



MINISTERIO
DE INDUSTRIA
Y TURISMO

SECRETARÍA DE ESTADO DE
INDUSTRIA

DIRECCIÓN GENERAL DE ESTRATEGIA
INDUSTRIAL Y DE LA PEQUEÑA Y
MEDIANA EMPRESA



AR-E9-00.11861 EXT. 02

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COMUNICACIÓN / COMMUNICATION:

Concerniente a /
Concerning: ⁽¹⁾

~~La concesión de homologación / Approval granted~~

~~La extensión de homologación / Approval extended~~

~~La denegación de homologación / Approval refused~~

~~La retirada de homologación / Approval withdrawn~~

~~El cese definitivo de producción / Production definitively discontinued~~

de un tipo de lámpara en aplicación del Reglamento UN N° 023 /
of a type of lamp pursuant to UN Regulation No. 023

Lámpara /
Lamp: ⁽¹⁾

~~Luz de la placa de matrícula trasera / Rear-registration plate illuminating lamp~~

~~Indicador de dirección / Direction indicator lamp~~

~~Luz de pare / Stop lamp~~

~~Luz de posición / Position lamp~~

~~Luz de gálibo / End-outline marker lamp~~

~~Luz de marcha atrás / Reversing lamp~~

~~Luz de maniobra / Manoeuvring lamp~~

~~Luz antiniebla trasera / Rear fog lamp~~

~~Luz de estacionamiento / Parking lamp~~

~~Luz de circulación diurna / Daytime running lamp~~

~~Luz de posición lateral / Side marker lamp~~

Categoría de la lámpara /
Category of the lamp:

AR

Cambio de índice /
Change index:

2

Nº de homologación /
Approval No:

AR-E9-00.11861 EXT. 02

Identificador Único (si procede) /
Unique Identifier (UI) (if
applicable):

⁽¹⁾ Táchese lo que no proceda / Strike out what does not apply





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1. Marca de fábrica o comercial de la lámpara / *Trade name or mark of the lamp*: Fristom
2. Tipo dado por el fabricante para la luz / *Manufacturer's name for the type of lamp*: FT-130 COF
3. Nombre y dirección del fabricante / *Manufacturer's name and address*:
FRISTOM Spółka z ograniczoną odpowiedzialnością
Spółka komandytowa 86-014 Sicienko / Polska ul.
Przemysłowa 5 NIP: 5542926937, KRS: 0000529238
Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41

Nota / *Note*: Este dispositivo puede ser fabricado en cualquiera de las Plantas de Fabricación que consten declaradas en el Anexo I del Certificado Conformidad Producción en vigor emitido por la UCA. / *This device may be manufactured in any of the Manufacturing Plants declared in Annex I of the Conformity Production Certificate in force issued by the UCA.*

4. Si procede, nombre y dirección del representante del fabricante / *If applicable, name and address of the manufacturer's representative*: ---
5. Dispositivo presentado a homologación el / *Submitted for approval on*: 05/01/2024
6. Servicio técnico encargado de los ensayos de homologación / *Technical Service responsible for conducting approval tests*: IDIADA
7. Fecha del informe emitido por dicho servicio / *Date of report issued by that Service*: 13/02/2024
8. Número del informe emitido por dicho servicio / *Number of report issued by that Service*: PC15020196, PC16090082, **PC24020126**
9. Breve descripción / *Concise description*:
 - 9.1. En caso de / *In case of*
 - 9.1.1. Una luz de la placa de matrícula trasera / *A rear-registration plate illuminating lamp*: ---
 - Condiciones geométricas de instalación (posiciones e inclinaciones del dispositivo en relación al espacio ocupado por la placa de matrícula y/o diferentes inclinaciones de este espacio) / *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)*: ---
 - 9.1.1.1. Categoría(s) de superficie iluminada / *Category(ies) of illuminated area*: ~~1a, 1b, 1c, 2a, 2b, 1, 2~~ ⁽¹⁾
 - 9.1.2. Un indicador de dirección / *A direction indicator*: ---
 - Activación secuencial de las fuentes luminosas / *Sequential activation of light sources*: ~~sí/yes~~ ~~no/no~~ ⁽¹⁾
 - 9.1.3. Una luz de marcha atrás / *A reversing lamp*: ---
 - La luz sólo puede instalarse en un vehículo como parte de un par de luces / *The lamp shall be installed on a vehicle only as part of a pair of lamps*: ~~sí/yes~~ - no / no ⁽¹⁾

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9.1.4. Una luz de maniobra / *A manoeuvring lamp*: ---

- La altura máxima de montaje / *The maximum mounting height*: ---

9.1.5. Una luz de circulación diurna / *A daytime running lamp*: ---

- La luz de circulación diurna está destinada exclusivamente a su instalación en vehículos de la categoría L3, y su intensidad luminosa máxima diseñada no excede $7.00 \cdot 10^2$ cd / *The daytime running lamp is intended exclusively for installation on vehicles of category L3, and its designed maximum luminous intensity does not exceed $7.00 \cdot 10^2$ cd*: ~~si~~ / ~~yes~~ - ~~no~~ / ~~no~~ ⁽¹⁾

9.1.6. En caso de una luz de posición trasera recíprocamente incorporada con una luz de pare, la luz de posición trasera/luz de pare son suministradas por fuentes luminosas múltiples / *In case of a rear position lamp reciprocally incorporated with a stop lamp, the rear position/stop lamp are provided by multiple light sources*: ~~si~~ / ~~yes~~ - ~~no~~ / ~~no~~ ⁽¹⁾

9.2. Por función de luz de señalización y categoría / *By light signalling function and category*:

- Para la instalación en el exterior ~~o en el interior o ambos~~ ⁽¹⁾ / *For mounting either outside ~~or inside or both~~* ⁽¹⁾
- Color de luz emitida / *Colour of light emitted*:
 - Luz de marcha atrás / *Reversing lamp*: ~~roja~~ / ~~red~~ - blanca / *white* - ~~ambar~~ / ~~amber~~ - incolora / *colourless* ⁽¹⁾
- Número, categoría(s) y tipo de la(s) fuente(s) luminosa(s) / *Number, category and kind of light source(s)*:
 - Luz de marcha atrás / *Reversing lamp*: 6-functional LED
- Luz homologada para fuente(s) luminosa(s) sustitutiva(s) de LED. En caso afirmativo, categoría de la(s) fuente(s) de luz sustitutiva(s) de LED / *Lamp approved for LED substitute light source(s). If yes, category of LED substitute light source(s)*: ---
- Voltaje nominal o el rango de voltaje / *Rated voltage or the range of voltage*:
 - Luz de marcha atrás / *Reversing lamp*: 12V / 24V – 3.5W/3.5W
- Módulo de fuente de luz / *Light source module*:
 - Luz de marcha atrás / *Reversing lamp*: ~~si~~ / ~~yes~~ - no / *no* ⁽¹⁾
- Código de identificación específico del módulo de fuente de luz / *Light source module specific identification code*:
 - Luz de marcha atrás / *Reversing lamp*: ---
- Solo para instalación limitada en altura igual o inferior a 750 mm por encima del suelo, si procede / *Only for limited mounting height of equal to or less than 750 mm above the ground, if applicable*:
 - Luz de posición / *Position lamp*: ~~si~~ / ~~yes~~ - ~~no~~ / ~~no~~ ⁽¹⁾
- Condiciones geométricas de instalación y variaciones relacionadas, si se da el caso / *Geometrical conditions of installation and relating variations, if any*: ---

Aplicación de una guía de control electrónica/control de intensidad variable de la(s) fuente(s) luminosa(s) /
Application of an electronic light source control gear/variable intensity control:

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- Luz de marcha atrás / *Reversing lamp*:---
 - (a) Formando parte de la luz / *Being part of the lamp*: ~~sí~~/yes - ~~no~~/no ⁽¹⁾
 - (b) No formando parte de la luz / *Being not part of the lamp*: ~~sí~~/yes - ~~no~~/no ⁽¹⁾
 - Tensión(es) de entrada suministrada(s) por la guía de control electrónica/control de intensidad variable la(s) fuente(s) luminosa(s) / *Input voltage(s) supplied by an electronic light source control gear/variable intensity control*: ---
 - Fabricante de la guía de control electrónica/control de intensidad variable de la(s) fuente(s) luminosa(s) y número de identificación (cuando la guía de control de la fuente luminosa forma parte de la luz pero no está incluida en el cuerpo de la luz) / *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)*: ---
 - Intensidad luminosa variable, si procede / *Variable luminous intensity, if applicable*: ~~sí~~/yes - no / no ⁽¹⁾
 - Función(es) producida(s) por una luz interdependiente que forma parte de un sistema de luces interdependientes, si procede / *Function(s) produced by an interdependent lamp forming part of an interdependent lamp system, if applicable*: ---
- 9.3. La luz de posición delantera, luz de posición trasera, luz de pare, luz de galibo, luz de circulación diurna, luz de estacionamiento ⁽¹⁾ es sólo para uso en un vehículo equipado con un testigo que indique el fallo / *The front position lamp, rear position lamp, stop lamp, end-outline marker lamp, daytime running lamp, parking lamp* ⁽¹⁾ is only for use on a vehicle fitted with a tell-tale indicating failure: ~~sí~~/yes - no / no ⁽¹⁾
- 9.4. Si se realiza un ensayo adicional de acuerdo con el párrafo 4.8.3.1.1. de este Reglamento / *Whether an additional test is conducted according to the paragraph 4.8.3.1.1. of this Regulation*: ~~sí~~/yes - no / no ⁽¹⁾
10. Posición de la marca de homologación o Identificador Único / *Position of the approval mark or Unique Identifier (UI)*: Ver documentación suministrada por el fabricante. / *See documentation supplied by the manufacturer.*
11. Motivo(s) de la extensión (si procede) / *Reason(s) for extension (if applicable)*: Nueva posición vertical añadida para la lámpara instalada / *New lamp fitted position added VERTICAL*
12. Se ~~concede~~/deniega/extiende/retira la homologación ⁽¹⁾ / *Approval ~~granted~~/extended/refused/withdrawn* ⁽¹⁾
13. Homologación concedida para los dispositivos destinados a ser utilizados en vehículos ya en uso únicamente / *Approval granted for devices to be used on vehicles already in use only*: ~~sí~~/yes - no / no ⁽¹⁾
14. Lugar / *Place*: Madrid
15. Fecha / *Date*: Ver firma electrónica. / *See electronic signature.*
16. Firma / *Signature*:

EL DIRECTOR GENERAL DE ESTRATEGIA INDUSTRIAL Y DE LA PEQUEÑA Y MEDIANA
EMPRESA

P.D. Orden ITU/103/2024, de 8 de febrero de 2024

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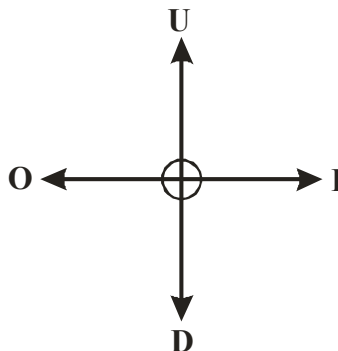
17. La lista de los documentos depositados ante la Autoridad de homologación de Tipo que ha concedido la homologación se adjunta a la presente comunicación y puede obtenerse previa solicitud. / *The list of documents deposited with the Type Approval Authority which has granted approval is annexed to this communication and may be obtained on request.*
- Informe. / *Report.*
 - Documentación suministrada por el fabricante. / *Documentation supplied by the manufacturer.*

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SUPERFICIE DE EMISIÓN DE LUZ / LIGHT EMITTING SURFACE



Límite superior / Upper boundary "U" (mm)	Límite inferior / Down boundary "D" (mm)	Límite interior / Inner boundary "I" (mm)	Límite exterior / Outer boundary "O" (mm)
10.2	17.4	20.7	22.4

MOTIVOS DE LA EXTENSIÓN / REASONS OF EXTENSION

Nueva posición vertical añadida para la lámpara instalada / *New lamp fitted posiiton added VERTICAL*

Lugar del ensayo / *Test place:* L'Albornar, E-43710 Santa Oliva (Tarragona)

Fecha del ensayo / *Test date:* 20/12/2023-21/12/2023

Joan Fonts Sala
INGENIERO DE ENSAYOS
TEST ENGINEER

- * LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
- * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
- * EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.
MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
- * LA REGLA DE DECISIÓN UTILIZADA, SEGÚN LA NORMA ILAC-G8, HA SIDO LA DECLARACIÓN BINARIA DE ACEPTACIÓN SIMPLE
THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

INFORMATION FOLDER:

FIRST APPLICATION
DATE: 10.01.2024

1. Specification data

Type	FT-130 COF	
Trade name or mark	Fristom	
Variants	See drawing	
Function	reflex reflector cat IA;stop S1;direction indicator 2a;position light R1;registration plate light L;reversing light AR	
Color	red;amber or white light color	
Rated	Voltage	see drawing
	Wattage	see drawing
Applicable Regulation	R03;R04;R06;R07;R23	
Light Source and connection	See drawing	
Location of marking	Light Source marks	See the drawing
	Trade mark	See the drawing
	Approval mark	See the drawing

2. Construction and material

Construction	Material	Remarks
Lenses	Defined on the technical drawing	--
Reflectors	Defined on the technical drawing	--
Bases	Defined on the technical drawing	--

3. Name and address of manufacturer:

FRISTOM Spółka z ograniczoną odpowiedzialnością Spółka komandytowa
86-014 Sicienko / Polska
ul. Przemysłowa 5
NIP: 5542926937, KRS: 0000529238
Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41

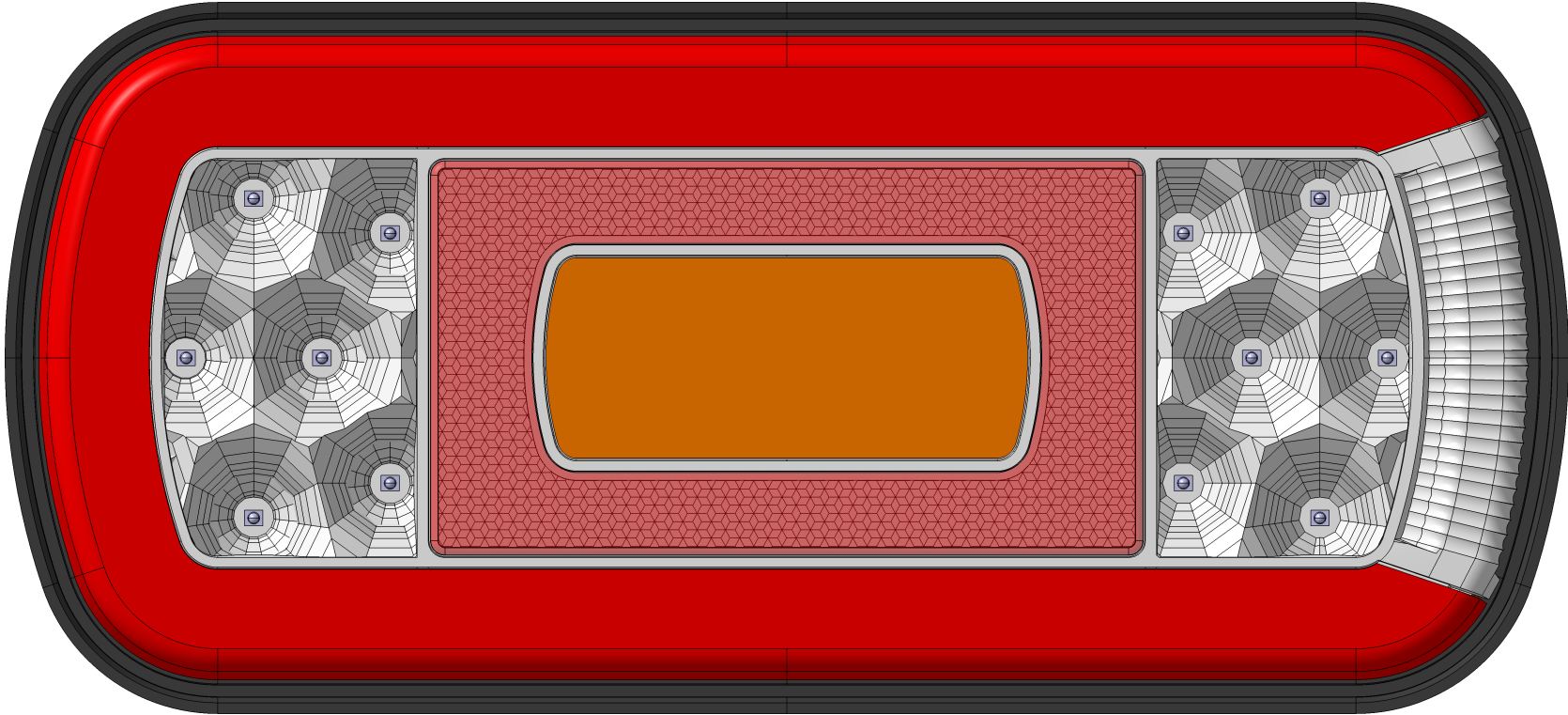
4. REASON OF THE APPROVAL EXTENSION:

- new lamp fitting position added VERTICAL

NOTE : APPROVAL MARKINGS ARE SHOWN IN THE ATTACHED DRAWING.
THIS INFORMATION FOLDER CONSISTS OF 1 PAGES

Manufacturer: FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K. 86-014 Sicienko / Polska ul. Przemysłowa 5 NIP: 5542926937, KRS: 0000529238 Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41 Fristom			Type: FT-130 COF LED multifunction rear lamp		Material used in manufacturing - lampshade PC clear transparent - housing ABS black - red filter insert PMMA milky red - amber filter insert PMMA amber - reflex reflector PMMA red - potting compound epoxy resin - printed circuit board type FR4 - reflector ABS white PVD coated
Drawn by: Karol Jonoszak	Date: 05-01-2024	Sheet: 1 of 16	Light source: - light source light 20 LED chip's red light color - light source stop light 6 LED chip's red light color - light source fog light 6 LED chip's red light color - light source registration plate light 6 LED chip's white light color - light source direction indicator light 4 LED chip's amber light color	Description: front lamp view general view This drawing is a part of the application for approval extension	

left lamp front view ,
right lamp is a mirror



Manufacturer:
FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K.
86-014 Sicienko / Polska
ul. Przemysłowa 5
NIP: 5542926937, KRS: 0000529238
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Drawn by: Karol Jonoszak	Date: 05-01-2024	Sheet: 2 of 16
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Type:
FT-130 COF
LED multifunction rear lamp

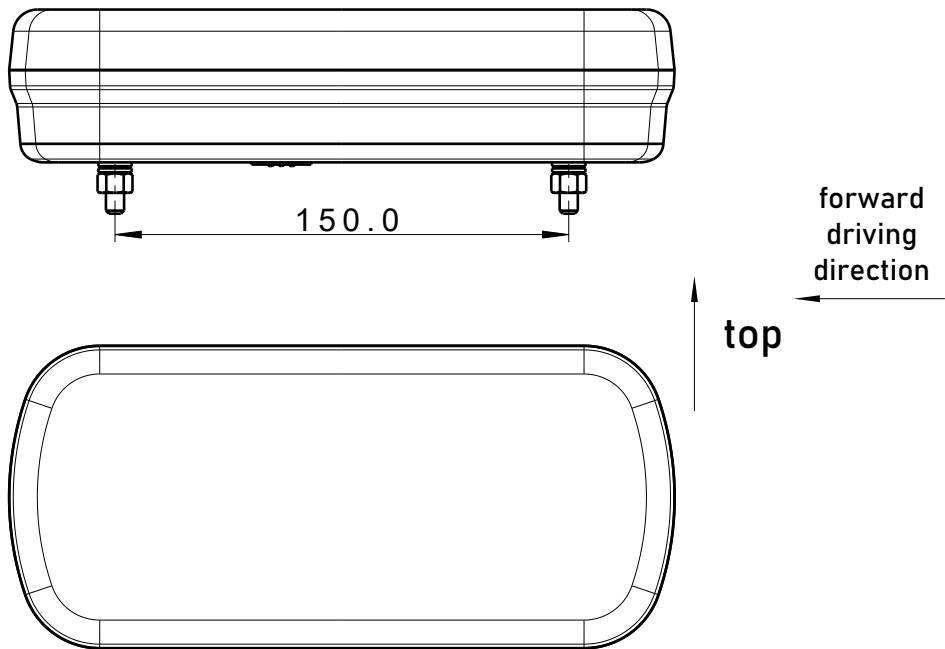
Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
installation on the vehicle
This drawing is a part of the application for approval extension

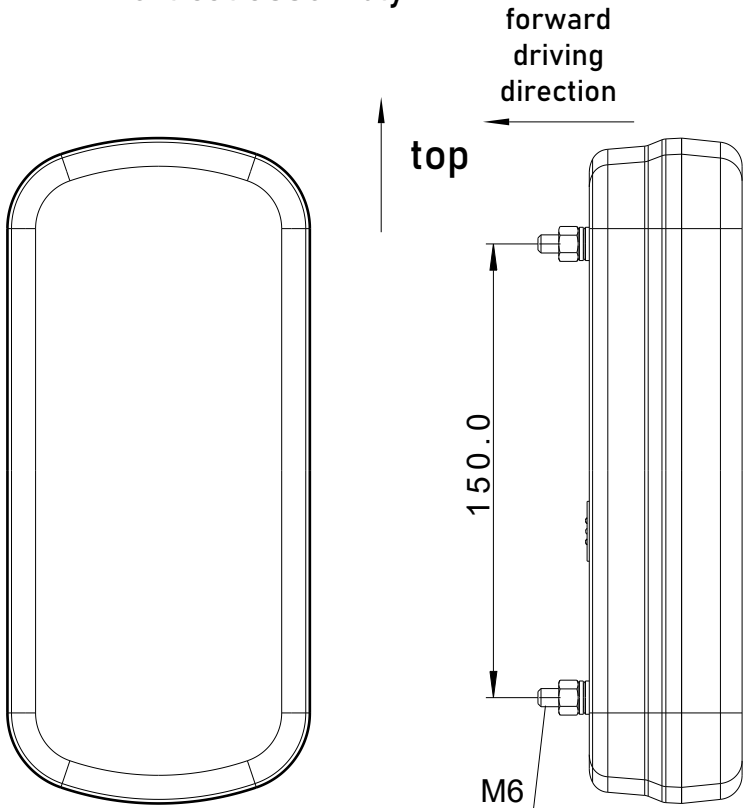
Material used in manufacturing

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

Horizontal assembly



Vertical assembly



Manufacturer:
FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K.
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 3 of 16

Type: FT-130 COF

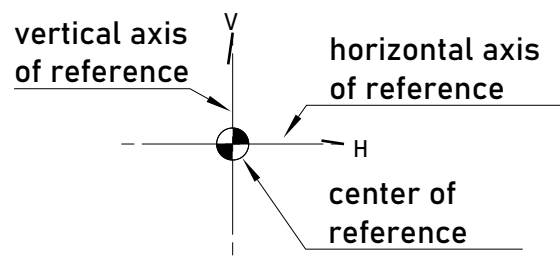
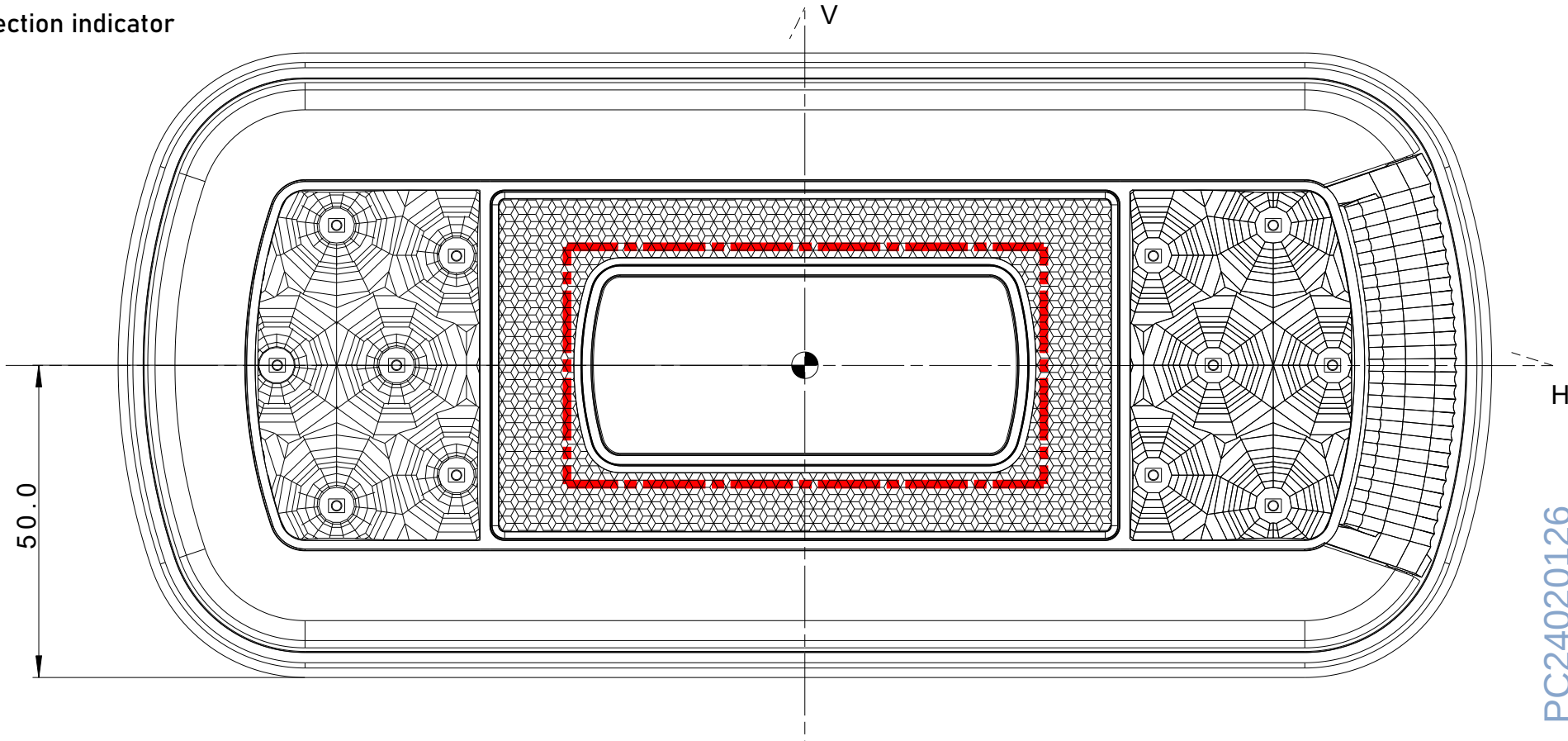
LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
lamp functions
This drawing is a part of the application for approval extension

- Material used in manufacturing :
- lampshade PC clear transparent
 - housing ABS black
 - red filter insert PMMA milky red
 - amber filter insert PMMA amber
 - reflex reflector PMMA red
 - potting compound epoxy resin
 - printed circuit board type FR4
 - reflector ABS white PVD coated

function: rear direction indicator



Manufacturer:
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Type: FT-130 COF

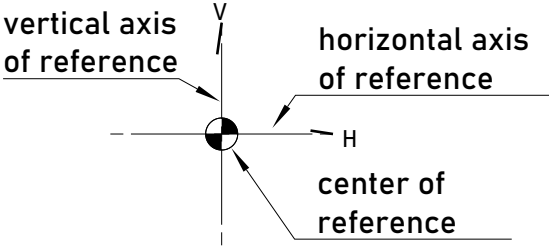
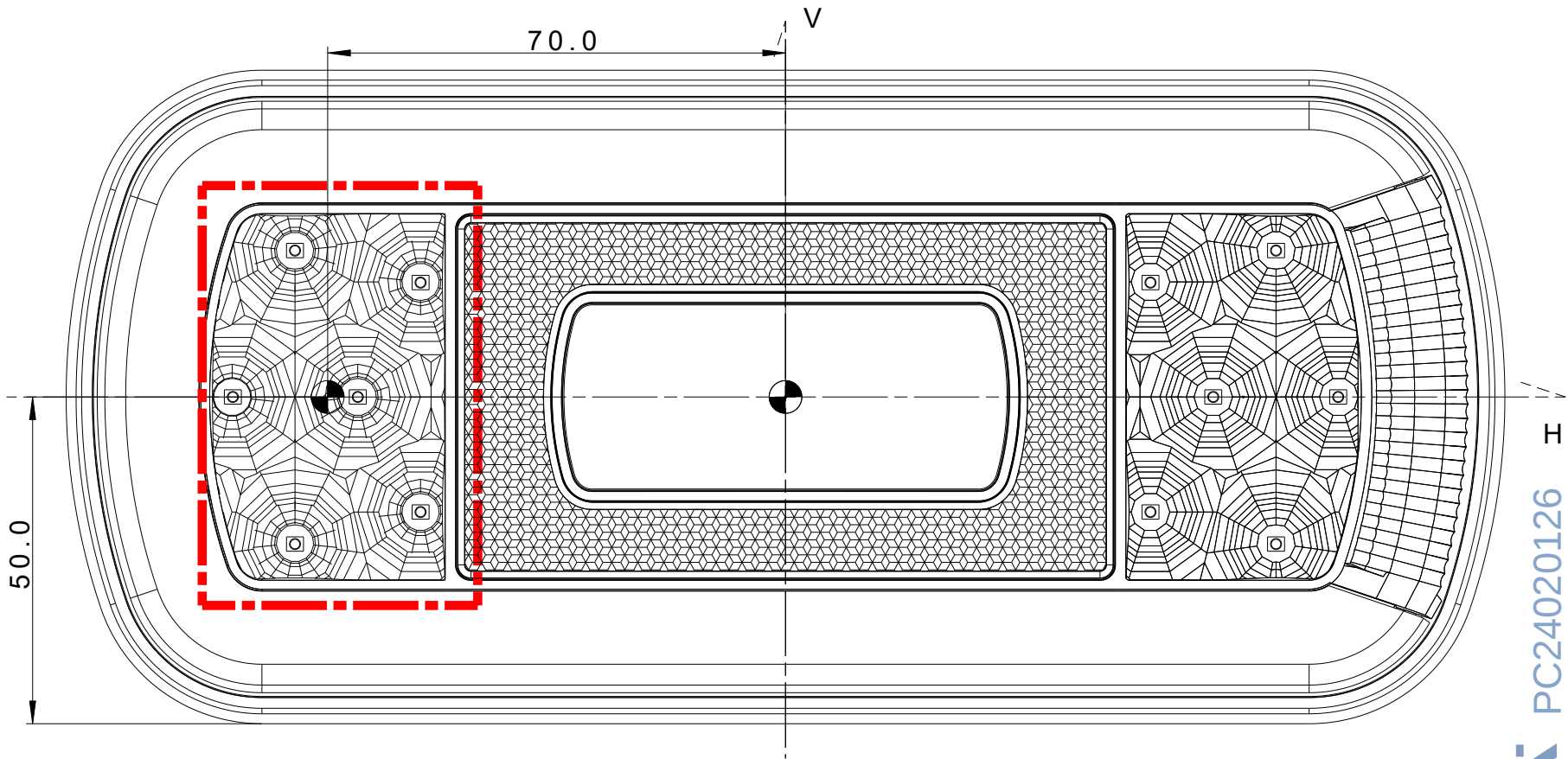
LED multifunction rear lamp

Light source:
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Description:
lamp functions
This drawing is a part of the application for approval extension

Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

function: reversing light



Manufacturer:
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Date: 05-01-2024
Sheet: 5 of 16

Type:
FT-130 COF

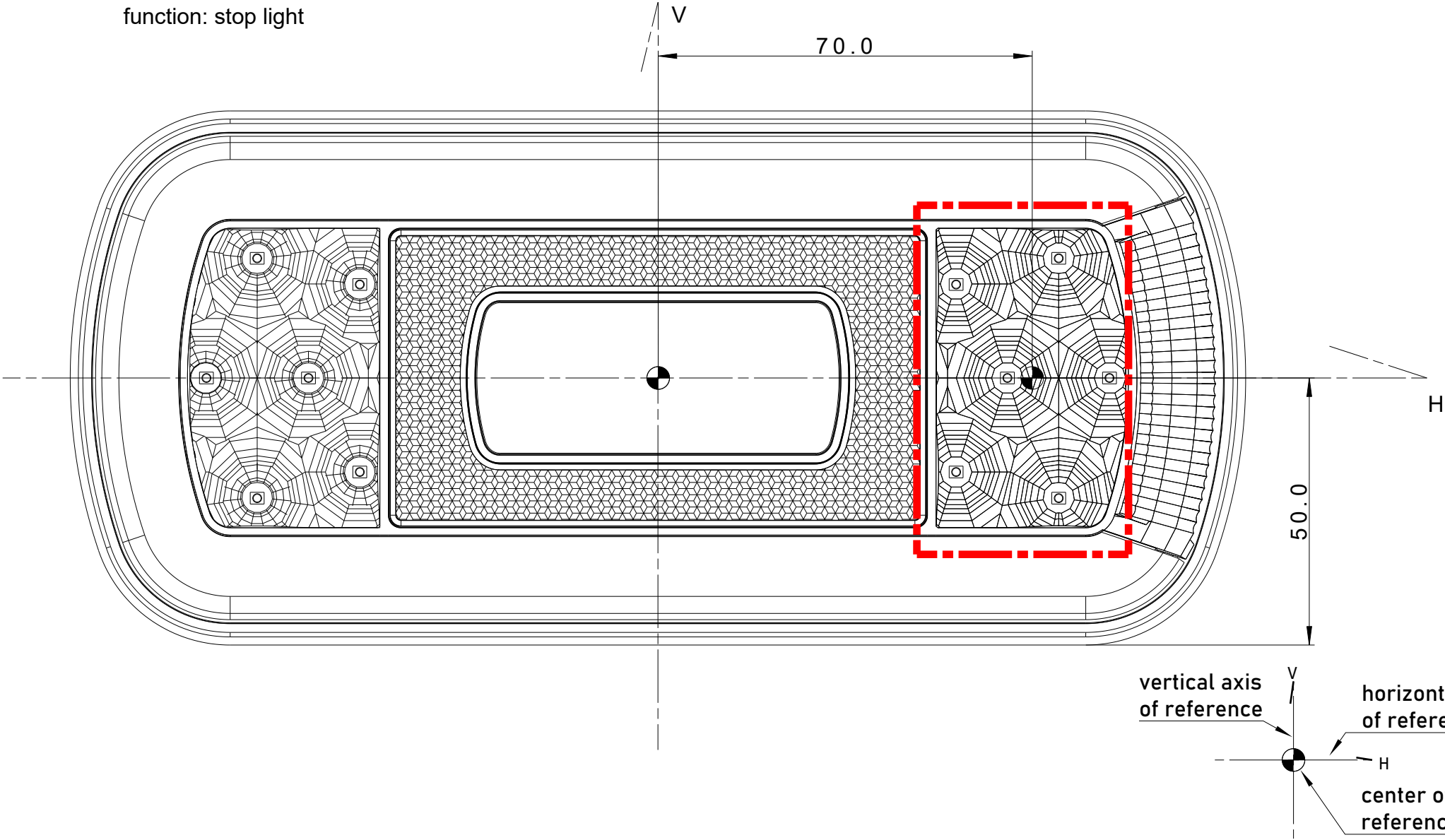
LED multifunction rear lamp

Light source:
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- light source stop light 6 LED chip's red light color
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- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
lamp functions
This drawing is a part of the application for approval extension

Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

function: stop light



iDiAŚA PC24020126

Manufacturer:
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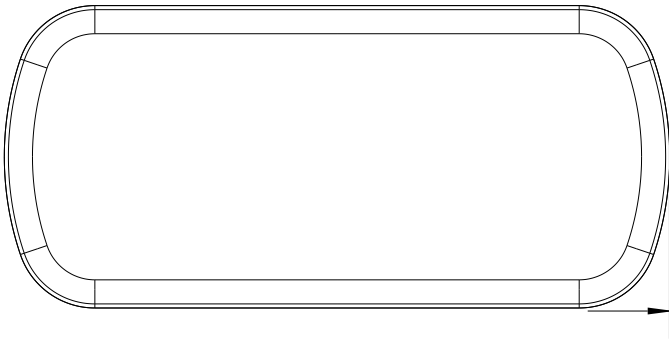
Type:
FT-130 COF

LED multifunction rear lamp

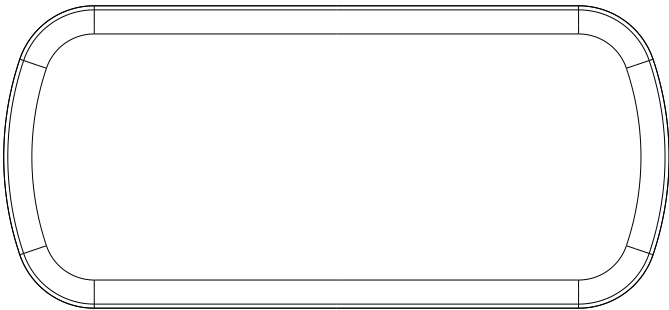
Light source:
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- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
registration plate assembly
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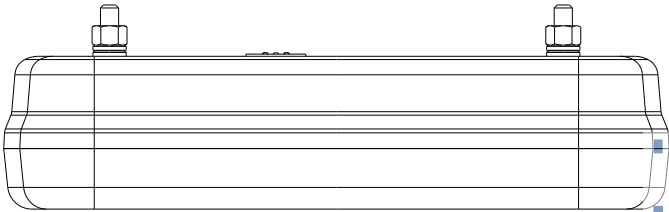
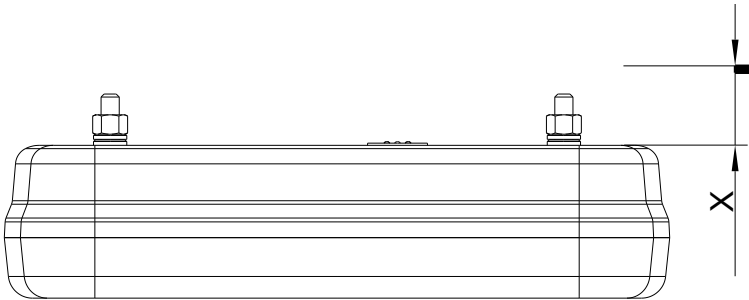
Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated



registration plate 520x120



assembly position for registration plate	
X	Y
0-20	30-200
mm	



Manufacturer:
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Date: 05-01-2024
Sheet: 7 of 16

Type: FT-130 COF

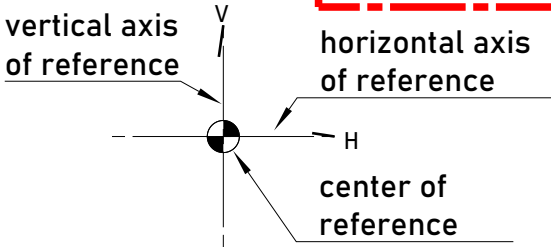
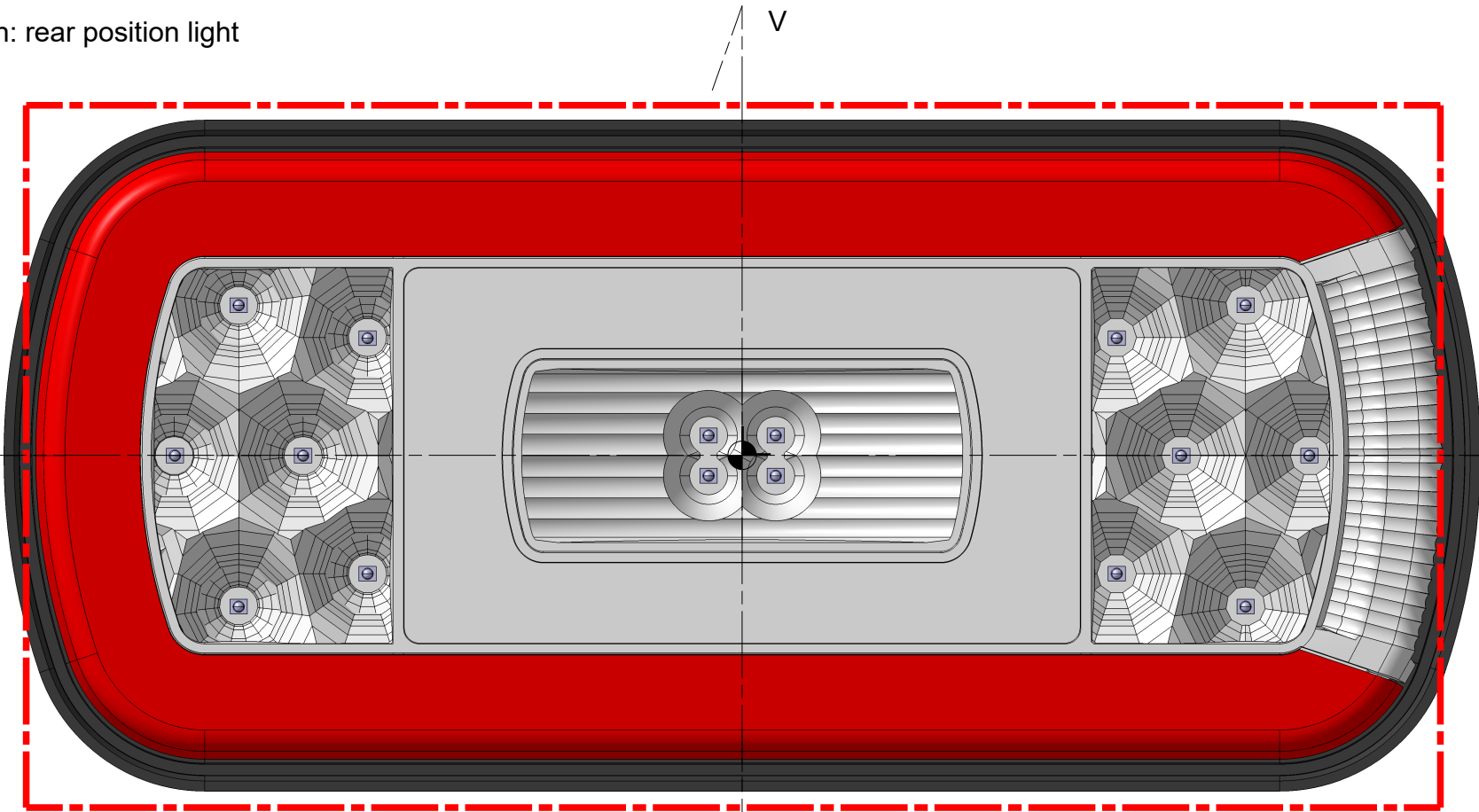
LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
lamp functions
This drawing is a part of the application for approval extension

Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

function: rear position light



Manufacturer:
FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K.
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 8 of 16

Type: FT-130 COF

LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

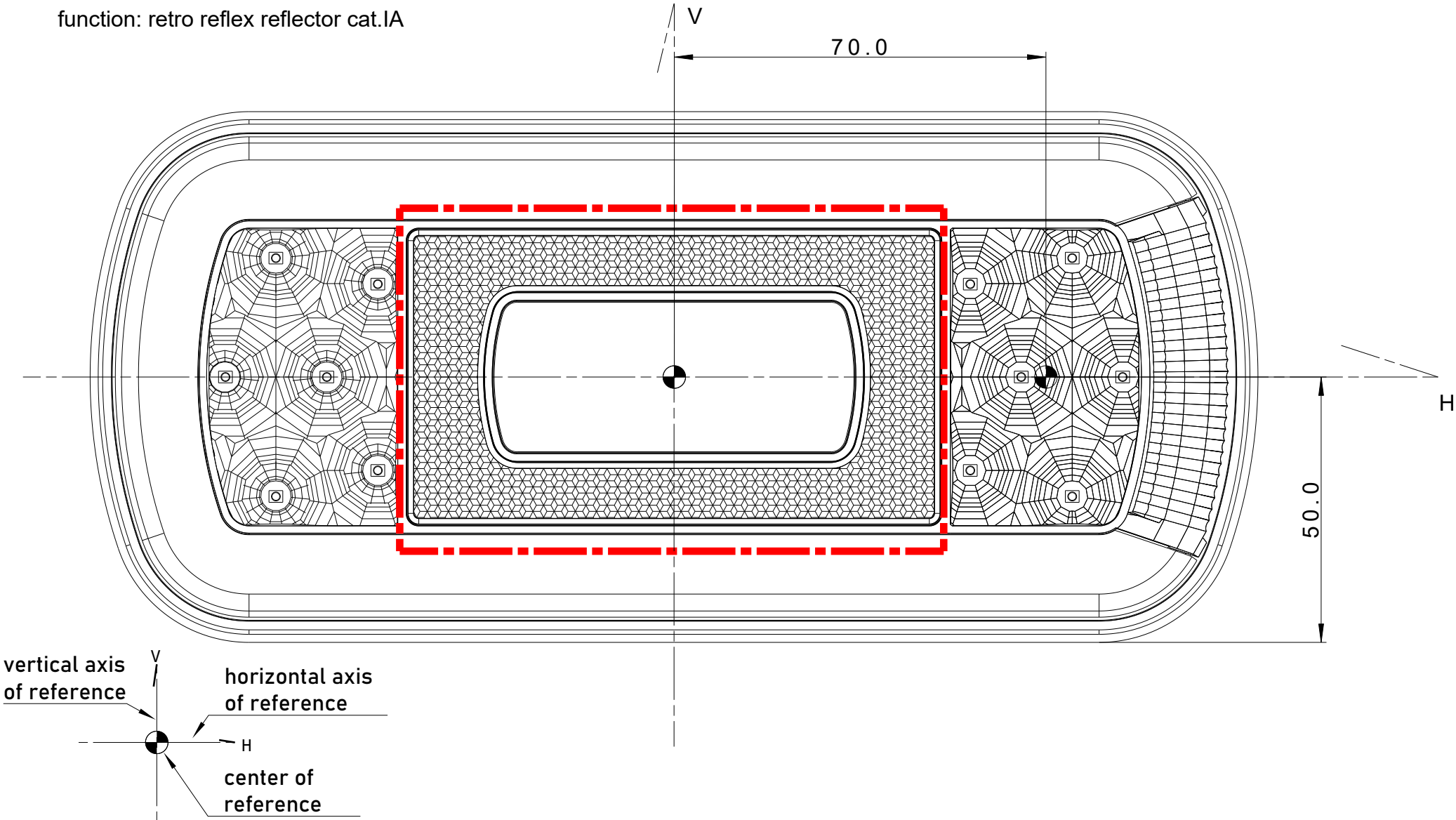
Description:

lamp functions
This drawing is a part of the application for approval extension

Material used in manufacturing :

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

function: retro reflex reflector cat.IA



Manufacturer:
FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K.
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Drawn by:	Date:	Sheet:
Karol Jonoszak	05-01-2024	9 of 16

Type: FT-130 COF

LED multifunction rear lamp

Light source:

- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

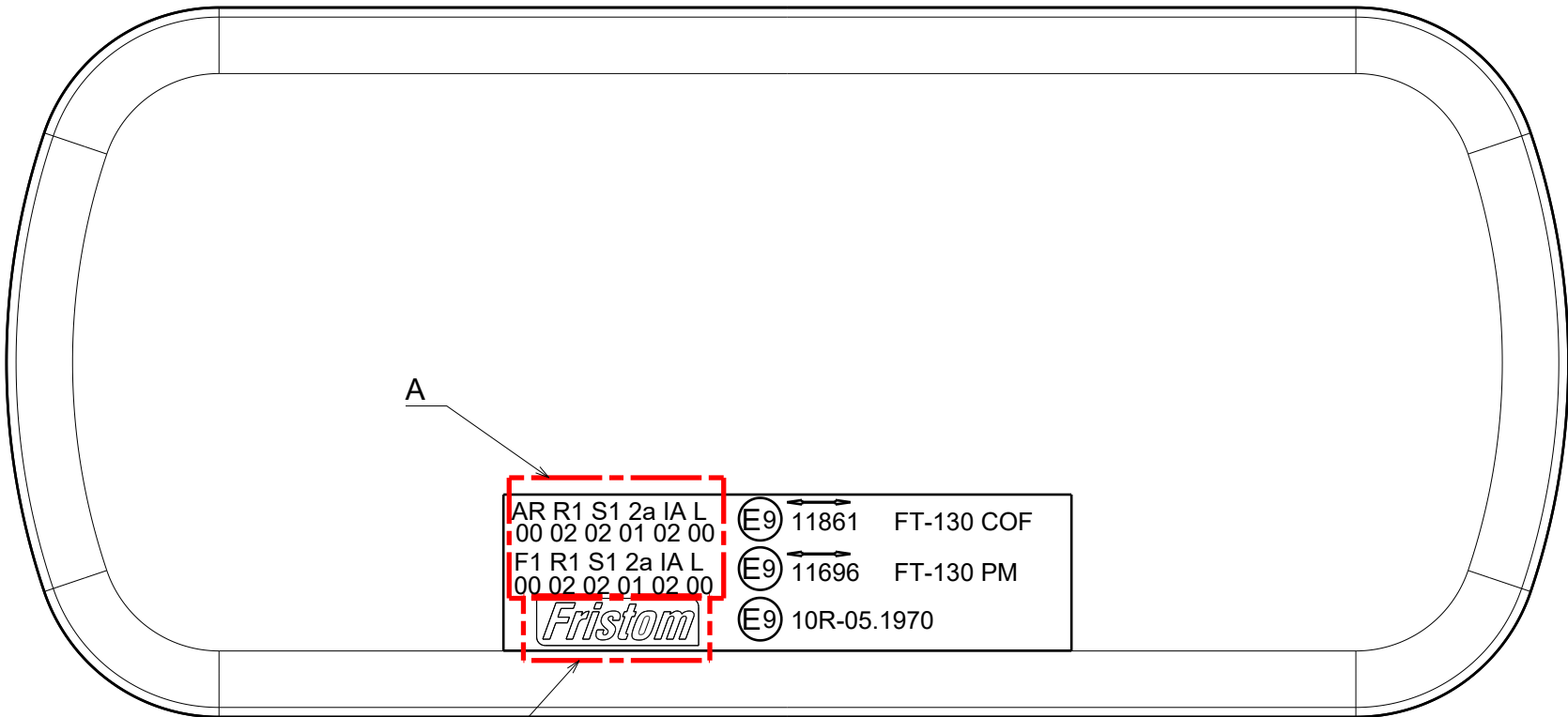
Description:

approval markings

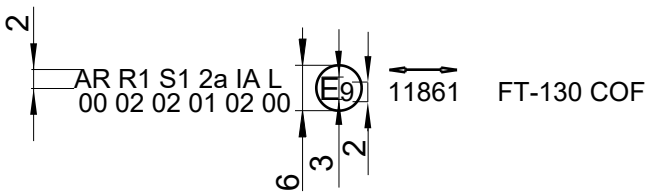
This drawing is a part of the application for approval extension

Material used in manufacturing :

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

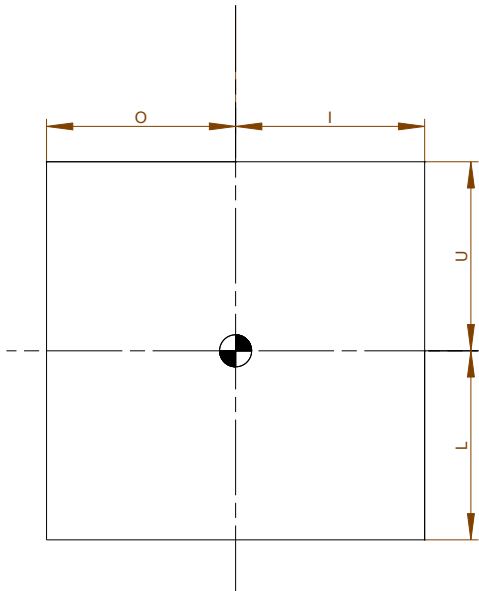


approval marking dimensions



A	approval numbers
B	trademark

Manufacturer: FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K. 86-014 Sicienko / Polska ul. Przemysłowa 5 NIP: 5542926937, KRS: 0000529238 Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41		Type: FT-130 COF		Material used in manufacturing : - lampshade PC clear transparent - housing ABS black - red filter insert PMMA milky red - amber filter insert PMMA amber - reflex reflector PMMA red - potting compound epoxy resin - printed circuit board type FR4 - reflector ABS white PVD coated	
		LED multifunction rear lamp			
		Light source: - light source light 20 LED chip's red light color - light source stop light 6 LED chip's red light color - light source fog light 6 LED chip's red light color - light source registration plate light 6 LED chip's white light color - light source direction indicator light 4 LED chip's amber light color		Description: illumination surface This drawing is a part of the application for approval extension	
Drawn by: Karol Jonoszak	Date: 05-01-2024	Sheet: 10 of 16			



surface dimensions				
function	U (upper limit) [mm]	L (lower limit) [mm]	O (outer limit) [mm]	I (inner limit) [mm]
rear direction indicator	14	14	34	34
reversing light	28	28	18	18
rear fog light	28	28	18	18
stop light	28	28	18	18
rear position light	41	41	98	98

Determining the lower , upper and lateral limits of the illumination surface of the lamp device.
According to European Directive 91/663/EEC , Annex I "Instalation of lighting and light-signalling devices" clause 1.9.2.
According to ECE regulation 48/06 "Instalation of light and light-signalling devices" clause 2.10.3.2.

Manufacturer: FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K. 86-014 Sicienko / Polska ul. Przemysłowa 5 NIP: 5542926937, KRS: 0000529238 Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41			Type: FT-130 COF		Material used in manufacturing : - lampshade PC clear transparent - housing ABS black - red filter insert PMMA milky red - amber filter insert PMMA amber - reflex reflector PMMA red - potting compound epoxy resin - printed circuit board type FR4 - reflector ABS white PVD coated	
			LED multifunction rear lamp			
Drawn by: Karol Jonoszak			Date: 05-01-2024	Sheet: 11 of 16	Light source: - light source light 20 LED chip's red light color - light source stop light 6 LED chip's red light color - light source fog light 6 LED chip's red light color - light source registration plate light 6 LED chip's white light color - light source direction indicator light 4 LED chip's amber light color	Description: tradenames This drawing is a part of the application for approval

Indeks	Description
FT-130 COF LED	6-functional LED rear lamp with the position, reversing, STOP, an indicator and a number plate lights with reflector, 1 m cable.
FT-130 COF LED Mxx	6-functional LED rear lamp with the position, reversing, STOP, an indicator and a number plate lights with reflector, Mxx cable.
FT-130 COF LED BAJONET	6-functional LED rear lamp with the position, reversing, STOP, an indicator and a number plate lights and reflector, 5PIN Bayonet connector.
FT-130 NT COF LED	5-functional LED rear lamp with the position, reversing, STOP, an indicator lights without a number plate light with reflector, 1 m cable.
FT-130 NT COF LED Mxx	5-functional LED rear lamp with the position, reversing, STOP, an indicator lights without a number plate light with reflector, Mxx cable.
FT-130 NT COF LED BAJONET	5-functional LED rear lamp with the position, reversing, STOP, an indicator lights without a number plate lights with reflector, 5PIN Bayonet connector.

* where "x" is a digit between 0-9

Manufacturer:
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 12 of 16

Type: FT-130 COF

LED multifunction rear lamp

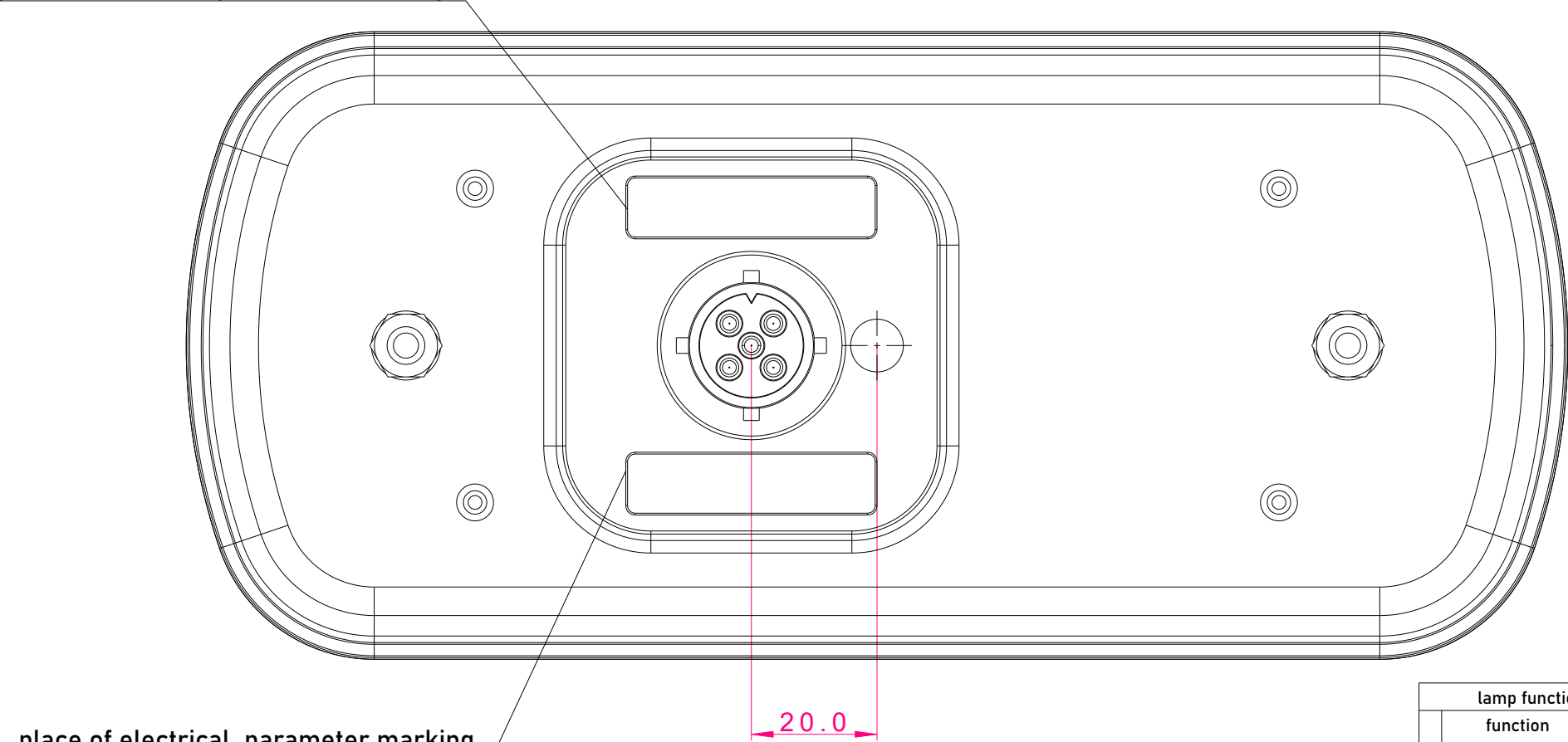
Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
bajonet plug lamp version
electric parameters
This drawing is a part of the application for approval extension

Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated

place of electrical parameter marking

Right lamp



place of electrical parameter marking

lamp function and electric power		
	function	electrical power
1	direction indicator	12V/24V - 1,5W/3W
2	stop light	12V/24V - 1W/2W
3	rear position light	12V/24V - 3W/5W
4	reversing light	12V/24V - 3,5W/3,5W
5	registration plate light	12V/24V - 3W/5W

PC24020126



Manufacturer:
FRISTOM Spółka z ograniczoną odpowiedzialnością Sp.K.
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 13 of 16

Type:
FT-130 COF

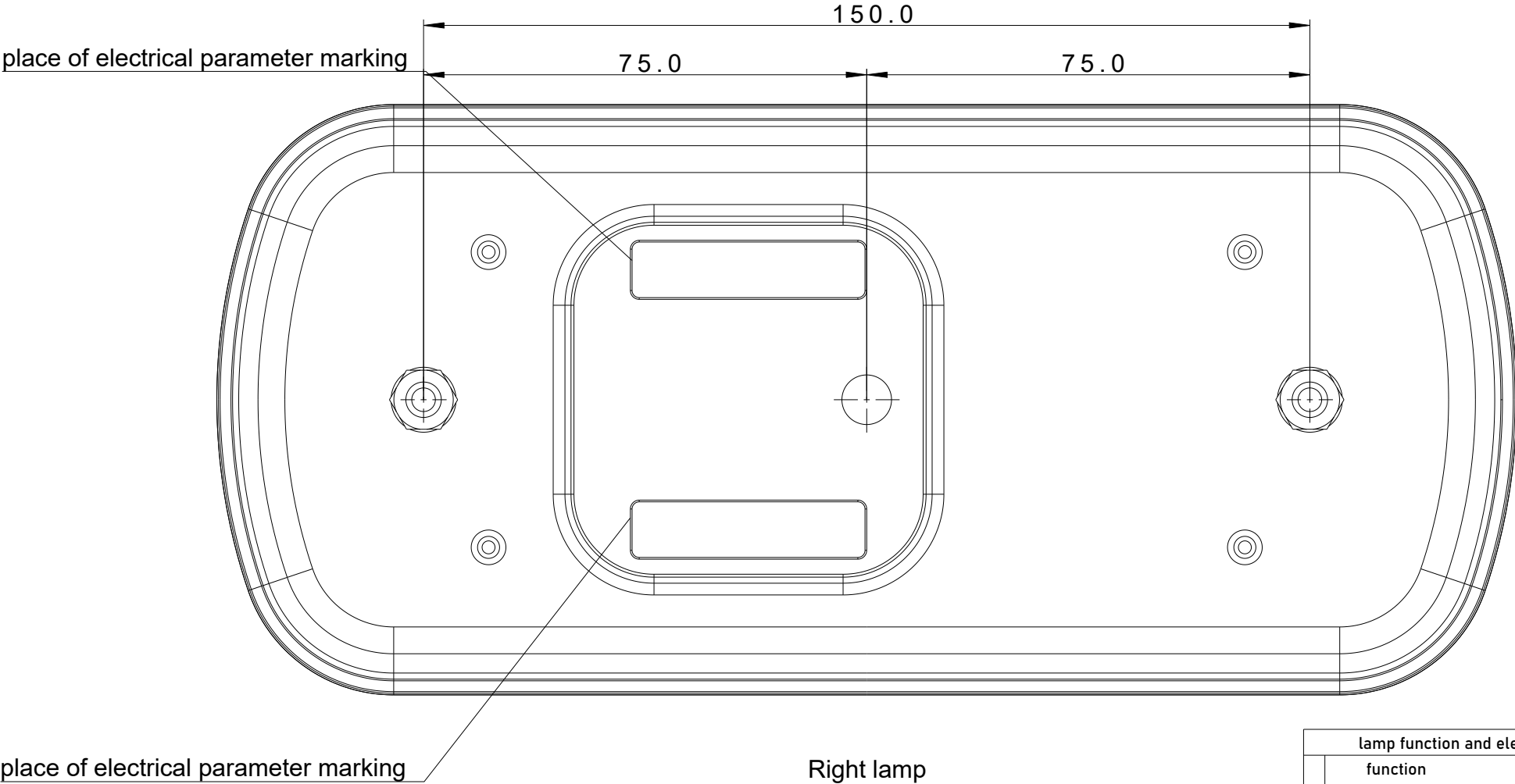
LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
cable version lamp
electric parameters
This drawing is a part of the application for approval extension

Material used in manufacturing :

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated



Right lamp

lamp function and electric power		
	function	electrical power
1	direction indicator	12V/24V - 1,5W/3W
2	stop light	12V/24V - 1W/2W
3	rear position light	12V/24V - 3W/5W
4	reversing light	12V/24V - 3,5W/3,5W
5	registration plate light	12V/24V - 3W/5W

Manufacturer:
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 14 of 16

Type:
FT-130 COF

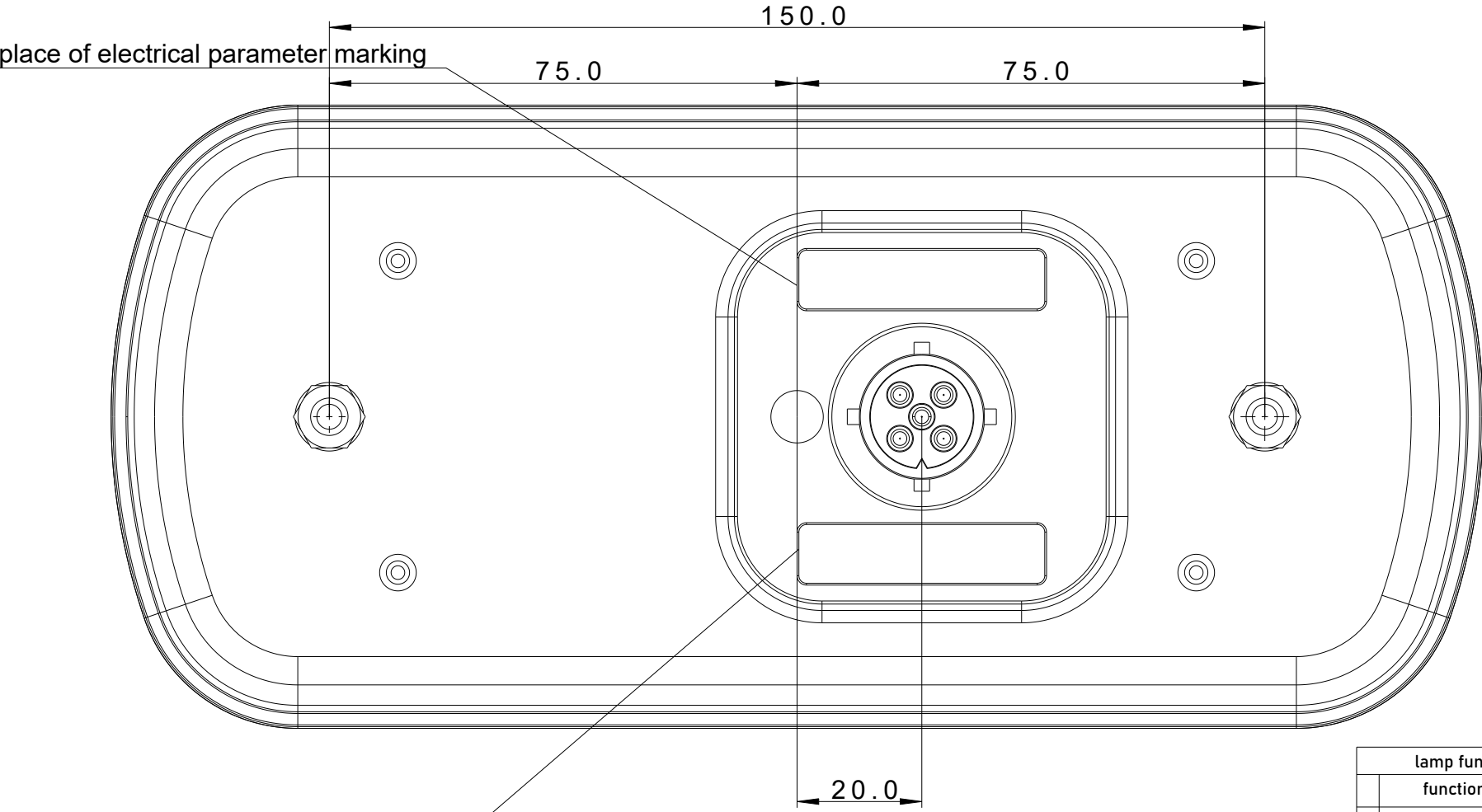
LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
bajonet plug version lamp
electric parameters
This drawing is a part of the application for approval extension

Material used in manufacturing :

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated



place of electrical parameter marking

Left lamp

lamp function and electric power		
	function	electrical power
1	direction indicator	12V/24V - 1,5W/3W
2	stop light	12V/24V - 1W/2W
3	rear position light	12V/24V - 3W/5W
4	reversing light	12V/24V - 3,5W/3,5W
5	registration plate light	12V/24V - 3W/5W

Manufacturer:
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Drawn by: Karol Jonoszak	Date: 05-01-2024	Sheet: 15 of 16
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Type:
FT-130 COF

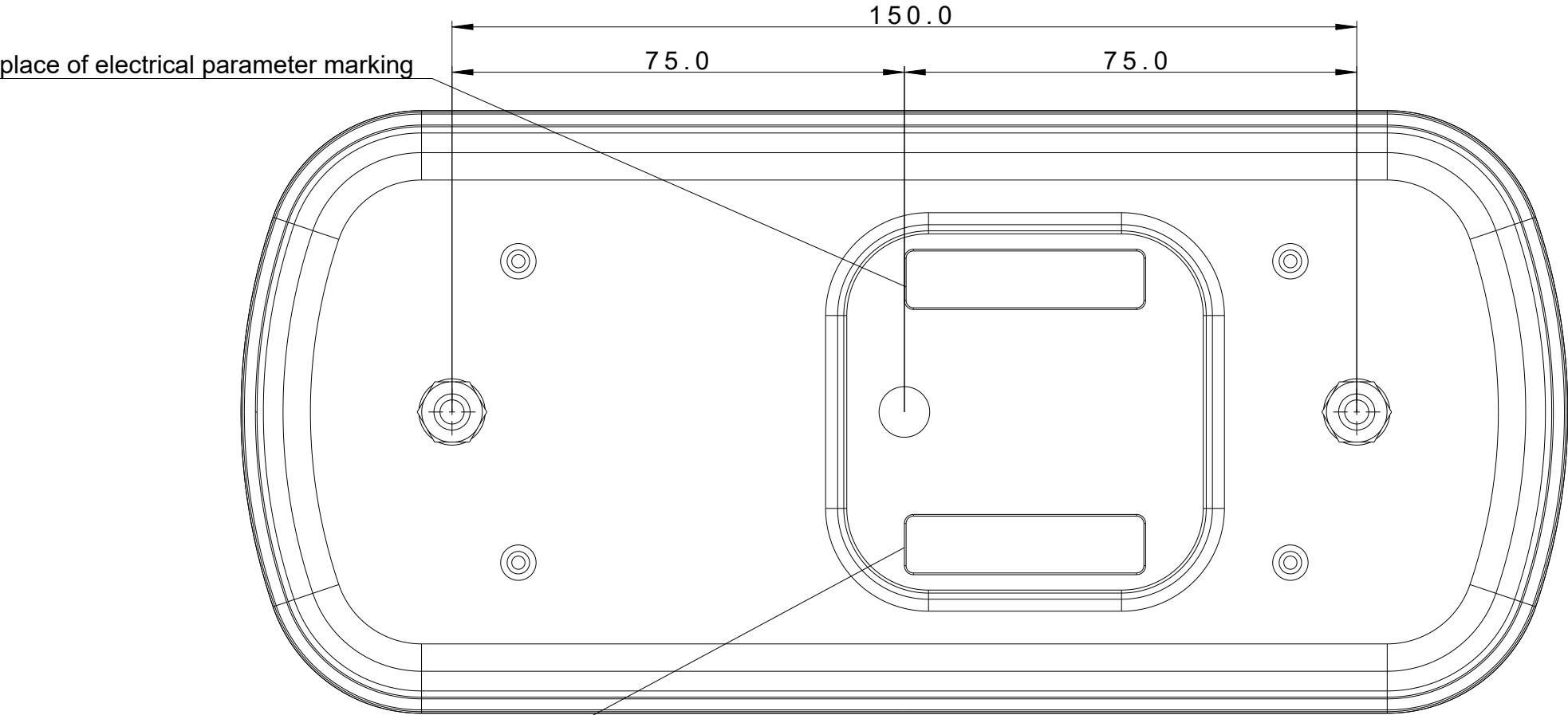
LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
cable version lamp
electric parameters
This drawing is a part of the application for approval extension

Material used in manufacturing :

- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- reflector ABS white PVD coated



place of electrical parameter marking

Left lamp

lamp function and electric power		
	function	electrical power
1	direction indicator	12V/24V - 1,5W/3W
2	stop light	12V/24V - 1W/2W
3	rear position light	12V/24V - 3W/5W
4	reversing light	12V/24V - 3,5W/3,5W
5	registration plate light	12V/24V - 3W/5W

Manufacturer:
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Drawn by: Karol Jonoszak
Date: 05-01-2024
Sheet: 16 of 16

Type:
FT-130 COF

LED multifunction rear lamp

Light source:
- light source light 20 LED chip's red light color
- light source stop light 6 LED chip's red light color
- light source fog light 6 LED chip's red light color
- light source registration plate light 6 LED chip's white light color
- light source direction indicator light 4 LED chip's amber light color

Description:
led connection
This drawing is a part of the application for approval extension

Material used in manufacturing :
- lampshade PC clear transparent
- housing ABS black
- red filter insert PMMA milky red
- amber filter insert PMMA amber
- reflex reflector PMMA red
- potting compound epoxy resin
- printed circuit board type FR4
- white reflector PMMA white

