

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
R06-02	00	-	-	Signature date	SONAR SK2091-5WT620 / 00	8

Approved and to be attached to the approval certificate,

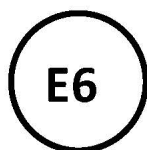


R. VERHELST

Getekend op : 2022-03-09 11:54:27 +0100 te Brussel

dossier nr. 43859 - E6\*06R02/00\*5411\*00





Communication concerning :

- Approval granted <sup>(1)</sup>
- ~~Approval extended <sup>(1)</sup>~~
- ~~Approval refused <sup>(1)</sup>~~
- ~~Approval withdrawn <sup>(1)</sup>~~
- ~~Production definitively discontinued <sup>(1)</sup>~~

of a type of direction indicator, pursuant to Regulation No.06

Approval No : E6\*06R02/00\*5411\*00

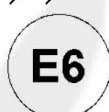
Extension No : -

Approval mark :

RL 1 A HCR PL

01 02 03 02

→ →



12.5

5411

Left hand

RL 1 A HCR PL

01 02 03 02

← ←



12.5

5411

Right hand

1. Trade name or mark of device : SONAR
2. Manufacturer's name for the type of device : SK2091-5WT620, SK2092-5WT620
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 : 09.02.2022  
X RAY INTERNATIONAL  
14.12.2021 ~ 27.12.2021  
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 : 02.03.2022
8. Number of test report issued by that service : H2160959376/461



9.	Concise description :	See information document
	Category :	1, <del>1a, 1b, 2a, 2b, 5, 6</del> <sup>(1)</sup>
	Number, category :	9 LEDs / 1 light source
	Function(s) produced by an interdependent lamp forming part of an interdependent lamps system :	Not applicable
	Voltage and wattage :	12 V, 3.5 W
	Light source module specific identification code :	Not applicable
	Only for limited mounting height of equal to or less than 750mm above the ground :	<del>Yes</del> / No <sup>(1)</sup>
	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 / <del>No</del> <sup>(1)</sup>
	(b) Being not part of the lamp :	<del>Yes</del> / No <sup>(1)</sup>
	Input voltage(s) supplied by an electronic light source control gear / variable intensity control :	13.5 V
	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 :	<del>Yes</del> / No <sup>(1)</sup>
	Sequential activation of light sources (see paragraph 5.6 of this Regulation) :	Yes / <del>No</del> <sup>(1)</sup>
10.	Position of approval mark :	On the lamp
11.	Reason(s) for extension (if applicable) :	Not applicable



12. Approval granted / ~~extended / refused / withdrawn~~ <sup>(1)</sup>
13. Place : Brussels
14. Date : Signature date
15. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:



R. VERHELST

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

(1) *Delete where not applicable*





**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

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**1. SUBJECT : DIRECTION INDICATORS**

R6-02

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<b>2. REF. :</b>	Report number : <b>H2160959376/461</b>	No. of pages : 1 of 13	No. of annexes : -
	Fastlane : 43859	Approval No. : (5411 00)	Update : 00

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**3. GENERALITIES :**

Make of Device : SONAR

Commercial Type :

Manufacturer's Type : SK2091-5WT620, SK2092-5WT620

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.

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<b>4. TESTS :</b>	Date and place : 2022.02.09 X RAY INTERNATIONAL 2021.12.14 to 2021.12.27 X RAY International Testing and Certification Co., LTD.
	Applied document(s) : SONAR SK2091-5WT620 / 00
	Inspector : LU Wan-Ching
	Persons witnessing the tests : LU Wan-Ching
	Location of E-mark : On the lamp

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**5. CONCLUSIONS :**

The tests were carried out according to the following specifications :

- UNECE Regulation No. 6 incorporating the 02 series of amendments.

The models presented comply with the requirements to be applied.

Date : 2022.03.02

Signature :



VINÇOTTE nv/sa  
LU Wan-Ching  
Automotive Certification



## DESCRIPTION OF THE TESTED DIRECTION INDICATOR

Direction indicator lamp type : Front direction indicator <sup>(1)</sup>  
Direction indicator lamp category : 1  
Category and kind of light source(s) : LED  
Number of light source : 9 LEDs / 1 light source  
Voltage and wattage : 12 V, 3.5 W

<sup>(1)</sup> This front direction indicator is sequential activation of light sources flash mode.

## GENERAL SPECIFICATIONS\*

Characteristics concerned and prescriptions to apply	References	Conformity	Not applicated
The requirements contained in sections 5. "General specifications" and 6. "Individual specifications" and in the Annexes referenced in the said sections of Regulations Nos. 48, 53, 74 or 86, and their series of amendments in force at the time of application for the lamp type approval shall apply to this Regulation.	5.		
The requirements pertinent to each lamp and to the category/ies of vehicle on which the lamp is intended to be installed shall be applied, where its verification at the moment of lamp type approval is feasible.			
Each device supplied shall conform to the specifications set forth in § 6 and § 8 below.	5.1.	*	
The devices must be so designed and constructed that under normal conditions of use and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Regulation.	5.2.	*	
In the case of light source modules, it shall be checked that :	5.3.		*
The design of the light source module(s) shall be such as	5.3.1.		
(a) that each light source module can only be fitted in no other position than the designated and correct one and can only be removed with the use of tool(s)			
(b) if there are more than one light source module used in the housing for a device, light source modules having different characteristics can not be interchanged within the same lamp housing			
The light source module(s) shall be tamperproof.	5.3.2.		
A light source module shall be so designed that regardless of the use of tool(s), it shall not be mechanically interchangeable with any replaceable approved light source	5.3.3		
In case of failure of the variable intensity control of a direction indicator of category 2b emitting more than the maximum value of category 2a, requirements of steady luminous intensity of category 2a shall be fulfilled automatically.	5.4		*
In the case of replaceable filament lamp(s) :	5.5.		*
The device shall only be equipped with light source(s) approved according to UN Regulation No. 37 and/or UN Regulation No. 128, provided that no restriction on the use is made in UN Regulation No. 37 and its series of amendments in force at the time of application for type approval or in UN Regulation No. 128 and its series of amendments in force at the time of application for type approval.	5.5.1.		
The design of the device shall be such that light source cannot be fixed in any other position but the correct one.	5.5.2.		
The light source holder shall conform to the characteristics given in IEC Publication 60061. The holder data sheet relevant to the category of light source used, applies.	5.5.3.		

**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 : SK2091-5WT620, SK2092-5WT620**

## SPECIFICATIONS

### Function-Application-class category lamp and colour

Trade name or mark		SONAR			
Function	Headlamp		Front Direction Indicator <sup>(1)</sup>	Front Position Lamp <sup>(2)</sup>	Daytime Running Lamp <sup>(2)</sup>
	Driving Beam	Passing Beam			
ECE Regulation	112-02 Supplement 00	112-02 Supplement 00	6-02 Supplement 00	7-03 Supplement 00	87-01 Supplement 00
Class	B	B	-	-	-
Category	-	-	1	A	-
Number, category and kind of lamp source(s)	3 LEDs / 1 LED module	5 LEDs / 1 LED module	9 LEDs / 1 light source	27 LEDs / 1 light source	27 LEDs / 1 light source
Voltage and wattage	12 V, 13.6 W	12 V, 27.1 W	12 V, 3.5 W	12 V, 2.5 W	12 V, 30.6 W
Electronic light source control gear					
- Being part of the lamp	-	-	Yes	Yes	Yes
- Being not part of the lamp	-	-	-	-	-
The luminous flux of all LED modules	908.8 lm	1578.1 lm			
Lens	Outer	Clear	Clear	Clear	Clear
	Filter (Inner)	Clear	Clear	Clear	Clear
Colour of light emitted	White	White	Amber	White	White

<sup>(1)</sup> This front direction indicator is sequential activation of light source flash mode.

<sup>(2)</sup> Front position lamp, which is reciprocally incorporated with daytime running lamp.

## TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PC	GE <sup>(3)</sup>
	Filter (Inner)	PC	-
	Filter (Inner) for passing beam and driving beam	Glass	-
Reflector		BMC <sup>(4)</sup>	Adjustable
Housing		PP + T20 %	-

<sup>(3)</sup> The base material of lens: Type number is LEXAN Resin LS2 from GE Advanced Materials.

The hard coating: Type number is UVT 2008 from Shiang Yuan.

<sup>(4)</sup> There are two kinds of sub-reflectors, one is electroplated and the other is black.



**AUTOMOTIVE certification**  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.com](mailto:homologation@vincotte.com)  
2022.03.02



**MARKING**

<b>Marking</b>		<b>Location</b>
<b>Trade name or mark</b>	<b>SONAR</b>	See drawing
<b>Approval marks</b>	<b>5411</b>	See drawing
<b>LED module code</b>	<b>MD E6 5411</b>	See drawing
<b>Electronic light source control gear code</b>	-	-

<b>DRAWINGS</b>	
<b>Reference</b>	<b>Version</b>
SK2091(2092)-5WT620 1	2021.12.28
SK2091(2092)-5WT620 2	2021.12.28
SK2091(2092)-5WT620 3	2021.10.28
SK2091(2092)-5WT620 4	2021.12.28
SK2091(2092)-5WT620 5	2021.12.28

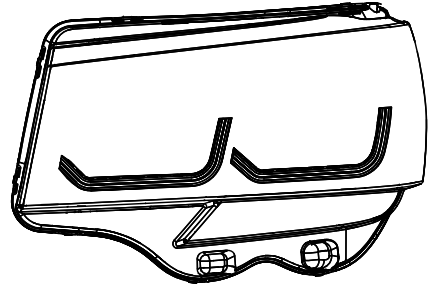
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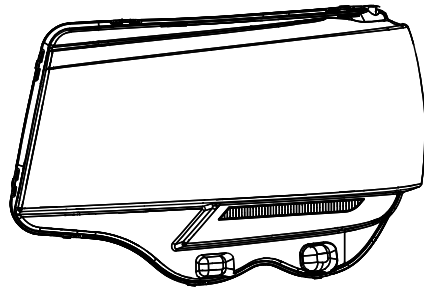
**AUTOMOTIVE certification**  
 Business Class Kantorenpark  
 Jan Olieslagerslaan 35  
 B-1800 Vilvoorde  
 E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
 2022.03.02

VEHICLE  
↓  
DRIVING DIRECTION

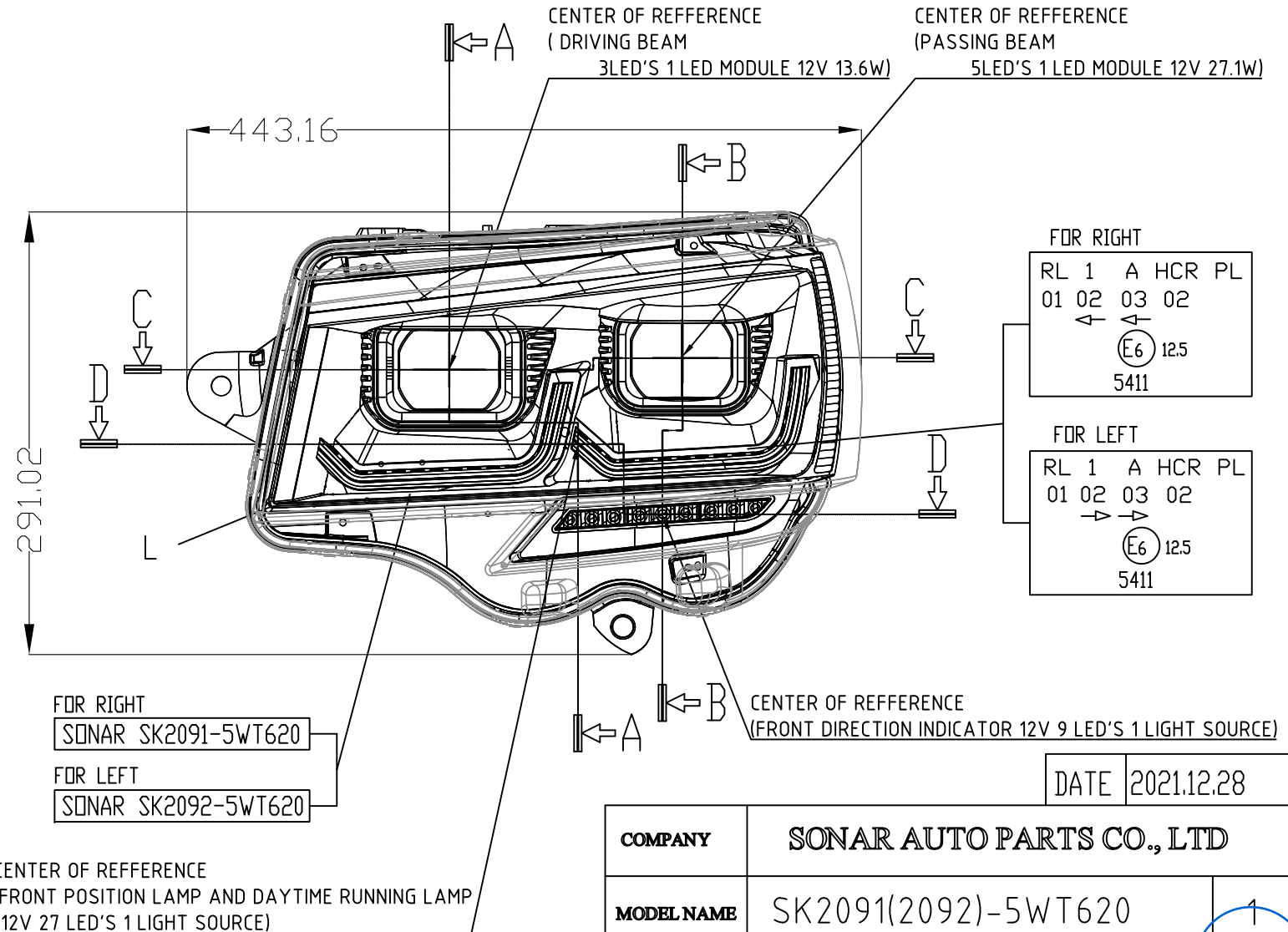
- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK



DAYTIME RUNNING LAMP & FRONT POSITION LAMP  
ILLUMINATING SURFACE:4219mm<sup>2</sup>



FRONT DIRECTION INDICATOR  
ILLUMINATING SURFACE:1437mm<sup>2</sup>



FOR RIGHT					
RL	1	A	HCR	PL	
01	02	03	02		
	←	←			
		(E6)	12.5		
		5411			

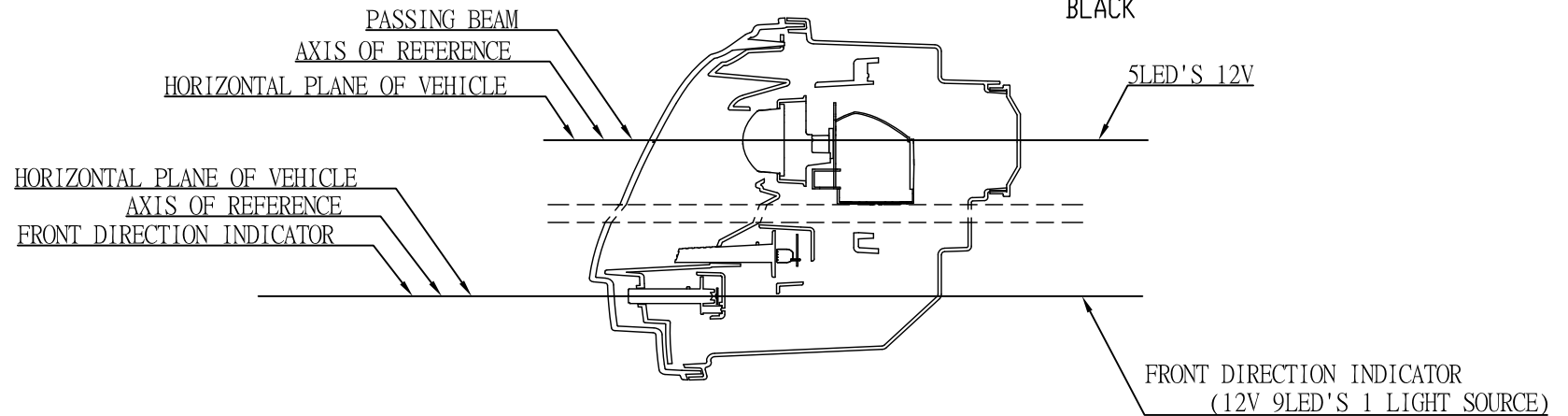
FOR LEFT					
RL	1	A	HCR	PL	
01	02	03	02		
	→	→			
		(E6)	12.5		
		5411			

DATE 2021.12.28

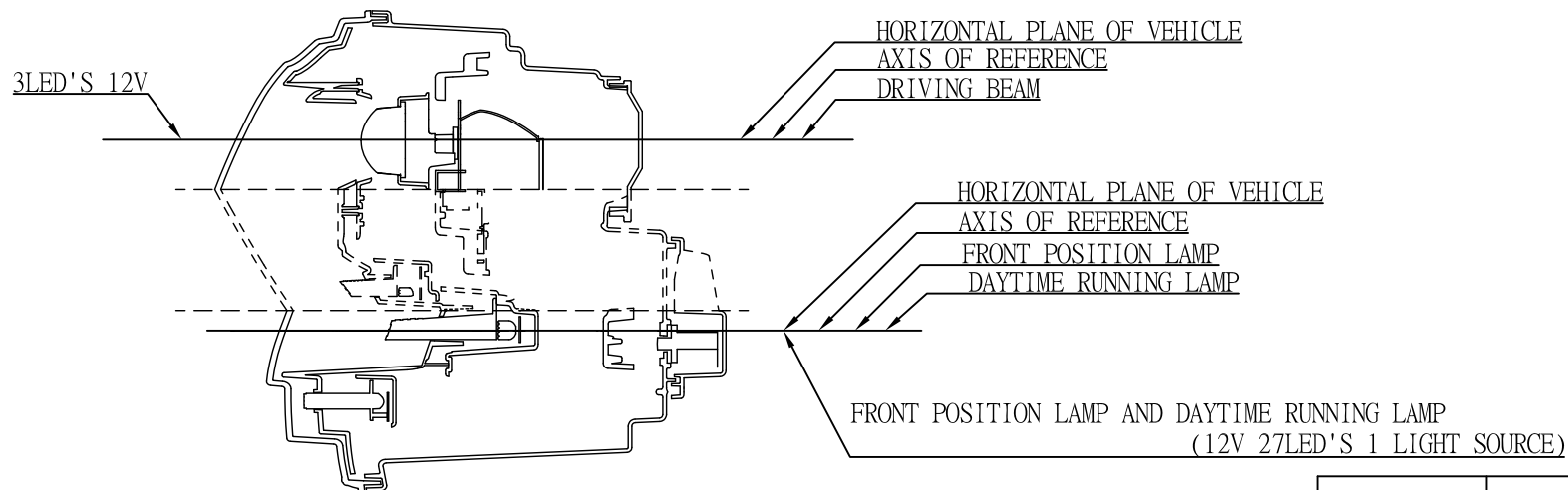
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		
FUNCTION	COMBINATION HEADLAMP	UNIT	1 Vlaamse overheid mm

← | VEHICLE DRIVING DIRECTION

- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK



SEC.B-B



SEC.A-A

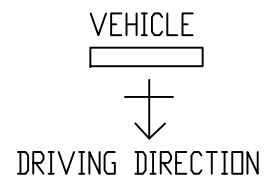
DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		2
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



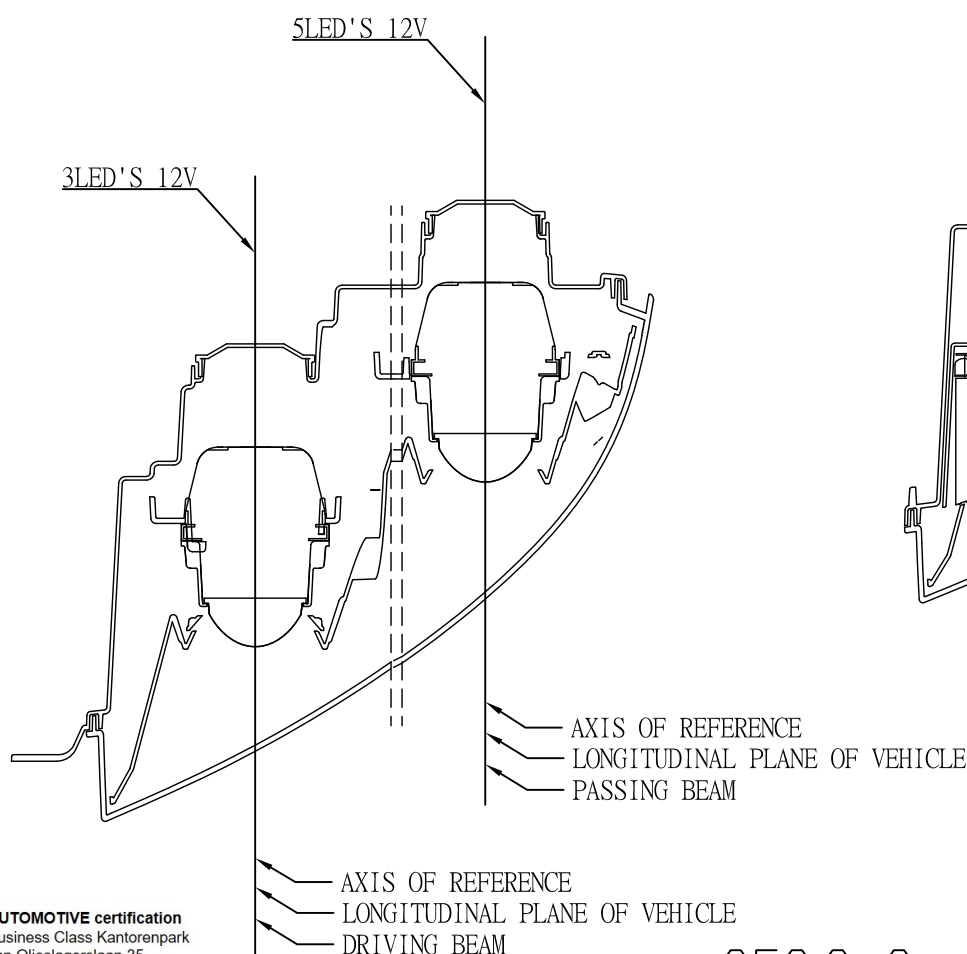
AUTOMOTIVE certification  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
2022.03.02

NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK

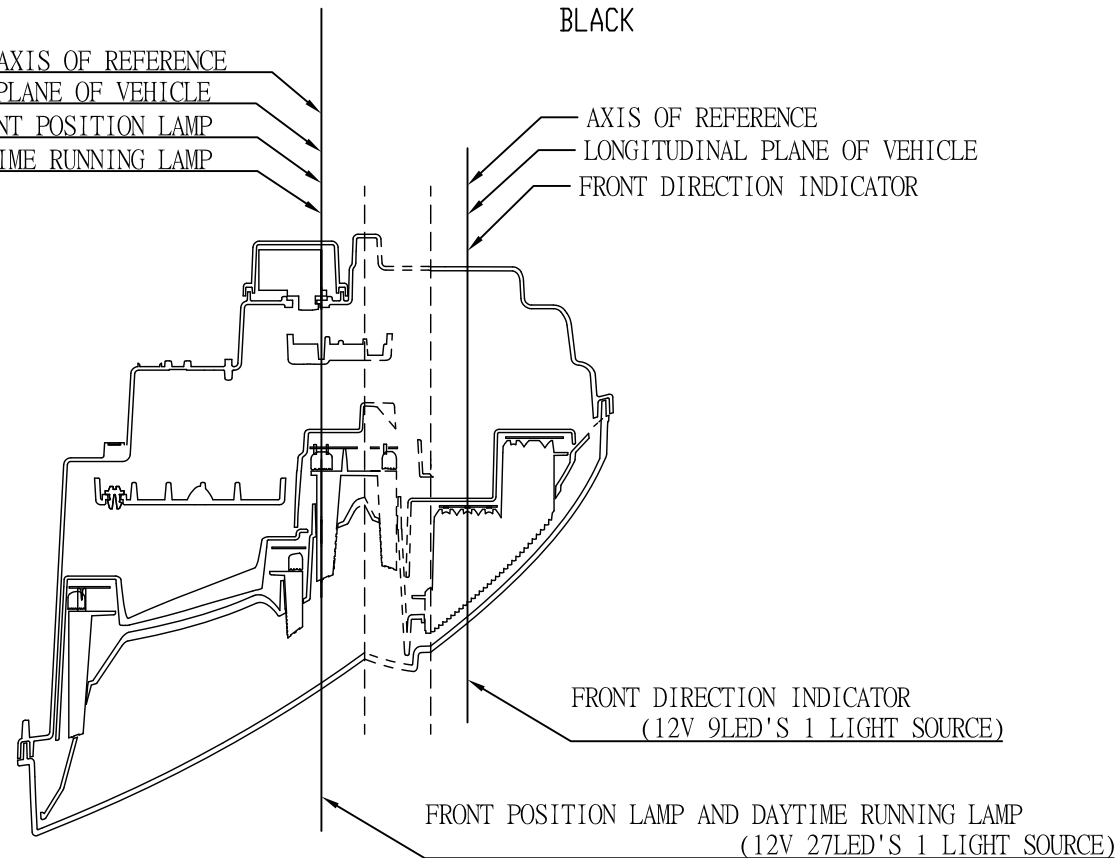


AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT POSITION LAMP  
DAYTIME RUNNING LAMP

AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT DIRECTION INDICATOR



SEC.C-C



SEC.D-D

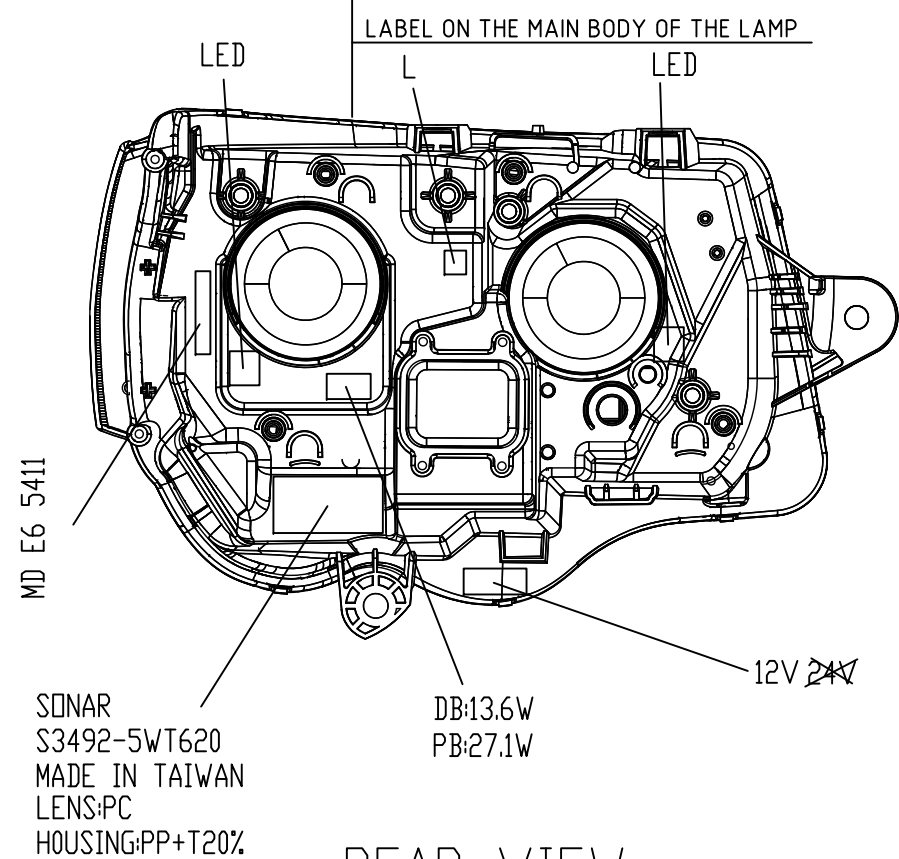
DATE 2021.10.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		3
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK

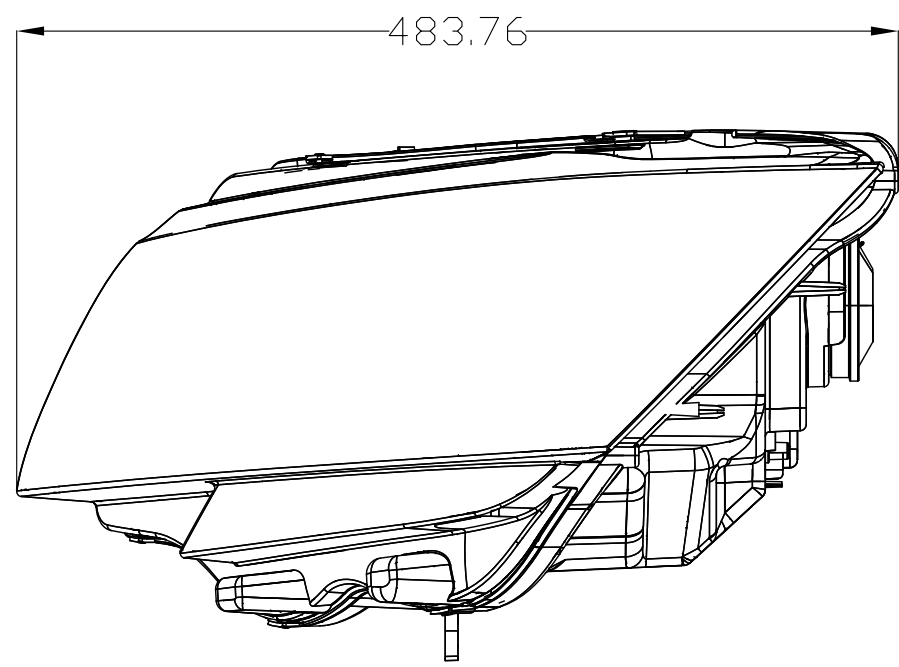
FOR RIGHT  
SONAR SK2091-5WT620  
RL 1 A HCR PL  
01 02 03 02  
← ←  
E6 12.5  
5411

FOR LEFT  
SONAR SK2092-5WT620  
RL 1 A HCR PL  
01 02 03 02  
→ →  
E6 12.5  
5411



LABEL ON THE MAIN BODY OF THE LAMP

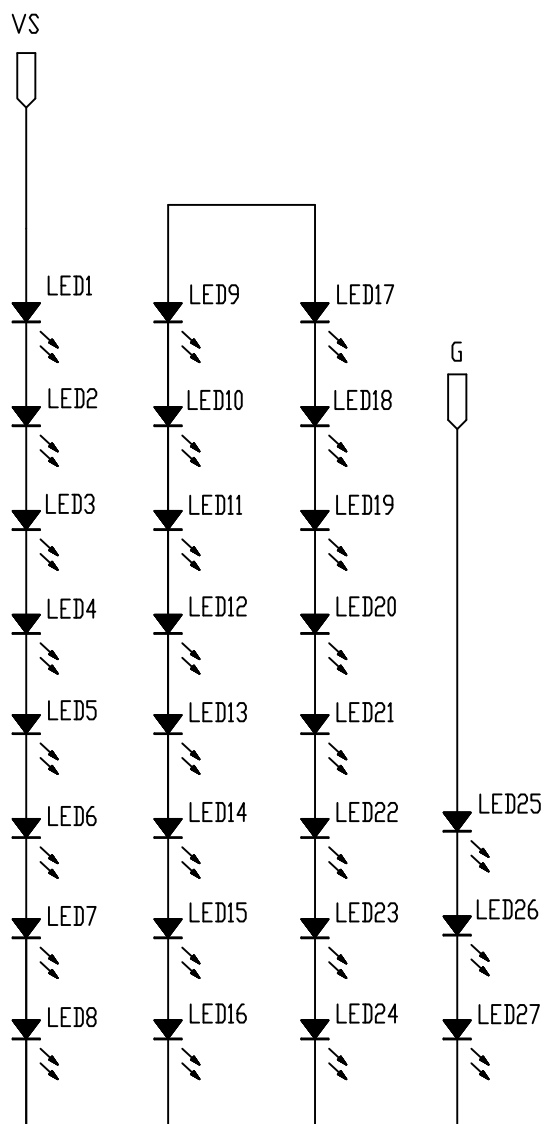
REAR VIEW



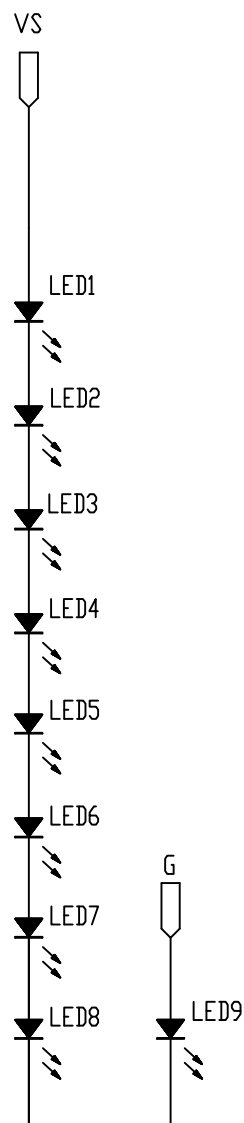
DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		4
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

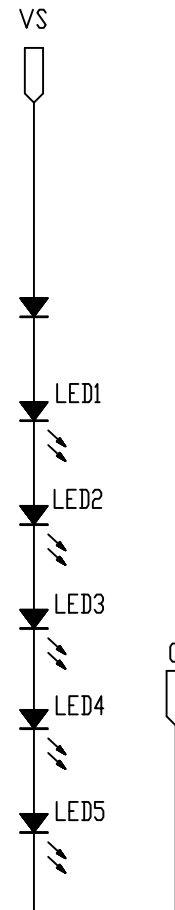




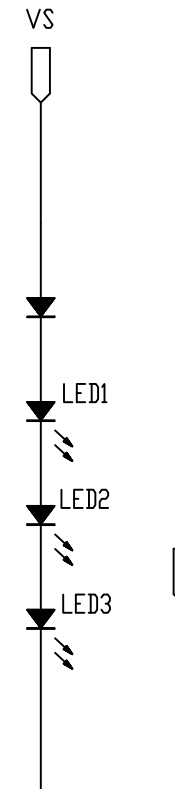
CIRCUIT DIAGRAM OF DAYTIME RUNNING LAMP AND FRONT POSITION LAMP  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF FRONT DIRECTION INDICATOR  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF PASSING BEAM



CIRCUIT DIAGRAM OF DRIVING BEAM

DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		5
FUNCTION	COMBINATION HEADLAMP		UNIT



AUTOMOTIVE certification  
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B-1800 Vilvoorde  
E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
2022.03.02

Vlaamse  
overheid  
mm

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
R07-03	00	-	-	Signature date	SONAR SK2091-5WT620 / 00	8

Approved and to be attached to the approval certificate,

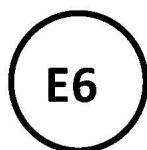


R. VERHELST

Getekend op : 2022-03-09 12:09:38 +0100 te Brussel

dossier nr. 43861 - E6\*07R03/00\*5411\*00





Communication concerning :

- Approval granted <sup>(1)</sup>
- ~~Approval extended <sup>(1)</sup>~~
- ~~Approval refused <sup>(1)</sup>~~
- ~~Approval withdrawn <sup>(1)</sup>~~
- ~~Production definitively discontinued <sup>(1)</sup>~~

of a type of device, pursuant to Regulation No.07

Approval No : **E6\*07R03/00\*5411\*00**

Extension No : -

Approval mark :

RL 1 A HCR PL

01 02 03 02

→ →



12.5

5411

Left hand

RL 1 A HCR PL

01 02 03 02

← ←



12.5

5411

Right hand

1. Trade name or mark of device : SONAR
2. Manufacturer's name for the type of device : SK2091-5WT620, SK2092-5WT620
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 :  
09.02.2020  
X RAY INTERNATIONAL  
14.12.2021 ~ 28.12.2021  
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 report issued by that Service: 02.03.2022
8. Number of report issued by that Service : H2160959376/462



9. Concise description : See information document
- 9.1. By category of lamp : A
- For mounting either outside ~~or inside or both~~ <sup>(1)</sup>
- Colour of light emitted : White / ~~Red~~ <sup>(1)</sup>
- Number, category and kind of light source(s) : 27 LEDs / 1 light source
- Voltage and wattage : 12 V, 2.5 W
- Light source module specific identification code : Not applicable
- Only for limited mounting height of equal to or less than 750mm above the ground : ~~Yes~~ / No <sup>(1)</sup>
- 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~~ <sup>(1)</sup>
- (b) Being not part of the lamp : ~~Yes~~ / No <sup>(1)</sup>
- Input voltage(s) supplied by an electronic light source control gear / variable intensity control : 13.5 V
- 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 <sup>(1)</sup>
- The front position lamp, ~~rear position lamp, stop lamp, end-outline marker lamp~~ <sup>(1)</sup> is only for use on a vehicle fitted with a tell-tale indicating failure : ~~Yes~~ / No <sup>(1)</sup>
- 9.2. Function(s) produced by an interdependent lamp forming part of an interdependent lamp system :
- Front position lamp : ~~Yes~~ / No <sup>(1)</sup>
- R1 Rear position lamp : ~~Yes~~ / No <sup>(1)</sup>
- R2 Rear position lamp : ~~Yes~~ / No <sup>(1)</sup>
- S1 Stop lamp : ~~Yes~~ / No <sup>(1)</sup>
- S2 Stop lamp : ~~Yes~~ / No <sup>(1)</sup>
- S3 Stop lamp : ~~Yes~~ / No <sup>(1)</sup>
- S4 Stop lamp : ~~Yes~~ / No <sup>(1)</sup>
- End-outline marker lamp : ~~Yes~~ / No <sup>(1)</sup>
10. Position of approval mark : On the lamp
11. Reason(s) for extension (if applicable) : Not applicable



12. Approval granted / ~~extended / refused / withdrawn~~ <sup>(1)</sup>
13. Place : Brussels
14. Date : Signature date
15. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:



R. VERHELST

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

(1) *Strike out what does not apply*





**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 : FRONT AND REAR POSITION (SIDE) LAMPS  
STOP-LAMPS  
END-OUTLINE MARKER LAMPS**

R7-03

**2. REF. :** Report number : **H2160959376/462** No. of pages : 1 of 13 No. of annexes : -  
Fastlane : 43861 Approval No. : (5411 00) Update : 00

**3. GENERALITIES :**

Make of Device : SONAR

Commercial Type : -

Manufacturer's Type : SK2091-5WT620, SK2092-5WT620

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 : 2020.02.09  
X RAY INTERNATIONAL  
2021.12.14 to 2021.12.28  
X RAY International Testing and Certification Co., LTD.  
Applied document(s) : SONAR SK2091-5WT620 / 00  
Inspector : LU Wan-Ching  
Persons witnessing the tests : LU Wan-Ching  
Location of E-mark : On the lamp

**5. CONCLUSIONS :**

The tests were carried out according to the following specifications :

- UNECE Regulation No. 7 incorporating the 03 series of amendments.

The models presented comply with the requirements to be applied.

Date : 2022.03.02

Signature :

 **VINÇOTTE nv/sa**  
**LU Wan-Ching**  
Automotive Certification  


## DESCRIPTION OF THE TESTED LAMP

Lamp type	: Front position lamp, which is reciprocally incorporated with daytime running lamp
Lamp category	: A
Category and kind of light source(s)	: LED
Number of light source(s)	: 27 LEDs / 1 light source
Voltage and wattage	: 12 V, 2.5 W

## GENERAL SPECIFICATIONS\*

Characteristics concerned and prescriptions to apply	References	Conformity	Not applicated
The requirements contained in sections 5. "General specifications" and 6. "Individual specifications" and in the Annexes referenced in the said sections of Regulations Nos. 48, 53, 74 or 86, and their series of amendments in force at the time of application for the lamp type approval shall apply to this Regulation.	5.		
The requirements pertinent to each lamp and to the category/ies of vehicle on which the lamp is intended to be installed shall be applied, where its verification at the moment of lamp type approval is feasible.			
Each device supplied shall conform to the specifications set forth in § 6 and 8 below.	5.1.	*	
The devices must be so designed and constructed that in normal conditions of use, and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Regulation.	5.2.	*	
Lamps having been approved as front or rear position lamps, are deemed being also approved end-outline marker lamps.	5.3.		*
Front and rear position lamps which are grouped or combined or reciprocally incorporated may also be used as end-outline marker lamps.	5.4.		*
Position lamps, which are reciprocally incorporated with another function, using a common light source, and designed to operate permanently with an additional system to regulate the intensity of the light emitted, are permitted.	5.5.	*	
However, in the case of rear position lamp reciprocally incorporated with a stop lamp, the device shall either: (a) Be a part of a multiple light source arrangement, or (b) Be intended for use in a vehicle equipped with a failure monitoring system for that function.	5.5.1.		*
In either case, a note shall be made within the communication document.			
In the case of light source modules, it shall be checked that:	5.6.		*
The design of the light source module(s) shall be such as: (a) That each light source module can only be fitted in no other position than the designated and correct one and can only be removed with the use of tool(s); (b) If there are more than one light source module used in the housing for a device, light source modules having different characteristics can not be interchanged within the same lamp housing.	5.6.1.		
The light source module(s) shall be tamperproof.	5.6.2.		
A light source module shall be so designed that regardless of the use of tool(s), it shall not be mechanically interchangeable with any replaceable approved light source.	5.6.3.		
If the front position lamp incorporates one or more infrared radiation generators, the photometric and colour requirements for this front position lamp shall be met with and without the operation of the infrared radiation generator(s).	5.7		*

**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 : SK2091-5WT620, SK2092-5WT620**

## SPECIFICATIONS

### Function-Application-class category lamp and colour

Trade name or mark		SONAR			
Function	Headlamp		Front Direction Indicator <sup>(1)</sup>	Front Position Lamp <sup>(2)</sup>	Daytime Running Lamp <sup>(2)</sup>
	Driving Beam	Passing Beam			
ECE Regulation	112-02 Supplement 00	112-02 Supplement 00	6-02 Supplement 00	7-03 Supplement 00	87-01 Supplement 00
Class	B	B	-	-	-
Category	-	-	1	A	-
Number, category and kind of lamp source(s)	3 LEDs / 1 LED module	5 LEDs / 1 LED module	9 LEDs / 1 light source	27 LEDs / 1 light source	27 LEDs / 1 light source
Voltage and wattage	12 V, 13.6 W	12 V, 27.1 W	12 V, 3.5 W	12 V, 2.5 W	12 V, 30.6 W
Electronic light source control gear					
- Being part of the lamp	-	-	Yes	Yes	Yes
- Being not part of the lamp	-	-	-	-	-
The luminous flux of all LED modules	908.8 lm	1578.1 lm			
Lens	Outer	Clear	Clear	Clear	Clear
	Filter (Inner)	Clear	Clear	Clear	Clear
Colour of light emitted		White	White	Amber	White

<sup>(1)</sup> This front direction indicator is sequential activation of light source flash mode.

<sup>(2)</sup> Front position lamp, which is reciprocally incorporated with daytime running lamp.

## TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PC	GE <sup>(3)</sup>
	Filter (Inner)	PC	-
	Filter (Inner) for passing beam and driving beam	Glass	-
Reflector		BMC <sup>(4)</sup>	Adjustable
Housing		PP + T20 %	-

<sup>(3)</sup> The base material of lens: Type number is LEXAN Resin LS2 from GE Advanced Materials.

The hard coating: Type number is UVT 2008 from Shiang Yuan.

<sup>(4)</sup> There are two kinds of sub-reflectors, one is electroplated and the other is black.



**AUTOMOTIVE certification**  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.com](mailto:homologation@vincotte.com)  
2022.03.02





**MARKING**

<b>Marking</b>		<b>Location</b>
<b>Trade name or mark</b>	<b>SONAR</b>	See drawing
<b>Approval marks</b>	<b>5411</b>	See drawing
<b>LED module code</b>	<b>MD E6 5411</b>	See drawing
<b>Electronic light source control gear code</b>	-	-

<b>DRAWINGS</b>	
<b>Reference</b>	<b>Version</b>
SK2091(2092)-5WT620 1	2021.12.28
SK2091(2092)-5WT620 2	2021.12.28
SK2091(2092)-5WT620 3	2021.10.28
SK2091(2092)-5WT620 4	2021.12.28
SK2091(2092)-5WT620 5	2021.12.28

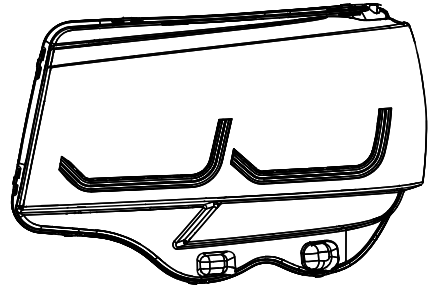
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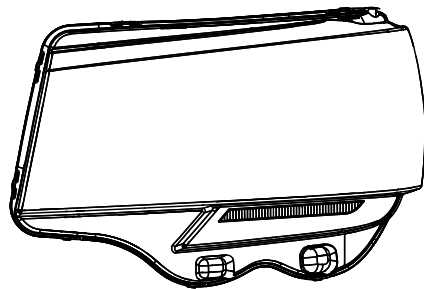
**AUTOMOTIVE certification**  
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 Jan Olieslagerslaan 35  
 B-1800 Vilvoorde  
 E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
 2022.03.02

VEHICLE  
↓  
DRIVING DIRECTION

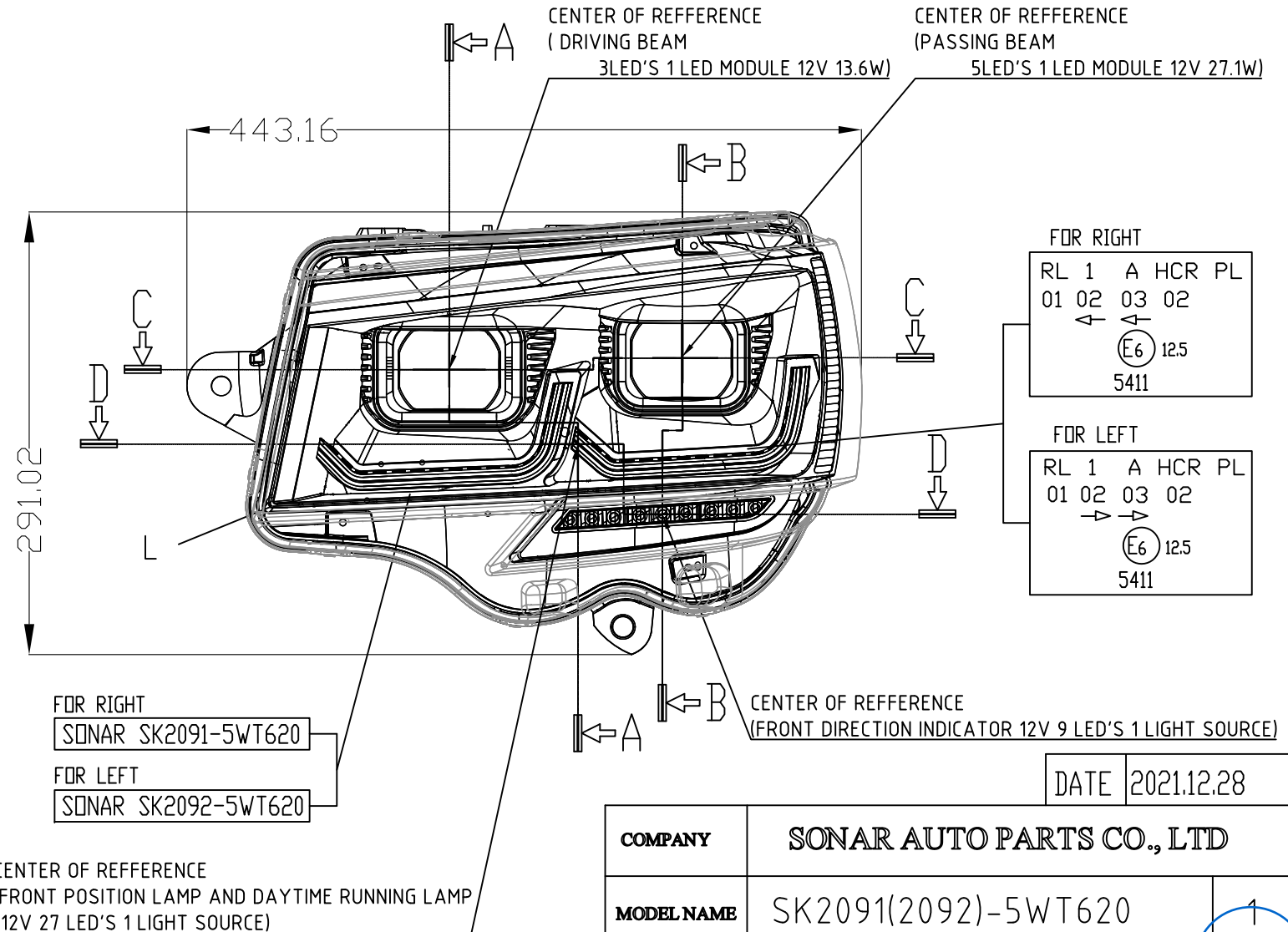
- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK



DAYTIME RUNNING LAMP & FRONT POSITION LAMP  
ILLUMINATING SURFACE:4219mm<sup>2</sup>



FRONT DIRECTION INDICATOR  
ILLUMINATING SURFACE:1437mm<sup>2</sup>

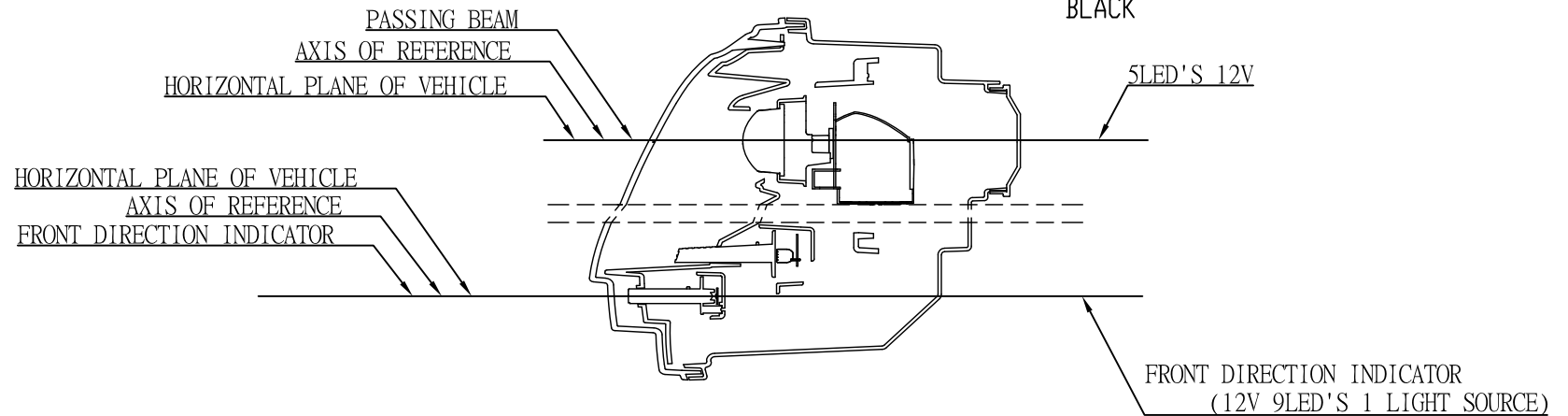


DATE 2021.12.28

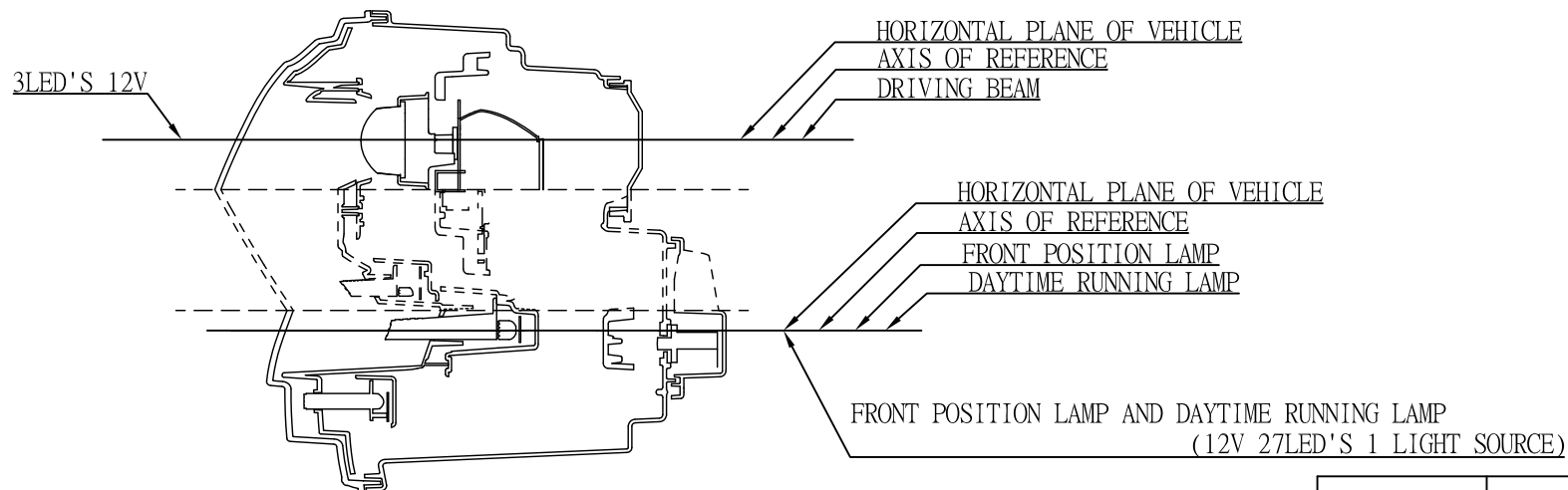
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		1
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

← | VEHICLE DRIVING DIRECTION

- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK



SEC.B-B



SEC.A-A

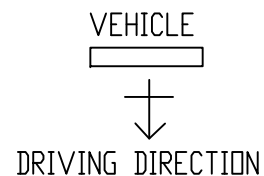
DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		2
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



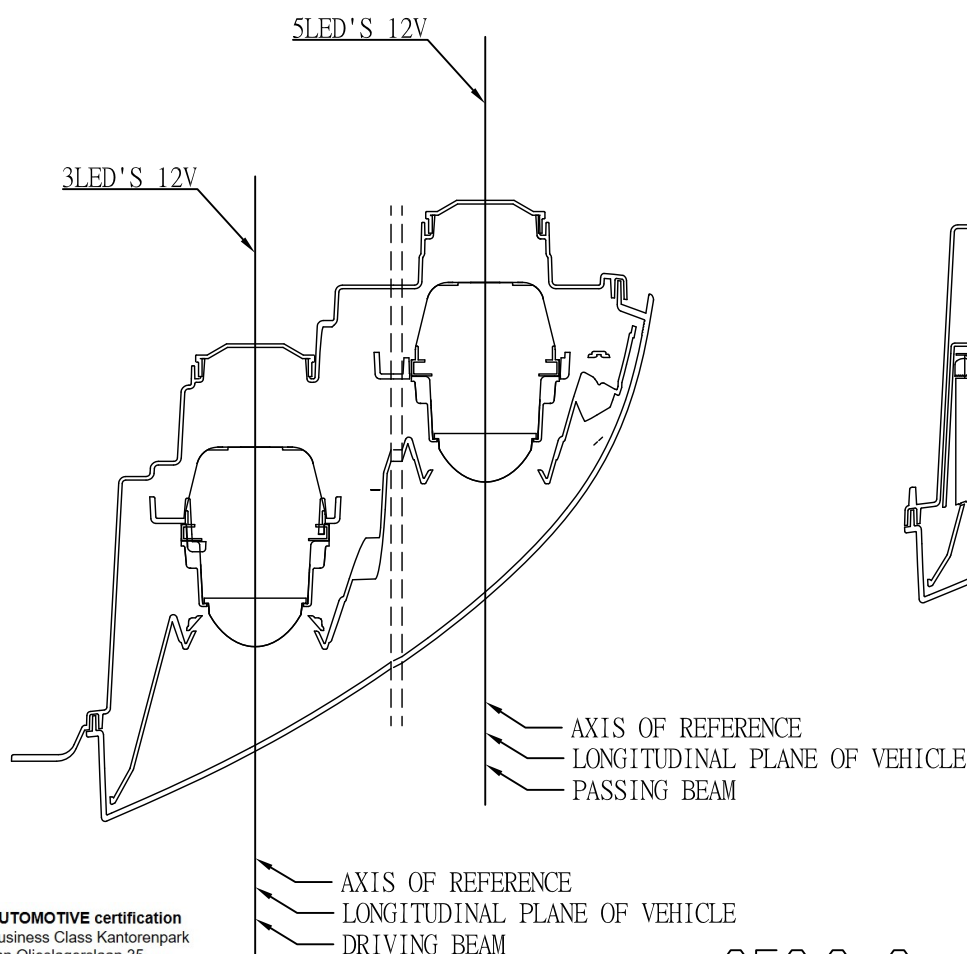
AUTOMOTIVE certification  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
2022.03.02

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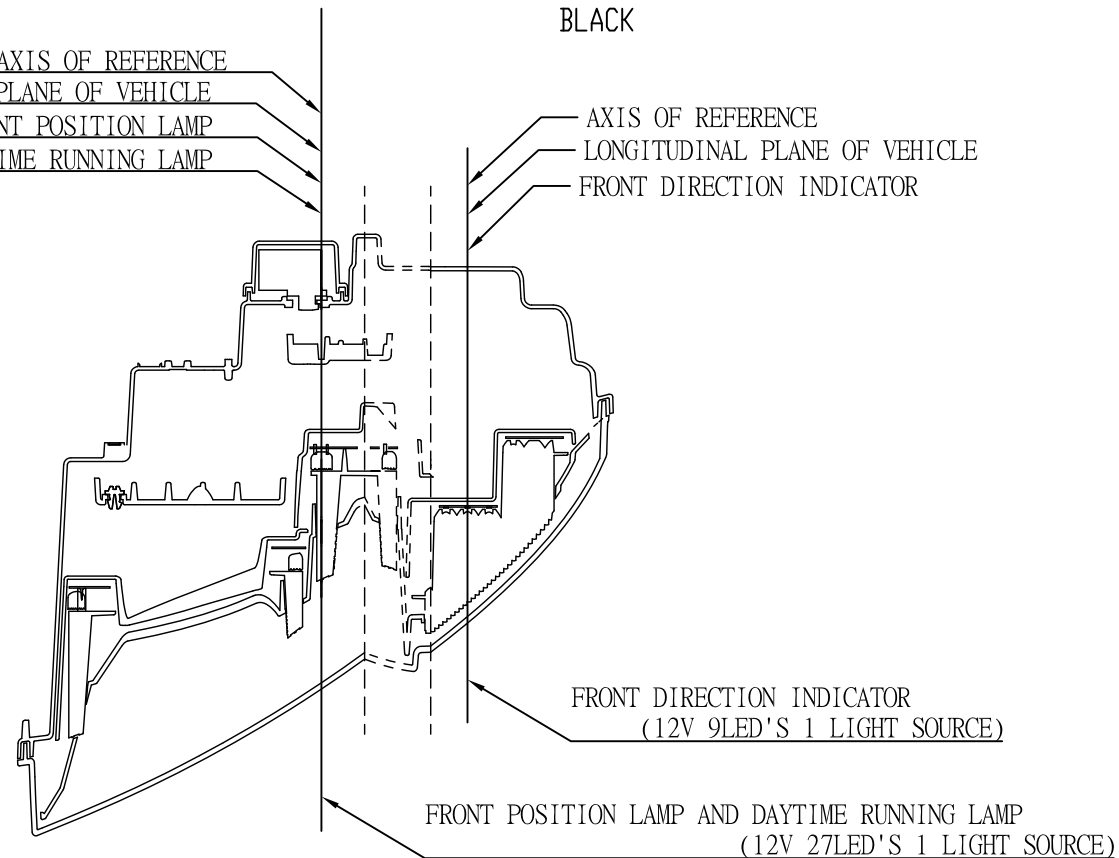


AXIS OF REFERENCE  
 LONGITUDINAL PLANE OF VEHICLE  
 FRONT POSITION LAMP  
 DAYTIME RUNNING LAMP

AXIS OF REFERENCE  
 LONGITUDINAL PLANE OF VEHICLE  
 FRONT DIRECTION INDICATOR



SEC.C-C



SEC.D-D

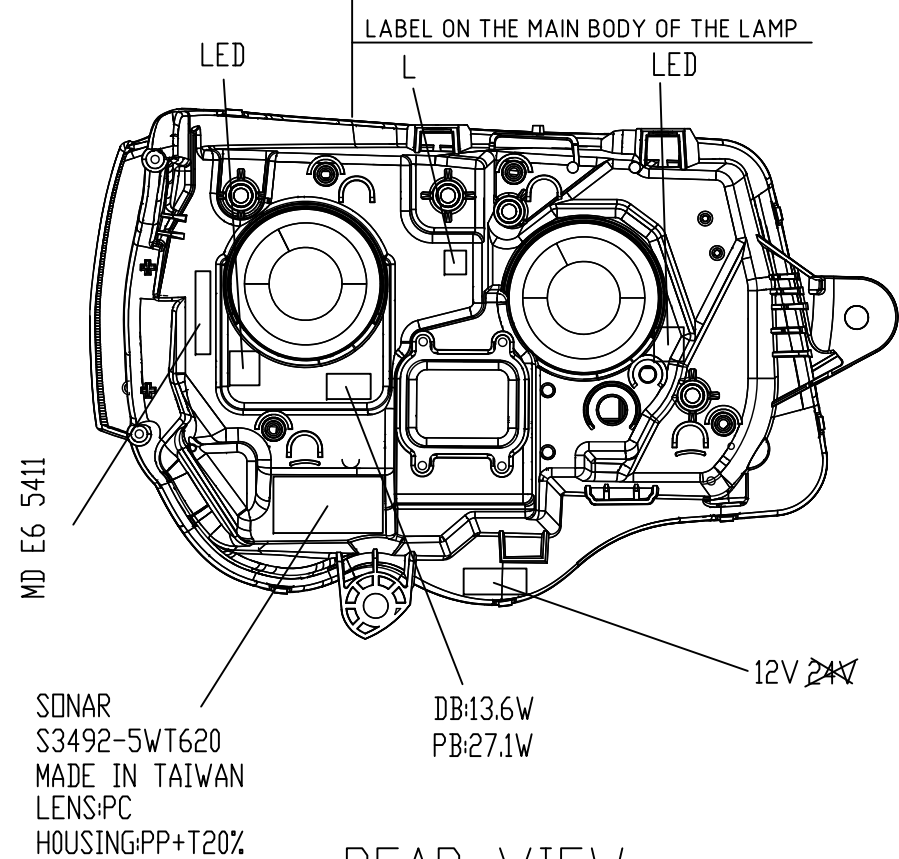
DATE 2021.10.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		3
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

NOTE:1.THIS DRAWING SHALL BE APPLIED  
FOR LEFT HAND ONLY.THE RIGHT HAND  
SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING  
GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS  
ONE IS ELECTROPLATED AND THE OTHER IS  
BLACK

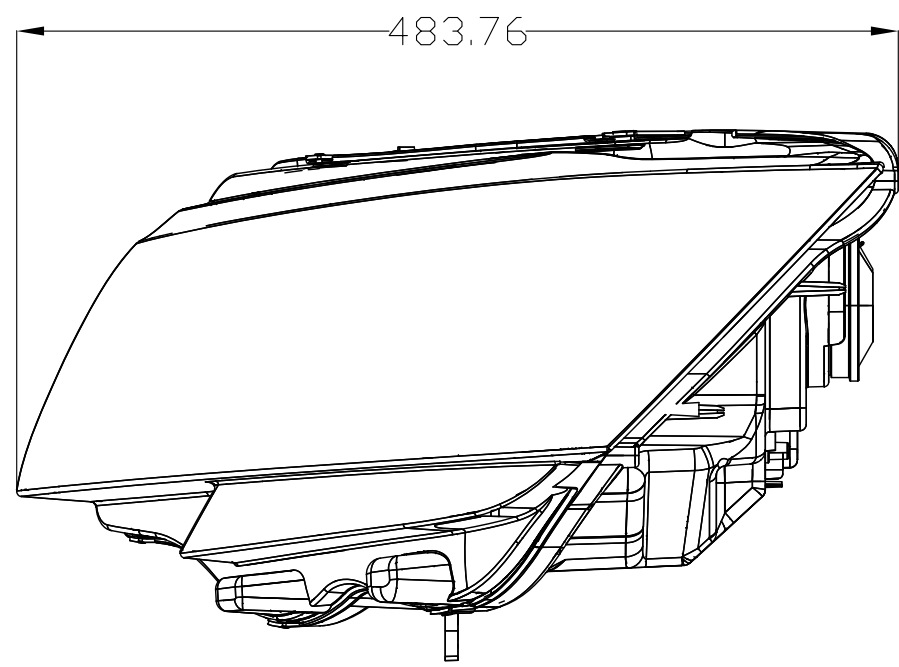
FOR RIGHT  
SONAR SK2091-5WT620  
RL 1 A HCR PL  
01 02 03 02  
← ←  
E6 12.5  
5411

FOR LEFT  
SONAR SK2092-5WT620  
RL 1 A HCR PL  
01 02 03 02  
→ →  
E6 12.5  
5411



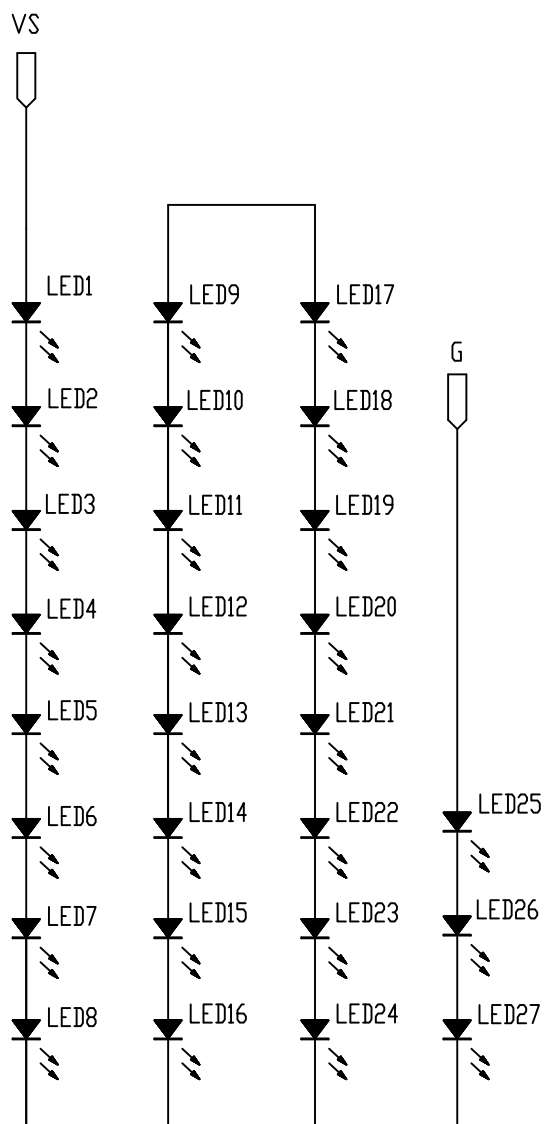
LABEL ON THE MAIN BODY OF THE LAMP

REAR VIEW

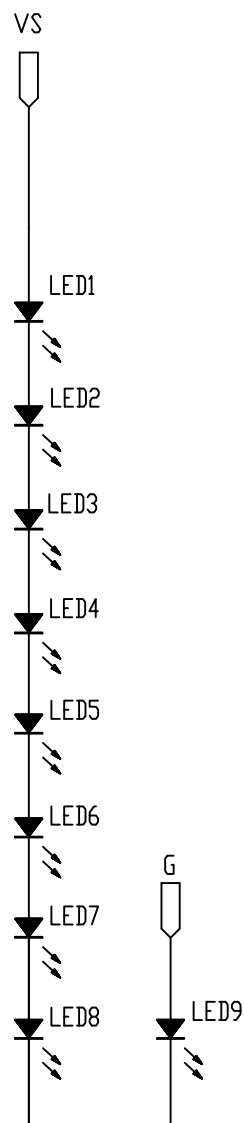


DATE 2021.12.28

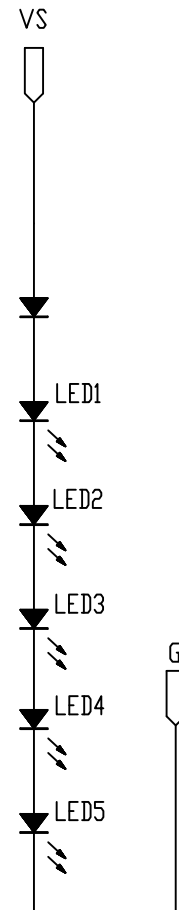
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		4
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



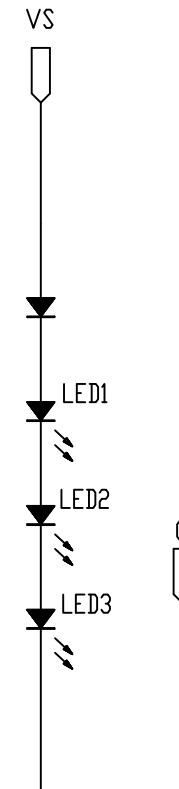
CIRCUIT DIAGRAM OF DAYTIME RUNNING LAMP AND FRONT POSITION LAMP  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF FRONT DIRECTION INDICATOR  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF PASSING BEAM



CIRCUIT DIAGRAM OF DRIVING BEAM

DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		5
FUNCTION	COMBINATION HEADLAMP		UNIT



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2022.03.02

Vlaamse  
overheid  
mm

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
R87-01	00	-	-	Signature date	SONAR SK2091-5WT620 / 00	8

Approved and to be attached to the approval certificate,

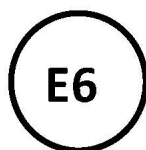


R. VERHELST

Getekend op : 2022-03-09 12:09:42 +0100 te Brussel

dossier nr. 43862 - E6\*87R01/00\*5411\*00





Communication concerning :

- Approval granted <sup>(1)</sup>
- ~~Approval extended~~ <sup>(1)</sup>
- ~~Approval refused~~ <sup>(1)</sup>
- ~~Approval withdrawn~~ <sup>(1)</sup>
- ~~Production definitively discontinued~~ <sup>(1)</sup>

of a type of daytime running lamp, pursuant to Regulation No.87

Approval No : **E6\*87R01/00\*5411\*00**

Extension No : -

Approval mark :

RL 1 A HCR PL

01 02 03 02

→ →



12.5

5411

Left hand

RL 1 A HCR PL

01 02 03 02

← ←



12.5

5411

Right hand

- Trade name or mark of the daytime running lamp : SONAR
- Manufacturer's name for the type of daytime running lamp : SK2091-5WT620, SK2092-5WT620
- 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.
- If applicable, name and address of the manufacturer's representative : Not applicable
- Submitted for approval on :  
09.02.2022  
X RAY INTERNATIONAL  
14.12.2021 ~ 28.12.2021  
X RAY International Testing and Certification  
Co., LTD.
- Technical Service responsible for conducting approval test:  
Vincotte N.V.  
Jan Olieslagerslaan 35  
1800 Vilvoorde  
Belgium
- Date of test report issued by that Service : 02.03.2022
- Number of test report issued by that Service: H2160959376/463





9. Concise description : See information document
- By category of lamp : RL
- Number, category and kind of light source(s) <sup>(2)</sup> : 27 LEDs / 1 light source
- Voltage and wattage : 12 V, 30.6 W
- Application of an electronic light source control gear :  
(a) Being part of the lamp : Yes / ~~No~~ <sup>(1)</sup>  
(b) Being not part of the lamp : ~~Yes~~ / No <sup>(1)</sup>
- Input voltage(s) supplied by an electronic light source control gear : 13.5 V
- 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) : Not applicable
- The lamp is only for use on a vehicle fitted with a tell-tale indicating failure : ~~Yes~~ / No <sup>(1)</sup>
10. The daytime running lamp is designed as an interdependent lamp system : ~~Yes~~ / No <sup>(1)</sup>
- The interdependent lamp system consists of 2/3 interdependent lamps. Not applicable
11. Position of approval mark : On the lamp
12. Reason(s) for extension (if applicable) : Not applicable
13. Approval granted / ~~extended / refused / withdrawn~~ <sup>(1)</sup>
14. Place : Brussels
15. Date : Signature date
16. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:

R. VERHELST

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

(1) Strike out what does not apply

(2) For daytime running lamps with non-replaceable light sources indicate the number and total wattage of the light sources used.



**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 : DAYTIME RUNNING LAMPS**

R87-01

**2. REF. :** Report number : **H2160959376/463**

No. of pages : 1 of 12

No. of annexes : -

Fastlane : 43862

Approval No. : (5411 00)

Update : 00

**3. GENERALITIES :**

Make of Device : SONAR

Commercial Type : -

Manufacturer's Type : SK2091-5WT620, SK2092-5WT620

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

: 2022.02.09

X RAY INTERNATIONAL

2021.12.14 to 2021.12.28

X RAY International Testing and Certification Co., LTD.

Applied document(s)

: SONAR SK2091-5WT620 / 00

Inspector

: LU Wan-Ching

Persons witnessing the tests

: LU Wan-Ching

Location of E-mark

: On the lamp

**5. CONCLUSIONS :**

The tests were carried out according to the following specifications :

- UNECE Regulation No. 87 incorporating the 01 series of amendments.

The models presented comply with the requirements to be applied.

Date : 2022.03.02

Signature :



VINÇOTTE nv/sa  
LU Wan-Ching  
Automotive Certification



---

**DESCRIPTION OF THE TESTED DAYTIME RUNNING LAMPS**

Lamp type	: Daytime running lamp, which is reciprocally incorporated with front position lamp.
Category and kind of light source(s)	: LED
Number of light source	: 27 LEDs / 1 light source
Voltage and wattage	: 12 V, 30.6 W

**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 : SK2091-5WT620, SK2092-5WT620**

## SPECIFICATIONS

### Function-Application-class category lamp and colour

Trade name or mark		SONAR			
Function	Headlamp		Front Direction Indicator <sup>(1)</sup>	Front Position Lamp <sup>(2)</sup>	Daytime Running Lamp <sup>(2)</sup>
	Driving Beam	Passing Beam			
ECE Regulation	112-02 Supplement 00	112-02 Supplement 00	6-02 Supplement 00	7-03 Supplement 00	87-01 Supplement 00
Class	B	B	-	-	-
Category	-	-	1	A	-
Number, category and kind of lamp source(s)	3 LEDs / 1 LED module	5 LEDs / 1 LED module	9 LEDs / 1 light source	27 LEDs / 1 light source	27 LEDs / 1 light source
Voltage and wattage	12 V, 13.6 W	12 V, 27.1 W	12 V, 3.5 W	12 V, 2.5 W	12 V, 30.6 W
Electronic light source control gear					
- Being part of the lamp	-	-	Yes	Yes	Yes
- Being not part of the lamp	-	-	-	-	-
The luminous flux of all LED modules	908.8 lm	1578.1 lm			
Lens	Outer	Clear	Clear	Clear	Clear
	Filter (Inner)	Clear	Clear	Clear	Clear
Colour of light emitted	White	White	Amber	White	White

<sup>(1)</sup> This front direction indicator is sequential activation of light source flash mode.

<sup>(2)</sup> Front position lamp, which is reciprocally incorporated with daytime running lamp.

## TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PC	GE <sup>(3)</sup>
	Filter (Inner)	PC	-
	Filter (Inner) for passing beam and driving beam	Glass	-
Reflector		BMC <sup>(4)</sup>	Adjustable
Housing		PP + T20 %	-

<sup>(3)</sup> The base material of lens: Type number is LEXAN Resin LS2 from GE Advanced Materials.

The hard coating: Type number is UVT 2008 from Shiang Yuan.

<sup>(4)</sup> There are two kinds of sub-reflectors, one is electroplated and the other is black.



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2022.03.02



**MARKING**

<b>Marking</b>		<b>Location</b>
<b>Trade name or mark</b>	<b>SONAR</b>	See drawing
<b>Approval marks</b>	<b>5411</b>	See drawing
<b>LED module code</b>	<b>MD E6 5411</b>	See drawing
<b>Electronic light source control gear code</b>	-	-

<b>DRAWINGS</b>	
<b>Reference</b>	<b>Version</b>
SK2091(2092)-5WT620 1	2021.12.28
SK2091(2092)-5WT620 2	2021.12.28
SK2091(2092)-5WT620 3	2021.10.28
SK2091(2092)-5WT620 4	2021.12.28
SK2091(2092)-5WT620 5	2021.12.28

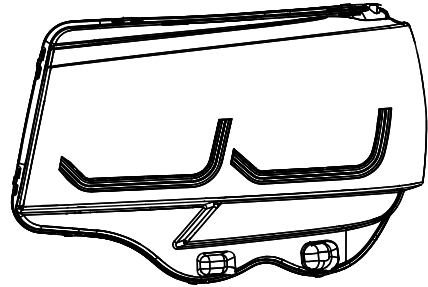
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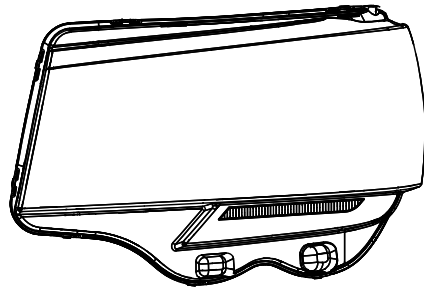
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 B-1800 Vilvoorde  
 E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
 2022.03.02

VEHICLE  
↓  
DRIVING DIRECTION

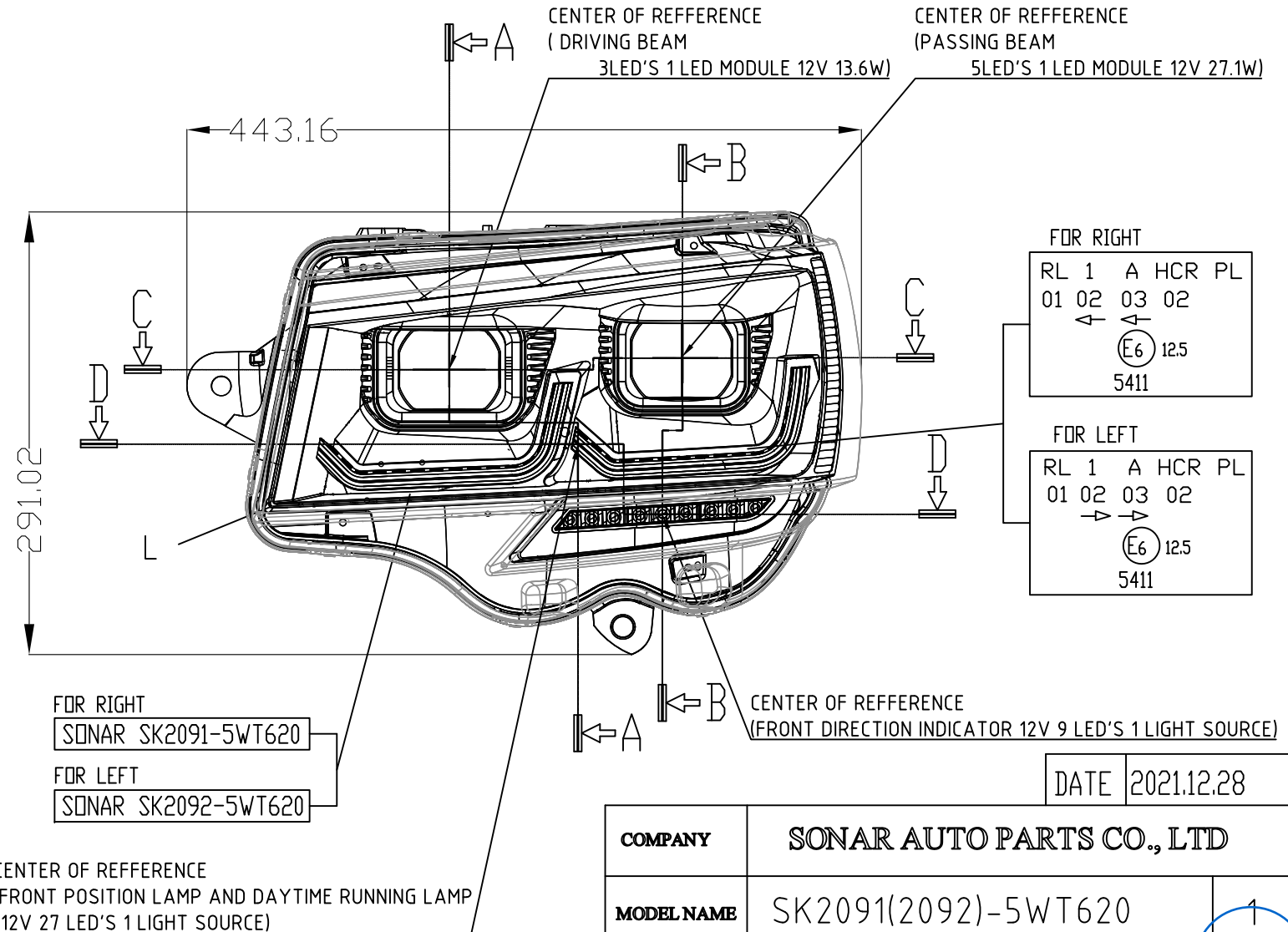
- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK



DAYTIME RUNNING LAMP & FRONT POSITION LAMP  
ILLUMINATING SURFACE:4219mm<sup>2</sup>



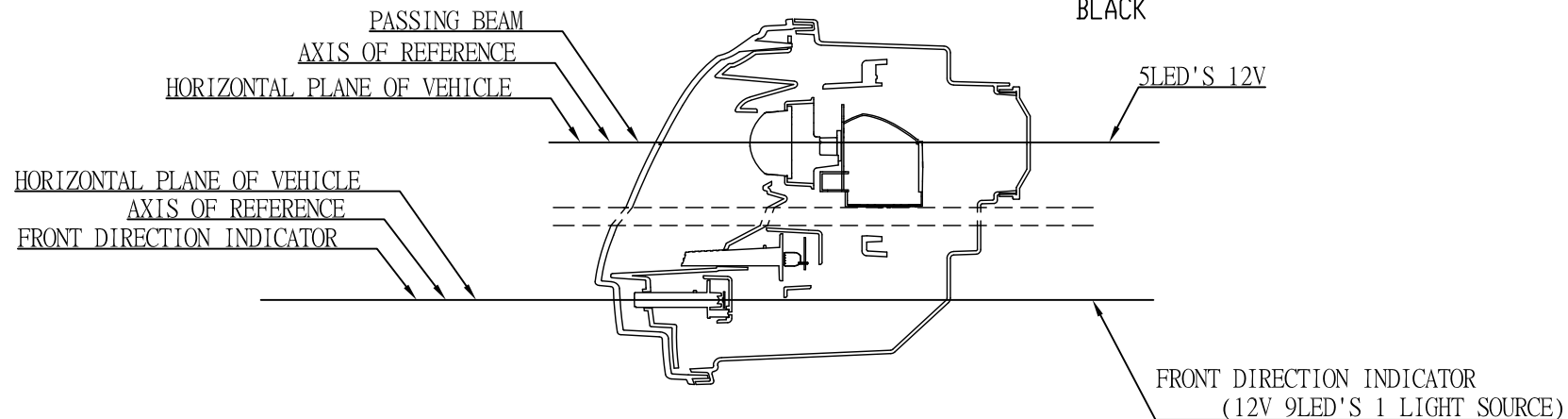
FRONT DIRECTION INDICATOR  
ILLUMINATING SURFACE:1437mm<sup>2</sup>



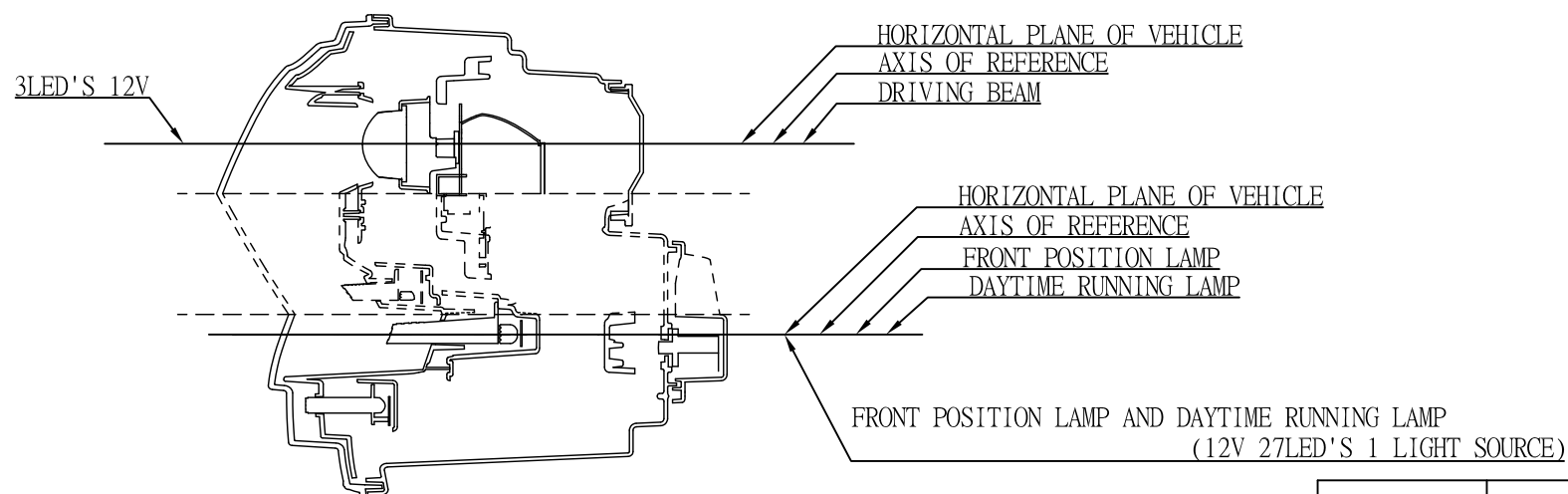
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		1
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

← | VEHICLE DRIVING DIRECTION

- NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
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SEC.B-B



SEC.A-A

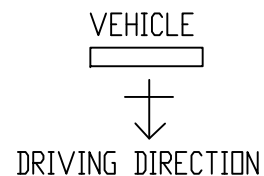
DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		2
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



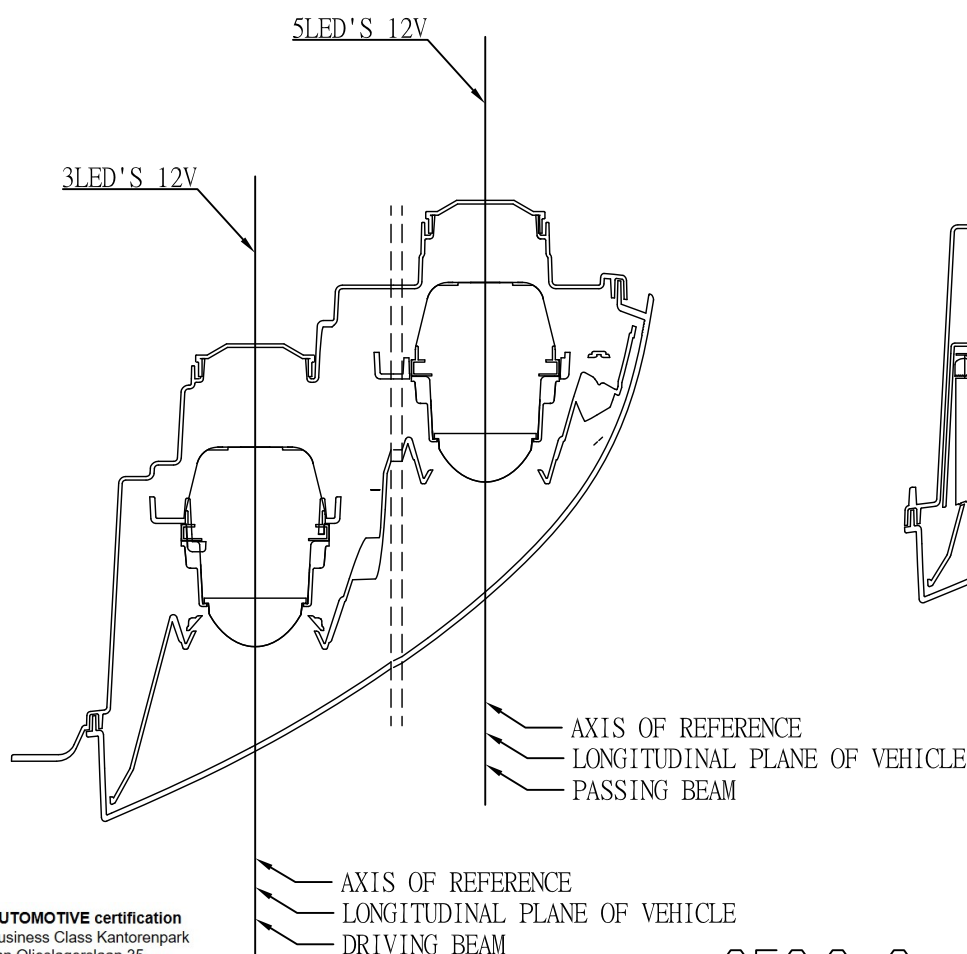
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NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
2.THE LENS IS FIXED TO HOUSING BY USING GLUE AND SCREW.  
3.THERE ARE TWO KINDS OF SUB-REFLECTORS ONE IS ELECTROPLATED AND THE OTHER IS BLACK

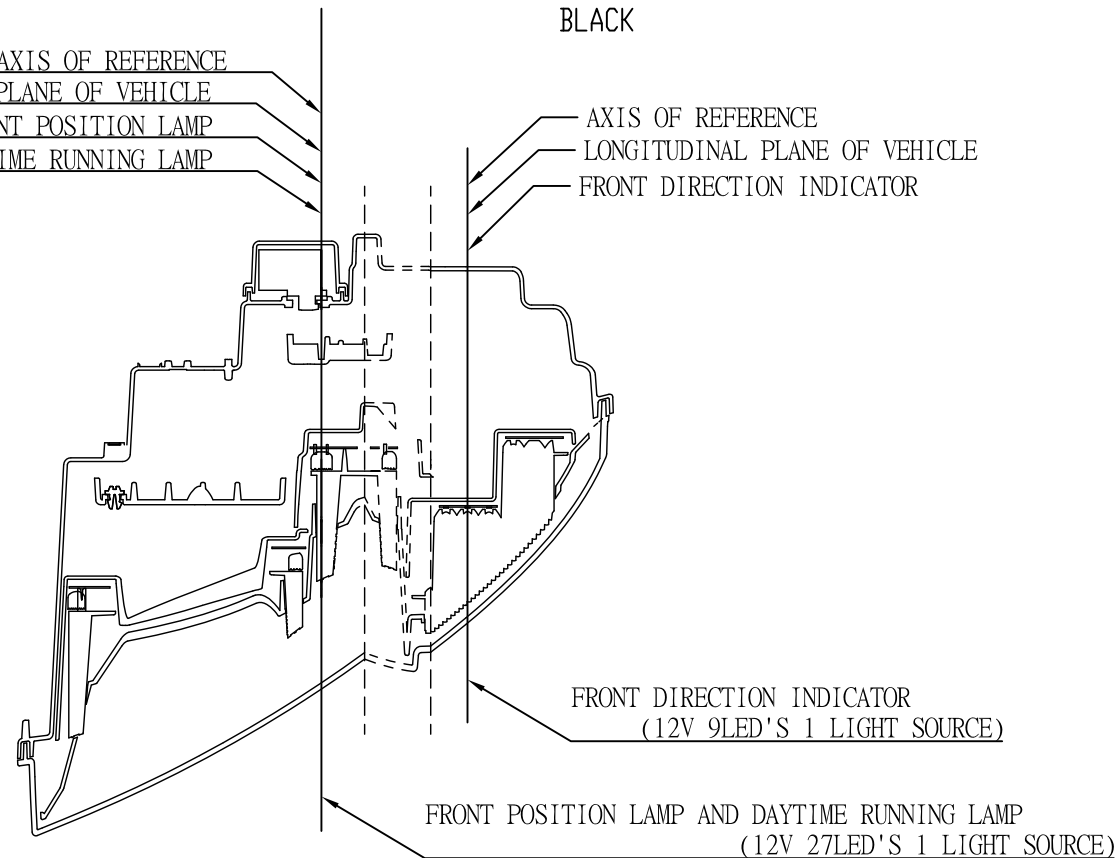


AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT POSITION LAMP  
DAYTIME RUNNING LAMP

AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT DIRECTION INDICATOR



SEC.C-C



SEC.D-D

DATE 2021.10.28

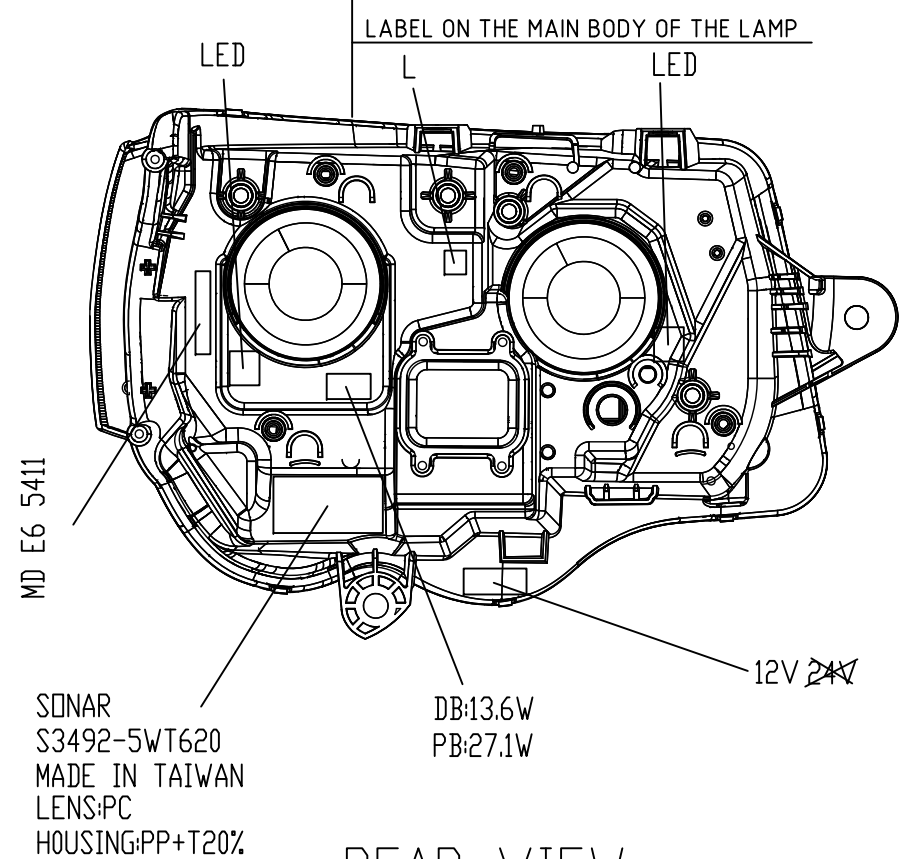
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		3
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



NOTE:1.THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY.THE RIGHT HAND SHALL BE SYMMETRICAL.  
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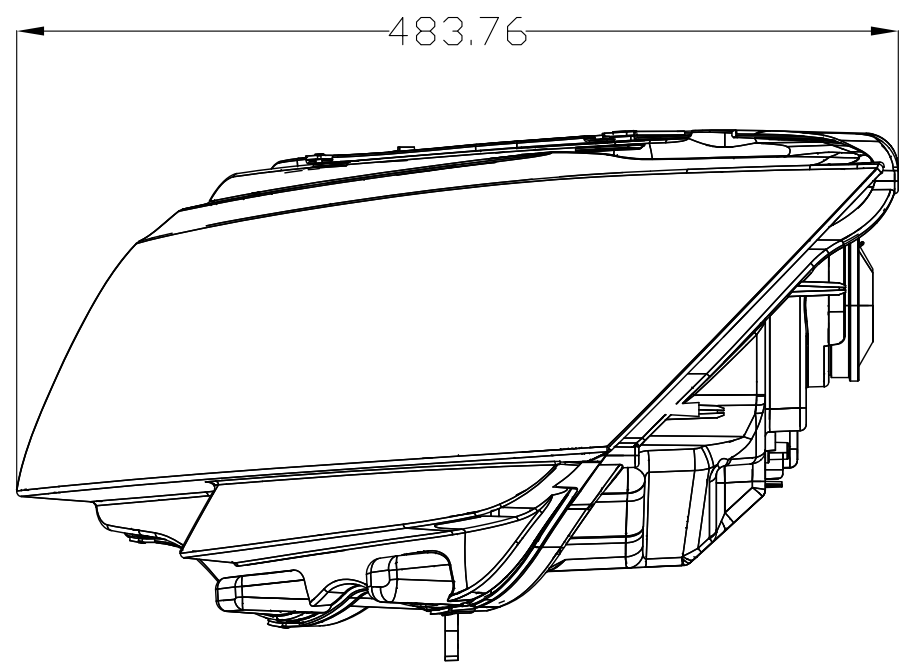
FOR RIGHT  
SONAR SK2091-5WT620  
RL 1 A HCR PL  
01 02 03 02  
← ←  
E6 12.5  
5411

FOR LEFT  
SONAR SK2092-5WT620  
RL 1 A HCR PL  
01 02 03 02  
→ →  
E6 12.5  
5411



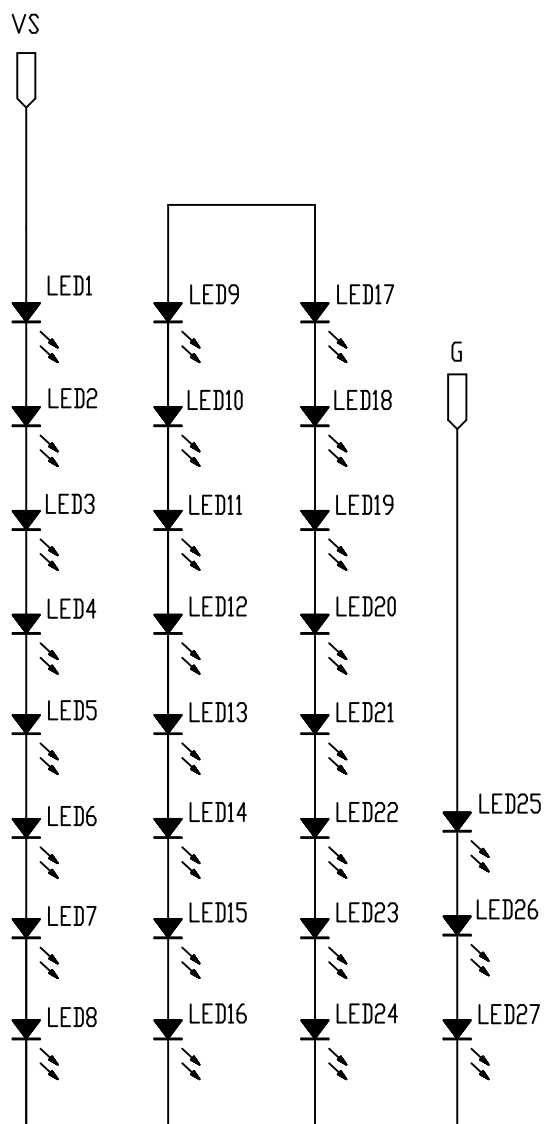
LABEL ON THE MAIN BODY OF THE LAMP

REAR VIEW

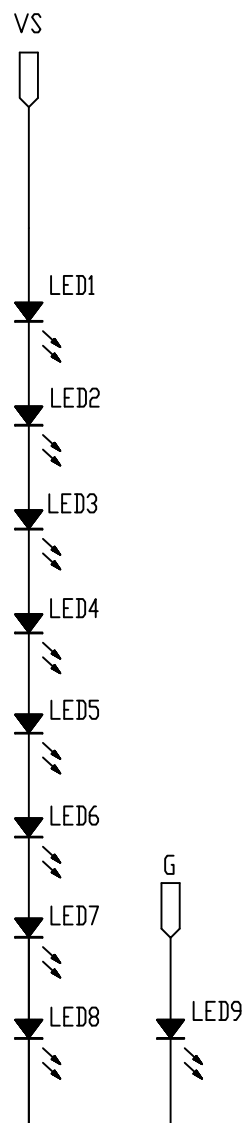


DATE 2021.12.28

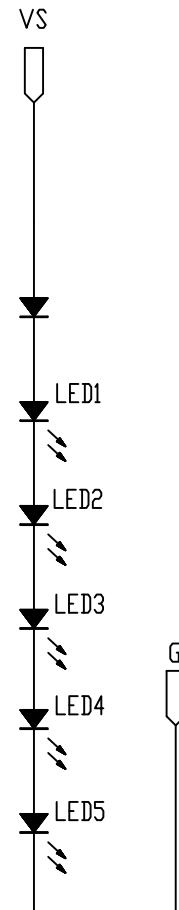
COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		4
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



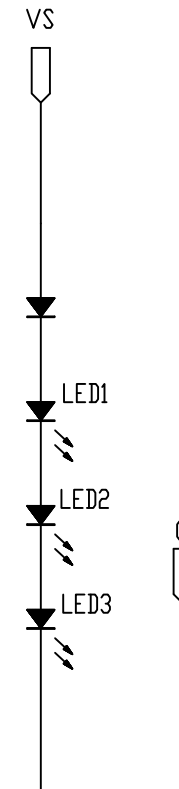
CIRCUIT DIAGRAM OF DAYTIME RUNNING LAMP AND FRONT POSITION LAMP  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF FRONT DIRECTION INDICATOR  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF PASSING BEAM



CIRCUIT DIAGRAM OF DRIVING BEAM

DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		5
FUNCTION	COMBINATION HEADLAMP		UNIT



AUTOMOTIVE certification  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
2022.03.02

Vlaamse  
overheid  
mm

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
R112-02	00	-	-	Signature date	SONAR SK2091-5WT620 / 00	8

Approved and to be attached to the approval certificate,



R. VERHELST

Getekend op : 2022-03-09 12:09:44 +0100 te Brussel

dossier nr. 43863 - E6\*112R02/00\*5411\*00



13. Place : Brussels
14. Date : Signature date
15. Signature :

ON BEHALF OF THE SECRETARY-GENERAL:



R. VERHELST

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

(1) Delete where not applicable

(2) Indicate the appropriate marking selected from the list below:

C, C, C, R, R PL, CR, CR, CR, C/R, C/R, C/R, C/, C/, C/,  
→ ↔ → ↔ → ↔ → ↔ → ↔ → ↔ → ↔  
C, PL, C PL, C PL, CR PL, CR PL, CR PL, C/R PL, C/R PL, C/R PL,  
→ ↔ → ↔ → ↔ → ↔ → ↔ → ↔  
C/PL, C/PL, C/PL  
→ ↔  
HC, HC, HC, HR, HR PL, HCR, HCR, HCR, HC/R, HC/R, HC/R, HC/, HC/, HC/,  
→ ↔ → ↔ → ↔ → ↔ → ↔ → ↔ → ↔ → ↔  
HC PL, HC PL, HC PL, HCR PL, HCR PL, HCR PL, HC/R PL, HC/R PL, HC/R PL,  
→ ↔ → ↔ → ↔ → ↔ → ↔ → ↔  
HC/PL, HC/PL, HC/PL  
→ ↔

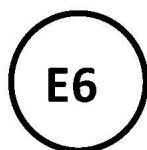
Getekend op : 2022-03-09 12:09:44 +0100 te Brussel

dossier nr. 43863 - E6\*112R02/00\*5411\*00



9.	Brief description:	See information document
	Category as described by the relevant marking <sup>(2)</sup> :	HCR PL
	Number and category(ies) of filament lamp(s) :	Not applicated
	Reference luminous flux used for the principal passing-beam :	1578.1 (lm)
	Principal passing-beam operated at approximately :	13.2 (V)
	Measures according to paragraph 5.8. of this Regulation :	§5.8.1.(b)
	Number and specific identification code(s) of LED module(s) and for each LED module:	MD E6 5411
	a statement whether it is replaceable or not:	<del>Yes</del> / No <sup>(1)</sup>
	Number and specific identification code(s) of electric light source control gear(s) :	Not applicable
	Total objective luminous flux as described in paragraph 5.9. exceeds 2,000 lumens :	<del>Yes</del> / No / <del>Does not apply</del> <sup>(1)</sup>
	The adjustment of the "cut-off" has been determined at :	<del>10 m/25 m/Does not apply</del> <sup>(1)</sup>
	The determination of the minimum sharpness of the "cut-off" has been carried out at :	<del>10 m/25 m/Does not apply</del> <sup>(1)</sup>
10.	Approval mark position :	On the lamp
11	Reason(s) for extension of approval :	Not applicable
12.	Approval granted / <del>extended / refused / withdrawn</del> <sup>(1)</sup>	





Communication concerning :

- Approval granted <sup>(1)</sup>
- ~~Approval extended~~ <sup>(1)</sup>
- ~~Approval refused~~ <sup>(1)</sup>
- ~~Approval withdrawn~~ <sup>(1)</sup>
- ~~Production definitively discontinued~~ <sup>(1)</sup>

of a type of headlamp, pursuant to Regulation No.112

Approval No : **E6\*112R02/00\*5411\*00**

Extension No : -

Approval mark :

RL 1 A HCR PL

01 02 03 02

→ →



12.5

5411

Left hand

RL 1 A HCR PL

01 02 03 02

← ←



12.5

5411

Right hand

- Trade name or mark of the device: SONAR
- Manufacturer's name for the type of device : SK2091-5WT620, SK2092-5WT620
- 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.
- If applicable, name and address of the manufacturer's representative : Not applicable
- Submitted for approval on : 27.12.2021 ~ 22.01.2022  
X RAY International Testing and Certification Co., LTD.
- Technical Service responsible for conducting approval test: Vincotte N.V.  
Jan Olieslagerslaan 35  
1800 Vilvoorde  
Belgium
- Date of test report issued by that service : 02.03.2022
- Number of test report issued by that service: H2160959376/464



**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

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**1. SUBJECT : HEADLAMPS**R112-02

---

<b>2. REF :</b>	Report number : <b>H2160959376/464</b>	No. of pages : 1 of 37	No. of annexes : -
	Fastlane : 43863	Approval No. : (5411 00)	Update : 00

---

**3. GENERALITIES :**

Make of Device : SONAR

Commercial Type : -

Manufacturer's Type : SK2091-5WT620, SK2092-5WT620

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.

---

<b>4. TESTS :</b>	Date and place : 2021.12.27 to 2022.01.22
	X RAY International Testing and Certification Co., LTD.
	Applied document(s) : SONAR SK2091-5WT620 / 00
	Inspector : LU Wan-Ching
	Persons witnessing the tests : LU Wan-Ching
	Location of E-mark : On the lamp

---

**5. CONCLUSIONS :**

The tests were carried out according to the following specifications :

UNECE Regulation No. 112 incorporating the 02 series of amendments.

The models presented comply with the requirements to be applied.

Date : 2022.03.02

Signature :



VINÇOTTE nv/sa  
LU Wan-Ching  
Automotive Certification



## DESCRIPTION OF THE TESTED HEADLAMP

Headlamp type : ~~Passing beam~~ / ~~Driving beam~~ / Passing and driving beam  
Drive type : ~~Left hand traffic~~ / Right hand traffic / ~~Left and right hand traffic~~  
Adjustable reflector : yes / ~~no~~  
Headlamp class : A / B  
Category and kind of light source(s) : LED module(s)  
Number of light source(s) : 5 LEDs / 1 LED module, 12 V, 27.1 W for passing beam  
3 LEDs / 1 LED module, 12 V, 13.6 W for driving beam  
The total objective luminous flux of all LED : 13.2 V / 1578.1 lm for passing beam  
13.2 V / 908.8 lm for driving beam

## GENERAL SPECIFICATIONS

Characteristics concerned and prescriptions to apply	References	Conformity	Not applicated
The requirements contained in sections 5. "General specifications" and 6. "Individual specifications" and in the Annexes referenced in the said sections of Regulations Nos. 48, 53, 74 or 86, and their series of amendments in force at the time of application for the lamp type approval shall apply to this Regulation.	5.		
The requirements pertinent to each lamp and to the category/ies of vehicle on which the lamp is intended to be installed shall be applied, where its verification at the moment of lamp type approval is feasible.			
Each lamp shall be conform to the specifications of § 6 to § 8.	5.1.	X	
Headlamps shall be so made as to retain their prescribed photometric characteristics and to remain in good working order when in normal use, in spite of the vibrations to which they may be subjected.	5.2.		
Headlamps shall be fitted with a device enabling them to be so adjusted on the vehicles as to comply with the rules applicable to them. Such a device need not be fitted on units in which the reflector and the diffusing lens cannot be separated, provided the use of such units is confined to vehicles on which the headlamp setting can be adjusted by other means.	5.2.1.	X	
Where a headlamp providing a principal passing beam and a headlamp providing a driving beam, each equipped with its own filament lamp or LED module(s), the adjusting device shall enable the principal passing beam and the driving beam to be adjusted individually.			
However, these provisions shall not apply to headlamp assemblies whose reflectors are indivisible. For this type of assembly the req.of § 6.3. of this Regulation apply.	5.2.2.		X



**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 : SK2091-5WT620, SK2092-5WT620**

## SPECIFICATIONS

### Function-Application-class category lamp and colour

Trade name or mark		SONAR			
Function	Headlamp		Front Direction Indicator <sup>(1)</sup>	Front Position Lamp <sup>(2)</sup>	Daytime Running Lamp <sup>(2)</sup>
	Driving Beam	Passing Beam			
ECE Regulation	112-02 Supplement 00	112-02 Supplement 00	6-02 Supplement 00	7-03 Supplement 00	87-01 Supplement 00
Class	B	B	-	-	-
Category	-	-	1	A	-
Number, category and kind of lamp source(s)	3 LEDs / 1 LED module	5 LEDs / 1 LED module	9 LEDs / 1 light source	27 LEDs / 1 light source	27 LEDs / 1 light source
Voltage and wattage	12 V, 13.6 W	12 V, 27.1 W	12 V, 3.5 W	12 V, 2.5 W	12 V, 30.6 W
Electronic light source control gear					
- Being part of the lamp	-	-	Yes	Yes	Yes
- Being not part of the lamp	-	-	-	-	-
The luminous flux of all LED modules	908.8 lm	1578.1 lm			
Lens	Outer	Clear	Clear	Clear	Clear
	Filter (Inner)	Clear	Clear	Clear	Clear
Colour of light emitted	White	White	Amber	White	White

<sup>(1)</sup> This front direction indicator is sequential activation of light source flash mode.

<sup>(2)</sup> Front position lamp, which is reciprocally incorporated with daytime running lamp.

## TECHNICAL DATA

Part		Material	Remark
Lens	Outer	PC	GE <sup>(3)</sup>
	Filter (Inner)	PC	-
	Filter (Inner) for passing beam and driving beam	Glass	-
Reflector		BMC <sup>(4)</sup>	Adjustable
Housing		PP + T20 %	-

<sup>(3)</sup> The base material of lens: Type number is LEXAN Resin LS2 from GE Advanced Materials.

The hard coating: Type number is UVT 2008 from Shiang Yuan.

<sup>(4)</sup> There are two kinds of sub-reflectors, one is electroplated and the other is black.



**AUTOMOTIVE certification**  
Business Class Kantorenpark  
Jan Olieslagerslaan 35  
B-1800 Vilvoorde  
E-mail: [homologation@vincotte.com](mailto:homologation@vincotte.com)  
2022.03.02



**MARKING**

<b>Marking</b>		<b>Location</b>
<b>Trade name or mark</b>	<b>SONAR</b>	See drawing
<b>Approval marks</b>	<b>5411</b>	See drawing
<b>LED module code</b>	<b>MD E6 5411</b>	See drawing
<b>Electronic light source control gear code</b>	-	-

<b>DRAWINGS</b>	
<b>Reference</b>	<b>Version</b>
SK2091(2092)-5WT620 1	2021.12.28
SK2091(2092)-5WT620 2	2021.12.28
SK2091(2092)-5WT620 3	2021.10.28
SK2091(2092)-5WT620 4	2021.12.28
SK2091(2092)-5WT620 5	2021.12.28

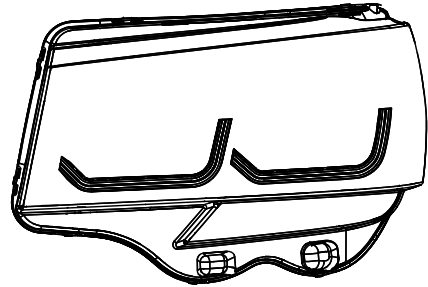
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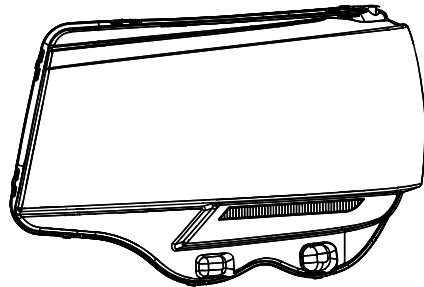
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 E-mail: [homologation@vincotte.be](mailto:homologation@vincotte.be)  
 2022.03.02

VEHICLE  
↓  
DRIVING DIRECTION

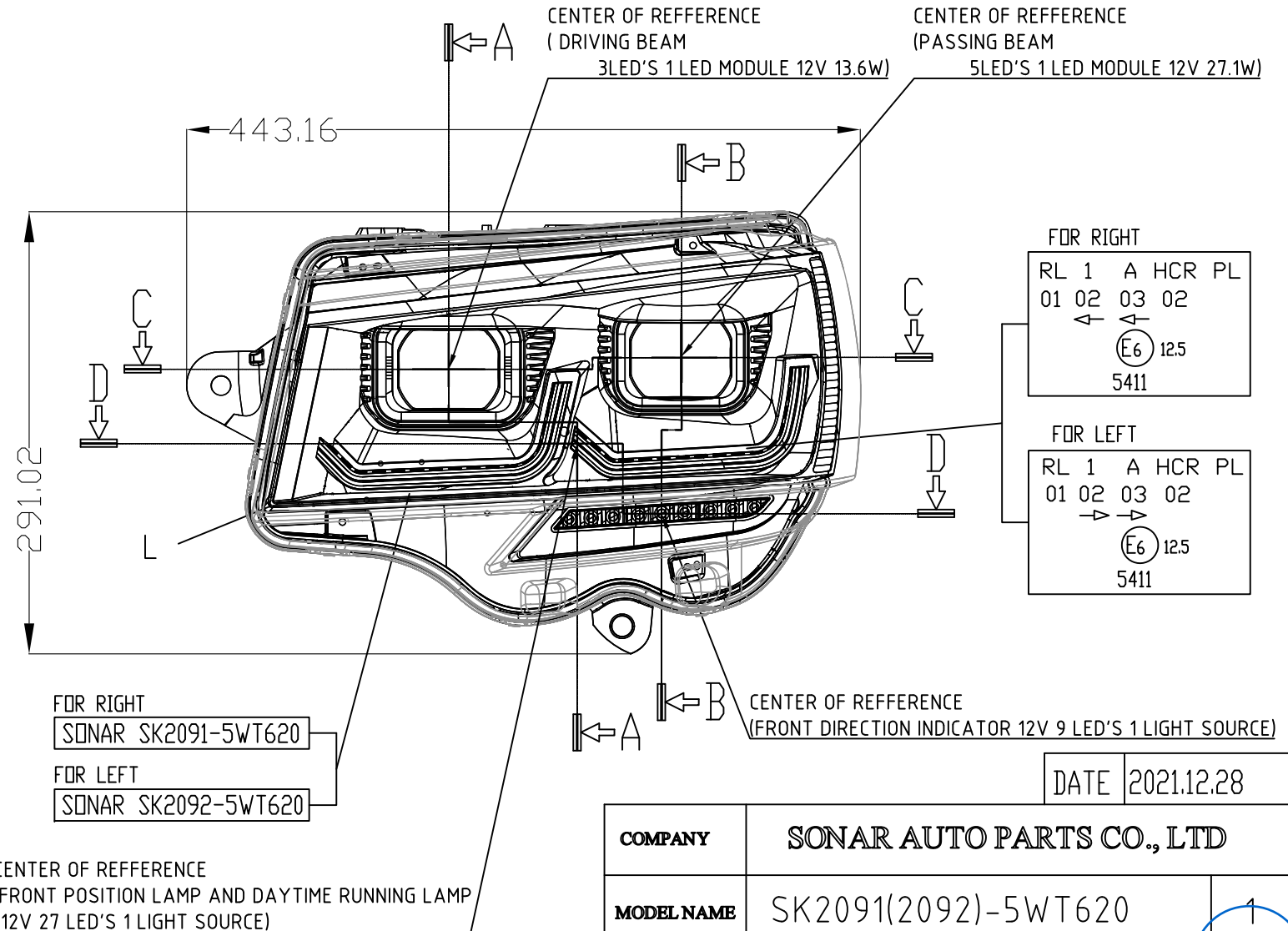
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DAYTIME RUNNING LAMP & FRONT POSITION LAMP  
ILLUMINATING SURFACE:4219mm<sup>2</sup>



FRONT DIRECTION INDICATOR  
ILLUMINATING SURFACE:1437mm<sup>2</sup>

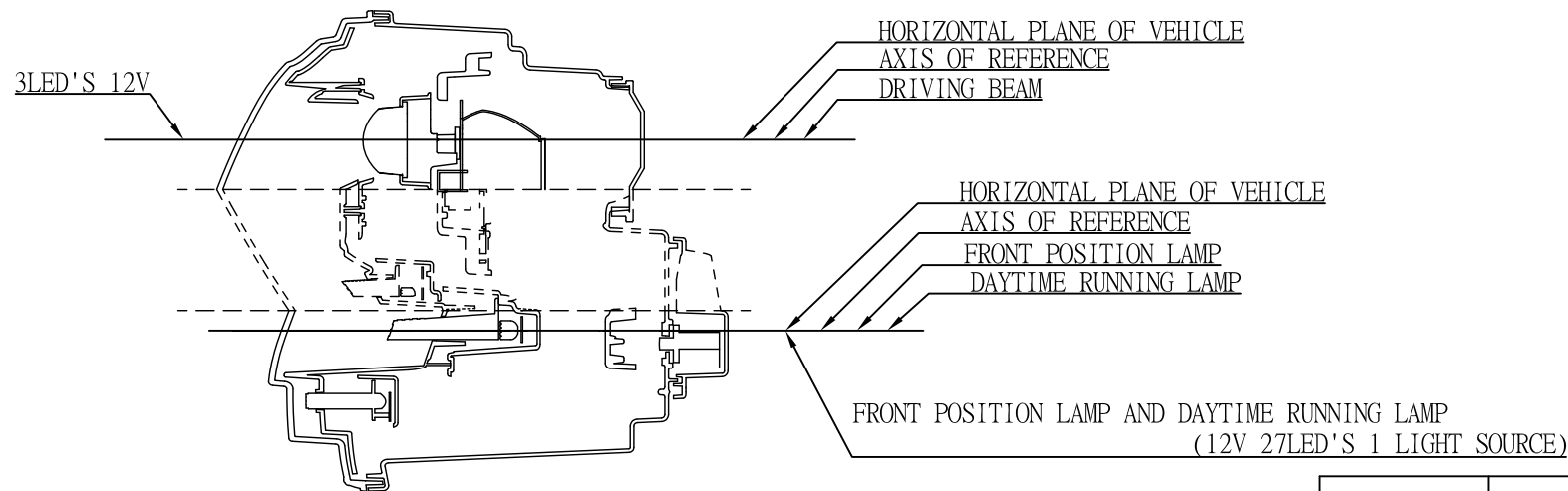
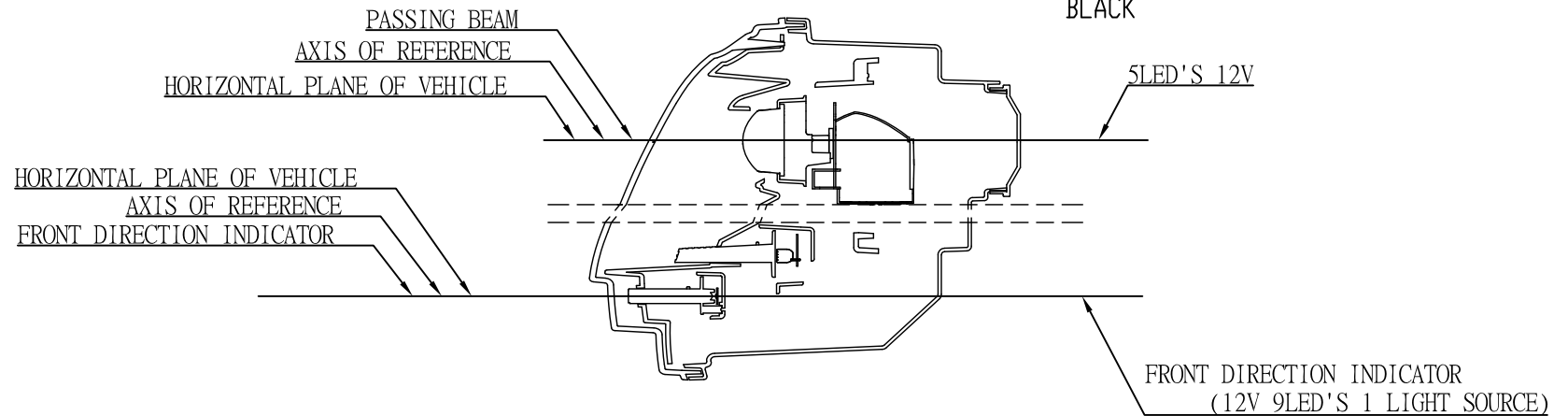


DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		
FUNCTION	COMBINATION HEADLAMP	UNIT	1 Vlaamse overheid mm

← | VEHICLE DRIVING DIRECTION

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SEC.A-A

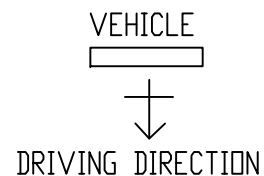
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COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		2
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



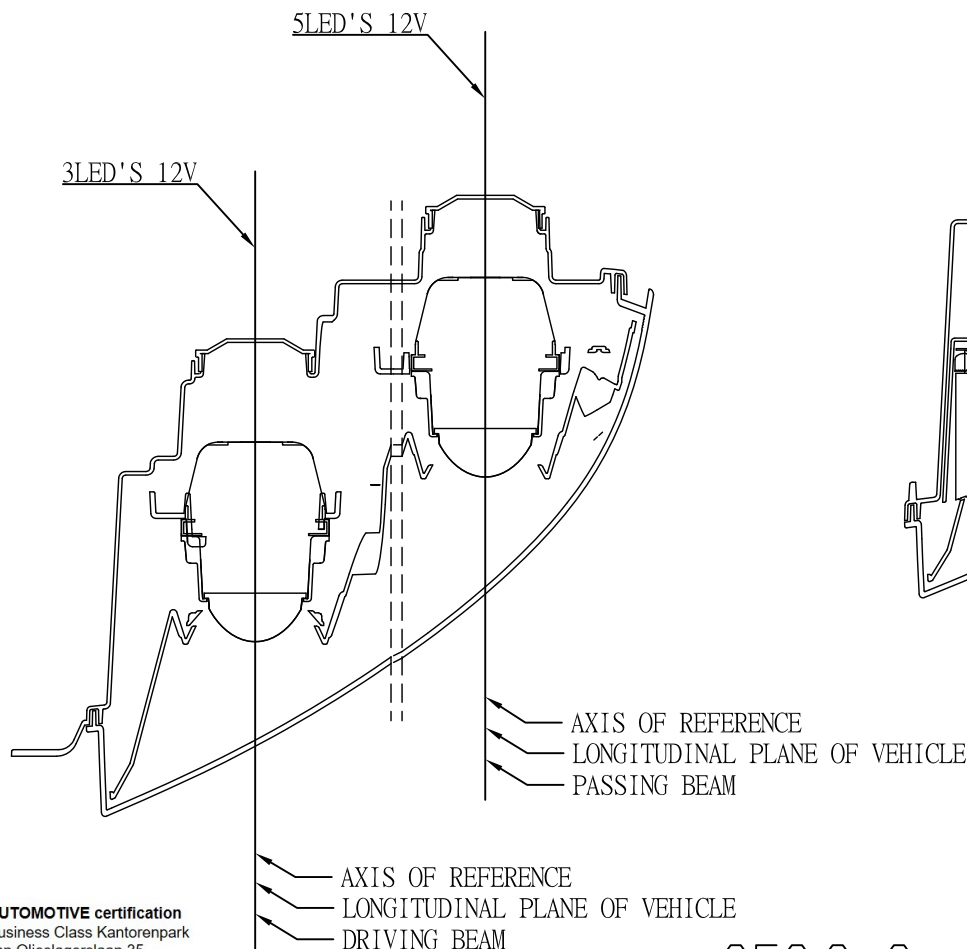
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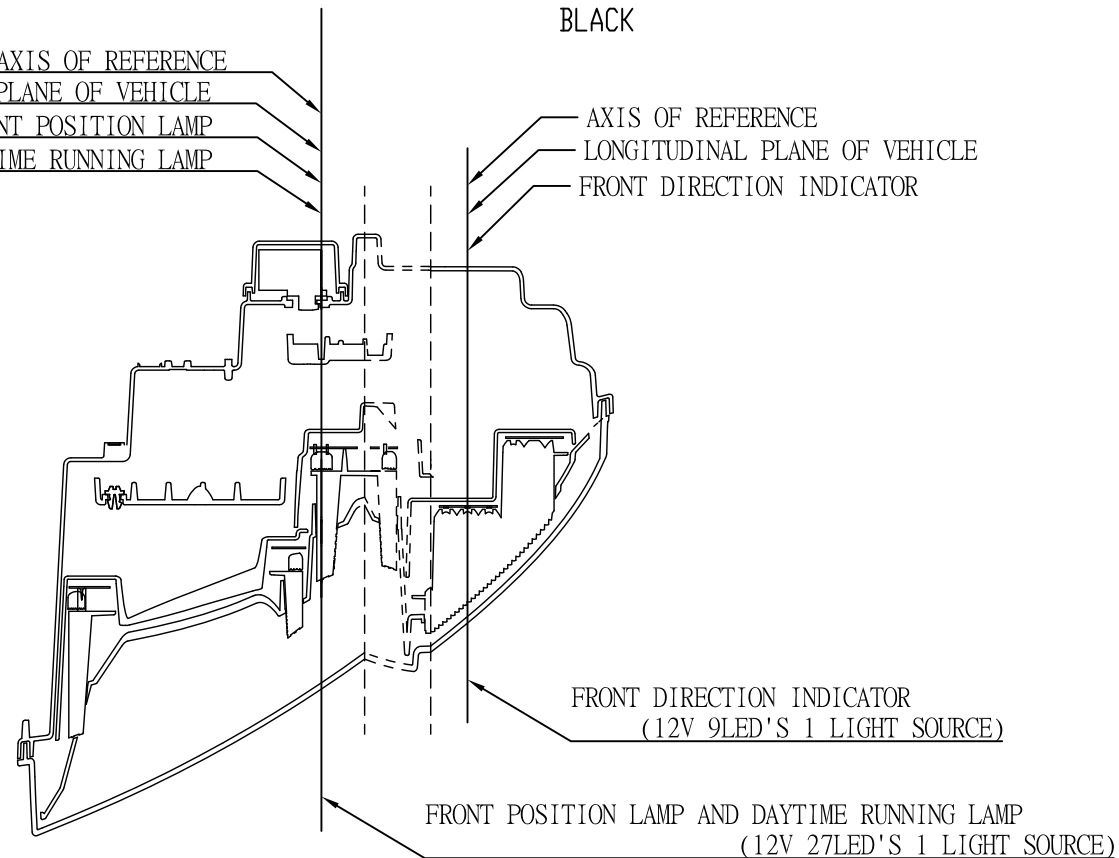


AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT POSITION LAMP  
DAYTIME RUNNING LAMP

AXIS OF REFERENCE  
LONGITUDINAL PLANE OF VEHICLE  
FRONT DIRECTION INDICATOR



SEC.C-C



SEC.D-D

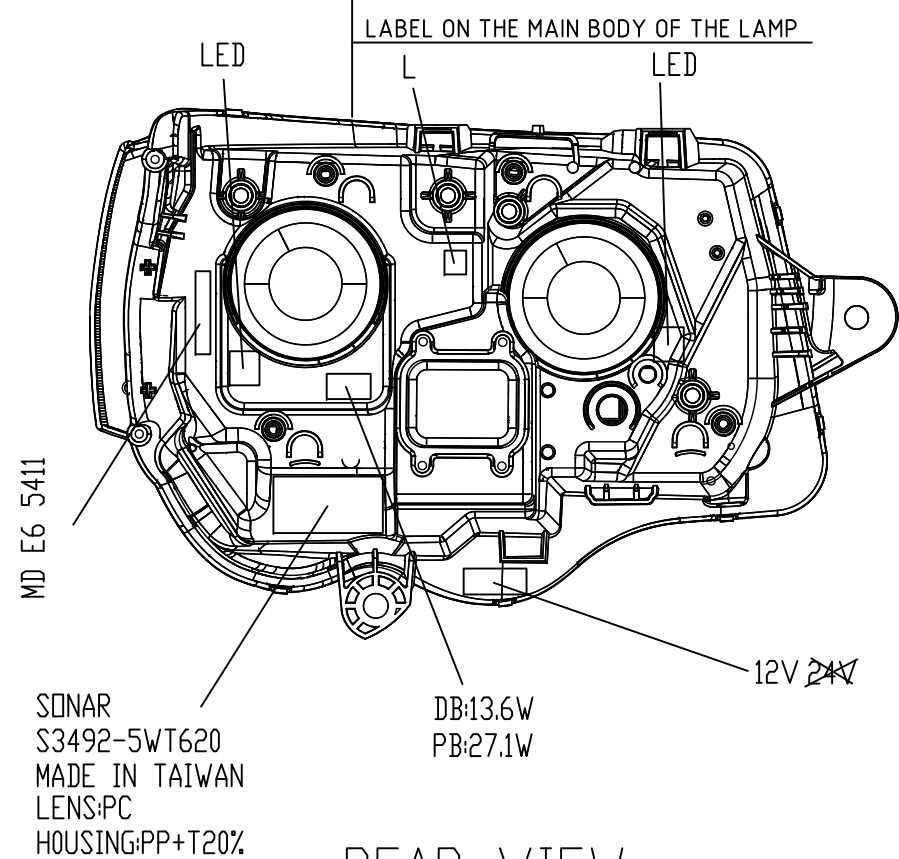
DATE 2021.10.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		3
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm

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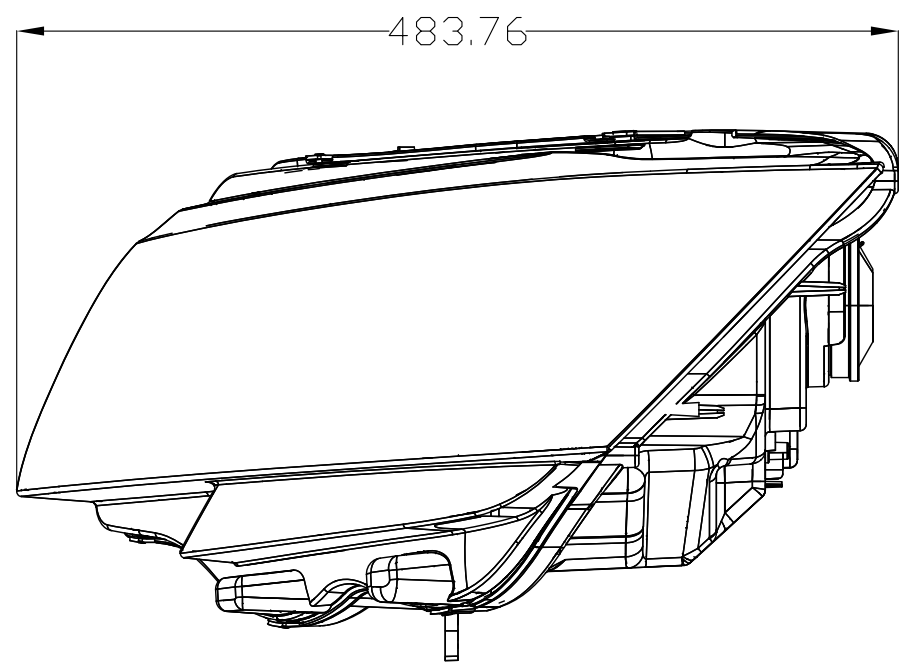
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← ←  
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FOR LEFT  
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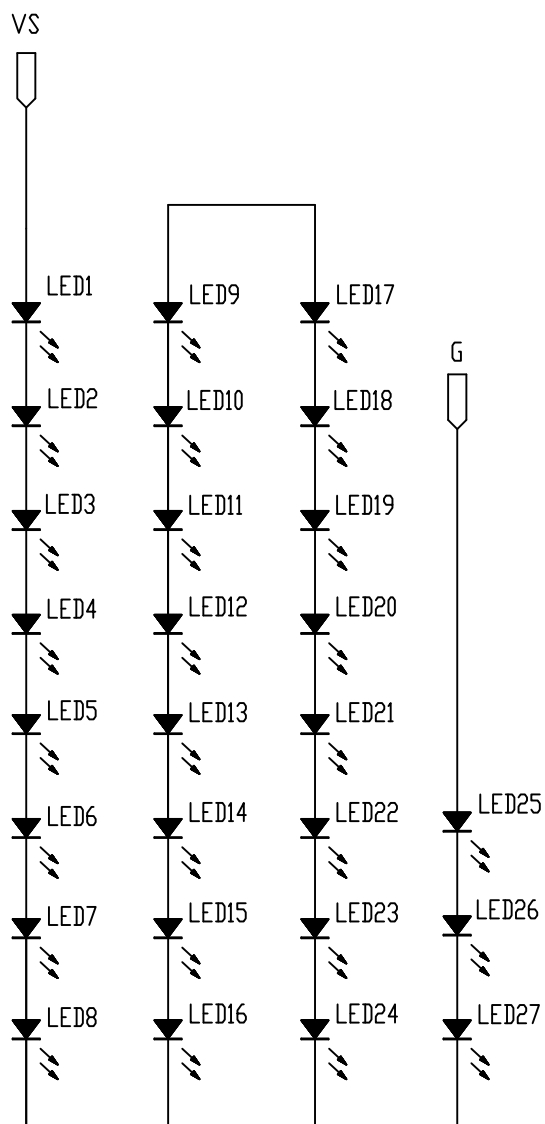
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REAR VIEW

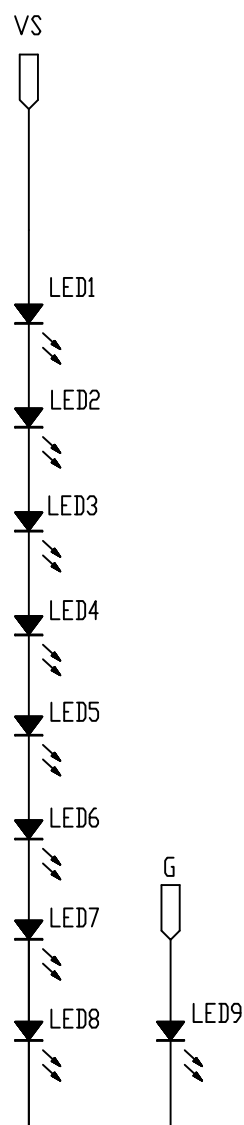


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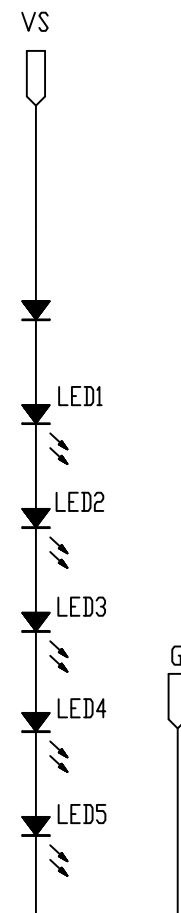
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MODEL NAME	SK2091(2092)-5WT620		4
FUNCTION	COMBINATION HEADLAMP	UNIT	Vlaamse overheid mm



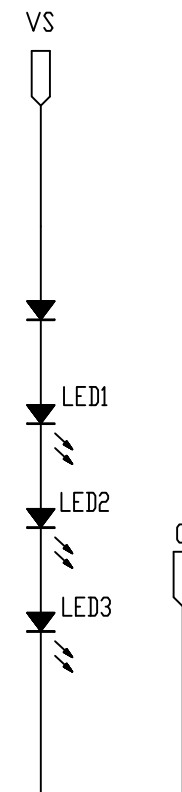
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1 LIGHT SOURCE



CIRCUIT DIAGRAM OF FRONT DIRECTION INDICATOR  
1 LIGHT SOURCE



CIRCUIT DIAGRAM OF PASSING BEAM



CIRCUIT DIAGRAM OF DRIVING BEAM

DATE 2021.12.28

COMPANY	SONAR AUTO PARTS CO., LTD		
MODEL NAME	SK2091(2092)-5WT620		5
FUNCTION	COMBINATION HEADLAMP		UNIT



AUTOMOTIVE certification  
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2022.03.02

Vlaamse  
overheid  
mm