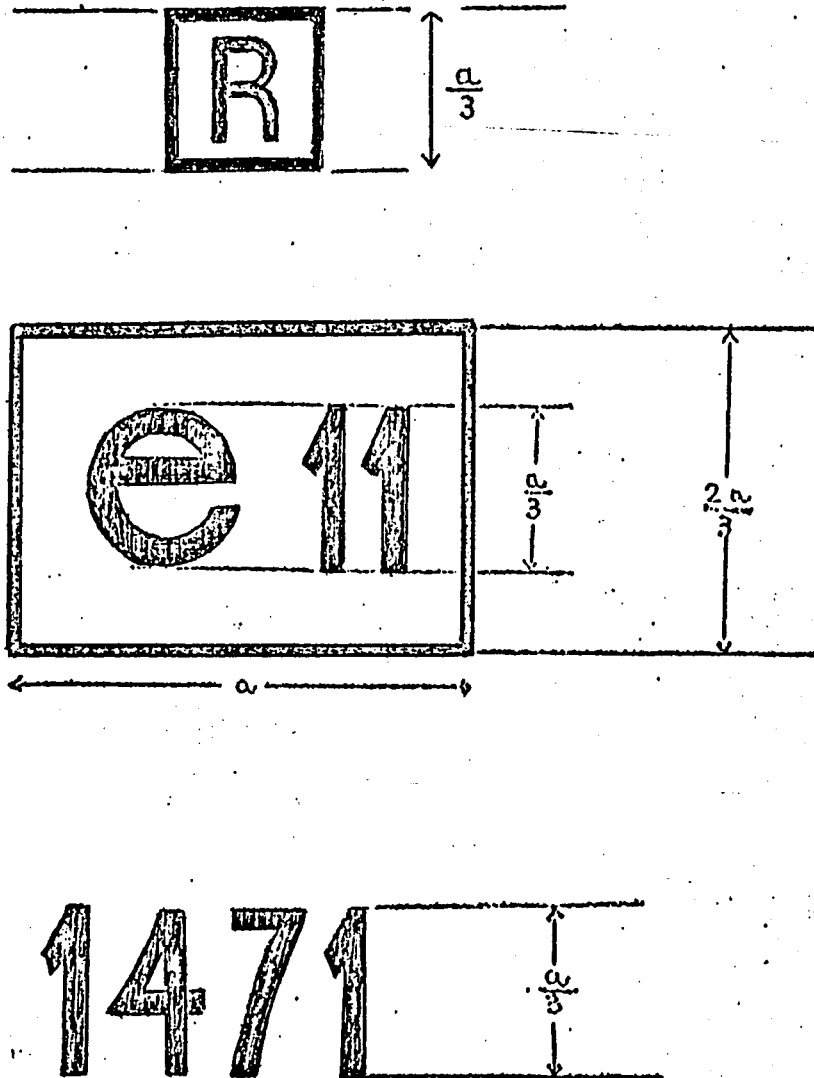
It must also include below the rectangle the EEC type-approval number which corresponds to the number of the EEC type-approval certificate issued for the type of illuminating device in question.

- 4.3. In the following cases a symbol additional to the EEC type-approval mark shall be opposed :
- 4.3.1. on devices satisfying the provisions of this Directive relating to side lights there shall be set a square enclosing the letter "A";
- 4.3.2. on devices satisfying the provisions of this Directive relating to rear lights, there shall be set a square enclosing the letter "R";
- 4.3.3. on devices satisfying the provisions of this Directive relating to stoplights, there shall be set a square enclosing the letter "S" followed by the figure "1" if the device has one level of illumination and by the figure "2" if it has two levels of illumination;
- 4.3.4. on devices comprising both a rear light and a stop lights satisfying the provisions of this Directive relating to such lights, there shall be set a rectangle enclosing the letter "R" and the symbol "S1" or "S2", as the case may be, separated by a horizontal dash;

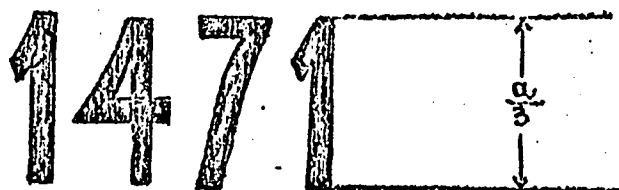
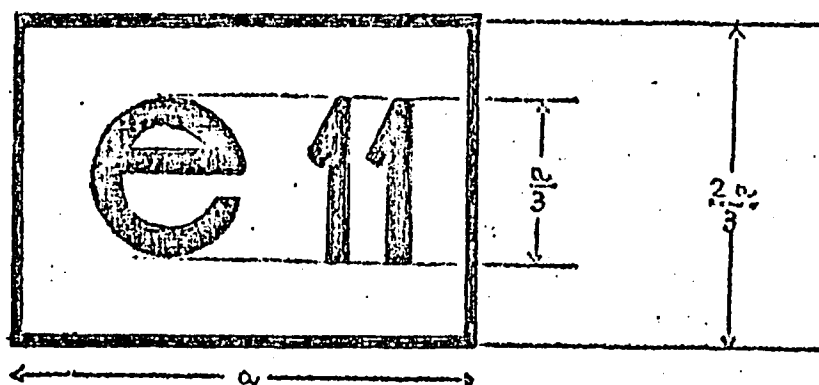
- 4.3.5. on side lights or rear lights whose angles of visibility are asymmetrical in relation to the reference axis in a horizontal direction, there shall be set an arrow pointing towards the side on which the photometric specifications are satisfied up to an angle of 80° H.
- 4.4. The EEC type-approval number must be situated close to the rectangle surrounding the letter "e", in any convenient position relative to the rectangle.
- 4.5. The EEC type-approval mark must be placed on the illuminating area or on one of the illuminating areas in such a way that it is indelible and clearly legible even when the lights are fitted on the vehicle.
- 4.6. Examples of type-approval marks are appended.
- 4.7. Where, as provided in paragraph 3.3., only one EEC type - approval number is to be assigned to a type of lighting and light signalling device comprising a side light, rear light or stop light and other lights and lamps, a single EEC type-approval mark may be affixed, consisting of:
- (a) a rectangle surrounding the letter "e" followed by a number or a distinctive letter identifying the Member State which has granted the EEC type-approval.
 - (b) the EEC type-approval number
 - (c) additional symbols required by the various directives under which EEC type-approval was granted.
- 4.8. The dimensions of the various components of this mark must not be less than the minimum dimensions specified for individual markings as appended to this Annex.
- 21

ANNEX IIIEXAMPLE OF AN EECTYPE-APPROVAL MARK $a = 8 \text{ mm min.}$ 

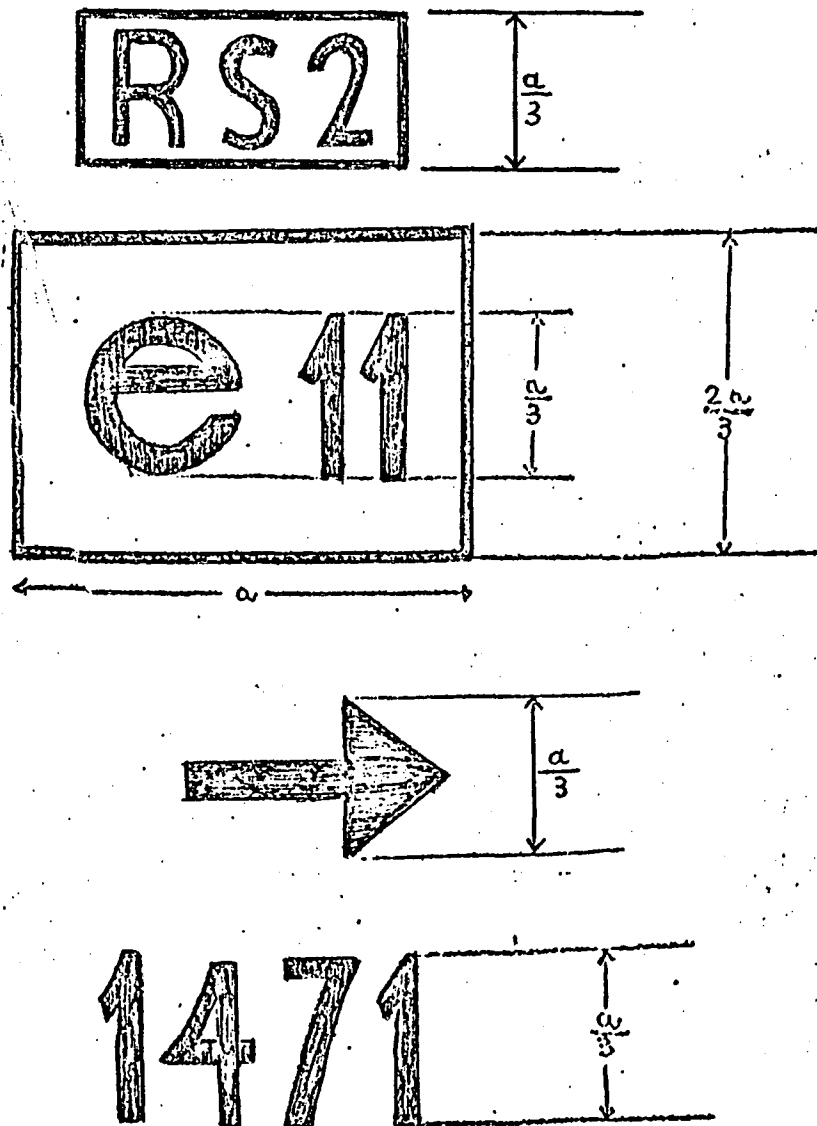
The device bearing the EEC type-approval mark shown above is a side light approved in the United Kingdom (e 11) under the number 1471. The arrow indicates the side on which the photometric specifications are satisfied up to an angle of 80° H.



The device bearing the EEC type-approval mark shown above is a rear light approved in the United Kingdom (e 11) under the number 1471. The absence of an arrow means that, both right and left, the photometric specifications are satisfied up to an angle of 80° H.



The device bearing the EEC type-approval mark shown above is a stop light, with one level of illumination, approved in the United Kingdom (e 11) under the number 1471.



The device bearing the EEC type-approval mark shown above is a device comprising both a rear light and a stop light, with two levels of illumination, approved in the United Kingdom (e 11) under the number 1471. The arrow means that, on the side to which it points, the photometric specifications are satisfied up to an angle of 80°H.

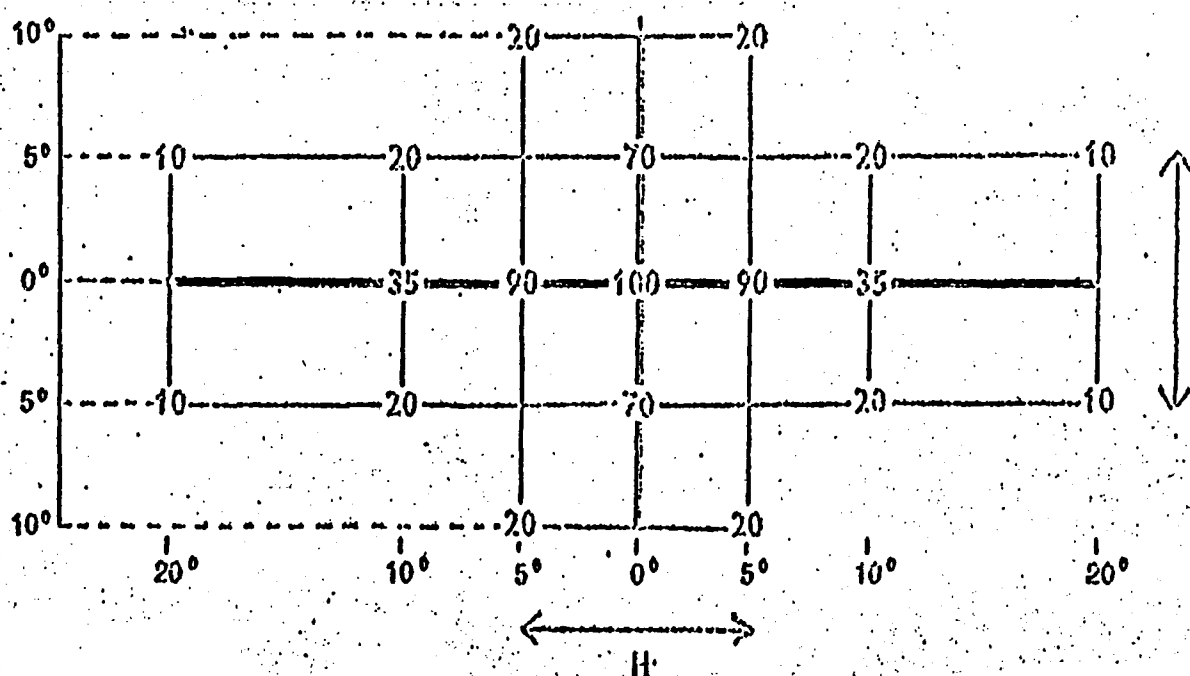
ANNEX IV

PHOTOMETRIC MEASUREMENTS

1. Measurement methods

- 1.1. During photometric measurements, stray reflexions shall be avoided by appropriate masking.
- 1.2. In case the results of measurements should be challenged, measurements shall be carried out in such a way as to meet the following requirements:
 - 1.2.1. the distance of measurement shall be such that the law of the inverse of the square of the distance is applicable;
 - 1.2.2. the measuring equipment shall be such that the angular aperture of the receiver viewed from the reference centre of the light is comprised between 10' and one degree;
 - 1.2.3. the intensity requirement for a particular direction of observation shall be deemed to be satisfied if that requirement is met in a direction deviating by not more than one quarter of a degree from the direction of observation.

2. Table of standard light distribution



ANNEX IV

- 2.1. 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 light (in the direction $H = 0^\circ$ and $V = 0^\circ$).
 - 2.2. If visual examination of a light appears to reveal substantial local variations of intensity, a check shall be made to ensure that no intensity measured between two of the directions of measurement referred to above is:
 - 2.2.1. for a minimum specification, below 50 per cent of the lower minimum intensity of the two prescribed for these directions of measurement;
 - 2.2.2. for a maximum specification, above the lower of the two maximum intensities prescribed for these directions of measurement, increased by a fraction of the difference between the intensities prescribed for the said directions of measurement, this fraction being a linear function of the difference.
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ANNEX V

COLOURS OF LIGHTS TRICHROMATIC CO-ORDINATES

RED	:	limit towards yellow	:	y	\leq	0.335
		" " purple	:	z	\leq	0.008
WHITE	:	Limit towards blue	:	x	\geq	0.310
		" " yellow	:	x	\leq	0.500
		" " green	:	y	\leq	$0.150 + 0.640x$
		" " green	:	y	\leq	0.440
		" " purple	:	y	\geq	$0.050 + 0.750x$
		" " red	:	y	\geq	0.382
SELECTIVE						
YELLOW	:	Limit towards red	:	y	\geq	$0.138 + 0.580x$
		" " green	:	y	\leq	$1.29x - 0.100$
		" " white control	:	y	\geq	$-x + 0.966$
		" " the spectral value	:	y	\leq	$-x + 0.992$

For checking those colorimetric characteristics, a source of light at a colour temperature of 2,854 K corresponding to illuminant A of the International Commission on Illumination (ICI) shall be used.



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