

**THE NETHERLANDS
(N E D E R L A N D)****COMMUNICATION**

Concerning:

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- ~~approval withdrawn~~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

of a type of front fog lamp pursuant to Regulation number 19.

Approval number: E4-19R-03 16603

Extension number: 00

1. Trade name or mark of the device : JUSTTOP or 
2. Type of the device : Class F3 Front fog lamp
3. Manufacturer's name for the type of device : JS-12307
4. Manufacturer's name and address : Just Auto Lighting Technology Co., Ltd.
6F., No.2, Lane 163, Shin Yi Road,
Banciao Dist, New Taipei City, 220,
Taiwan.
5. If applicable, name and address of manufacturer's representative : --
6. Submitted for approval on : 31 July 2012
7. Technical service responsible for conducting approval tests : DEKRA Certification B.V.
8. Date of report issued by that service : 18 December 2012
9. Number of report issued by that service : 2153159-PHO 12-061-15
10. Concise description:



- 10.1. Class as described by the relevant marking : ~~B, B/, BPL, B/PL, F3, F3/, F3 PL, F3/PL~~
- 10.2. Number and category(ies) of filament lamp(s) : 1 x non replaceable light source (LED); 12/24V; 10/12W
- 10.3. LED module : yes/~~no~~
- 10.4. Light generator : ~~yes~~/no
- 10.5. LED module or light generator specific identification code : MD E4 16603
- 10.6. Application of electronic light source control gear : yes/~~no~~
- Supply to the light source : 11.8V
- Specification of the light source control gear : Just Auto Lighting Technology Co., Ltd.
JS-12307-FW
(part of the lamp but not included into the lamp body)
- Input voltage : 12/24V
- In the case of an electronic light source control gear not being part of the lamp: --
- Output signal specification : 11.8V
- 10.7. Colour of light emitted : white/~~selective yellow~~
- 10.8. Luminous flux of the light source (see paragraph 5.10.) greater than 2,000 lumen : ~~yes~~/no
- 10.9. Luminous intensity is variable : ~~yes~~/no
- 10.10. The determination of the cut-off gradient (if measured) was carried out at : ~~10 m~~/25 m
11. Position of the approval mark : See annexed drawing
12. Reason(s) for extension (if applicable) : --
13. Approval : granted/~~extended/refused/withdrawn~~
14. Place : Zoetermeer
15. Date : 10-JAN-2013

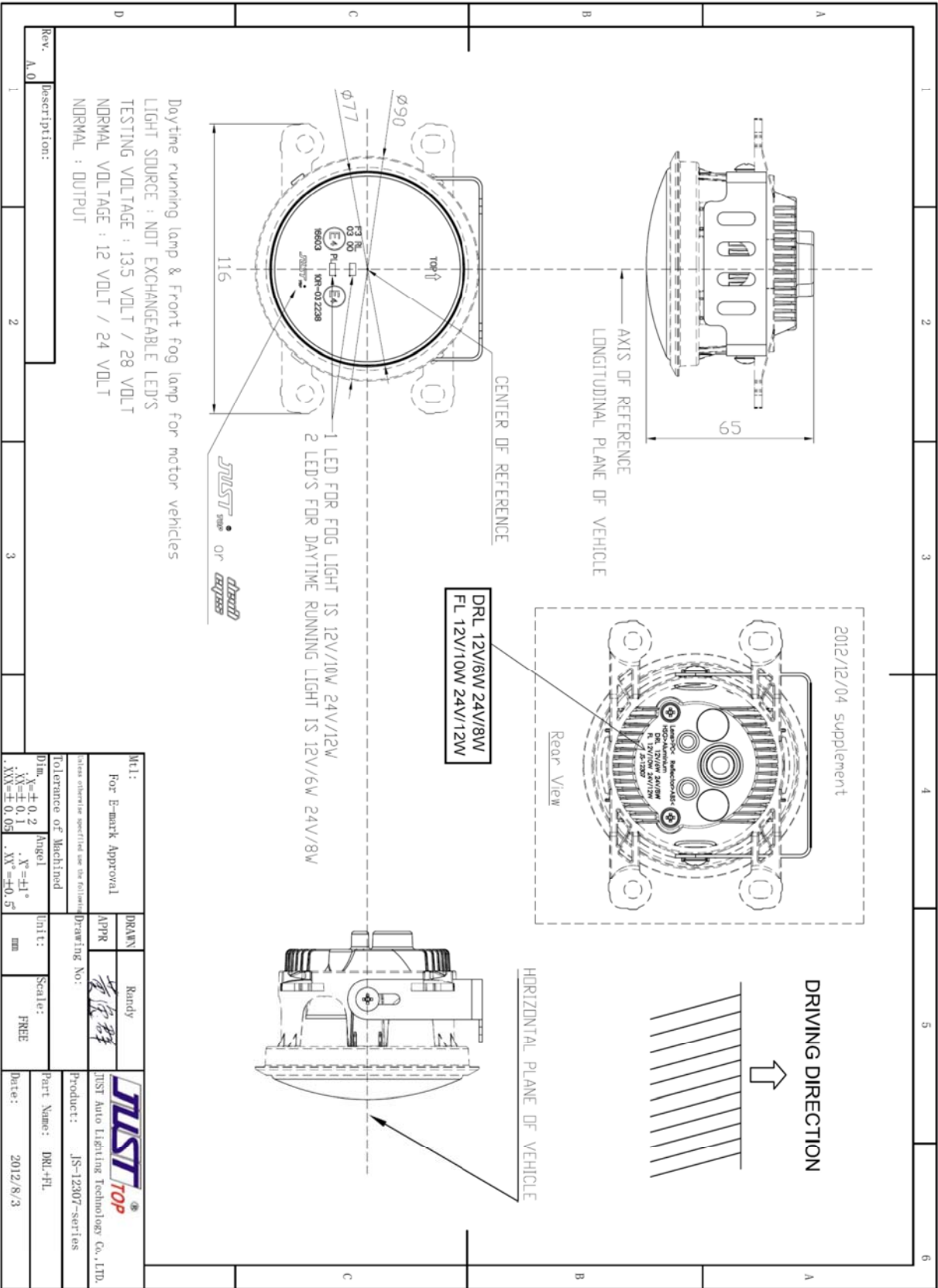


16. Signature :



The image shows a handwritten signature in blue ink, followed by a circular official stamp. The stamp features a coat of arms with a crown on top and the letters 'RDW' below it. To the right of the stamp, the name 'B.T. Alling' is printed in blue.

17. The list of documents deposited with the Administrative Service, which has granted approval, is annexed to this communication and may be obtained on request.
- 2 drawing No. JS-12307 and JS-12307 LED MODULE (annexed)
 - Test report as mentioned in item 8.



M11:		DRAMV		Randy	
For E-mark Approval		APPR		黄家祥	
Access otherwise specified see the following		Drawing No:		JS-12507-series	
Tolerance of Machined		Unit:		Part Name: DRL-FL	
Dim: X=±0.2 Y=±0.1 Z=±0.05		Scale:		Date: 2012/8/3	
Angle: X°=±1° Y°=±0.5° Z°=±0.5°		Unit:			
Tolerance of Machined		Unit:			
Tolerance of Machined		Unit:			



M.L: LED MODULE		DRAWN: Gary	
For E-mark Approval		APPR: 董俊群	
Unless otherwise specified use the following			
Tolerance of Machined		Drawing No:	
Dim:	Unit:	Scale:	
$X = \pm 0.2$	mm	2.5:1	
$Y = \pm 0.1$			
$Z = \pm 0.05$			
Product: JS-12307-series		Part Name: DRL+FL	
Date: 2012/12/6			

JUST Auto Lighting Technology Co., LTD



**THE NETHERLANDS**
(N E D E R L A N D)**COMMUNICATION**

Concerning:

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

of a type of daytime running lamp pursuant to Regulation number 87.

Approval number: E4-87R-00 16603**Extension number: 00**

1. Trade name or mark of the device : JUSTTOP or 
2. Manufacturer's name for the type of device : JS-12307
3. Manufacturer's name and address : Just Auto Lighting Technology Co., Ltd.
6F., No.2, Lane 163, Shin Yi Road,
Banciao Dist, New Taipei City, 220
Taiwan.
4. If applicable, name and address of the manufacturer's representative : --
5. Submitted for approval on : 31 July 2012
6. Technical service responsible for conducting approval tests : DEKRA Certification B.V.
7. Date of test report issued by that service : 18 December 2012
8. Number of test report issued by that service : 2153159-PHO 12-061-15
9. Concise description:



By category of lamp : RL

Number and category and kind of light source(s) : 2 x non-replaceable light source (LEDs)

Voltage and wattage : 12V; 6/8 W

Application of an electronic light source control gear:

- Being part of the lamp : yes/~~no~~

- Being not part of the lamp : ~~yes~~/no

Input voltage supplied by an electronic light source control gear : 11.8V

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) : Just Auto Lighting Technology Co., Ltd.
JS-12307-FW

10. Position of the approval mark : See annexed drawing

11. Reason(s) for extension (If applicable) : --

12. Approval : granted/~~refused~~/~~extended~~/~~withdrawn~~

13. Place : Zoetermeer

14. Date :

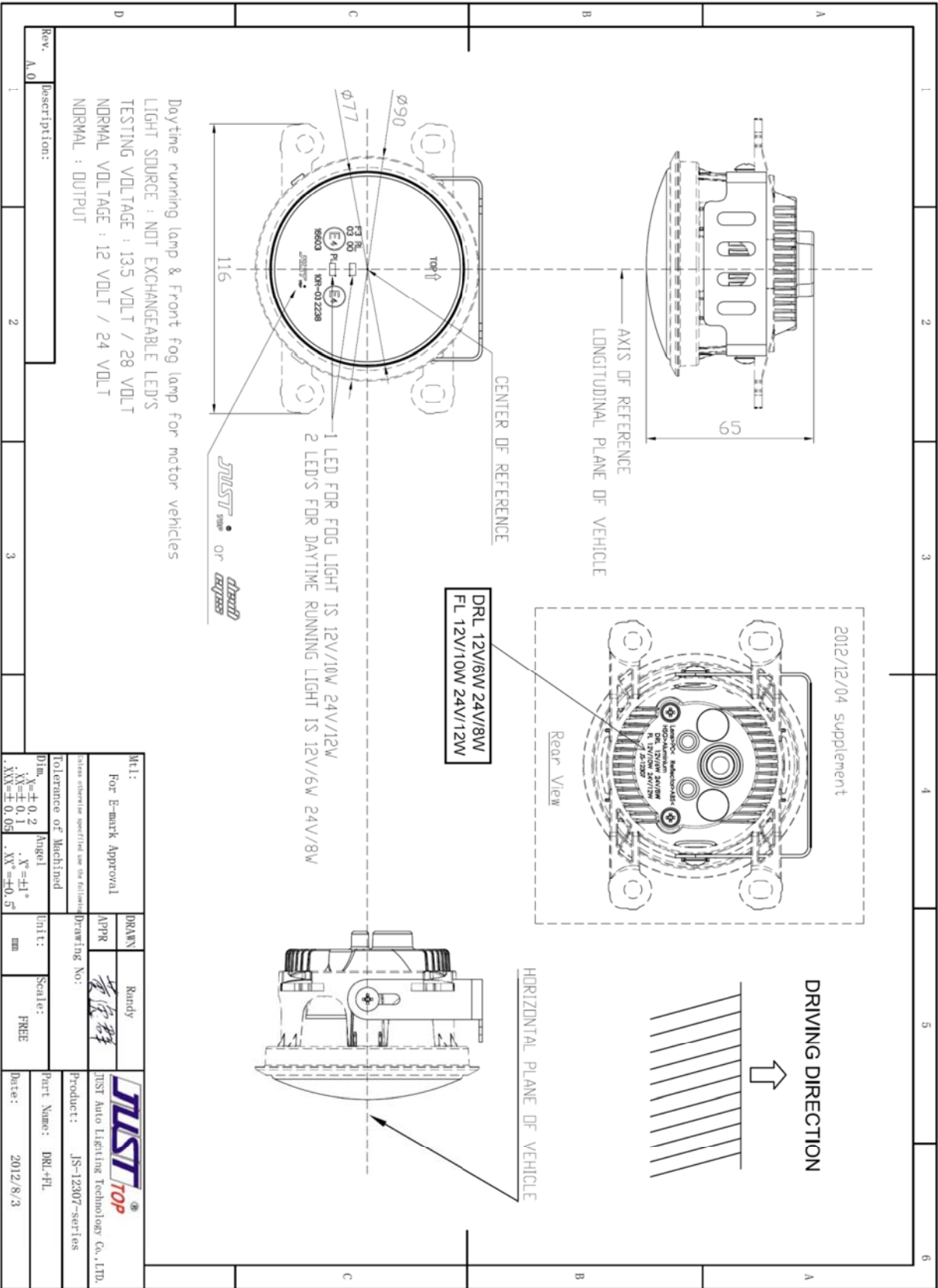
15. Signature :

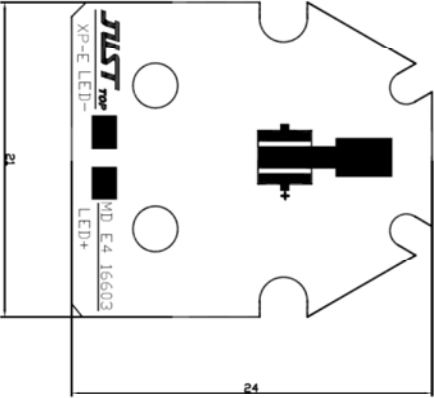
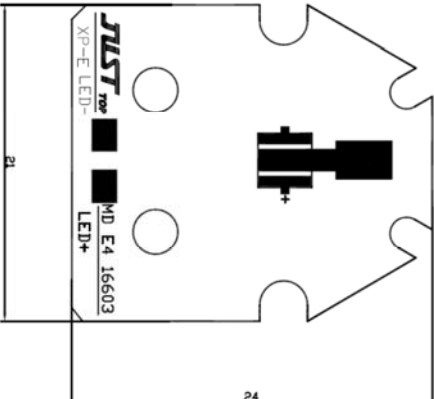


The image shows a handwritten signature in blue ink over a circular official stamp. The stamp features a coat of arms with a crown on top and the text 'RDW' below it. To the right of the stamp, the name 'B.T. Alling' is printed in blue.

16. The following documents, bearing the approval number shown above, are available on request:

- 3 drawings No. JS-12307, JS-12307 LED MODULE and Determination of the apparent surface (annexed)
- Test report as mentioned in item 8

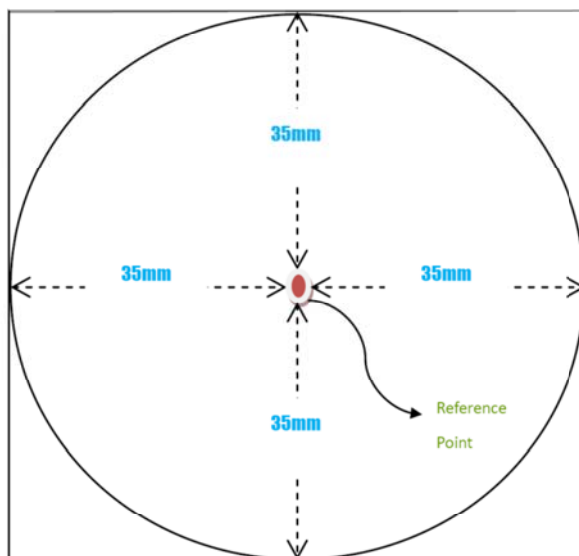


1	2	3	4	5	6												
 Front view LED MODULE  Front view																	
ABCCBA																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Rev. A. 0</td> <td colspan="5">Description:</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td colspan="3"></td> </tr> </table>						Rev. A. 0	Description:					1	2	3			
Rev. A. 0	Description:																
1	2	3															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="width: 60%;"> M1: LED MODULE For E-mark Approval Unless otherwise specified use the following Tolerance of Machined Dim: $X = \pm 0,2$ $.XX = \pm 0,1$ $.XXX = \pm 0,05$ Angle: $X = \pm 1^\circ$ $.XX = \pm 0,5^\circ$ </td> <td style="width: 10%;"> DRAWN: Gary APPR:  </td> <td style="width: 30%; text-align: center;">  JUST Auto Lighting Technology Co., LTD. Product: JS-12307-series Part Name: DRL+FL Date: 2012/12/6 </td> </tr> <tr> <td colspan="2">Unit: mm</td> <td>Scale: 2.5:1</td> <td>Date: 2012/12/6</td> </tr> </table>						M1: LED MODULE For E-mark Approval Unless otherwise specified use the following Tolerance of Machined Dim: $X = \pm 0,2$ $.XX = \pm 0,1$ $.XXX = \pm 0,05$ Angle: $X = \pm 1^\circ$ $.XX = \pm 0,5^\circ$		DRAWN: Gary APPR: 	 JUST Auto Lighting Technology Co., LTD. Product: JS-12307-series Part Name: DRL+FL Date: 2012/12/6	Unit: mm		Scale: 2.5:1	Date: 2012/12/6				
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Unit: mm		Scale: 2.5:1	Date: 2012/12/6														



Determination of the apparent surface

JS-12307 : Daytime Running Lamp



2153159-PHO 12-061-15

Approval testing of a front combination lamp

trade mark JUSTTOP or  , type name
JS-12307

Arnhem, 18 December 2012

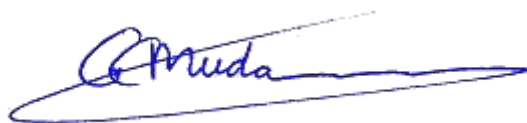
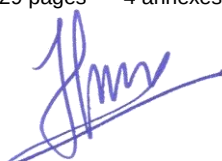
Author: H.M. van der Kolk

DEKRA Certification B.V. - Photometry

By order of Just Auto Lighting Technology Co., Ltd., New Taipei city, Taiwan

author : H.M. van der Kolk 18-12-2012 reviewed : G.C. Muda
B 29 pages 4 annexes HVDK

18-12-2012



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SUMMARY

The tested samples of the front combination lamp, marked JUSTTOP or  type JS-12307 were found to comply with the requirements of ECE Regulation Nos. 19-03 and 87-00.

1 APPLICATION FOR APPROVAL TESTING

On 31 July 2012, Just Auto Lighting Technology Co., Ltd. in New Taipei city, Taiwan submitted samples of a front combination lamp, trade name JUSTTOP or *Just Top*, type name JS-12307. All tests on stability of photometric performance (R19-Annex 5) and tests of lens of complete headlamps (R19-Annex 6) were performed in the laboratory of ISOQA in Taichung, Taiwan. Other tests were performed in the laboratory of ISOQA in Tainan, Taiwan.

The front fog lamp is equipped with 1 LED emitting white light.

The daytime running lamp is equipped with 2 LEDs emitting white light.

According to the manufacturer's technical description, all LEDs are controlled via the control gear, when one LED fails, all LEDs will fail.

The lenses are made of plastic material GE Lexan PCR 141-11 with UVHC3000 coating.

A brief technical description and a drawing which were sufficiently detailed to permit identification of the model can be found in Annex 1 and 2 respectively.

The applicant desired an examination to check whether the front combination lamp is in compliance with the requirements of the ECE Regulation Nos. 19-03 and 87-00.

2 EXAMINATION

The examination was carried out in accordance with the relevant clauses of the regulation concerned. The tests were performed taking into consideration the manufacturer's information concerning centre and axis of reference.

For the photometric tests the test voltage of 13.2V for 12V system or 28V for 24V system was applied. Detail of the electronic light source control gear is presented in Annex 2.

The distance of measurement was 25m for front fog lamp, 3.2m for daytime running lamp.

The approval tests on lenses and/or samples of plastic material GE Lexan PCR141-11 with UVHC3000 coating, in accordance with Annex 6 of Regulation No. 19-03 are described in KEMA report No. 2006488-KRQ/LTL 00-207 dated 25 January 2001.

3 RESULTS OF EXAMINATION

The results of the tests are summarised in Annex 3. Detailed results of the tests of the lamps are presented in Annex 4, tables 1 up to 14.

4 SUPPLEMENTARY REMARKS

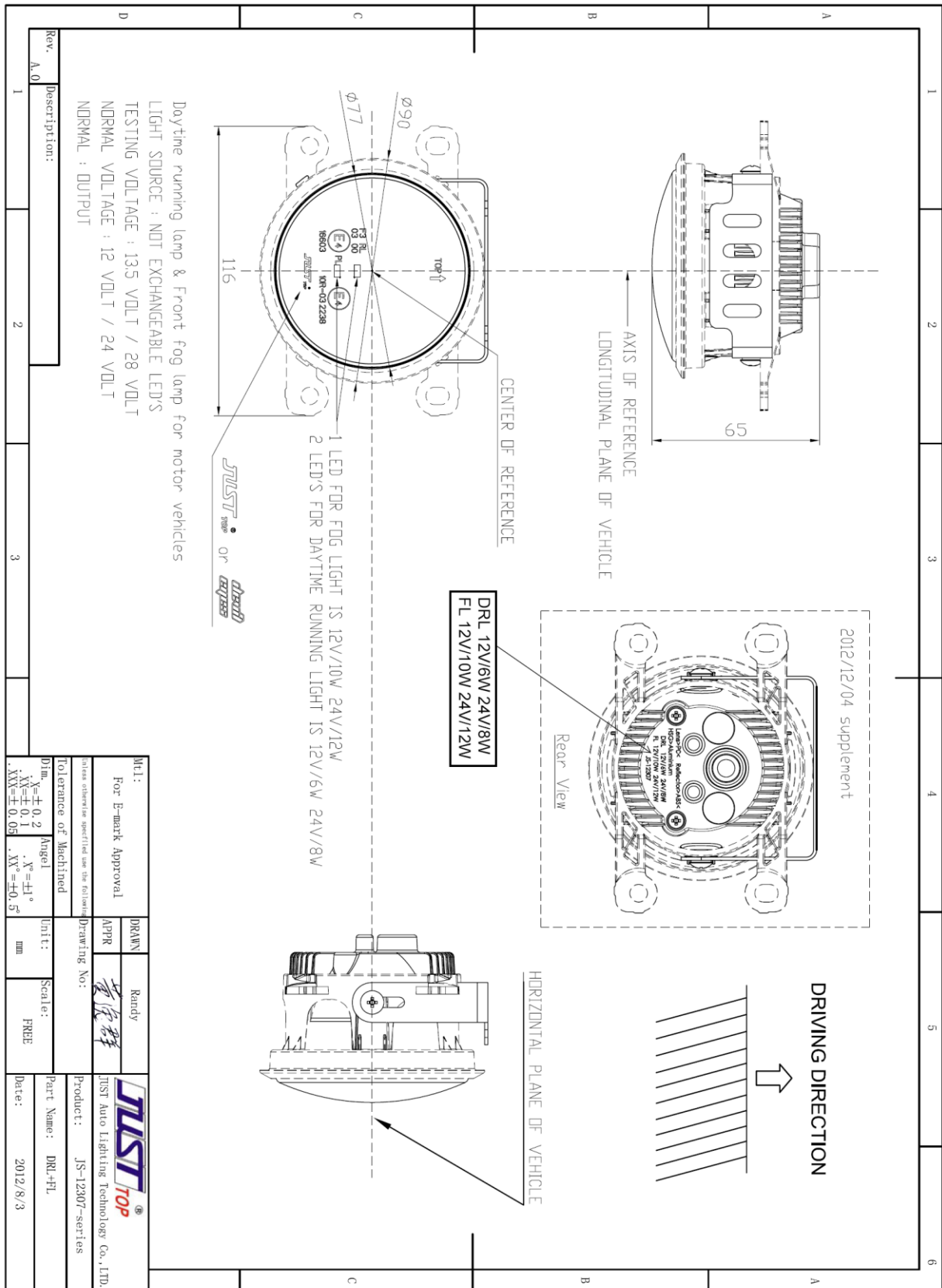
The approval number 16603 was assigned. The approval marking is shown in the drawing of Annex 2.

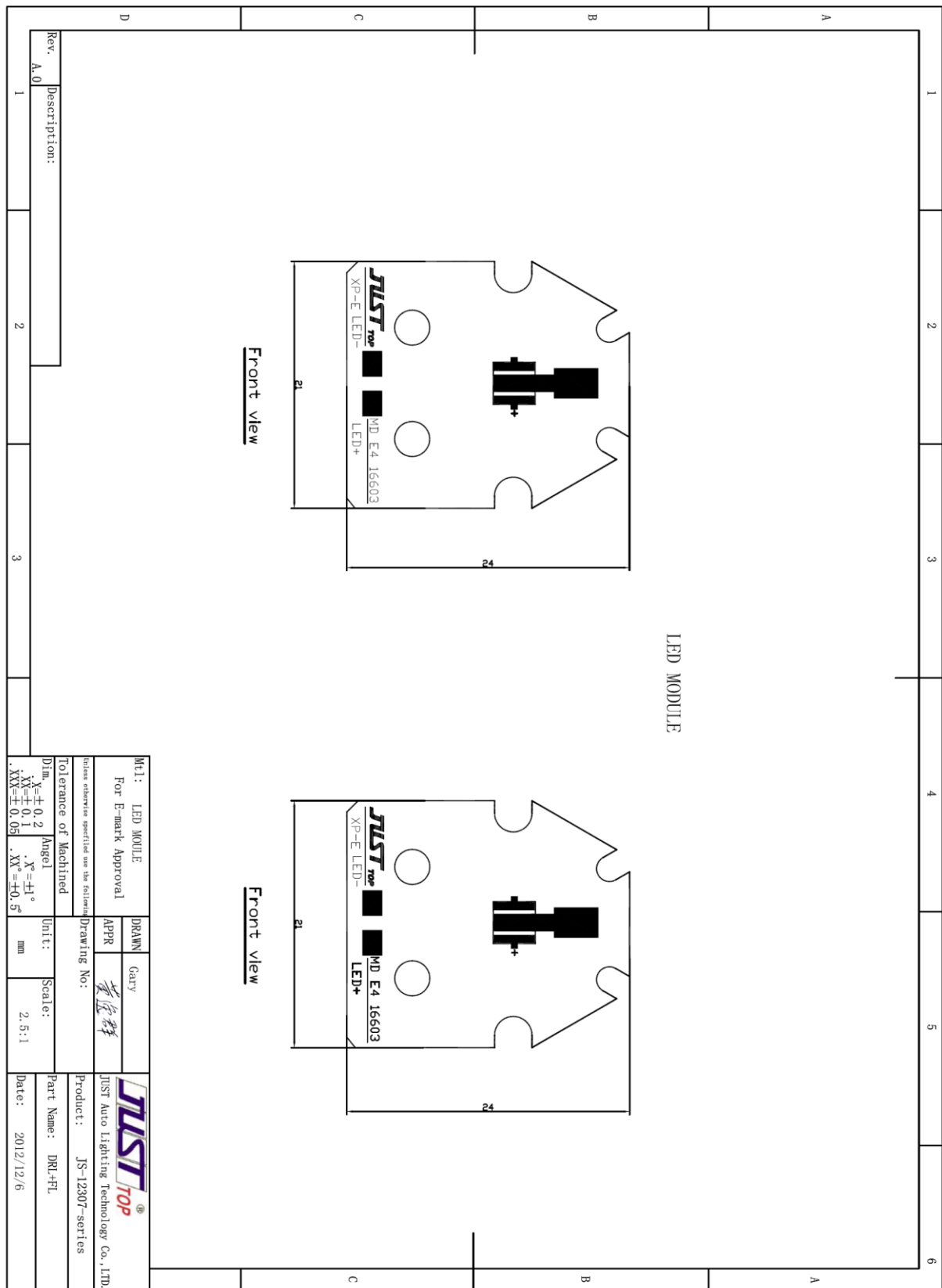
Information Document

of Model Number- JS-12307

Approval Number: 16603

Manufacturer's Name and Address		Just Auto Lighting Technology Co., Ltd. 6F., No.2, Lane 163, Shin Yi Road, Banciao Dist, New Taipei City, 220 Taiwan.
Trade name or mark		JUSTTOP or 
Model Number		JS-12307
Material of lens		GE Lexan LS2-111 with UVHC3000 coating
Electronic light source control gear		Just Auto Lighting Technology Co., Ltd. JS-12307-FW Output Voltage: 11.8V (part of the lamp but not included into the lamp body)
Light Source MD		identification code : MD E4 16603
Front fog lamp (Reg. 19)	Category	F3
	Light Source	1 x LED, 12/24V, 10/12W
	Color of light emit	White
	Color of lens	Clear
Daytime running lamp (Reg. 87)	Category	RL
	Light Source	2 x LEDs, 12/24V, 6/8 W (controlled via control gear; if one LED fails, all LEDs will fail)
	Color of light emit	White
	Color of lens	Clear





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Annex 2, page 3 of 4



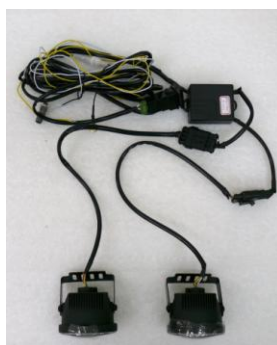
Front view



Side view



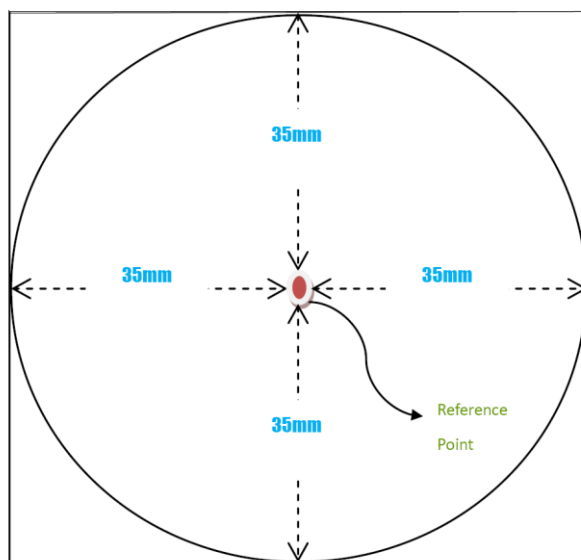
Top view



Front fog lamp and Daytime running lamp with control gear

Determination of the apparent surface

JS-12307: Daytime Running Lamp



Examination of the front combination lamp JS-12307 carried out according to the relevant clauses of Regulation No. 87-00

Clause No.	Subject of the relevant clause	Judgement of the device	Remark
4	1 trade name or mark 2 space reserved for the approval mark	complies complies	
6	General specifications: a intensity and colour of the light emitted b maintenance of satisfactory operation and of photometric characteristics c field of visibility horizontal and vertical	complies complies complies	see below under 7 and 9 by visual inspection only
7	intensity of the light emitted	complies	see Annex 4 ¹
8	Apparent Surface	complies	4900 mm ²
9	colour of the light emitted	complies	²
11	Heat resistance test	complies	

¹ All light sources were controlled by control gear, if one LED fails, all LEDs will fail.

² Daytime running lamp emitted white light:

12V	S1: x= 0.3278, y=0.3351	S2: x=0.3340, y=0.3586
24V	S1: x= 0.3274, y=0.3340	S2: x=0.3339, y=0.3582

Examination of front fog lamp JS-12307 carried out according to the relevant clauses of Regulation No. 19-03

Clause No.	Subject of the relevant clause	Judgement of the device	Remark
3	a trade name or mark	complies	
	b space reserved for the approval mark	complies	
	c LED module rated voltage, rated wattage and specific identification code	complies	³
	d light source control gear	complies	⁴
4	Marking of the number 24 crossed out by an oblique cross	does not apply	applied for both 12V and 24V
5	a photometric characteristics	see below	
	b maintenance of satisfactory operation in normal use	complies	
	c stability of photometric performance and change of cut-off line	complies	see annexed 4
	d requirement on lenses made of plastic material	complies	see annexed 4
	e total objective luminous flux	less than 2000 lm	315 lm

³ LED Module identification code is E4 16603

⁴ Light source control gear is part of the lamp but not included into the lamp body.

Examination of front fog lamp JS-12307 carried out according to the relevant clauses of Regulation No. 19-03

Clause No.	Subject of the relevant clause	Judgement of the device	Remark
6	a intensity of the light emitted	complies	see Annex 4
	b multiplied by a factor of 0.7 prior	complies	see Annex 4
	c sharpness and linearity of the cut-off	complies	see Annex 4 ⁵
7	colour of the light emitted	complies	⁶

⁵ Gradient: (min 0.08)

12V S1 = 0.12 S2 = 0.13

24V S1 = 0.12 S2 = 0.13

Linearity: (max 0.20°)

12V S1 = 0.10° S2 = 0.14°

24V S1 = 0.01° S2 = 0.17°

⁶ Front Fog Lamp emitted White Light:

12V 1 minute S1: x=0.3193 y=0.3444 S2: x=0.3213 y=0.3298

30 minute S1: x=0.3342 y=0.3598 S2: x=0.3180 y=0.3297

24V 1 minute S1: x=0.3186 y=0.3446 S2: x= 0.3212 y=0.3295

30 minute S1: x=0.3341 y=0.3595 S2: x=0.3178 y=0.3293

Examination of front fog lamp JS-12307 carried out according to the relevant clauses of Regulation No. 19-03

Clause No.	Subject of the relevant clause	Judgement of the device	Remark
8	absence of dazzle	complies	
A12	a Ageing	complies	⁷
	b Run-up Test	does not apply	
	c Hot re-strike test	does not apply	
	d Red content	complies	⁸
	e UV-radiation	complies	⁹
	f Temperature stability	complies	¹⁰ ¹¹

⁷ LED module shall be operated for 15 h and cooled down to ambient temperature before starting the tests

⁸ 12V: K red = 0.0529 (> 0.05) 24V: K red = 0.0523 (> 0.05)

⁹ 12V: K uv = 1.57×10^{-8} (< 10^{-5} W/lm) 12V: K uv = 3.55×10^{-8} (< 10^{-5} W/lm)

¹⁰ The illuminance values measured after one minute and until photometric stability has occurred, shall comply with the minimum and maximum requirements. See Annex 4, Table 2 and 4.

¹¹ The colour of the light emitted, measured after 1 minute and measured after 30 minutes of operation, shall be within the required colour boundaries in both instances. See remark 4.

Front Fog Lamp- 12V-S1(S122272)

ISOQA

PHOTOMETRIC RESULTS

Program:	02	ECE R 19_F3 (2010)
ECE R 19 Front Fog Lamp		
Name:	12-0452 JS-12307 S122272 ECER19 Front FOG Lamp(LED)(12V) 12_0731	
Number:	L120843	
Test distance	25m	Meas.-no.:
Lamp type:	LED	
Number:	LED	
Flux:	0.00 lm	Operator: chen
Voltage:	13.194 V	Date: 7/31/2012 3:29:36 PM
Current:	0.782 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 19_F3 (2010)

Function	Min	Max	Value	H	V	N.O.K.
H-2.5D(1 min)	2000	8400	3725.000	0.00°	-2.50°	
H-2.5D(30 min)	2000	8400	3669.000	0.00°	-2.50°	
Point 1	-	60	1.500	-45.00°	60.00°	
Point 2	-	60	2.000	45.00°	60.00°	
Point 3	-	60	21.000	-30.00°	40.00°	
Point 4	-	60	48.600	30.00°	40.00°	
Point 5	-	60	2.400	-60.00°	30.00°	
Point 6	-	60	2.800	60.00°	30.00°	
Point 7	-	60	36.900	-40.00°	20.00°	
Point 8	-	60	47.700	-15.00°	20.00°	
Point 9	-	60	47.800	15.00°	20.00°	
Point 10	-	60	44.000	40.00°	20.00°	
Line 1	0	90	39.895	4.00°	8.00°	
Line 2	0	105	43.709	6.50°	4.00°	
Line 3	0	170	54.081	-10.00°	2.00°	
Line 4	0	250	112.604	12.50°	1.00°	
Line 5	0	340	297.071	-10.00°	0.00°	
Line 6	2000	8400	(3181.309) 3989.433	(3.25°) -4.25°	-2.50°	
Line 7	0	0.5* Max line 6	568.298	-4.75°	-6.00°	
Line 8L	800	8400	(1838.260) 1909.955	(-22.00°) -21.50°	-2.50°	
Line 8R	800	8400	(1951.728) 1966.998	(22.00°) 21.50°	-2.50°	
Line 9R	320	8400	(795.900) 816.481	(35.00°) 34.50°	(-2.00°) -2.50°	
Line 9L	320	8400	(829.087) 831.882	(-35.00°) -34.50°	-3.00°	
Zone D	0	8400	4191.045	-4.75°	-3.00°	

Front Fog Lamp- 12V-S1 (S122272)-ratio calculated

Designated lines or zones	minimum	maximum	Value				Result
			1mins	× 0.7	30mins	× 0.7	
2.5D-V	2000	8400	3725.000	2607.500	3669.000	2568.300	complies
Point 1	-	60	1.523	1.066	1.500	1.050	complies
Point 2	-	60	2.031	1.421	2.000	1.400	complies
Point 3	-	60	21.321	14.924	21.000	14.700	complies
Point 4	-	60	49.342	34.539	48.600	34.020	complies
Point 5	-	60	2.437	1.706	2.400	1.680	complies
Point 6	-	60	2.843	1.990	2.800	1.960	complies
Point 7	-	60	37.463	26.224	36.900	25.830	complies
Point 8	-	60	48.428	33.900	47.700	33.390	complies
Point 9	-	60	48.530	33.971	47.800	33.460	complies
Point 10	-	60	44.672	31.270	44.000	30.800	complies
Line 1	-	90	40.504	28.353	39.895	27.927	complies
Line 2	-	105	44.376	31.063	43.709	30.596	complies
Line 3	-	170	54.906	38.435	54.081	37.857	complies
Line 4	-	250	114.323	80.026	112.604	78.823	complies
Line 5	-	340	301.605	211.124	297.071	207.950	complies
Line 6	2000	8400	(3229.865) 4050.324	(2260.906) 2835.227	(3181.309) 3989.433	(2226.916) 2792.603	complies
Line 7	-	0.5*Max line 6	576.972	403.880	568.298	397.809	complies
Line 8L	800	8400	(1866.317) 1939.107	(1306.422) 1357.375	(1838.260) 1909.955	(1286.782) 1336.969	complies
Line 8R	800	8400	(1981.517) 1997.020	(1387.062) 1397.914	(1951.728) 1966.998	(1366.210) 1376.899	complies
Line 9R	320	8400	(808.048) 828.943	(565.633) 580.260	(795.900) 816.481	(557.130) 571.537	complies
Line 9L	320	8400	(841.741) 844.579	(589.219) 591.205	(829.087) 831.882	(580.361) 582.317	complies
Zone D	-	8400	4255.013	2978.509	4191.045	2933.732	complies

Front Fog Lamp- 12V-S2 (S122627)

ISOQA

PHOTOMETRIC RESULTS

Program:	02	ECE R 19_F3 (2010)
ECE R 19 Front Fog Lamp		
Name:	12-0452 JS-12307 S122627 ECER19 Front FOG Lamp(LED)(12V) 12_0904	
Number:	L120843	
Test distance	25m	Meas.-no.:
Lamp type:	LED	
Number:	LED	
Flux:	0.000 lm	Operator: chen
Voltage:	13.194 V	Date: 9/4/2012 10:33:45 AM
Current:	0.777 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 19_F3 (2010)

Function	Min	Max	Value	H	V	Unit	N.O.K.
H-2.5D(1 min)	2000	8400	3605.000	0.00°	-2.50°	cd	
H-2.5D(30 min)	2000	8400	3563.000	0.00°	-2.50°	cd	
Point 1	-	60	2.700	-45.00°	60.00°	cd	
Point 2	-	60	2.400	45.00°	60.00°	cd	
Point 3	-	60	54.600	-30.00°	40.00°	cd	
Point 4	-	60	53.700	30.00°	40.00°	cd	
Point 5	-	60	3.100	-60.00°	30.00°	cd	
Point 6	-	60	3.000	60.00°	30.00°	cd	
Point 7	-	60	36.600	-40.00°	20.00°	cd	
Point 8	-	60	44.400	-15.00°	20.00°	cd	
Point 9	-	60	45.500	15.00°	20.00°	cd	
Point 10	-	60	37.600	40.00°	20.00°	cd	
Line 1	0	90	34.889	-3.50°	8.00°	cd	
Line 2	0	105	38.131	3.00°	4.00°	cd	
Line 3	0	170	51.178	3.50°	2.00°	cd	
Line 4	0	250	78.003	3.00°	1.00°	cd	
Line 5	0	340	214.894	-1.50°	0.00°	cd	
Line 6	2000	8400	(3340.832) 4007.007	(-10.00°) 4.50°	-2.50°	cd	
Line 7	0	0.5*Max line 6	894.393	-4.00°	-6.00°	cd	
Line 8L	800	8400	(1811.018) 1861.365	(-22.00°) - 21.50°	-3.00°	cd	
Line 8R	800	8400	(1881.626) 1923.487	(22.00°) 21.50°	-2.50°	cd	
Line 9R	320	8400	(802.615) 809.349	(34.50°) 35.00°	(-3.50°) - 4.00°	cd	
Line 9L	320	8400	(794.635) 817.924	(-35.00°) - 34.50°	-3.50°	cd	
Zone D	0	8400	4006.505	4.50°	-2.50°	cd	

Front Fog Lamp- 12V-S2 (S122627)-ratio calculated

Designated lines or zones	minimum	maximum	Value				Result
			1mins	× 0.7	30mins	× 0.7	
2.5D-V	2000	8400	3605.000	2523.500	3563.000	2494.100	complies
Point 1	-	60	2.732	1.912	2.700	1.890	complies
Point 2	-	60	2.428	1.700	2.400	1.680	complies
Point 3	-	60	55.244	38.671	54.600	38.220	complies
Point 4	-	60	23.979	16.786	23.700	16.590	complies
Point 5	-	60	3.137	2.196	3.100	2.170	complies
Point 6	-	60	3.035	2.125	3.000	2.100	complies
Point 7	-	60	37.031	25.922	36.600	25.620	complies
Point 8	-	60	44.923	31.446	44.400	31.080	complies
Point 9	-	60	46.036	32.225	45.500	31.850	complies
Point 10	-	60	38.043	26.630	37.600	26.320	complies
Line 1	-	90	35.300	24.710	34.889	24.422	complies
Line 2	-	105	38.580	27.006	38.131	26.692	complies
Line 3	-	170	51.781	36.247	51.178	35.825	complies
Line 4	-	250	78.922	55.246	78.003	54.602	complies
Line 5	-	340	217.427	152.199	214.894	150.426	complies
Line 6	2000	8400	(3380.213) 4054.241	(2366.149) 2837.969	(3340.832) 4007.007	(2338.582) 2804.905	complies
Line 7	-	0.5*Max line 6	904.936	633.455	894.393	626.075	complies
Line 8L	800	8400	(1832.366) 1883.306	(1282.656) 1318.315	(1811.018) 1861.365	(1267.713) 1302.956	complies
Line 8R	800	8400	(1903.806) 1946.161	(1332.664) 1362.313	(1881.626) 1923.487	(1317.138) 1346.441	complies
Line 9R	320	8400	(812.076) 818.889	(568.453) 573.223	(802.615) 809.349	(561.831) 566.544	complies
Line 9L	320	8400	(804.002) 827.566	(562.801) 579.296	(794.635) 817.924	(556.245) 572.547	complies
Zone D	-	8400	4053.733	2837.613	4006.505	2804.554	complies

Front Fog Lamp- 24V-S1 (S122272)

ISOQA

PHOTOMETRIC RESULTS

Program:	02	ECE R 19_F3 (2010)
ECE R 19 Front Fog Lamp		
Name:	12-0452 JS-12307 S122272 ECER19 Front FOG Lamp(LED)(24V) 12_0731	
Number:	L120843	
Test distance	25m	Meas.-no.:
Lamp type:	LED Light Source 1	
Number:	Light Source 1	
Flux:	0.00 lm	Operator: chen
Voltage:	27.998 V	Date: 7/31/2012 3:39:48 PM
Current:	0.428 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 19_F3 (2010)

Function	Min	Max	Value	H	V	N.O.K.
H-2.5D(1 min)	2000	8400	3780.000	0.00°	-2.50°	
H-2.5D(30 min)	2000	8400	3714.000	0.00°	-2.50°	
Point 1	-	60	1.700	-45.00°	60.00°	
Point 2	-	60	2.000	45.00°	60.00°	
Point 3	-	60	20.600	-30.00°	40.00°	
Point 4	-	60	48.700	30.00°	40.00°	
Point 5	-	60	2.600	-60.00°	30.00°	
Point 6	-	60	3.000	60.00°	30.00°	
Point 7	-	60	37.300	-40.00°	20.00°	
Point 8	-	60	48.700	-15.00°	20.00°	
Point 9	-	60	49.100	15.00°	20.00°	
Point 10	-	60	44.900	40.00°	20.00°	
Line 1	0	90	40.389	4.00°	8.00°	
Line 2	0	105	44.398	6.50°	4.00°	
Line 3	0	170	55.286	-9.75°	2.00°	
Line 4	0	250	115.844	12.50°	1.00°	
Line 5	0	340	304.543	-10.00°	0.00°	
Line 6	2000	8400	(3238.953) 4078.203	(3.25°) -4.25°	-2.50°	
Line 7	0	0.5* Max line 6	582.719	-4.75°	-6.00°	
Line 8L	800	8400	(1868.027) 1933.273	(-22.00°) -21.50°	-2.50°	
Line 8R	800	8400	(1976.557) 1996.481	(22.00°) 21.50°	-2.50°	
Line 9R	320	8400	(805.564) 831.442	(35.00°) 34.50°	-2.00°	
Line 9L	320	8400	(834.456) 848.127	(-35.00°) -34.50°	-3.00°	
Zone D	0	8400	4261.342	-4.75°	-3.00°	

Front Fog Lamp- 24V-S1(S122272)-ratio calculated

Designated lines or zones	minimum	maximum	Value				Result
			1mins	× 0.7	30mins	× 0.7	
2.5D-V	2000	8400	3780.000	2646.000	3714.000	2599.800	complies
Point 1	-	60	1.730	1.211	1.700	1.190	complies
Point 2	-	60	2.036	1.425	2.000	1.400	complies
Point 3	-	60	20.966	14.676	20.600	14.420	complies
Point 4	-	60	49.565	34.696	48.700	34.090	complies
Point 5	-	60	2.646	1.852	2.600	1.820	complies
Point 6	-	60	3.053	2.137	3.000	2.100	complies
Point 7	-	60	37.963	26.574	37.300	26.110	complies
Point 8	-	60	49.565	34.696	48.700	34.090	complies
Point 9	-	60	49.973	34.981	49.100	34.370	complies
Point 10	-	60	45.698	31.989	44.900	31.430	complies
Line 1	-	90	41.107	28.775	40.389	28.272	complies
Line 2	-	105	45.187	31.631	44.398	31.079	complies
Line 3	-	170	56.268	39.388	55.286	38.700	complies
Line 4	-	250	117.903	82.532	115.844	81.091	complies
Line 5	-	340	309.955	216.968	304.543	213.180	complies
Line 6	2000	8400	(3296.511) 4150.675	(2307.558) 2905.473	(3238.953) 4078.203	(2267.267) 2854.742	complies
Line 7	-	0.5*Max line 6	593.074	415.152	582.719	407.903	complies
Line 8L	800	8400	(1901.223) 1967.628	(1330.856) 1377.340	(1868.027) 1933.273	(1307.619) 1353.291	complies
Line 8R	800	8400	(2011.682) 2031.960	(1408.177) 1422.372	(1976.557) 1996.481	(1383.590) 1397.537	complies
Line 9R	320	8400	(819.879) 846.217	(573.916) 592.352	(805.564) 831.442	(563.895) 582.009	complies
Line 9L	320	8400	(849.285) 863.199	(594.499) 604.239	(834.456) 848.127	(584.119) 593.689	complies
Zone D	-	8400	4309.589	3016.712	4234.342	2964.039	complies

Front Fog Lamp- 24V-S2(S122627)

ISOQA

PHOTOMETRIC RESULTS

Program:	02	ECE R 19_F3 (2010)
ECE R 19 Front Fog Lamp		
Name:	12-0452 JS-12307 S122627 ECER19 Front FOG Lamp(LED)(24V) 12_0904	
Number:	L120843	
Test distance	25m	Meas.-no.:
Lamp type:	LED Light Source 1	
Number:	Light Source 1	
Flux:	0.00 lm	Operator: chen
Voltage:	28.000 V	Date: 9/4/2012 10:31:54 AM
Current:	0.433 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 19_F3 (2010)

Function	Min	Max	Value	H	V	N.O.K.
H-2.5D(1 min)	2000	8400	3653.000	0.00°	-2.50°	
H-2.5D(30 min)	2000	8400	3589.000	0.00°	-2.50°	
Point 1	-	60	2.800	-45.00°	60.00°	
Point 2	-	60	2.400	45.00°	60.00°	
Point 3	-	60	56.200	-30.00°	40.00°	
Point 4	-	60	55.300	30.00°	40.00°	
Point 5	-	60	3.200	-60.00°	30.00°	
Point 6	-	60	3.100	60.00°	30.00°	
Point 7	-	60	37.300	-40.00°	20.00°	
Point 8	-	60	45.100	-15.00°	20.00°	
Point 9	-	60	46.300	15.00°	20.00°	
Point 10	-	60	38.400	40.00°	20.00°	
Line 1	0	90	35.184	-3.50°	8.00°	
Line 2	0	105	38.654	3.25°	4.00°	
Line 3	0	170	52.330	3.25°	2.00°	
Line 4	0	250	79.829	3.00°	1.00°	
Line 5	0	340	221.267	-1.50°	0.00°	
Line 6	2000	8400	(3408.635) 4090.638	(-10.00°) 4.50°	-2.50°	
Line 7	0	0.5* Max line 6	906.408	-4.00°	-6.00°	
Line 8L	800	8400	(1843.432) 1901.895	(-22.00°) -21.50°	-3.00°	
Line 8R	800	8400	(1920.654) 1956.327	(22.00°) 21.50°	-2.50°	
Line 9R	320	8400	(819.121) 828.222	(34.50°) 35.00°	-3.50°	
Line 9L	320	8400	(812.090) 835.371	(-35.00°) -34.50°	-3.50°	
Zone D	0	8400	4083.722	4.25°	-2.50°	

Front Fog Lamp- 24V-S2 (S122627) _ratio calculated

Designated lines or zones	minimum	maximum	Value				Result
			1mins	× 0.7	30mins	× 0.7	
2.5D-V	2000	8400	3653.000	2557.100	3589.000	2512.300	complies
Point 1	-	60	2.850	1.995	2.800	1.960	complies
Point 2	-	60	2.443	1.710	2.400	1.680	complies
Point 3	-	60	57.202	40.042	56.200	39.340	complies
Point 4	-	60	56.286	39.400	55.300	38.710	complies
Point 5	-	60	3.257	2.280	3.200	2.240	complies
Point 6	-	60	3.155	2.209	3.100	2.170	complies
Point 7	-	60	37.965	26.576	37.300	26.110	complies
Point 8	-	60	45.904	32.133	45.100	31.570	complies
Point 9	-	60	47.126	32.988	46.300	32.410	complies
Point 10	-	60	39.085	27.359	38.400	26.880	complies
Line 1	-	90	35.811	25.068	35.184	24.629	complies
Line 2	-	105	39.343	27.540	38.654	27.058	complies
Line 3	-	170	53.263	37.284	52.330	36.631	complies
Line 4	-	250	81.253	56.877	79.829	55.880	complies
Line 5	-	340	225.213	157.649	221.267	154.887	complies
Line 6	2000	8400	(3469.419) 4163.583	(2428.593) 2914.508	(3408.635) 4090.638	(2386.045) 2863.447	complies
Line 7	-	0.5*Max line 6	922.571	645.800	906.408	634.486	complies
Line 8L	800	8400	(1876.305) 1935.810	(1313.413) 1355.067	(1843.432) 1901.895	(1290.402) 1331.327	complies
Line 8R	800	8400	(1954.904) 1991.213	(1368.433) 1393.849	(1920.654) 1956.327	(1344.458) 1369.429	complies
Line 9R	320	8400	(833.728) 842.991	(583.609) 590.094	(819.121) 828.222	(573.385) 579.755	complies
Line 9L	320	8400	(826.571) 850.268	(578.600) 595.187	(812.090) 835.371	(568.463) 584.760	complies
Zone D	-	8400	4156.544	2909.581	4083.722	2858.605	complies

Daytime Running Lamp –12V- S1 (S122272)

ISOQA

PHOTOMETRIC RESULTS

Program:	01 (2010.12.04)	ECE R 87 (LED)2010
Daytime Running lamp		
Name:	12-0452 JS-12307 S122272 ECER87 Daytime Running(LED)(12V) 12_0731	
Number:	L120843	
Test distance:	3.194 m	Meas.-no.:
Lamp type:	LED 13.5V	
Number:	LED	
Flux:	0.000 lm	Operator: chen
Voltage:	13.494 V	Date: 7/31/2012 2:18:42 PM
Current:	0.467 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 87 (LED)2010

Function	Min	Max	Value	H	V	Unit	N.O.K.
H - V (1 min)	400	1200	825.000	0.00°	0.00°	cd	
H - V (30 min)	400	1200	816.000	0.00°	0.00°	cd	
10U - 5L	80	1200	101.300	-5.00°	10.00°	cd	
10U - V	80	1200	134.700	0.00°	10.00°	cd	
10U - 5R	80	1200	119.900	5.00°	10.00°	cd	
5U - 20R	40	1200	139.900	20.00°	5.00°	cd	
5U - 10R	80	1200	338.000	10.00°	5.00°	cd	
5U - V	280	1200	366.400	0.00°	5.00°	cd	
5U - 10L	80	1200	313.700	-10.00°	5.00°	cd	
5U - 20L	40	1200	170.400	-20.00°	5.00°	cd	
H - 20L	100	1200	181.500	-20.00°	0.00°	cd	
H - 10L	280	1200	499.500	-10.00°	0.00°	cd	
H - 5L	360	1200	739.100	-5.00°	0.00°	cd	
H - 5R	360	1200	872.000	5.00°	0.00°	cd	
H - 10R	280	1200	564.500	10.00°	0.00°	cd	
H - 20R	100	1200	142.700	20.00°	0.00°	cd	
5D - 20R	40	1200	103.500	20.00°	-5.00°	cd	
5D - 10R	80	1200	409.000	10.00°	-5.00°	cd	
5D - V	280	1200	796.100	0.00°	-5.00°	cd	
5D - 10L	80	1200	389.400	-10.00°	-5.00°	cd	
5D - 20L	40	1200	114.600	-20.00°	-5.00°	cd	
Visibility	1	1200	(103.181) 1151.627	(20.00°) - 1.50°	(-5.00°) - 3.00°	cd	

Daytime Running Lamp – 12V S2 (S122627)

ISOQA

PHOTOMETRIC RESULTS

Program:	01 (2010.12.04)	ECE R 87 (LED)2010
Daytime running Lamp		
Name:	12-0452 JS-12307 S122627 ECER87 Daytime Running(LED)(12V) 12_0904	
Number:	L120843	
Test distance:	3.194 m	Meas.-no.:
Lamp type:	LED 13.5V	
Number:	LED	
Flux:	0.000 lm	Operator: chen
Voltage:	13.494 V	Date: 9/4/2012 10:53:58 AM
Current:	0.410 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 87 (LED)2010

Function	Min	Max	Value	H	V	Unit	N.O.K.
H - V (1 min)	400	1200	1045.000	0.00°	0.00°	cd	
H - V (30 min)	400	1200	1031.000	0.00°	0.00°	cd	
10U - 5L	80	1200	160.700	-5.00°	10.00°	cd	
10U - V	80	1200	177.000	0.00°	10.00°	cd	
10U - 5R	80	1200	164.400	5.00°	10.00°	cd	
5U - 20R	40	1200	136.200	20.00°	5.00°	cd	
5U - 10R	80	1200	525.800	10.00°	5.00°	cd	
5U - V	280	1200	473.900	0.00°	5.00°	cd	
5U - 10L	80	1200	438.500	-10.00°	5.00°	cd	
5U - 20L	40	1200	256.700	-20.00°	5.00°	cd	
H - 20L	100	1200	175.800	-20.00°	0.00°	cd	
H - 10L	280	1200	610.500	-10.00°	0.00°	cd	
H - 5L	360	1200	1097.000	-5.00°	0.00°	cd	
H - 5R	360	1200	1087.000	5.00°	0.00°	cd	
H - 10R	280	1200	687.900	10.00°	0.00°	cd	
H - 20R	100	1200	110.500	20.00°	0.00°	cd	
5D - 20R	40	1200	82.400	20.00°	-5.00°	cd	
5D - 10R	80	1200	276.200	10.00°	-5.00°	cd	
5D - V	280	1200	314.800	0.00°	-5.00°	cd	
5D - 10L	80	1200	237.800	-10.00°	-5.00°	cd	
5D - 20L	40	1200	86.700	-20.00°	-5.00°	cd	
Visibility	1	1200	(82.589) 1154.891	(20.00°) - 4.00°	(-5.00°) - 1.00°	cd	

Daytime Running Lamp –24V- S1 (S122272)

ISOQA

PHOTOMETRIC RESULTS

Program:	(2010.11.08)	ECE R 87 Daytime Running-LED2010
Daytime running lamp		
Name:	120452 JS-12307 S122272 ECER87 Daytime Running(LED)(24V)	
Number:	L120843	
Test distance:	3.176 m	Meas.-no.:
Lamp type:	LED 28V	
Number:	Light Source 1	
Flux:	0.00 lm	Operator: Bo Yang Lee
Voltage:	28.002 V	Date: 12/15/2012 9:29:25 AM
Current:	0.260 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 87 Daytime Running-LED2010

Function	Min	Max	Value	H	V	Reaim	Unit	N.O.K.
H - V(1min)	400	1200	960.000	0.00°	0.00°		cd	
H - V(30min)	400	1200	952.000	0.00°	0.00°		cd	
10U - 5L	80	1200	156.300	-5.00°	10.00°		cd	
10U - H	80	1200	178.100	0.00°	10.00°		cd	
10U - 5R	80	1200	164.400	5.00°	10.00°		cd	
5U - 20R	40	1200	131.300	20.00°	5.00°		cd	
5U - 10R	80	1200	371.300	10.00°	5.00°		cd	
5U - V	280	1200	419.300	0.00°	5.00°		cd	
5U - 10L	80	1200	349.300	-10.00°	5.00°		cd	
5U - 20L	40	1200	197.000	-20.00°	5.00°		cd	
H - 20L	100	1200	205.800	-20.00°	0.00°		cd	
H - 10L	280	1200	576.400	-10.00°	0.00°		cd	
H - 5L	360	1200	830.000	-5.00°	0.00°		cd	
H - 5R	360	1200	859.000	5.00°	0.00°		cd	
H - 10R	280	1200	574.900	10.00°	0.00°		cd	
H - 20R	100	1200	162.700	20.00°	0.00°		cd	
5D - 20R	40	1200	50.090	20.00°	-5.00°		cd	
5D - 10R	80	1200	192.700	10.00°	-5.00°		cd	
5D - V	280	1200	459.300	0.00°	-5.00°		cd	
5D - 10L	80	1200	327.100	-10.00°	-5.00°		cd	
5D - 20L	40	1200	110.400	-20.00°	-5.00°		cd	
Maximum&Minimum	1	1200	(50.035) 1123.749	(20.00°) -2.50°	(-5.00°) -1.75°		cd	

Daytime Running Lamp – 24V S2 (S122627)

ISOQA
PHOTOMETRIC RESULTS

Program:	01 (2010.12.04)	ECE R 87 (LED)2010
Daytime running Lamp		
Name:	12-0452 JS-12307 S122627 ECER87 Daytime Running(LED)(24V) 12_0904	
Number:	L120843	
Test distance:	3.194 m	Meas.-no.:
Lamp type:	LED 28V	
Number:	Light Source 1	
Flux:	0.000 lm	Operator: chen
Voltage:	28.000 V	Date: 9/4/2012 11:05:19 AM
Current:	0.252 A	Set value: Const. voltage
X-offset:	0.00°	Y-offset: 0.00°
Comment:		

ECE R 87 (LED)2010

Function	Min	Max	Value	H	V	Unit	N.O.K.
H - V (1 min)	400	1200	1064.000	0.00°	0.00°	cd	
H - V (30 min)	400	1200	1033.000	0.00°	0.00°	cd	
10U - 5L	80	1200	162.200	-5.00°	10.00°	cd	
10U - V	80	1200	181.100	0.00°	10.00°	cd	
10U - 5R	80	1200	170.200	5.00°	10.00°	cd	
5U - 20R	40	1200	141.300	20.00°	5.00°	cd	
5U - 10R	80	1200	544.300	10.00°	5.00°	cd	
5U - V	280	1200	482.400	0.00°	5.00°	cd	
5U - 10L	80	1200	449.100	-10.00°	5.00°	cd	
5U - 20L	40	1200	262.400	-20.00°	5.00°	cd	
H - 20L	100	1200	185.300	-20.00°	0.00°	cd	
H - 10L	280	1200	629.400	-10.00°	0.00°	cd	
H - 5L	360	1200	1117.000	-5.00°	0.00°	cd	
H - 5R	360	1200	1107.000	5.00°	0.00°	cd	
H - 10R	280	1200	701.400	10.00°	0.00°	cd	
H - 20R	100	1200	115.800	20.00°	0.00°	cd	
5D - 20R	40	1200	93.400	20.00°	-5.00°	cd	
5D - 10R	80	1200	304.100	10.00°	-5.00°	cd	
5D - V	280	1200	348.900	0.00°	-5.00°	cd	
5D - 10L	80	1200	261.900	-10.00°	-5.00°	cd	
5D - 20L	40	1200	95.500	-20.00°	-5.00°	cd	
Visibility	1	1200	(55.330) 1122.913	(20.00°) - 3.50°	(2.00°) - 1.00°	cd	

Stability of photometric performance on front fog lamps marked JS-12307, sample no. S122627

Illumination in cd on measuring points		
	$E_{\max}$ (cd)	HV (cd)
A Clean fog lamp – 12V ¹⁾		
Prior to the test	3347 (2342.9) ²⁾	176.563 (123.59) ²⁾
After 12 hours	3475 (2432.5) ²⁾	176.563 (123.59) ²⁾
B Dirty fog lamp – 12V ¹⁾		
After 1 hour	3531 (2471.7) ²⁾	165.625 (115.93) ²⁾
C Clean fog lamp – 24V ¹⁾		
Prior to the test	3410 (2387.0) ²⁾	185.938 (130.15) ²⁾
After 12 hours	3514 (2459.8) ²⁾	178.125 (124.68) ²⁾
D Dirty fog lamp – 24V ¹⁾		
After 1 hour	3618 (2532.6) ²⁾	173.438 (121.40) ²⁾

¹⁾ The LED module operated by the electronic light source control gear, test voltage was 13.2 or 28V, same sample was tested for both 13.2V and 28V.

²⁾ () = original value multiplied by 0.7.

After both tests the fog lamp was inspected visually. No distortion, deformation, cracking or change in colour of the fog lamp lens was noticeable.

The discrepancy of the photometric characteristics prior to the tests and after the tests was less than 10 per cent.

Under influence of heat the cut-off line changed approximately 1.92 mrad for 12V system and 1.92 mrad for 24V system (maximum allowed change: 2 mrad).

Test on the complete fog lamp incorporating a lens of plastic material on class F3 front fog lamp.

§ 2.4.1 Mechanical deterioration - sample no. S122629

Point on measuring screen	Illumination in cd on measuring points	
	After mechanical deterioration	Required min. or permissible max. value
Line 2 – 12V	64.026 (44.818) ²⁾	136.5 max.
Line 5 – 12V	187.500 (131.250) ²⁾	442 max.
Line 2 – 24V	65.625 (45.938) ²⁾	136.5 max.
Line 5 – 24V	192.188 (134.532) ²⁾	442 max.

§ 2.6.2 Adherence of coatings – sample no. S122630

The impaired area was approximately 3%, and did not exceed the permitted 15% of the gridded area.