Type : 1001-6200

Manufacturer :

Test Report

Agreement

concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or light-emitting diode (LED) modules

ECE-Regulation 112

including all amendments until

series of Amendments: 02
Supplement 01 Date of entry into force: May 29, 2020

Approval status	
ECE	Number of approval
	E4*112R02/01*28191*00

Type : 1001-6200

Manufacturer :

Test object(s) and general test information

Test object(s)

identification number	: 1001-6200
version	: Driving Beam
Worst case	: Not applicable

General test information

Order issued by (if different from manufacturer)	: ---
Test object / test vehicle received on	: not applicable
Test date	: Finished on January 27, 2021
Test site	:

Remark : ---

Type : 1001-6200

Manufacturer :

Test minutes

Test facilities	: The test facilities are in compliance with the requirements of the regulation.
Test results	: See enclosure.
Temperature/Relative Humidity of laboratory	: 21.6 °C / 44 %
Markings	: The trade mark is marked clearly legible and indelible on the reflector of the lamp. Space for the approval mark and for additional symbols is provided on the lens (the lens cannot be separated from the housing).
General specifications	: The lamps are designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics according to Paragraph 5 of the Regulation. ~~The filament lamp holder shall conform to the characteristics given in IEC Publication 60061. The holder data sheet relevant to the category of filament lamp used, applies.~~ Headlamps be fitted with a device enabling them to be so adjusted on the vehicles as to comply with the rules applicable to them. Such a device need not be fitted on units in which the reflector and the diffusing lens cannot be separated, provided the use of such units is confined to vehicles on which the headlamp setting can be adjusted by other means. ~~On headlamps designed to provide alternately a driving beam and a passing beam by electromechanical device incorporated in the headlamp and the device have been tested according to paragraph 5.7. of the Regulation.~~

Type : 1001-6200

Manufacturer :

Illumination configuration for different traffic conditions	: Not applicable
Photometric tests	: The headlamps have been adjusted according to paragraph ~~6.2.~~ and 6.3. of the Regulation. The LED modules of lamp shall continue operation until photometric stability has occurred. Once stability of photometry has been achieved. (According to Annex 10 paragraph 4.3 of the Regulation)
Driving beam	: ~~In the case of a headlamp designed to provide a driving-beam and a passing-beam, measurements of the luminous intensity of the driving-beam shall be taken with the same headlamp alignment as for measurements under paragraphs 6.2.4. to 6.2.6. above;~~ in the case of a headlamp providing a driving-beam only, it shall be so adjusted that the area of maximum luminous intensity is centred on the point of intersection of lines H-H and V-V; such a headlamp need meet only the requirements referred to in paragraph 6.3. The point of intersection (HV) of lines h h and v v shall be situated within the isolux 80 per cent of maximum luminous intensity (I_{max}) Illumination of the driving beam measured on the screen by means of LEDs. And the LED module(s) is measured at ~~6.3 V,~~ 13.2 V or 28.0 V. ~~an uncoloured standard lamp H7 produces a light flux of 1100 lumens.~~

Type : 1001-6200

Manufacturer :

Results of photometric tests of the driving beam [class B]

12 V

illumination produced on the screen [cd]			
	sample 1	sample 2	required illumination
Maximum illumination I_{max}	207364.70	211767.50	$40{,}500 \leq I_{max} \leq 215{,}000$
Illumination at point of intersection (HV) of lines hh and vv	185411.30	178900.40	$\geq 0.8 \times I_{max}$
$I'_M = I_{max} / 4{,}300$	48.22	49.25	50
H-5L	19352.50	19562.90	$\geq 5{,}100$
H-2.5L	74715.50	75947.50	$\geq 20{,}300$
H-2.5R	79513.50	75586.90	$\geq 20{,}300$
H-5R	19462.70	19032.00	$\geq 5{,}100$

Decision : ■ Pass or □ Failed

Results of photometric tests of the driving beam [class B]

24 V

illumination produced on the screen [cd]			
	sample 1	sample 2	required illumination
Maximum illumination I_{max}	212468.70	213952.30	$40{,}500 \leq I_{max} \leq 215{,}000$
Illumination at point of intersection (HV) of lines hh and vv	191321.30	181504.80	$\geq 0.8 \times I_{max}$
$I'_M = I_{max} / 4{,}300$	49.41	49.76	50
H-5L	20003.60	19683.10	$\geq 5{,}100$
H-2.5L	77339.90	76428.30	$\geq 20{,}300$
H-2.5R	82839.10	76648.70	$\geq 20{,}300$
H-5R	20163.90	19282.40	$\geq 5{,}100$

Decision : ■ Pass or □ Failed

Type : 1001-6200

Manufacturer :

Stability of photometric performance of headlamps in operation

Clean headlamp : The lamp was operated for 12 hours as described in Annex 4 paragraph 1.1.1. of the Regulation, . ~~And also grouped and/or reciprocally incorporated signalling lamps lit successively for the duration of the test.~~

The visual inspections after this test did not show any distortion, deformation, cracking or change in colour of either the headlamp lens or the external lens.

12 V

photometric test results [cd]				
points on screen	initial	end of test	difference [%]	allowable difference [%]
driving beam I_{max}	208062.50	206889.30	-0.56	±10

Decision : ■ Pass or □ Failed

24 V

photometric test results [cd]				
points on screen	initial	end of test	difference [%]	allowable difference [%]
driving beam I_{max}	214089.10	211795.80	-1.07	±10

Decision : ■ Pass or □ Failed

Type : 1001-6200

Manufacturer :

Dirty headlamp : After preparation as prescribed in Annex 4 paragraph 1.2.1. of the Regulation, and confirmation that the illumination values have dropped to 15% to 20 % of the prior values, the headlamp was operated for 1 hour as described in Annex 4 paragraph 1.1.1., ~~. And also grouped and/or reciprocally incorporated signalling lamps lit successively for the duration of the test.~~

The visual inspections after this test did not show any distortion, deformation, cracking or change in colour of either the headlamp lens or the external lens.

12 V

photometric test results [cd]				
points on screen	initial	end of test	difference [%]	allowable difference [%]
driving beam I_{max}	206889.30	202383.10	-2.18	±10

Decision : ■ Pass or □ Failed

24 V

photometric test results [cd]				
points on screen	initial	end of test	difference [%]	allowable difference [%]
driving beam I_{max}	211795.80	206480.20	-2.51	±10

Decision : ■ Pass or □ Failed

Change in vertical position of the cut-off line under the influence of heat : Not applicable

Type : 1001-6200

Manufacturer :

Colorimetric characteristics : The colour of the light emitted is white which satisfies the conditions prescribed in paragraph 7 of the Regulation.

"White" means the chromaticity coordinates (x,y) of the light emitted that lie inside the chromaticity areas defined by the boundaries:

green boundary : y = 0.150 + 0.640 x

yellowish green boundary : y = 0.440

yellow boundary : x = 0.500

reddish purple boundary : y = 0.382

purple boundary : y = 0.050 + 0.750 x

blue boundary : x = 0.310

The chromaticity coordinates (x,y) of the light emitted	Driving beam	
	12V	24V
x	0.3208	0.3202
y	0.3244	0.3235

Decision : ■ Pass or □ Failed

Type : 1001-6200

Manufacturer :

The Colour rendering of LED light source	:	compliance with the requirements in Annex 10 paragraph 4.1. Driving Beam: The Red content Kred = **0.093** ≧0.05. Decision : ■ Pass or □ Failed
The UV-radiation of LED light source	:	compliance with the requirements in Annex 10 paragraph 4.2. Driving Beam: The UV-radiation Kuv = **3.2E-07** ≦ 10^5 W/lm. Decision : ■ Pass or □ Failed
Variants and components	:	Not applicable
Additional tests for adjustable reflectors	:	Not applicable
Test of lens or material samples and of complete lamps for lamps incorporating lenses of plastic material	:	The lamp manufacturer proved that the product already passed the tests prescribed in paragraphs 2.1.-2.5. of Annex 6 of this ECE-Regulation, or equivalent tests pursuant to another Regulation, those tests need not to be repeated; only the tests prescribed in appendix 1, table B had been conducted. With reference to: Test report No.:BD-TT389E112 Test site:
Evaluation of transmission and diffusion values	:	After the mechanical deterioration method described in appendix 3 of Annex 6 the variations in transmission and in diffusion were measured according to the procedure described in appendix 2. The test results fulfil the requirements. Readings taken please refer to Annex 6-Appendix 2 of Regulation

Type : 1001-6200

Manufacturer :

Resistance to mechanical deterioration of the lens surface : After this test, the photometric measurements were carried out in accordance with the Regulation.

Driving Beam - 12V

photometric test results [cd]		
points on screen	measured value	required illumination
H-V	210375.70	not exceed by more than 10 per cent below the minimum values prescribed for HV

Decision : ■ Pass or □ Failed

Driving Beam - 24V

photometric test results [cd]		
points on screen	measured value	required illumination
H-V	213653.60	not exceed by more than 10 per cent below the minimum values prescribed for HV

Decision : ■ Pass or □ Failed

Test of adherence of coatings, if any : After testing no appreciable impairment of gridded area could be observed. The requirements of Annex 6 of Regulation are fulfilled.

Decision : ■ Pass or □ Failed

Explanatory note : This report describes the examination of the Driving Beam as a part of a lamp device.

For the examination of the other lamp of the device, refer to the following report:

Type of lamp	Test Report No.
Front position lamp	TW007-A0-200080

Test Report
No. : TW112-A0-200080
ECE Regulation No.112

Type	:	1001-6200
Manufacturer	:	

Remark concerning tested object(s)

All versions of the lamps as stated in the information document are covered with the tested version(s) and test object(s) respectively.

Appendices

L	Technical information about the lamp type according to Annex 1 for the communication of the ECE Regulation No.112 type approval.	
0	List of modifications	: Not attached
1	Information folder no.	: 1001-6200

Statement of conformity

The information folder and the type described there comply with the requirements in the above mentioned ~~directive/~~ regulation.

The samples / test vehicles used were representative in terms of the type to be approved.

The technical report (including appendix L) consists of pages 1 to 12 and shall not be reproduced except in full without the written approval of the testing laboratory.

Designated Technical Service: RDWT-T04

Taipei, February 02, 2021
IFM/#

Cronus Huang
Engineer

Type : 1001-6200

Manufacturer :

Technical information about the lamp type according to Annex 1 for the communication of the ECE Regulation No.112 type approval — Appendix L

1.	Trade name or mark of the device	:	
2.	Manufacturer's name for the type of device	:	1001-6200 Driving Beam
3.	Manufacturer's name and address	:	
4.	If applicable, name and address of the manufacturer's representative	:	not applicable
5.	Submitted for approval on	:	March 13, 2020
7.	Date of report issued by that service	:	February 02, 2021
9.	Brief description		
	Category as described by the relevant marking	:	HR PL
	Number and category(ies) of filament lamp(s)	:	5 x LED (12 V / 24 V, 81 W / 67 W)
10.	Approval mark position	:	on the lens
11.	Reason(s) for extension of approval	:	not applicable

1. Specification Data December 31, 2020

Type		1001-6200	
Function		Front position lamp	Driving Beam
Light Color		White	White
Rated	Voltage	12 V / 24 V	12 V / 24 V
	Wattage	0.6 W / 1.2 W	81 W / 67 W
Application Regulation (ECE)		R7.03	R112.02
Category of light source		LED x 10	LED x 5
Position of marking	Trade mark		
		On the Reflector	
	Approval mark	On the lens	

2. Construction and Material :

Construction	Material	Remarks
Lens	PC (GE LS2-111) UV HC-3000 Coating	Clear
Reflector	PC	Vacuum Plating
Heat sink	ADC12	--

3. Name and Address of Manufactory :

4. Picture of tested sample

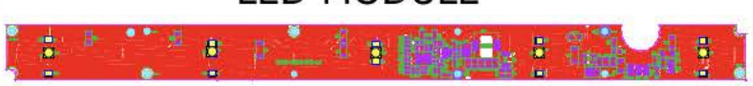
Sample 1

This document (including drawing) consists of 4 pages

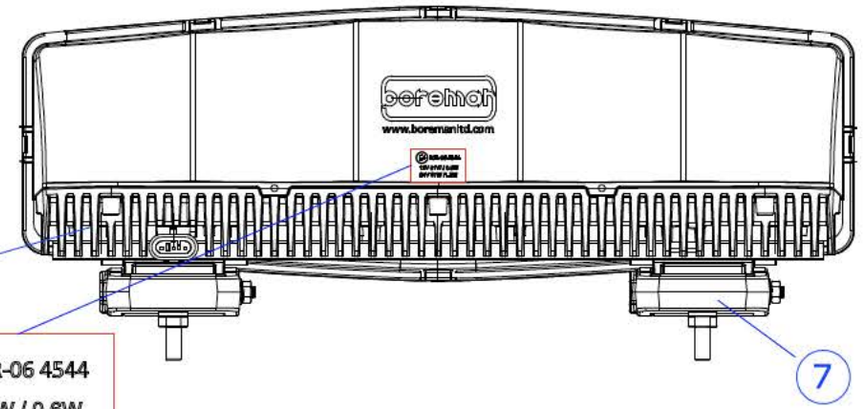
MODEL INFORMATION DOCUMENT NO. 1001-6200

REF	REV	DESCRIPTION	AUTH	DATE
1		New release	Dennis	2020/01/05

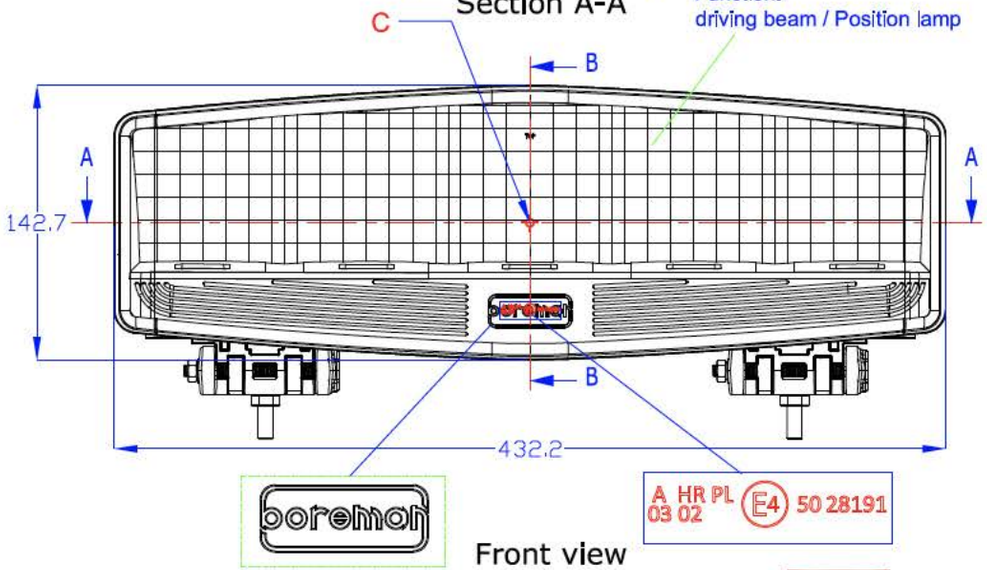
LED MODULE



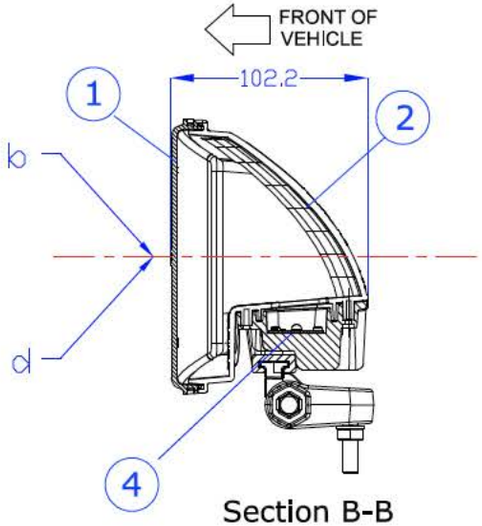
Section A-A



Back view



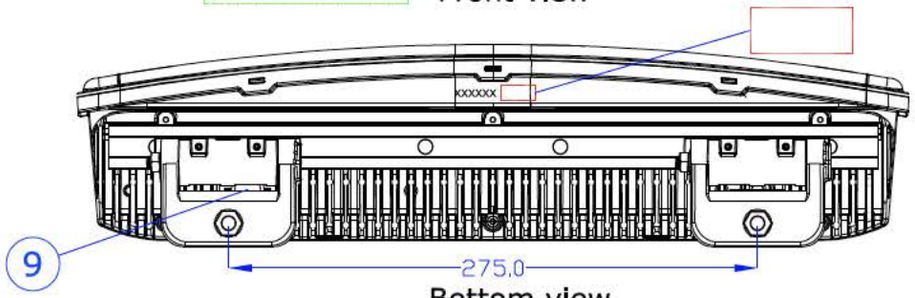
Front view



Section B-B

This drawing shall be applied for left and right hand.
a-Longitudinal plane of Vehicle.
b-Horizontal plane of Vehicle.
c-Center of reference.
d-Axis of reference.

NOTES:
Lens glued to the vacuum plating

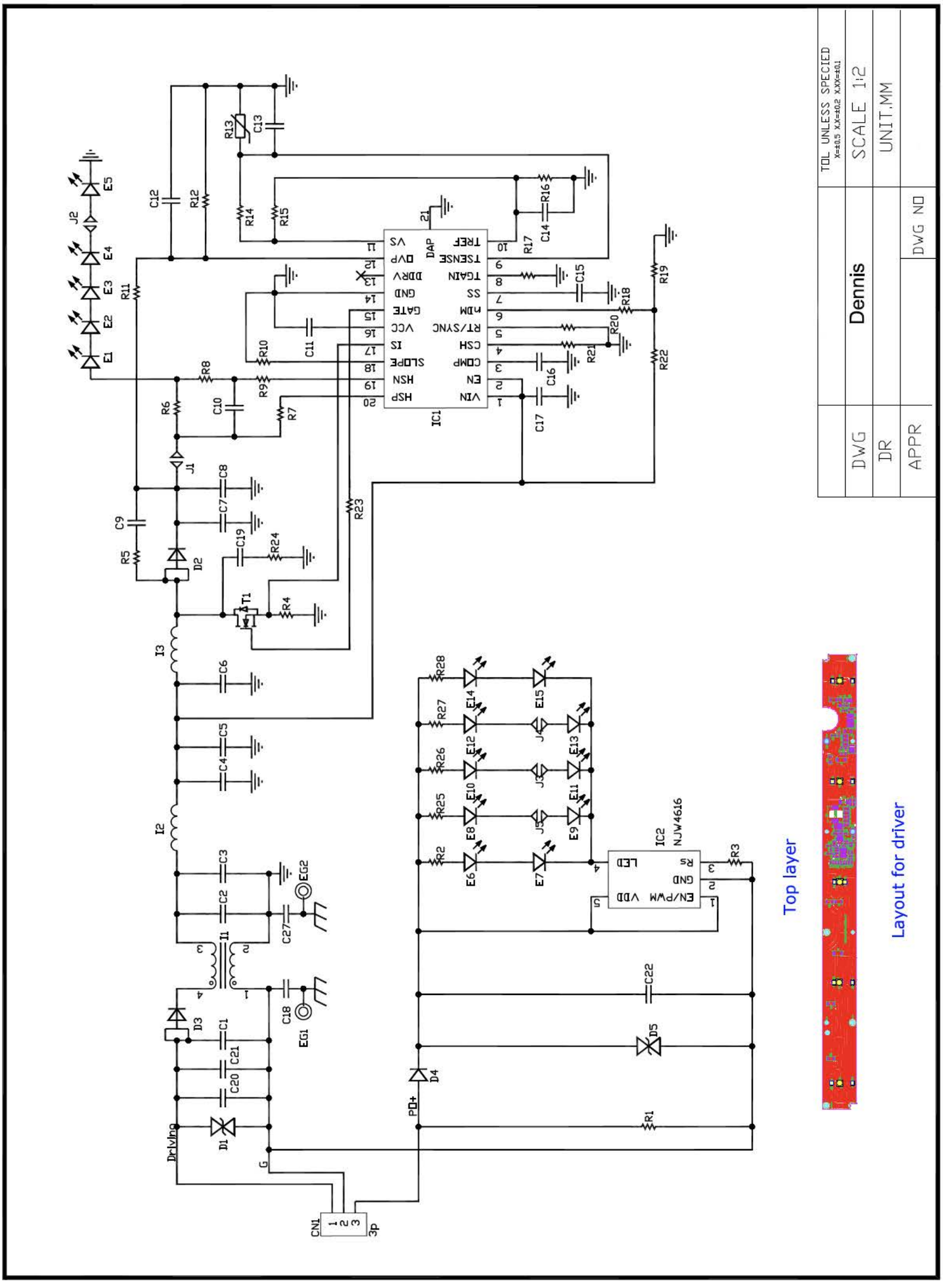


Bottom view

9	VENT COVER
8	CONNECTOR
7	BRACKET
6	LED for position lamp
5	LED for driving beam
4	MCPCB
3	HEATSINK
2	VACUUM PLATING
1	OUTER LENS

			TOL UNLESS SPECIED X=±0.5 X.X=±0.2 X.XX=±0.1
DWG	Dennis		SCALE 1:2
DR			UNIT.MM
APPR		DWG NO	

MODEL INFORMATION DOCUMENT NO. 1001-6200



THE NETHERLANDS
(NEDERLAND)

E4

JE MAINTIENDRAI

COMMUNICATION

Concerning (1)

- approval granted
- ~~approval extended~~
- ~~approval refused~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of headlamp pursuant to Regulation number 112.

Approval number:E4*112R02/01*28191*00

1.	Trade name or mark of the device	: boreman
2.	Manufacturer's name for the type of device	: 1001-6200
3.	Manufacturer's name and address	:
4.	If applicable, name and address of the manufacturer's representative	: Not applicable
5.	Submitted for approval on	: March 13, 2020
6.	Technical service responsible for conducting approval tests	: TÜV NORD Mobilität GmbH & Co. KG IFM-Institut für Fahrzeugtechnik und Mobilität Schönscheidtstrasse 28, D-45307 Essen
7.	Date or report issued by that service	: February 02, 2021
8.	Number of report issued by that service	: TW112-A0-200080

P.O. Box 777
2700 AT Zoetermeer
The Netherlands

Tel.+ 31 (0)79 345 83 02
E-mail typeapproval@rdw.nl
www.rdw.nl

Type-approval Department

JE MAINTIENDRAI
RDW

9.	Brief description	
	Category as described by the relevant marking (2)	: HR PL
	Number and category(ies) of filament lamp(s)	: Not applicable
	Reference luminous flux used for the principal passing beam (lm)	: Not applicable
	Principal passing beam operated at approximately (V)	: Not applicable
	Measures according to paragraph 5.8. of this Regulation	: Not applicable
	Number and specific identification code(s) of LED module(s) and for each LED module a statement whether it is replaceable or not	: ~~yes/~~no (1) (the LED module is non-replaceable.) 5 x LED (12 V / 24 V, 81 W / 67 W)
	Number and specific identification code(s) of electronic light source control gear(s)	: Not applicable
	Total objective luminous flux as described in paragraph 5.9. exceeds 2,000 lumen	: ~~yes/no/~~does not apply (1)
	The adjustment of the cut-off has been determined at	: ~~10 m/25 m/~~does not apply (1)
	The determination of the minimum sharpness of the 'cut-off' has been carried out at	: ~~10 m/25 m~~/does not apply (1)
10.	Approval mark position	: on the lens
11.	Reason(s) for extension of approval	: Not applicable
12.	Approval	: granted~~/extended/refused/withdrawn~~ (1)
13.	Place	: Zoetermeer
14.	Date	: 08 February 2021

JE MAINTIENDRAI
RDW

15. Signature :

R. Sarabdjitsingh

16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.

---

(1) Strike out what does not apply.
(2) Indicate the appropriate marking selected from the list below:

C, C, C, R, R PL, CR, CR, CR, C/R, C/R, C/R, C/, C/, C/,

C PL, C PL, C PL, CR PL, CR PL, CR PL, C/R PL, C/R PL, C/R PL,

C/PL, C/PL, C/PL,

HC, HC, HC, HR, HR PL, HCR, HCR, HCR, HC/R, HC/R, HC/R,

HC/, HC/, HC/,

HC PL, HC PL, HC PL, HCR PL, HCR PL, HCR PL, HC/R PL, HC/R PL, HC/R PL,

HC/PL, HC/PL, HC/PL,