

Index to the information package of a type approval with regard to a Regulation (UNECE) :

Last applicable Series of amendments	Base approval and update No	Extension No	Revision No	Issue date	Information document	
					Reference	Number of pages
R148-00	00	-	-	26.03.2024	SONAR SK1810(1811)-ADA513 / 00	19
R148-00	01	01	-	Signature date	SONAR SK1810(1811)-ADA513 / 01	19

Approved and to be attached to the approval certificate,



R. VERHELST





Communication concerning :

- ~~Approval granted⁽²⁾~~
- ~~Approval extended⁽²⁾~~
- ~~Approval refused⁽²⁾~~
- ~~Approval withdrawn⁽²⁾~~
- ~~Production definitively discontinued⁽²⁾~~

of a type of rear registration plate illuminating lamp
of a type of direction indicator lamp
of a type of stop lamp
of a type of position lamp
of a type of end-outline marker lamp
of a type of reversing lamp
of a type of manoeuvring lamp
of a type of rear fog lamp
of a type of parking lamp
of a type of daytime running lamp
of a type of side marker lamp
pursuant to UN Regulation No. 148

Category of the lamp : 2aY, R1Y, S1, -, F1
Approval No : E6*148R00/04*5522*01

Change Index : 01
Unique Identifier (UI) : -
(If applicable)

- | | | |
|----|--|--|
| 1. | Trade name or mark of the lamp : | SONAR |
| 2. | Manufacturer's name for the type of lamp : | SK1810-ADA513, SK1811-ADA513
SK1820-ADA513, SK1821-ADA513 |
| 3. | Manufacturer's name and address : | Sonar Auto Parts Co., Ltd
No. 427, Sec. 2, Wenhua Rd.,
Panchiao District,
New Taipei City, Taiwan, R.O.C. |
| 4. | If applicable, name and address of the manufacturer's representative : | Not applicable |
| 5. | Submitted for approval on : | 29.03.2024
X RAY International Testing and
Certification Co., LTD.
30.05.2023 to 01.06.2023
X RAY International Testing and
Certification Co., LTD. |
| 6. | Technical Service responsible for conducting approval test: | Vincotte N.V.
Jan Olieslagerslaan 35
1800 Vilvoorde
Belgium |



7.	Date of test report issued by that service :	12.04.2024
8.	Number of report issued by that service :	H2461283069.114
9.	Concise description ⁽²⁾ :	See information document
9.1.	In case of	
9.1.1.	A rear-registration plate illuminating lamp :	Not applicable
	Geometrical conditions of installation (position(s) and inclination(s) of the device in relation to the space to be occupied by the registration plate and/or different inclinations of this space):	
9.1.2.	A direction indicator :	
	Sequential activation of light sources :	yes / no ⁽²⁾
9.1.3.	A reversing lamp :	
	The lamp shall be installed on a vehicle only as part of a pair of lamps:	yes / no ⁽²⁾
9.1.4.	A manoeuvring lamp :	Not applicable
	The maximum mounting height:	
9.1.5.	A daytime running lamp :	Not applicable
	Maximum luminous intensity does not exceed 700 cd :	yes / no ⁽²⁾
9.2.	By light signalling function and category	Rear Direction Indicator for cat. 2aY Rear Position Lamp for cat. R1Y Stop Lamp for cat. S1 Reversing Lamp Rear Fog Lamp for cat. F1
	For mounting either outside or inside or both ⁽²⁾	
	Colour of light emitted :	red / white / amber / colourless ⁽²⁾
	Number, category and kind of light source(s) :	16 LEDs / 2 light sources 26 LEDs / 2 light sources 8 LEDs / 1 light source 3 LEDs / 1 light source 4 LEDs / 1 light source
	Lamp approved for LED substitute light source(s):	yes / no ⁽²⁾
	If yes, category of LED substitute light source(s):	
	Voltage and wattage :	12 V, 4.3 W 12 V, 1.4 W 12 V, 3.3 W 12 V, 1.4 W 12 V, 2.6 W



	Light source module :	yes / no ⁽²⁾
	Light source module specific identification code :	Not applicable
	Only for limited mounting height of equal to or less than 750 mm above the ground, if applicable :	yes / no ⁽²⁾
	Geometrical conditions of installation and relating variations, if any :	See information document
	Application of an electronic light source control gear/variable intensity control :	
	(a) Being part of the lamp :	yes / no ⁽²⁾
	(b) Being not part of the lamp :	yes / no ⁽²⁾
	Input voltage supplied by an electronic light source control gear / variable intensity control :	Not applicable
	Electronic light source control gear / variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body) :	Not applicable
	Variable luminous intensity :	yes / no ⁽²⁾
9.3.	The front position lamp ⁽²⁾ , rear position lamp ⁽²⁾ , stop lamp ⁽²⁾ , end-outline marker lamp ⁽²⁾ , daytime running lamp ⁽²⁾ is only for use on a vehicle fitted with a tell-tale indicating failure :	Not applicable
10.	Position of the approval mark :	On the lamp
11.	Reason(s) for extension (if applicable) :	See information document
12.	Approval granted / extended / refused / withdrawn ⁽²⁾	
13.	Approval granted for devices to be used on vehicles already in use only.	yes / no ⁽²⁾
14.	Place :	Brussels
15.	Date :	Signature date



16. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:



R. VERHELST

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.

- (1) *For lamps with non-replaceable light sources indicate the number and the total wattage of the light sources*
(2) *Strike out what does not apply*



**VINÇOTTE nv**

Registered office: Jan Olieslagerslaan 35 • 1800 Vilvoorde • Belgium
VAT BE 0462.513.222 • RPM/RPR Brussels • BNP Paribas Fortis: BE24 2100 4113 6338 • BIC: GEBABEBB

Jan Olieslagerslaan 35 • 1800 Vilvoorde • Belgium • phone: +32 2 674 57 11 • brussels@vincotte.be

ISO/IEC 17020 Accredited inspection body - Accreditation certificate BELAC No. 016-INSP

1. SUBJECT

Light-signalling devices (lamps) for power-driven vehicles 148R00/04
and their trailers LSD

2. REFERENCE

Report number : H2461283069.114 Update : 01

3. GENERALITIES

Make : SONAR

Commercial name : -

Type : SK1810-ADA513, SK1811-ADA513, SK1820-ADA513, SK1821-ADA513

Name and address of the manufacturer :

Sonar Auto Parts Co., Ltd

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.

4. TESTS

Date and place : 2024.03.29
X RAY International Testing and Certification Co., LTD.
2023.05.30 to 2023.06.01
X RAY International Testing and Certification Co., LTD.

Applied document (s) : SONAR SK1810(1811)-ADA513 / 01

Inspector : LIAO Yi-Jin

Manufacturer's repr. : -

Location of E-mark : On the lamp

Location of UI : -

5. CONCLUSIONS

The tests were carried out according to the following specifications :

UNECE Regulation No.148 incorporating supplement 4 to the 00 series of amendments

The models presented comply with the requirements to be applied.

Date : 2024.04.12

Signature :


VINÇOTTE nv/za
LIAO Yi-Jin
Automotive Certification

2BH/LYJ

R148-00-S04 v2

SPECIFICATIONS CHECK SHEET

FACILITIES AND EQUIPMENT The facilities and equipment used to carry out the

Worst case rationale		
	Direction indicator lamp	X
	Stop lamp	X
	Position lamp	X
	Reversing lamp	X
	Rear fog lamp	X

SONAR AUTO PARTS CO., LTD.Head Office:

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.

Taipei Plant:

No.263, Yingtao Rd. Yingge District,
New Taipei City, Taiwan R.O.C.

Tainan Plant:

No. 185, Sec. 1, Jhongshan Rd., Guiren District,
Tainan City, Taiwan, R.O.C.

COMBINATION TAILLAMP**SONAR SK1810(1811)-ADA513****Application: Extension 01****Date: April 01, 2024****Total number of pages: 19**

Extension / Revision history:	
Original application:	May 23, 2023
Extension 01: Add sequential activation of light sources flash mode for rear direction indictor lamp. Therefore, some information was updated.	April 01, 2024

Manufacturer name and address : Sonar Auto Parts Co., Ltd

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.

Trade name or mark : SONAR

Type of device : SK1810-ADA513, SK1811-ADA513
SK1820-ADA513, SK1821-ADA513

SPECIFICATIONS

Function-Application-class category lamp and colour

Trade name or mark		SONAR					
Function		<i>Rear Direction Indicator (1)(2)(3)</i>	<i>Rear Position Lamp (2)(4)</i>	<i>Stop Lamp</i>	<i>Reversing Lamp (5)</i>	<i>Rear Fog Lamp (5)</i>	<i>Retro- Reflective Device</i>
ECE regulation		148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	150-00 Supplement 04
Class		-	-	-	-	-	IB
Category		2aY	R1Y	S1	-	F1	-
Number, category and kind of lamp source(s)		16 LEDs / 2 light sources	26 LEDs / 2 light sources	8 LEDs / 1 light source	3 LEDs / 1 light source	4 LEDs / 1 light source	-
Voltage and wattage		12 V, 4.3 W	12 V, 1.4 W	12 V, 3.3 W	12 V, 1.4 W	12 V, 2.6 W	-
Electronic light source control gear							-
- Being part of the lamp		-	-	-	-	-	-
- Being not part of the lamp		-	-	-	-	-	-
Lens	Outer Version A	Clear	Red	Red	Clear	Red	Red
	Outer Version B	Smoked	Red	Red	Smoked	Red	Red
	Outer Version C	Clear	Clear	Clear	Clear	Clear	Clear
	Outer Version D	Smoked	Smoked	Smoked	Smoked	Smoked	Smoked
	Inner Version A	Clear	Red	-	-	-	Red
	Inner Version B	Clear	White	-	-	-	Red
Colour of light emitted		Amber	Red	Red	White	Red	Red

(1) This rear direction indicator is sequential activation of light sources flash mode.

(2) On devices SK1810(1811)-ADA513 and SK1820(1821)-ADA513 which may be used as part of an interdependent lamp system, the additional letter "Y" to the right of the symbol mentioned with ECE R148 in paragraph 4.2.2 shall be marked on each device.

(3) Total 16LEDs / 2 light sources for rear direction indicator. Outboard: 8LEDs / 1 light source, inboard : 8LEDs / 1 light source.

(4) Total 26LEDs / 2 light sources for rear position lamp. Outboard: 21LEDs / 1 light source, inboard : 5LEDs / 1 light source.

(5) This lamp should be installed in pair of devices.

TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PMMA	-
	Filter (Inner)	PC	-
Reflector		- ⁽⁶⁾	-
Housing		PC	-

⁽⁶⁾ There are two kinds of sub-reflectors, one is electroplated, and the other is black.

MARKING

Marking		Location
Trade name or mark	SONAR	See drawing
Approval marks	5522	See drawing
LED module code	-	-
Electronic light source control gear code	-	-

DRAWINGS	
Reference	Version
SK1810(1811)-ADA513-1	2023.06.06
SK1810(1811)-ADA513-2	2023.06.06
SK1810(1811)-ADA513-3	2023.06.06
SK1810(1811)-ADA513-4	2023.06.06
SK1810(1811)-ADA513-5	2023.06.06
SK1810(1811)-ADA513-6	2023.06.06
SK1810(1811)-ADA513-7	2023.06.06
SK1810(1811)-ADA513-8	2023.06.06
SK1810(1811)-ADA513-9	2023.06.06
SK1820(1821)-ADA513-1	2023.06.06
SK1820(1821)-ADA513-2	2023.06.06
SK1820(1821)-ADA513-3	2023.06.06
SK1820(1821)-ADA513-4	2023.06.06
SK1820(1821)-ADA513-5	2023.06.06
SK1820(1821)-ADA513-6	2023.06.06
SK1820(1821)-ADA513-7	2023.06.06

(Null below)

DRIVING DIRECTION

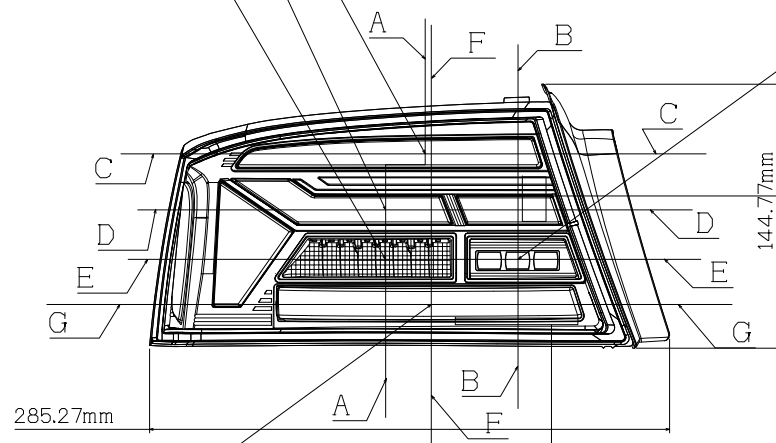


CENTER OF REFERENCE STOP LAMP (8LED's12V)

CENTER OF REFERENCE REAR POSITION LAMP (21LED's12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED's12V)

CENTER OF REFERENCE REVERSING LAMP (3LED's12V)

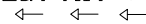


LH SONAR SK1811-ADA513

RH SONAR SK1810-ADA513

CENTER OF REFERENCE REFLEX REFLECTOR

IB 2aY R1Y S1AR

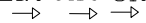


E₆

148R00 5522
150R00

FOR LEFT

IB 2aY R1Y S1AR



E₆

148R00 5522
150R00

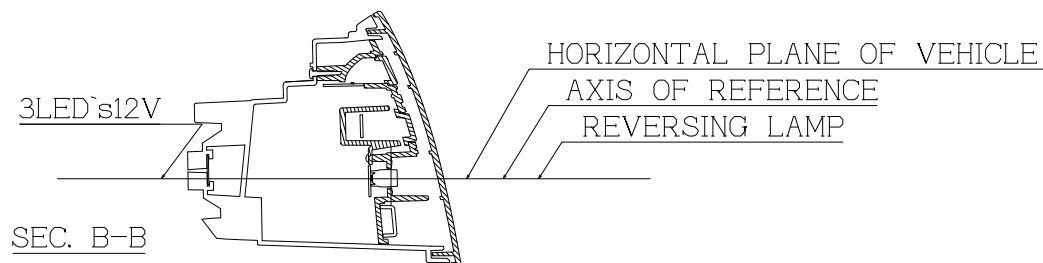
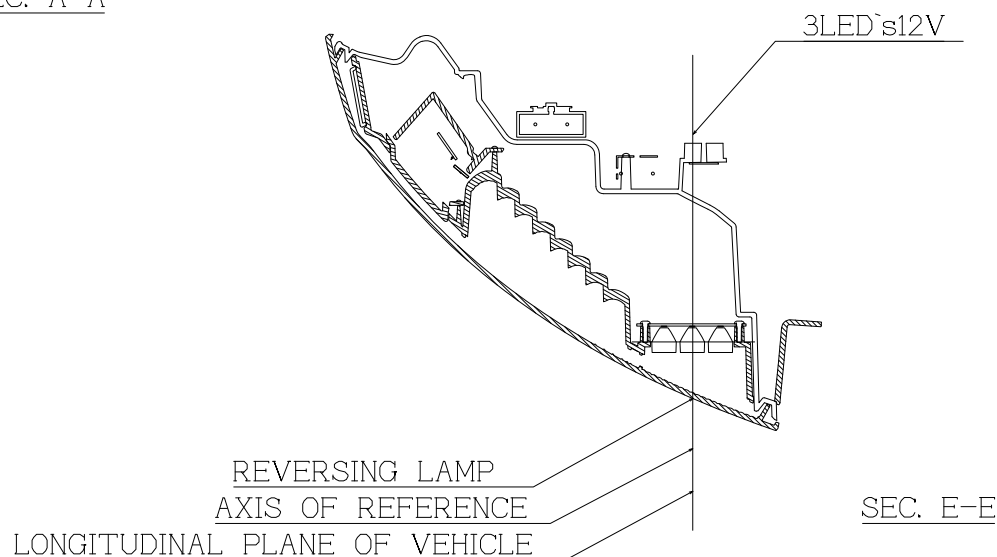
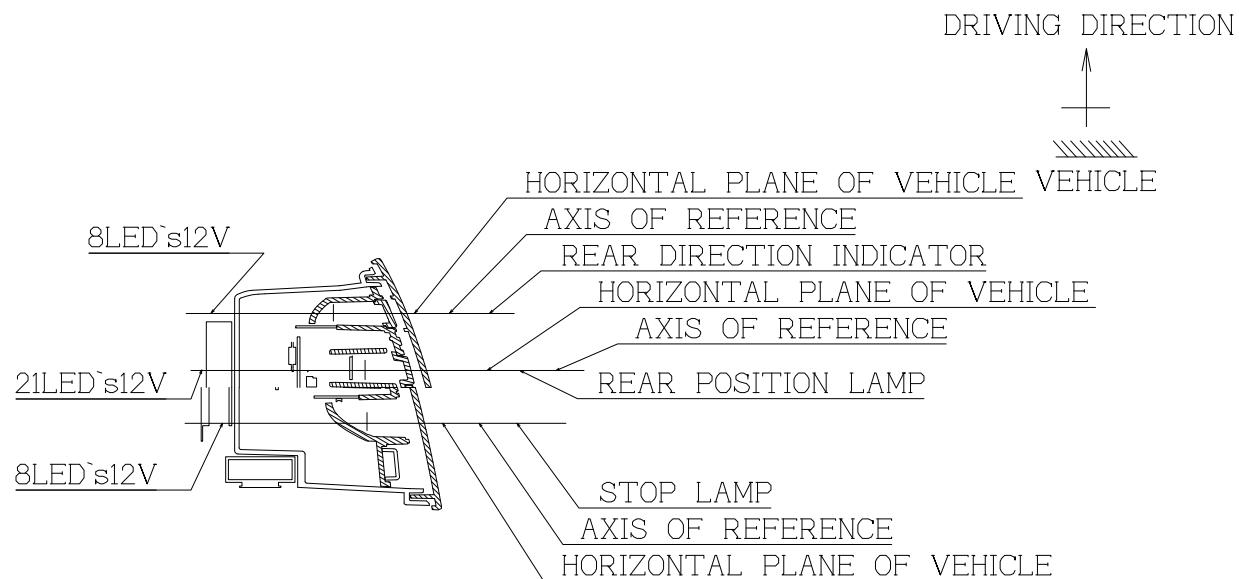
FOR RIGHT

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-1	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-2	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

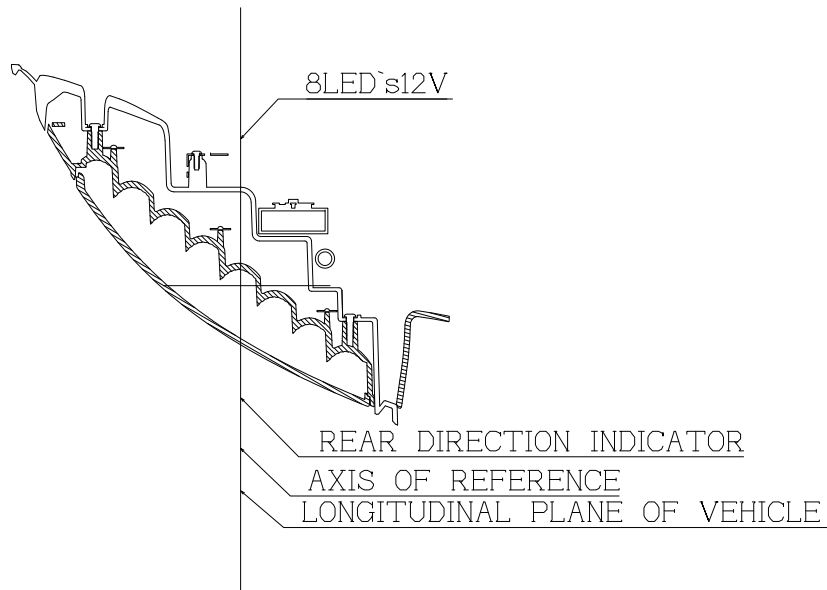
VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

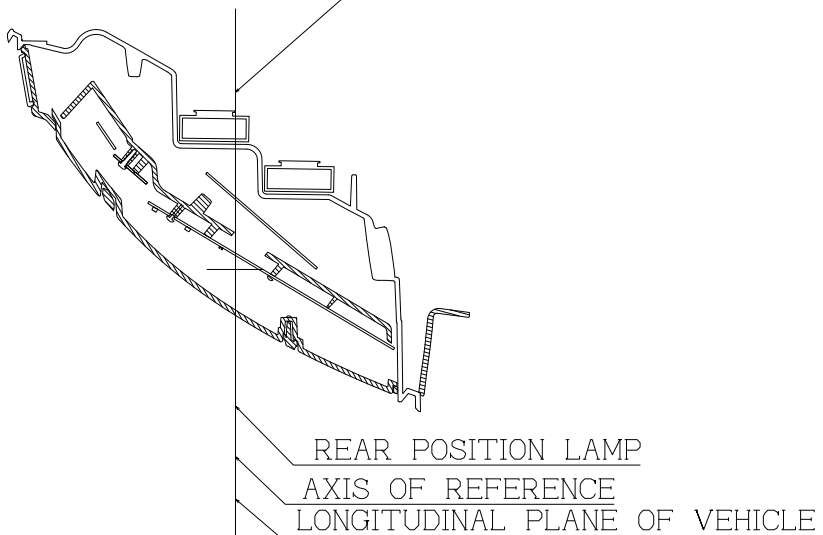
4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)

SEC. C-C



4LED's12V

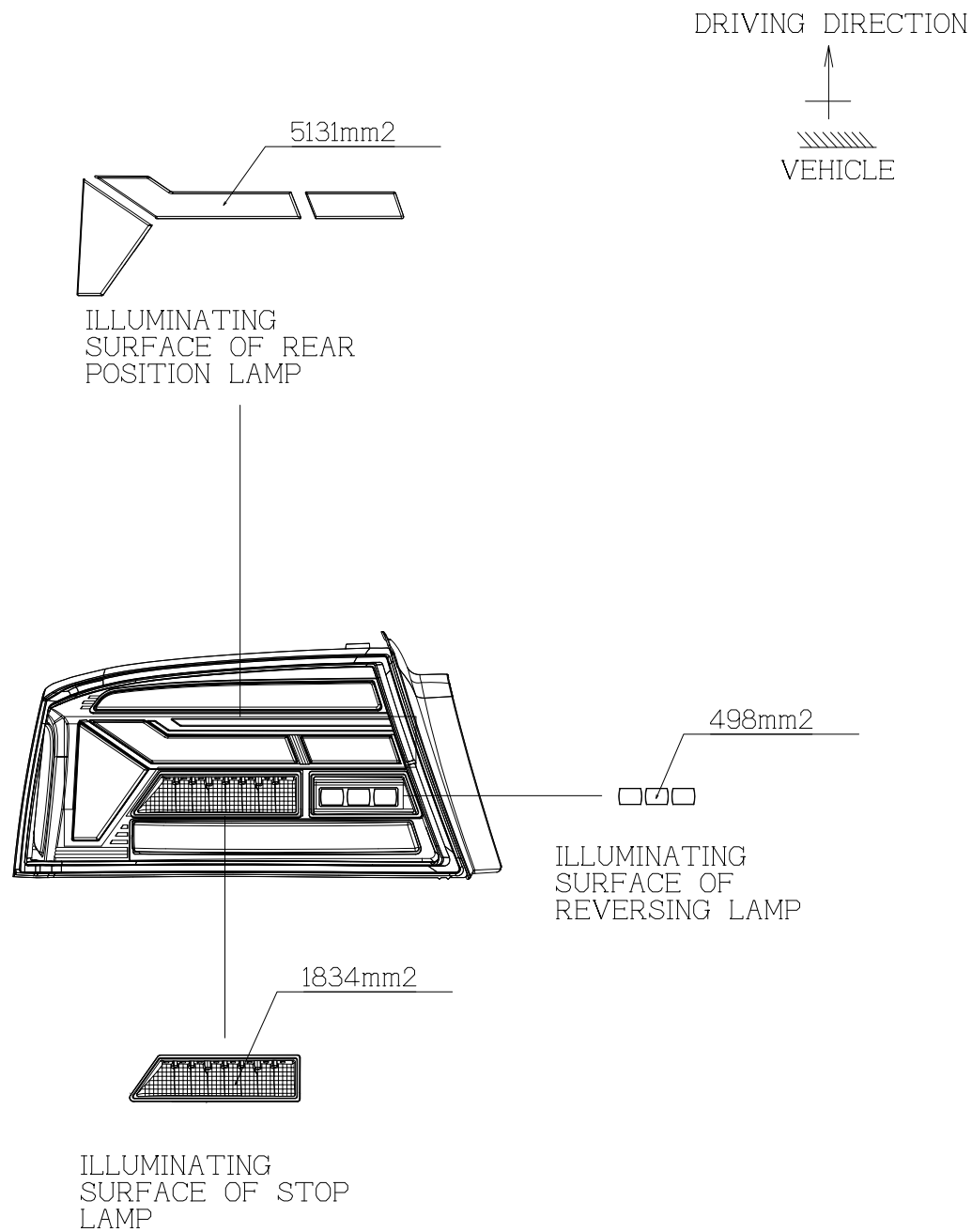


SEC. D-D

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-3	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-4	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

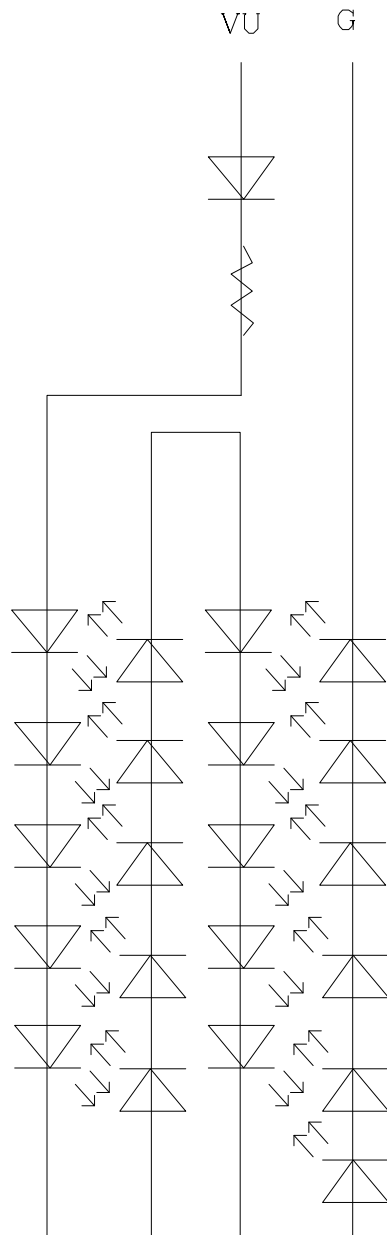
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

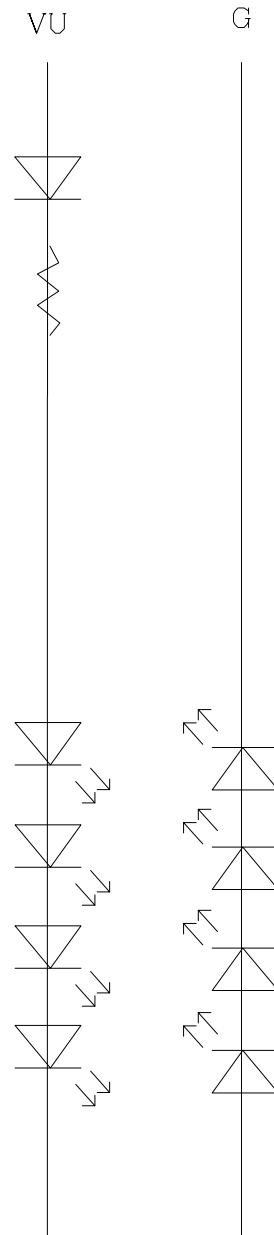
VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)



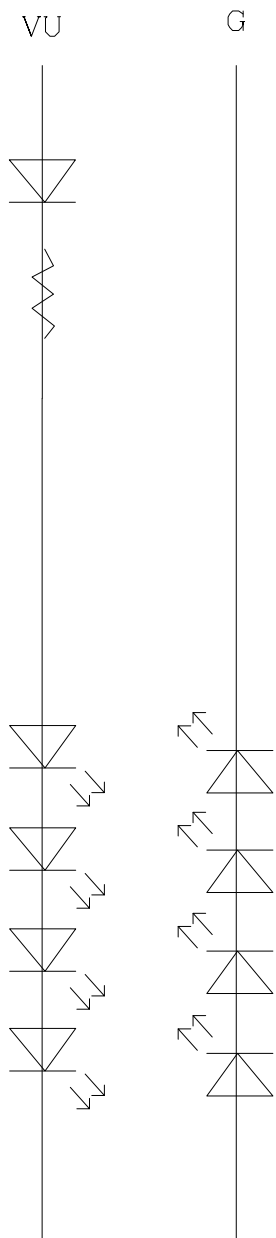
CIRCUIT DIAGRAM OF
REAR POSITION LAMP



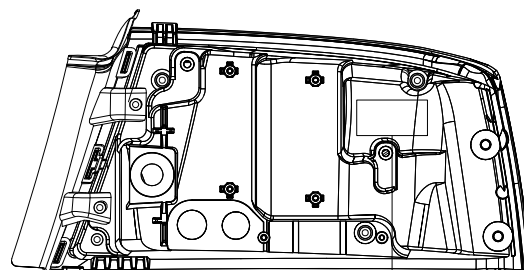
CIRCUIT DIAGRAM OF
STOP LAMP

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-5	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



DRIVING DIRECTION



SONAR SK1811-ADA513
MADE IN TAIWAN
LENS:PMMA
HSG:PC

12V ~~24V~~
LH

NOTE:

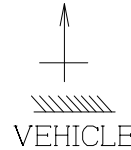
1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
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VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-6	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

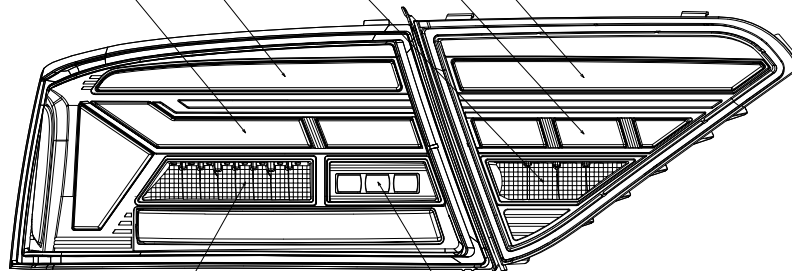
CENTER OF REFERENCE REAR POSITION LAMP (21LED`s12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED`s12V)

CENTER OF REFERENCE REAR FOG LAMP (4LED`s12V)

CENTER OF REFERENCE REAR POSITION LAMP (5LED`s12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED`s12V)



CENTER OF REFERENCE REVERSING LAMP (3LED`s12V)

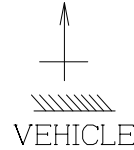
CENTER OF REFERENCE STOP LAMP (8LED`s12V)

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-7	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

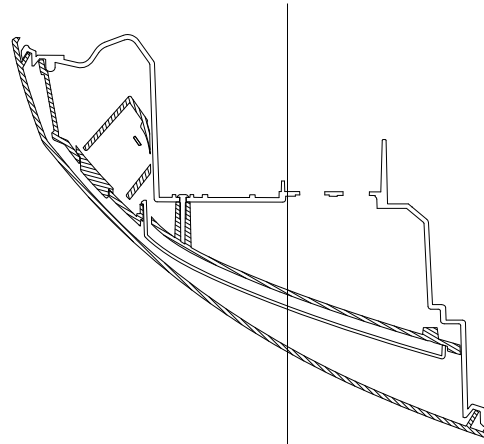
VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

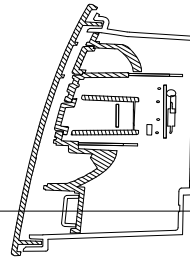
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)

SEC. G-G



REFLEX REFLECTOR(2370mm)

REFLEX REFLECTOR(2370mm)



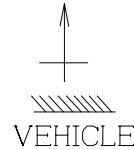
SEC. F-F

圖面比例: 1:1

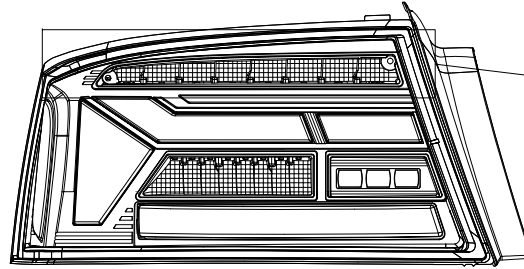
UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-8	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

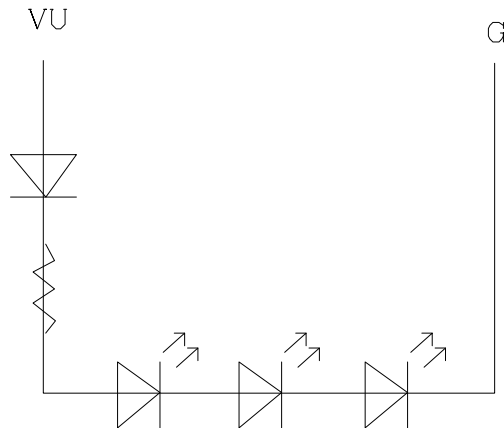
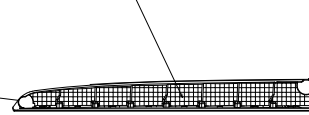
DRIVING DIRECTION



2541mm²



ILLUMINATING
SURFACE OF REAR
DIRECTION INDICATOR



CIRCUIT DIAGRAM OF
REVERSING LAMP

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-9	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

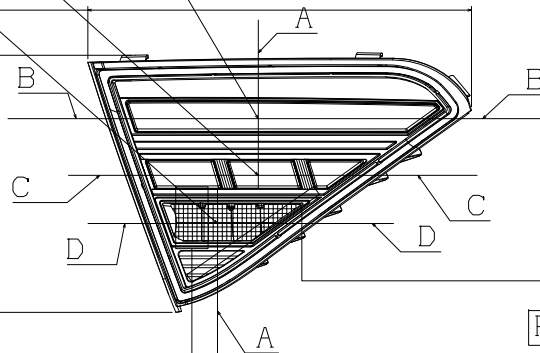
CENTER OF REFERENCE REAR FOG LAMP (4LED's12V)

CENTER OF REFERENCE REAR POSITION LAMP (5LED's12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED's12V)

210.47mm

141mm



RH SONAR SK1820-ADA513

LH SONAR SK1821-ADA513

2aY R1Y F1
→ →

E₆

148R00 5522

FOR RIGHT

2aY R1Y F1
← ←

E₆

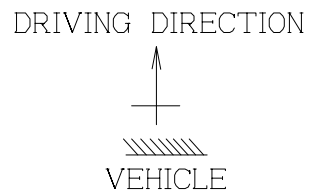
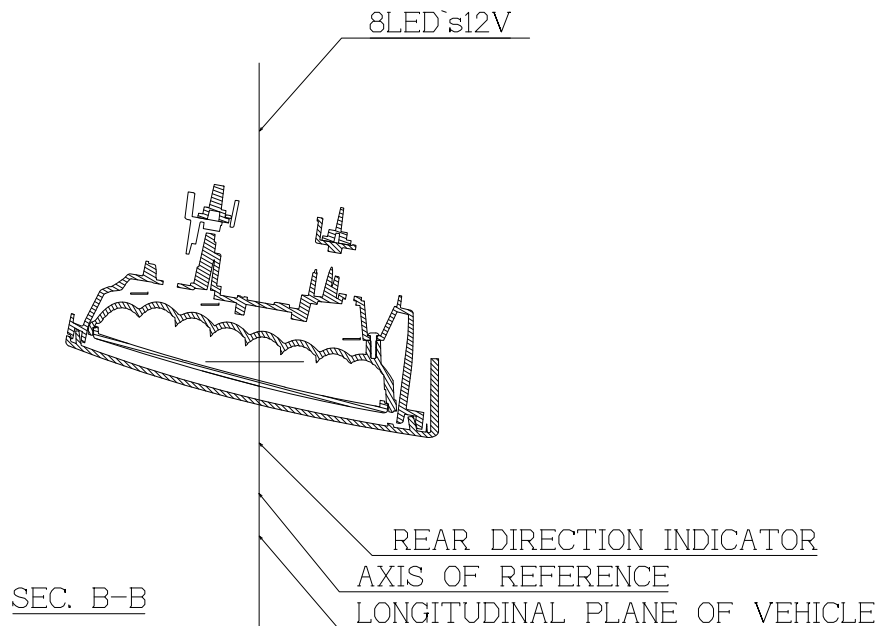
148R00 5522

FOR LEFT

圖面比例: 1:1

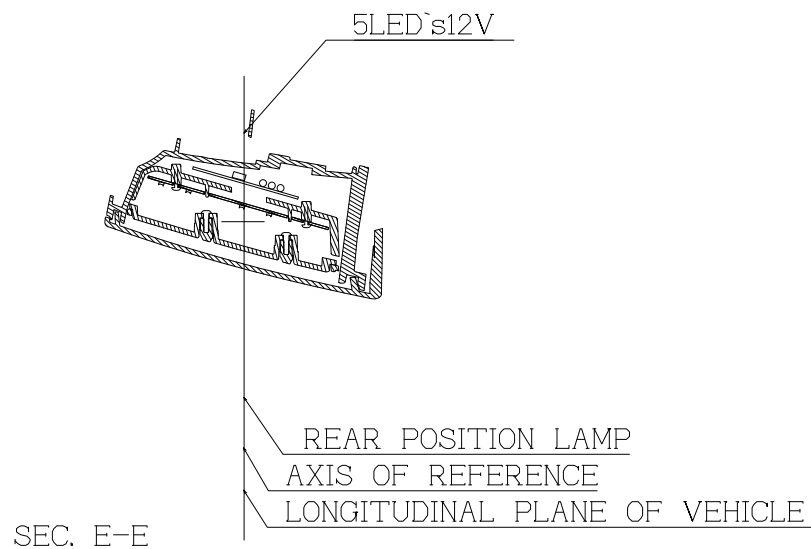
UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-1	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY, THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
3. VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
4. THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR), RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR), WHITE INNER LENS (REAR POSITION LAMP)



圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-2	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



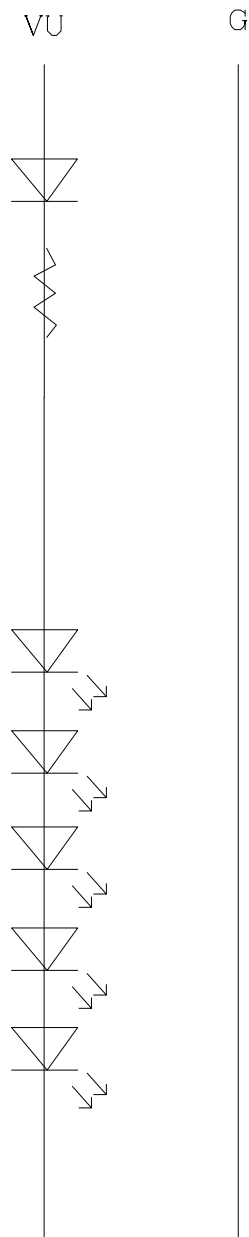
SEC. D-D

NOTE:

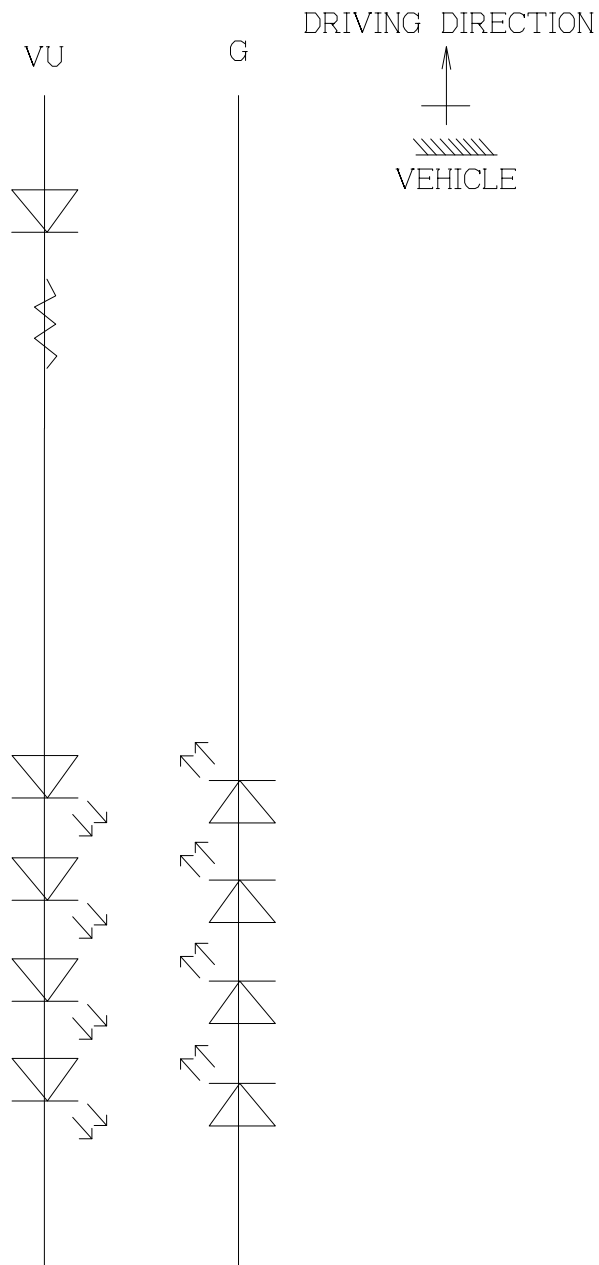
1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-3	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR



CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR

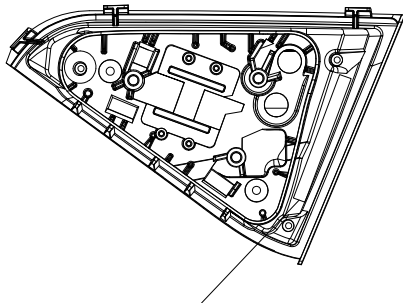
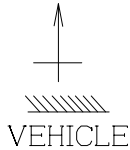
NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY, THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
3. VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
4. THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR), RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR), WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-4	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION

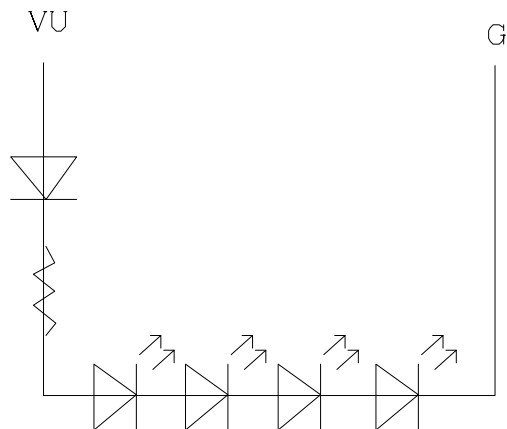
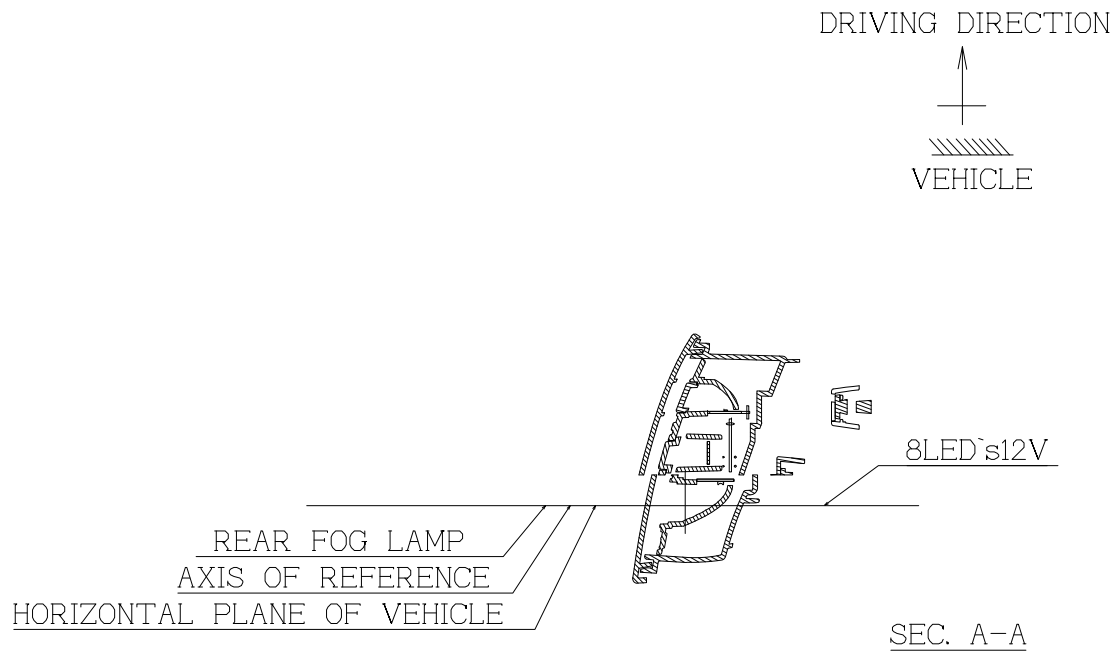


SONAR SK1821-ADA513
MADE IN TAIWAN
LENS:PMMA
HSG:PC
12V ~~24V~~
LH

NOTE:
1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-5	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



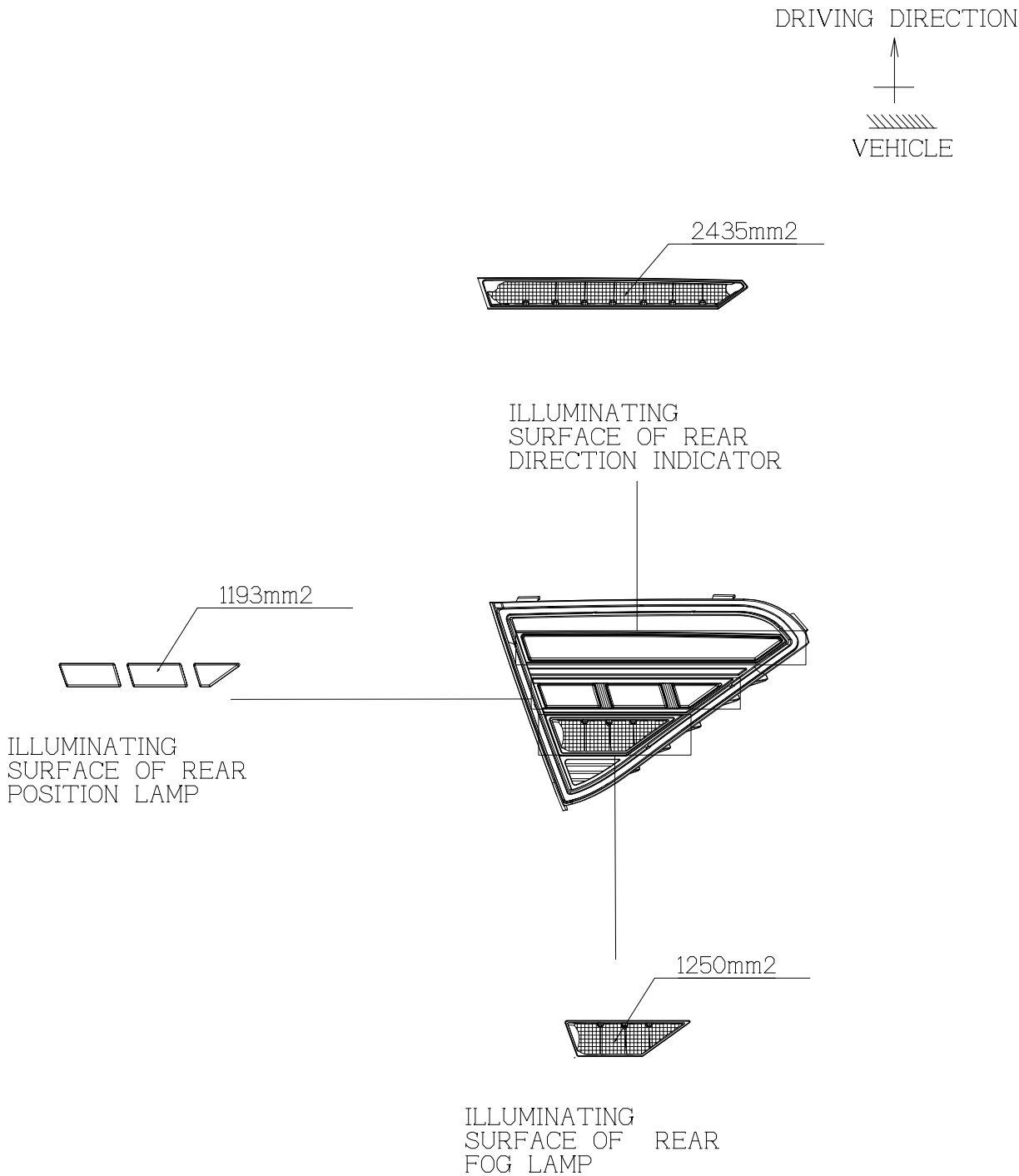
CIRCUIT DIAGRAM OF
REAR FOG LAMP

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-6	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-7	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

Index to the information package of a type approval with regard to a Regulation (UNECE) :

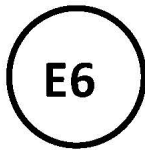
Last applicable Series of amendments	Base approval and update No	Extension No	Revision No	Issue date	Information document	
					Reference	Number of pages
R150-00	00	-	-	26.03.2024	SONAR SK1810(1811)-ADA513 / 00	19
R150-00	01	01	-	Signature date	SONAR SK1810(1811)-ADA513 / 01	19

Approved and to be attached to the approval certificate,



R. VERHELST





Communication concerning :

- ~~Approval granted⁽²⁾~~
- ~~Approval extended⁽²⁾~~
- ~~Approval refused⁽²⁾~~
- ~~Approval withdrawn⁽²⁾~~
- ~~Production definitively discontinued⁽²⁾~~

of a type of retro-reflective device
~~of a type of advance warning triangle~~
~~of a type of SMV rear marking plate~~
~~of a type of rear marking plate~~
~~of retro-reflective markings of heavy and long vehicles and their trailers~~
pursuant to UN Regulation No. 150

Category of the device : IB Change Index : 01
Approval No : E6*150R00/04*5522*01 Unique Identifier (UI) : -
(If applicable)

- | | | |
|--------|--|--|
| 1. | Trade name or mark of the retro-reflective device or marking material: | SONAR |
| 2. | Manufacturer's name: | Sonar Auto Parts Co., Ltd |
| 2.1. | for the retro-reflecting type of device: | SK1810-ADA513, SK1811-ADA513
SK1820-ADA513, SK1821-ADA513 |
| 2.2. | for the advance warning triangle : | Not applicable |
| 2.3. | for the SMV rear marking plate type: | Not applicable |
| 2.3.1. | SMV rear marking plate class: | |
| 2.4. | for the rear marking plate type: | Not applicable |
| 2.4.1. | Rear marking plate class: | |
| 2.5. | Class of the marking material: | Not applicable |
| 3. | Name and address of the manufacturer: | Sonar Auto Parts Co., Ltd
No. 427, Sec. 2, Wenhua Rd.,
Panchiao District,
New Taipei City, Taiwan, R.O.C. |
| 4. | If applicable, name and address of manufacturer's representative: | Not applicable |



5. Date on which the marking material was submitted for approval tests: 01.04.2024
X RAY INTERNATIONAL
27.10.2023 to 02.11.2023
X RAY International Testing and Certification Co., LTD.
6. Technical service responsible for carrying out the approval test: Vincotte N.V.
Jan Olieslagerslaan 35
1800 Vilvoorde
Belgium
7. Date of test report issued by the technical service: 12.04.2024
8. Number of test report issued by the technical service: H2461283069.115
9. Concise description: See information document
In isolation/part of an assembly of devices ⁽²⁾ :
Colour of light emitted : ~~White/red/amber~~ ⁽²⁾
Installation as an integral part of a lamp, which is integrated into the body of a vehicle: Yes / ~~no~~ ⁽²⁾
Geometric conditions of installation and relating variations, if any: See information document
Only for limited mounting height of equal to or less than 750 mm above the ground: ~~Yes~~ / no ⁽²⁾
10. Approval ~~granted~~ / refused / ~~extended~~ / ~~withdrawn~~ ⁽²⁾
11. Reason(s) for extension (if applicable) : See information document
12. Position of the approval mark: On the lamp
13. Place : Brussels
14. Date : Signature date
15. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:



R. VERHELST



16. Annexed is a list of documents making up the approval file, deposited with the Type Approval Authority which granted approval; a copy can be obtained on request.

(1) *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the regulation).*
(2) *Strike out what does not apply*



Getekend op : 2024-05-16 15:47:19 +0200 te Brussel

dossier nr. 86582 - E6*150R00/04*5522*01



**VINÇOTTE nv**

Registered office: Jan Olieslagerslaan 35 • 1800 Vilvoorde • Belgium

VAT BE 0462.513.222 • RPM/RPR Brussels • BNP Paribas Fortis: BE24 2100 4113 6338 • BIC: GEBABEBB

Jan Olieslagerslaan 35 • 1800 Vilvoorde • Belgium • phone: +32 2 674 57 11 • brussels@vincotte.be

ISO/IEC 17020 Accredited inspection body - Accreditation certificate BELAC No. 016-INSP

1. SUBJECTRetro-reflective devices and markings for power-driven
vehicles and their trailers150R00/04
RRD**2. REFERENCE**

Report number : H2461283069.115 Update : 01

3. GENERALITIES

Make : SONAR

Commercial name : -

Type : SK1810-ADA513, SK1811-ADA513, SK1820-ADA513, SK1821-ADA513

Name and address of the manufacturer :

Sonar Auto Parts Co., Ltd

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.**4. TESTS**

Date and place :	2024.04.01 X RAY INTERNATIONAL 2023.10.27 to 2023.11.02 X RAY International Testing and Certification Co., LTD.
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Applied document (s) : SONAR SK1810(1811)-ADA513 / 01

Inspector : LIAO Yi-Jin

Manufacturer's repr. : -

Location of E-mark : On the lamp

Location of UI : -

5. CONCLUSIONS

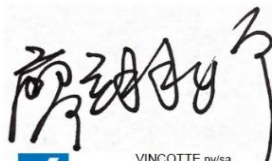

The tests were carried out according to the following specifications :

UNECE Regulation No.150 incorporating supplement 4 to the 00 series of amendments

The models presented comply with the requirements to be applied.

Date : 2024.04.12

Signature :



VINÇOTTE nv/sa
LIAO Yi-Jin
Automotive Certification

2BH/LYJ

R150-00-S04 v1

SONAR AUTO PARTS CO., LTD.Head Office:

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.

Taipei Plant:

No.263, Yingtao Rd. Yingge District,
New Taipei City, Taiwan R.O.C.

Tainan Plant:

No. 185, Sec. 1, Jhongshan Rd., Guiren District,
Tainan City, Taiwan, R.O.C.

COMBINATION TAILLAMP**SONAR SK1810(1811)-ADA513****Application: Extension 01****Date: April 01, 2024****Total number of pages: 19**

Extension / Revision history:	
Original application:	May 23, 2023
Extension 01: Add sequential activation of light sources flash mode for rear direction indictor lamp. Therefore, some information was updated.	April 01, 2024

Manufacturer name and address : Sonar Auto Parts Co., Ltd

No. 427, Sec. 2, Wenhua Rd., Panchiao District,
New Taipei City, Taiwan, R.O.C.

Trade name or mark : SONAR

Type of device : SK1810-ADA513, SK1811-ADA513
SK1820-ADA513, SK1821-ADA513

SPECIFICATIONS

Function-Application-class category lamp and colour

Trade name or mark		SONAR					
Function		<i>Rear Direction Indicator (1)(2)(3)</i>	<i>Rear Position Lamp (2)(4)</i>	<i>Stop Lamp</i>	<i>Reversing Lamp (5)</i>	<i>Rear Fog Lamp (5)</i>	<i>Retro- Reflective Device</i>
ECE regulation		148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	148-00 Supplement 04	150-00 Supplement 04
Class		-	-	-	-	-	IB
Category		2aY	R1Y	S1	-	F1	-
Number, category and kind of lamp source(s)		16 LEDs / 2 light sources	26 LEDs / 2 light sources	8 LEDs / 1 light source	3 LEDs / 1 light source	4 LEDs / 1 light source	-
Voltage and wattage		12 V, 4.3 W	12 V, 1.4 W	12 V, 3.3 W	12 V, 1.4 W	12 V, 2.6 W	-
Electronic light source control gear							-
- Being part of the lamp		-	-	-	-	-	-
- Being not part of the lamp		-	-	-	-	-	-
Lens	Outer Version A	Clear	Red	Red	Clear	Red	Red
	Outer Version B	Smoked	Red	Red	Smoked	Red	Red
	Outer Version C	Clear	Clear	Clear	Clear	Clear	Clear
	Outer Version D	Smoked	Smoked	Smoked	Smoked	Smoked	Smoked
	Inner Version A	Clear	Red	-	-	-	Red
	Inner Version B	Clear	White	-	-	-	Red
Colour of light emitted		Amber	Red	Red	White	Red	Red

(1) This rear direction indicator is sequential activation of light sources flash mode.

(2) On devices SK1810(1811)-ADA513 and SK1820(1821)-ADA513 which may be used as part of an interdependent lamp system, the additional letter "Y" to the right of the symbol mentioned with ECE R148 in paragraph 4.2.2 shall be marked on each device.

(3) Total 16LEDs / 2 light sources for rear direction indicator. Outboard: 8LEDs / 1 light source, inboard : 8LEDs / 1 light source.

(4) Total 26LEDs / 2 light sources for rear position lamp. Outboard: 21LEDs / 1 light source, inboard : 5LEDs / 1 light source.

(5) This lamp should be installed in pair of devices.

TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PMMA	-
	Filter (Inner)	PC	-
Reflector		- ⁽⁶⁾	-
Housing		PC	-

⁽⁶⁾ There are two kinds of sub-reflectors, one is electroplated, and the other is black.

MARKING

Marking		Location
Trade name or mark	SONAR	See drawing
Approval marks	5522	See drawing
LED module code	-	-
Electronic light source control gear code	-	-

DRAWINGS	
Reference	Version
SK1810(1811)-ADA513-1	2023.06.06
SK1810(1811)-ADA513-2	2023.06.06
SK1810(1811)-ADA513-3	2023.06.06
SK1810(1811)-ADA513-4	2023.06.06
SK1810(1811)-ADA513-5	2023.06.06
SK1810(1811)-ADA513-6	2023.06.06
SK1810(1811)-ADA513-7	2023.06.06
SK1810(1811)-ADA513-8	2023.06.06
SK1810(1811)-ADA513-9	2023.06.06
SK1820(1821)-ADA513-1	2023.06.06
SK1820(1821)-ADA513-2	2023.06.06
SK1820(1821)-ADA513-3	2023.06.06
SK1820(1821)-ADA513-4	2023.06.06
SK1820(1821)-ADA513-5	2023.06.06
SK1820(1821)-ADA513-6	2023.06.06
SK1820(1821)-ADA513-7	2023.06.06

(Null below)

DRIVING DIRECTION

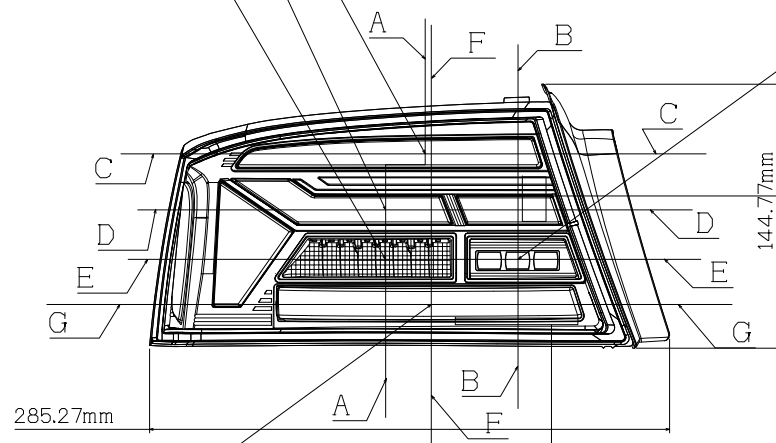


CENTER OF REFERENCE STOP LAMP (8LED's12V)

CENTER OF REFERENCE REAR POSITION LAMP (21LED's12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED's12V)

CENTER OF REFERENCE REVERSING LAMP (3LED's12V)

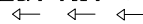


LH SONAR SK1811-ADA513

RH SONAR SK1810-ADA513

CENTER OF REFERENCE REFLEX REFLECTOR

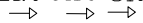
IB 2aY R1Y S1AR



148R00 5522
150R00

FOR LEFT

IB 2aY R1Y S1AR



148R00 5522
150R00

FOR RIGHT

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

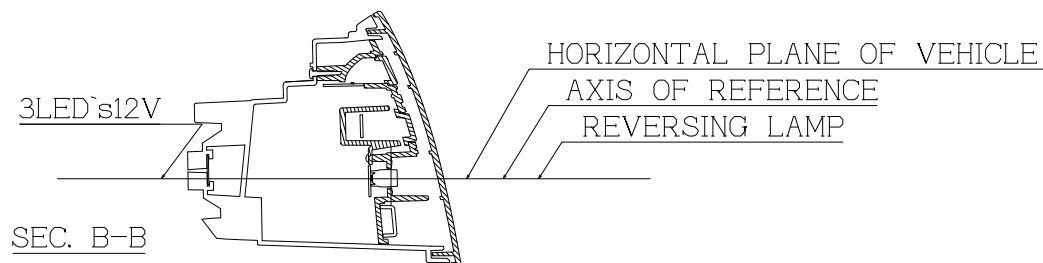
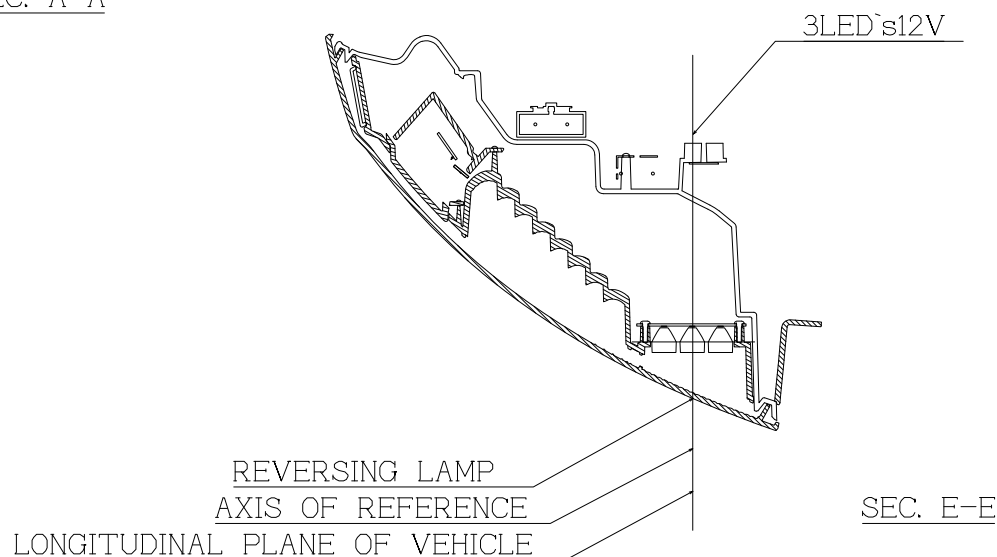
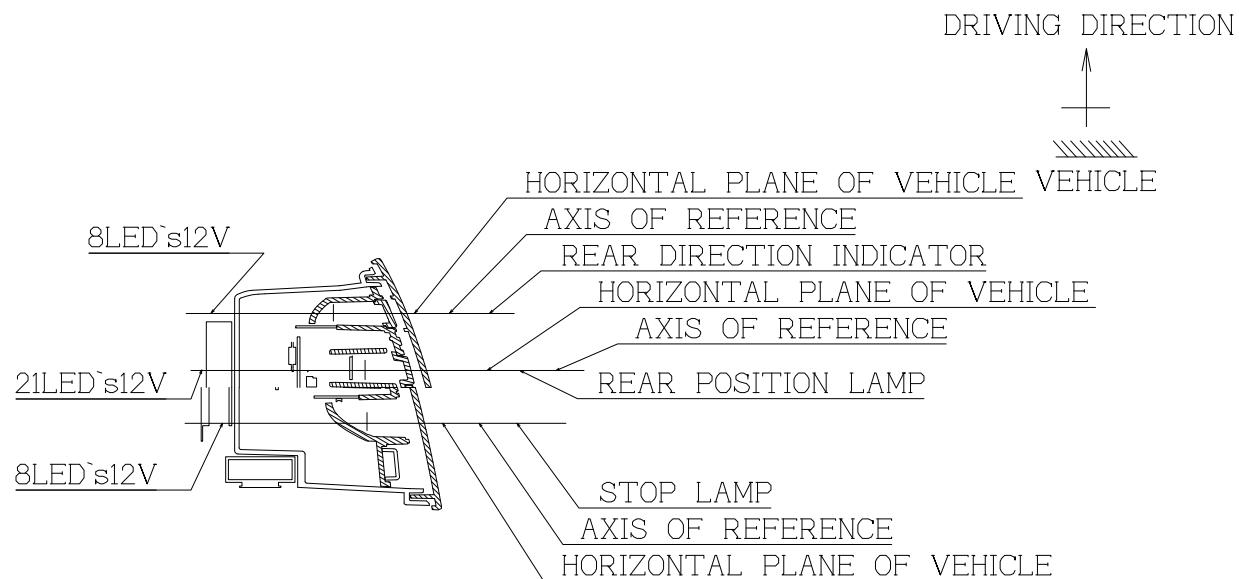
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-1	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-2	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

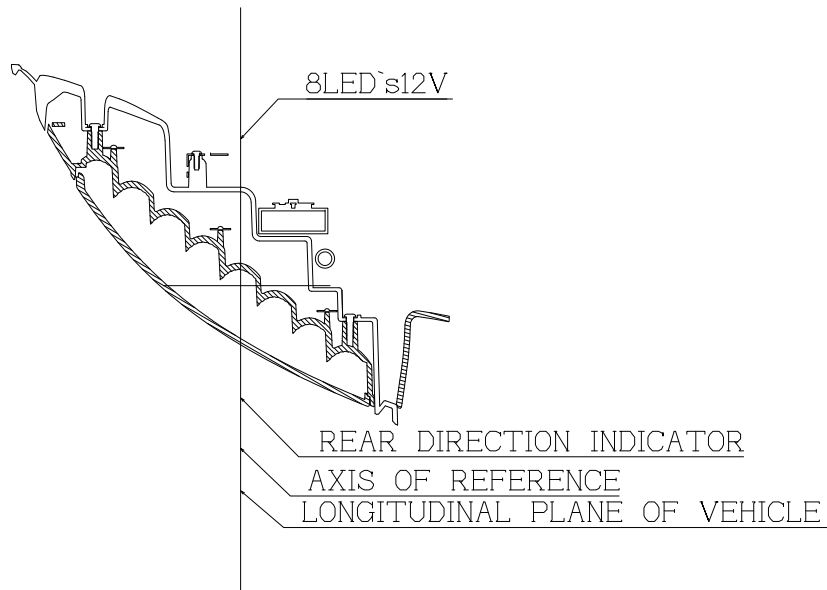
VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

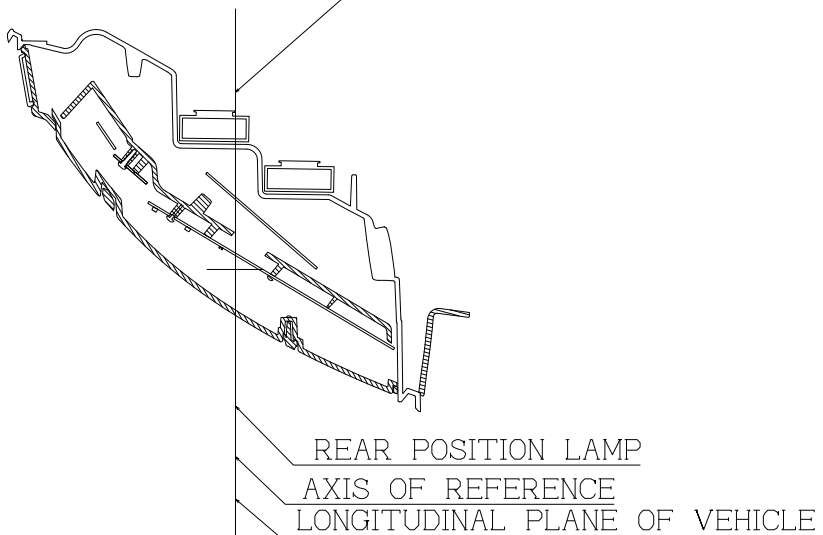
4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)

SEC. C-C



4LED's12V

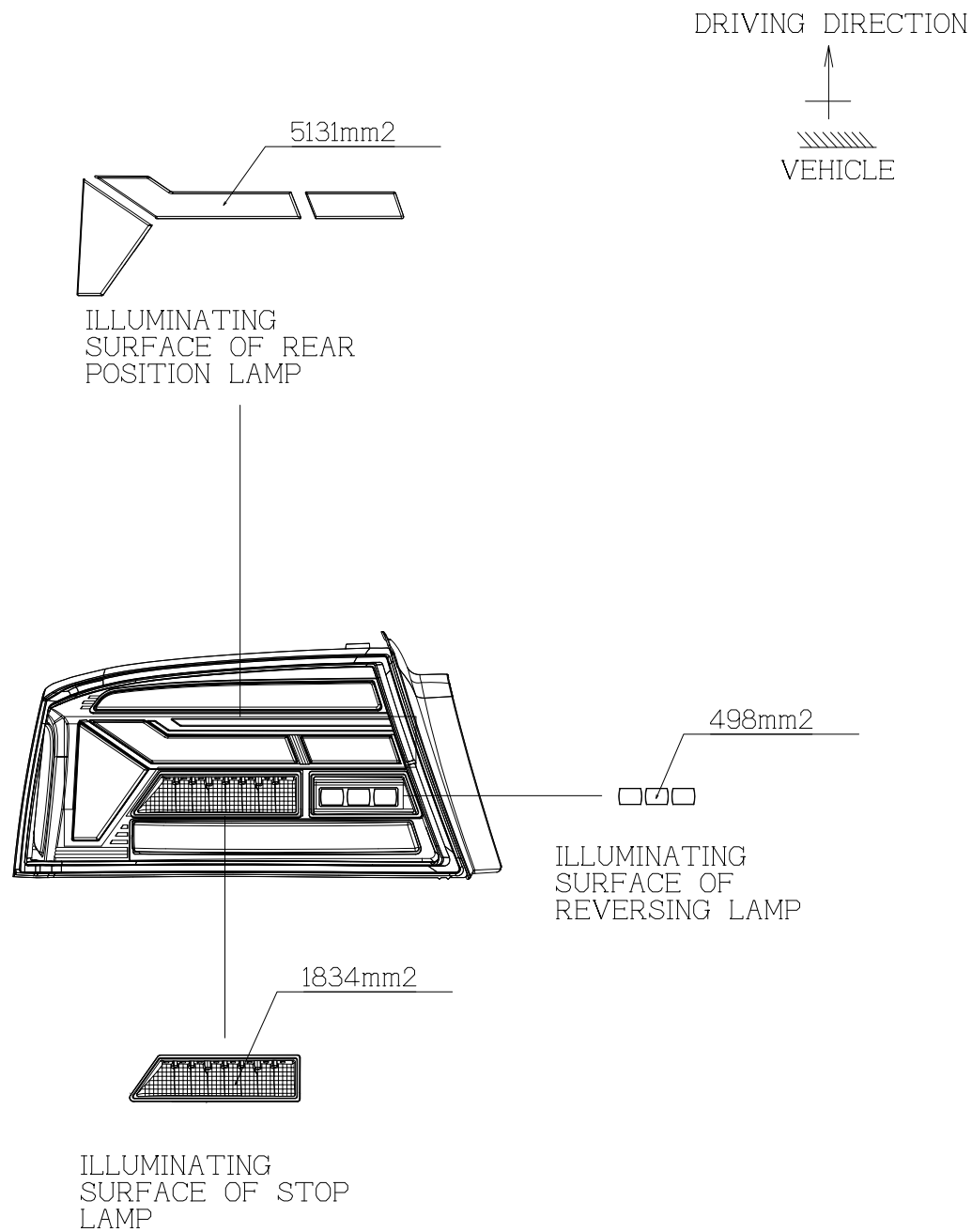


SEC. D-D

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-3	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY, THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
3. VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
4. THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR), RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR), WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-4	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

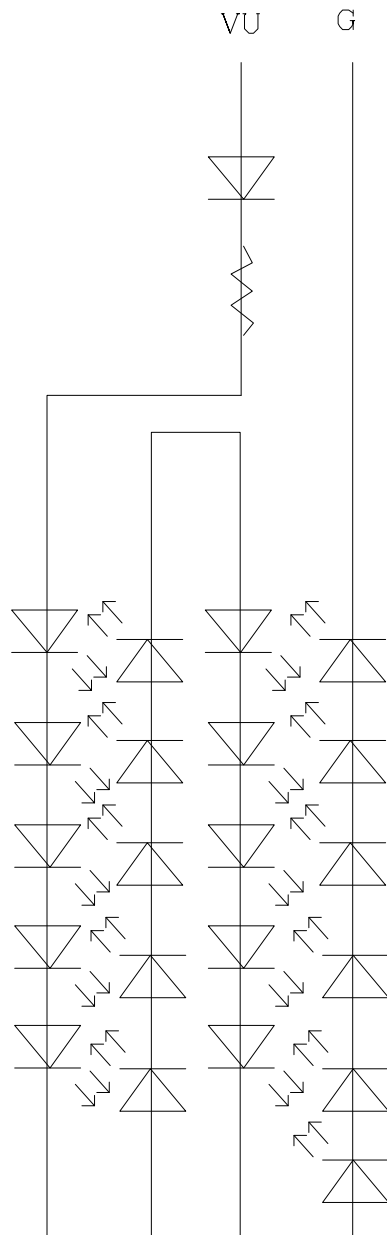
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

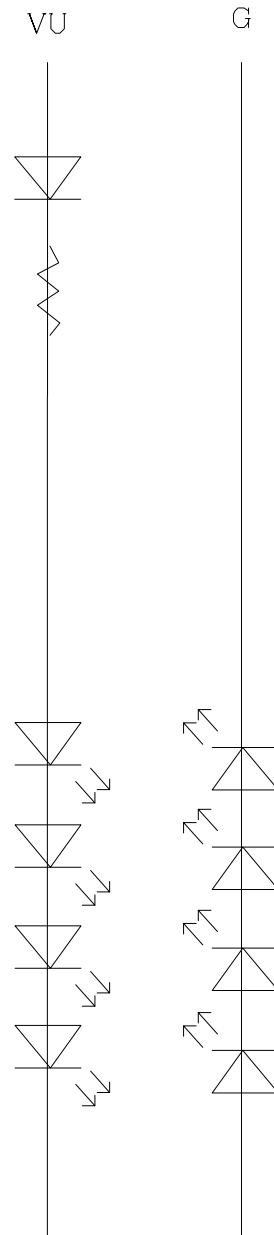
VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)



CIRCUIT DIAGRAM OF
REAR POSITION LAMP

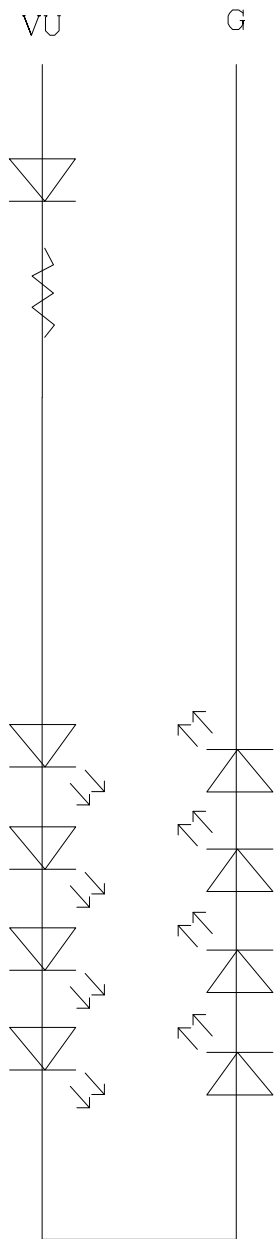


CIRCUIT DIAGRAM OF
STOP LAMP

圖面比例: 1:1

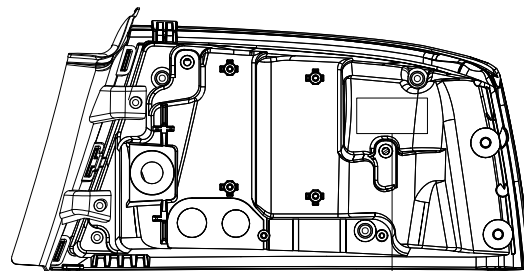
UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-5	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR

DRIVING DIRECTION



SONAR SK1811-ADA513
MADE IN TAIWAN
LENS:PMMA
HSG:PC

12V ~~24V~~
LH

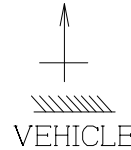
NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-6	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)

VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

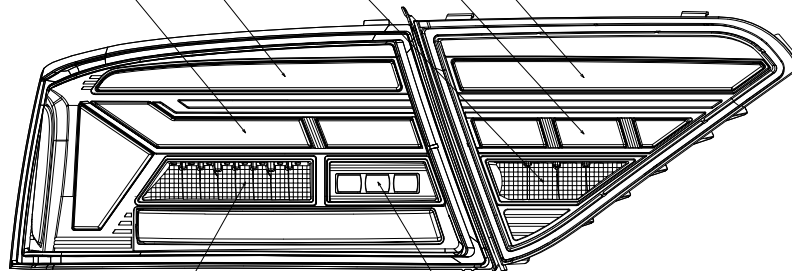
CENTER OF REFERENCE REAR POSITION LAMP (21LED`s12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED`s12V)

CENTER OF REFERENCE REAR FOG LAMP (4LED`s12V)

CENTER OF REFERENCE REAR POSITION LAMP (5LED`s12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED`s12V)



CENTER OF REFERENCE REVERSING LAMP (3LED`s12V)

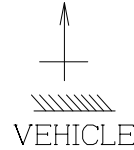
CENTER OF REFERENCE STOP LAMP (8LED`s12V)

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-7	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

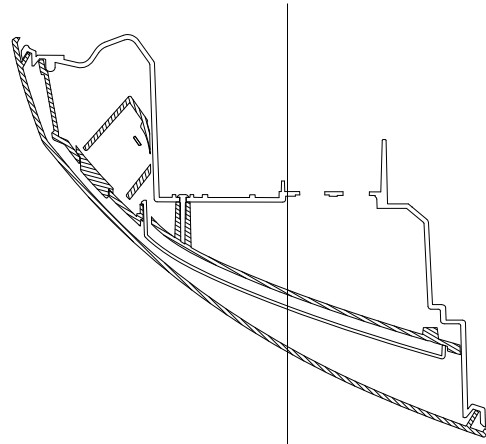
VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS
(REAR POSITION LAMP)

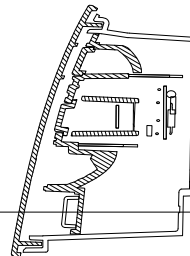
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS
(REAR POSITION LAMP)

SEC. G-G



REFLEX REFLECTOR(2370mm)

REFLEX REFLECTOR(2370mm)



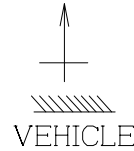
SEC. F-F

圖面比例: 1:1

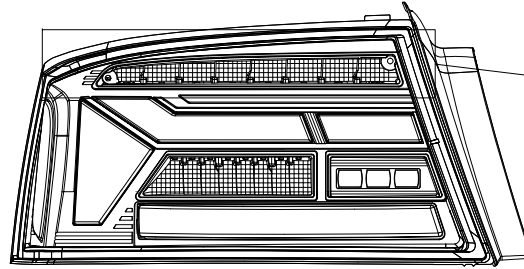
UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-8	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

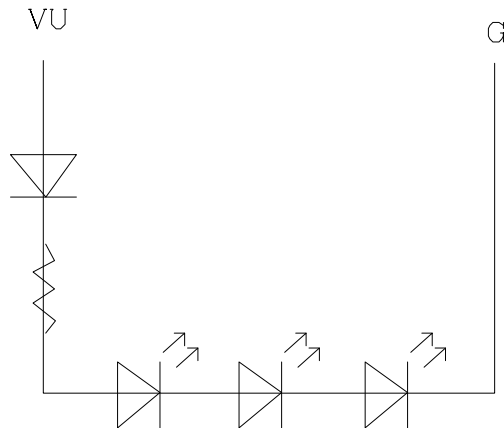
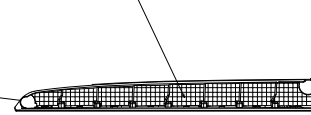
DRIVING DIRECTION



2541mm²



ILLUMINATING
SURFACE OF REAR
DIRECTION INDICATOR



CIRCUIT DIAGRAM OF
REVERSING LAMP

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1

UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1810(1811)-ADA513-9	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.

3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),
RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP),

RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR)
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION C: ALL CLEAR OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

VERSION D: ALL SMOKED OUTER LENS
(THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)

4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

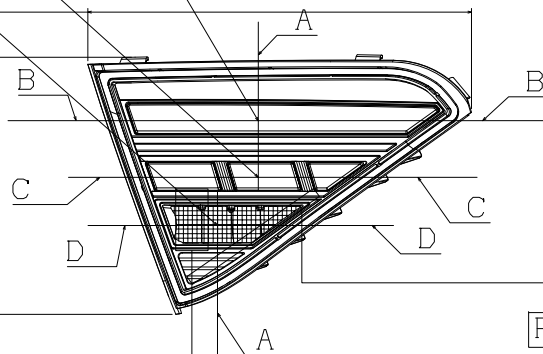
CENTER OF REFERENCE REAR FOG LAMP (4LED's12V)

CENTER OF REFERENCE REAR POSITION LAMP (5LED's12V)

CENTER OF REFERENCE (REAR DIRECTION INDICATOR 8LED's12V)

210.47mm

141mm



RH SONAR SK1820-ADA513

LH SONAR SK1821-ADA513

2aY R1Y F1
→ →

E₆

148R00 5522

FOR RIGHT

2aY R1Y F1
← ←

E₆

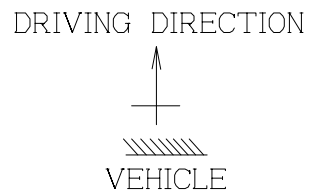
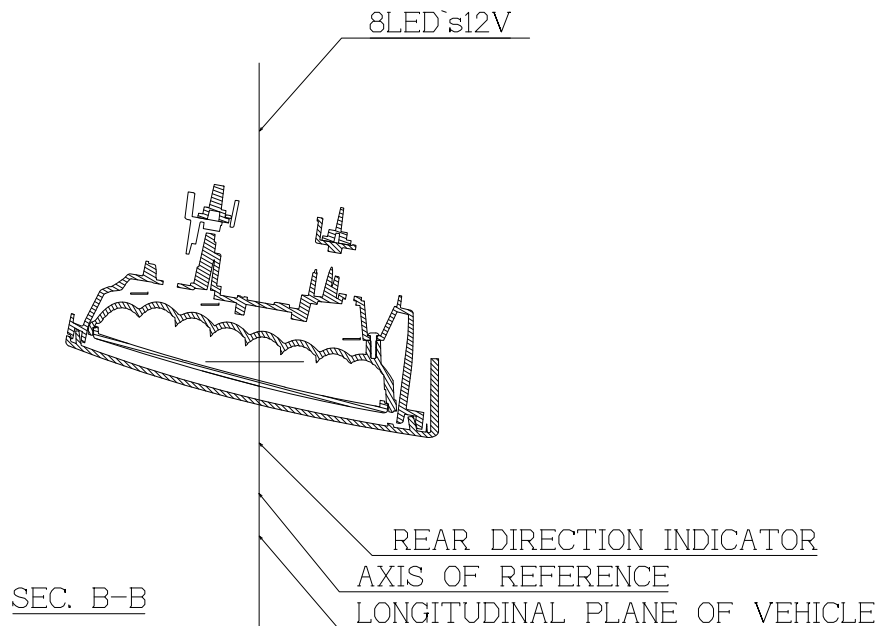
148R00 5522

FOR LEFT

圖面比例: 1:1

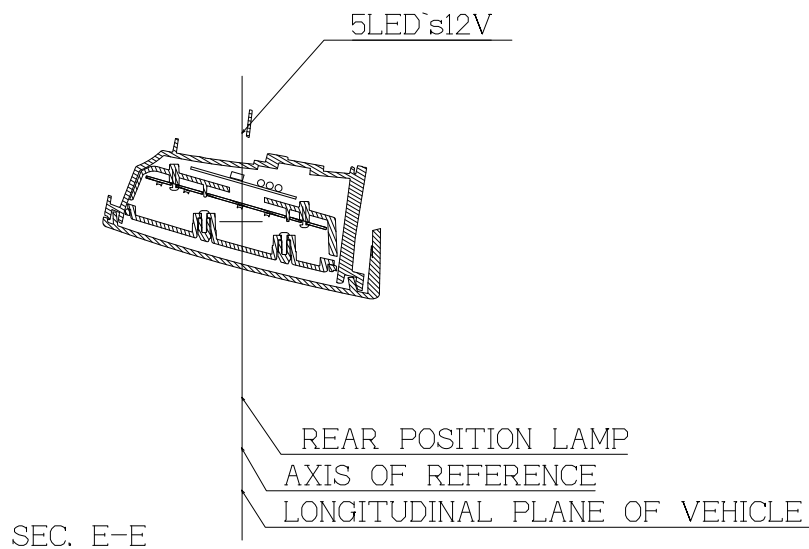
UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-1	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)



圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-2	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

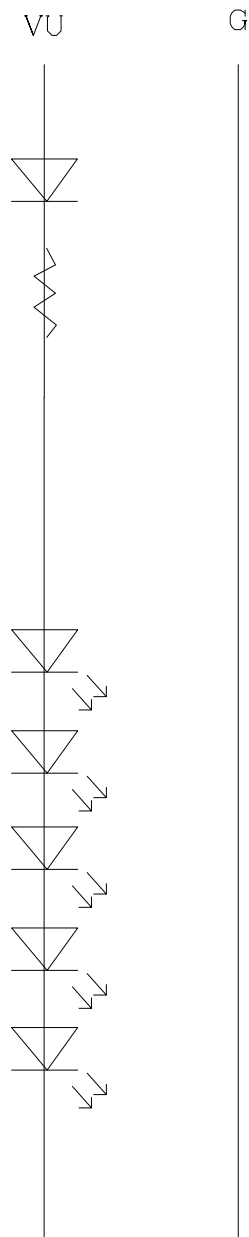


SEC. D-D

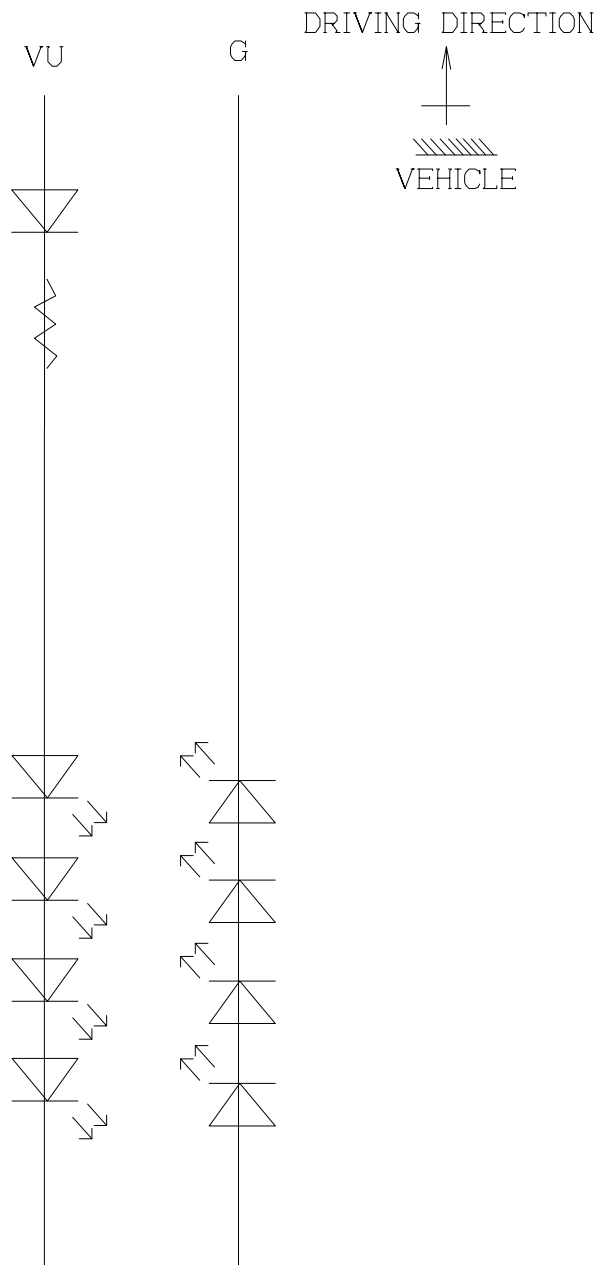
NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm		
COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-3	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR



CIRCUIT DIAGRAM OF
REAR DIRECTION
INDICATOR

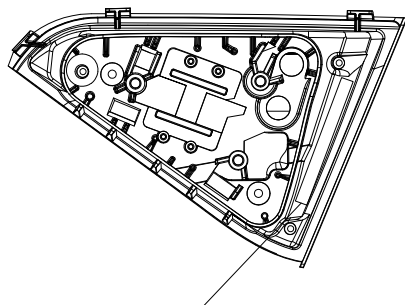
NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY, THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
3. VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
4. THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR), RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR), WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-4	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	

DRIVING DIRECTION



SONAR SK1821-ADA513
MADE IN TAIWAN
LENS:PMMA
HSG:PC

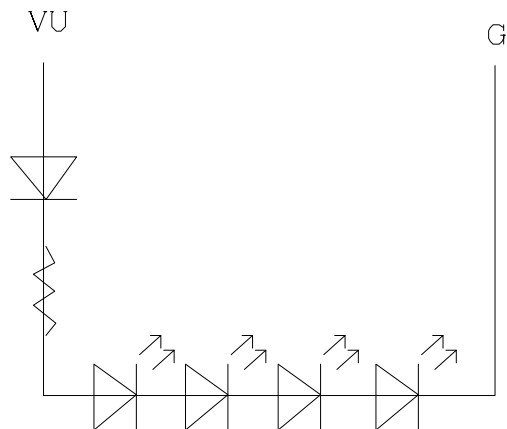
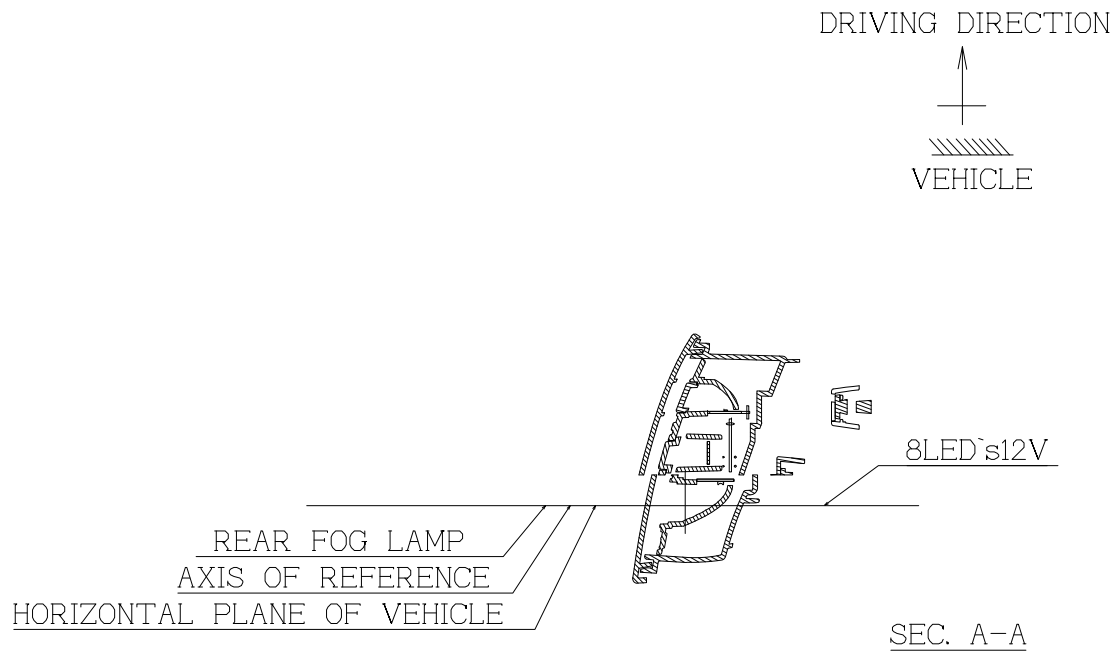
12V ~~24V~~
LH

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS,
VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-5	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



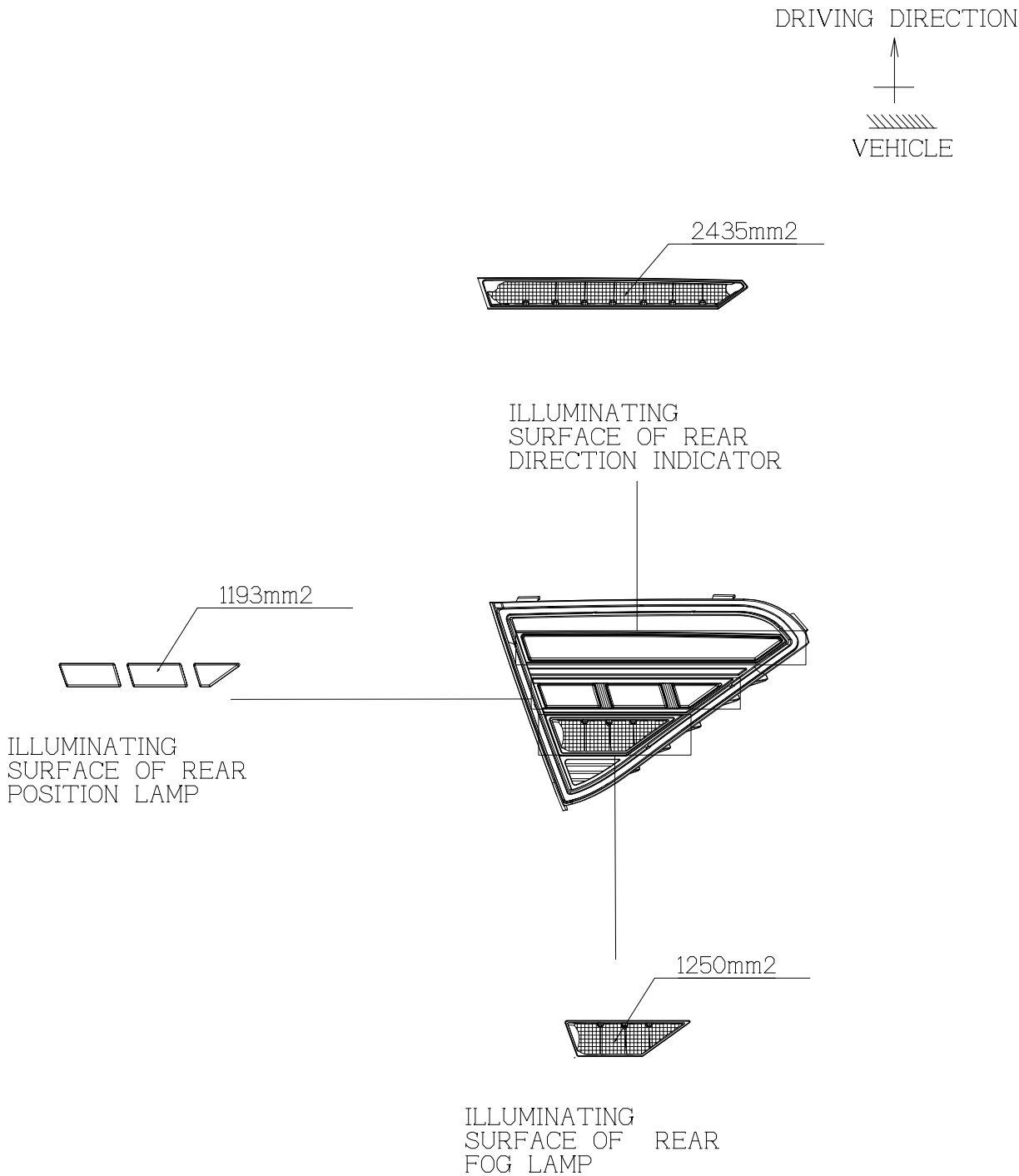
CIRCUIT DIAGRAM OF
REAR FOG LAMP

NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm

COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-6	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	



NOTE:

1. THIS DRAWING SHALL BE APPLIED FOR LEFT SIDE ONLY,THE RIGHT SIDE SHALL BE SYMMETRICAL
2. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.
- 3.VERSION A: CLEAR OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION B: SMOKED OUTER LENS (REAR DIRECTION INDICATOR LAMP, REVERSING LAMP), RED OUTER LENS (REAR POSITION LAMP, STOP LAMP, REAR FOG LAMP, REAR REFLEX REFLECTOR) (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION C: ALL CLEAR OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- VERSION D: ALL SMOKED OUTER LENS (THERE ARE TWO KINDS OF SUB-REFLECTOR, ONE IS ELECTROPLATED AND THE OTHER IS BLACK)
- 4.THERE ARE TWO KINDS OF INNER LENS, VERSION A: CLEAR INNER LENS (REAR DIRECTION INDICATOR),RED INNER LENS (REAR POSITION LAMP)
- VERSION B: CLEAR INNER LENS (REAR DIRECTION INDICATOR),WHITE INNER LENS (REAR POSITION LAMP)

圖面比例: 1:1 UNIT:mm		
COMPANY	SONAR AUTO PARTS CO., LTD	
MODEL NAME	SK1820(1821)-ADA513-7	DATE:2023.6.6
FUNCTION	COMBINATION TAIL LAMP	