



E9\*4R00/19\*23098\*02

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COMUNICACIÓN / COMMUNICATION:

Concerniente a <sup>(1)</sup>: ~~LA CONCESIÓN DE HOMOLOGACIÓN~~  
~~LA EXTENSIÓN DE HOMOLOGACIÓN~~  
~~LA DENEGACIÓN DE HOMOLOGACIÓN~~  
~~LA RETIRADA DE HOMOLOGACIÓN~~  
~~EL CESE DEFINITIVO DE PRODUCCIÓN~~

Concerning <sup>(1)</sup>: ~~APPROVAL GRANTED~~  
~~APPROVAL EXTENDED~~  
~~APPROVAL REFUSED~~  
~~APPROVAL WITHDRAWN~~  
~~PRODUCTION DEFINITELY DISCONTINUED~~

de un tipo de dispositivo de alumbrado de placa de matrícula trasera de los vehículos a motor (excepto las motocicletas) y sus remolques en aplicación del Reglamento N° 4.  
*of a type of device for the illumination of rear registration plates of motor vehicles (except for motorcycles) and their trailers pursuant to Regulation No. 4.*

N° de homologación / Approval No.: E9\*4R00/19\*23098\*02

Extensión N° / Extension No.: 2

1. Marca de fábrica o comercial del dispositivo / Trade name or mark of the device: FRISTOM
2. Designación del tipo de dispositivo dado por el fabricante / Manufacturer's name for the type of device: FT-270 LED
3. Nombre y dirección del fabricante / Manufacturer's name and address:  
FRISTOM SPÓLKA Z OGRANICZONA  
ODPOWIEDZIALNOSCIA SPÓLKA  
KOMANDYTOWA  
UL. PRZEMYSŁOWA 5, 86-014  
85416 SICIENKO  
SICIENKO (POLONIA)

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. En su caso, nombre y dirección del representante del fabricante / If applicable, name and address of manufacturer's representative: ---
5. Dispositivo presentado a homologación el / Submitted for approval on: 07/04/2021
6. Servicio técnico encargado de los ensayos de homologación / Technical service responsible for conducting approval test: IDIADA
7. Fecha del informe emitido por dicho servicio / Date of report issued by that service: 27/04/2021

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





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8. Número del informe emitido por dicho servicio / *Number of report issued by that service*: PC19060177, PC20020156, PC20050213, **PC21050060**
9. Breve descripción / *Concise description*:
- Dispositivo destinado a la iluminación / *Device for illuminating*:  
Categoría / *Category* ~~1a~~ / 1b ~~1e~~ / **2a** / ~~2b~~ <sup>(1)</sup>  
  
de un emplazamiento alto / *a tall plate* <sup>(4)</sup>  
de un emplazamiento largo / *a wide plate* <sup>(1)</sup>  
de un emplazamiento para tractores agrícolas o forestales / *a plate for agricultural or forestry tractors* <sup>(1)</sup>
  - Número y categoría(s) de la(s) fuente(s) luminosa(s) / *Number and category(ies) of light source(s)*:  
3xLEDs
  - Módulo de fuente de luz / *Light source module*: ~~si~~ / yes - no / no <sup>(1)</sup>
  - Código de identificación específico del módulo de fuente de luz / *Light source module specific identification code*: ---
  - 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)*: ---
10. Posición de la marca de homologación / *Position of the approval mark*: Ver documentación suministrada por el fabricante / *See documentation supplied by the manufacturer*.
11. Motivos de la extensión (en su caso) / *Reason(s) of extension (if applicable)*:
- a) Dimensiones físicas del reflector de categoría IIIA se corrigen de acuerdo a: / *Physical dimensions of reflex reflector cat. IIIA have been corrected according to*: R003 – E/ECE/324/Add.2/Rev.4 E/ECE/TRANS/505/Add.2/Rev.4 Annex 5-par 2.6
  - b) Se añade esquema de conexiones LED / *Scheme of LED connections has been added*

<sup>(1)</sup> Táchese lo que no proceda / *Strike out what does not apply*





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12. Se ~~concede~~/deniega/extiende/retira la homologación <sup>(1)</sup> / ~~Approval granted/refused/extended/withdrawn~~ <sup>(1)</sup>

13. Lugar / Place: Madrid

14. Fecha / Date: Ver firma electrónica / See electronic signature

15. Firma / Signature:

EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL  
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012

16. Se adjunta la lista de apartados que constituyen el expediente de homologación depositado en el servicio administrativo que ha concedido la homologación y que pueden ser obtenidos a petición. / *The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.*

- Informe del ensayo / *Test report*
- Documentación suministrada por el fabricante / *Documentation supplied by the manufacturer*

<sup>(1)</sup> Táchese lo que no proceda / *Strike out what does not apply*







**INFORME N° / REPORT No.: PC21050060**

RELATIVO A LA EXTENSIÓN DE HOMOLOGACIÓN DE LOS DISPOSITIVOS DE ALUMBRADO DE LA PLACA TRASERA DE MATRÍCULA SEGÚN EL REGLAMENTO ECE 4.00 / *CONCERNING THE APPROVAL EXTENDED OF DEVICES FOR THE ILLUMINATION OF REAR REGISTRATION PLATES ACCORDING TO REGULATION 4.00 ECE*

**EXTENSIÓN III / EXTENSION III**

Nombre y dirección del fabricante /  
*Manufacturer's name and address* : FRISTOM SPÓLKA Z OGRANICZONA  
ODPOWIEDZIALNOSCIA SPÓLKA  
KOMANDYTOWA  
UL. PRZEMYSLOWA 5, 86-014  
85416 SICIENKO  
SICIENKO (POLONIA)

Marca comercial / *Trade mark* : FRISTOM

Tipo / *Type* : FT-270 LED

Lugar y fecha de emisión del informe /  
*Place and date of test report issue* : L'Albornar, Santa Oliva (Tarragona)  
27/04/2021

**CONCLUSIONES / CONCLUSIONS:** Las modificaciones introducidas, que se detallan en el Anexo a este Informe, son objeto de extensión de homologación respecto al tipo homologado por este servicio (Informe N° PC19060177, PC20020156, PC20050213) **CUMPLE** las prescripciones relativas a la homologación de dispositivos de alumbrado de la placa trasera de matrícula de categoría 1a y 1b de los vehículos a motor en aplicación del Reglamento 4.00 / *Modifications introduced, as detailed in the Annex attached to this report, are extension of homologation with respect to formerly certified type performed by this technical department (Test Report No. PC19060177, PC20020156, PC20050213) FULFILLS the prescriptions with regard to the approval of the devices for the illumination of rear registration plates of category 1a and 1b of motor vehicles in application of Regulation 4.00*

Realizado/ *Performed by*

Joan Fonts Sala  
INGENIERO DE ENSAYOS  
TEST ENGINEER

V. B°./ *Revised by:*

Ramon Santafè Guiu  
JEFE DE DEPARTAMENTO  
DEPARTMENT MANAGER



## ANEXO AL INFORME

## ANNEX TO THE REPORT

RELATIVO A LA EXTENSIÓN DE HOMOLOGACIÓN DE LOS DISPOSITIVOS DE ALUMBRADO DE LA PLACA TRASERA DE MATRÍCULA SEGÚN EL REGLAMENTO ECE 4.00 / CONCERNING THE APPROVAL EXTENDED OF DEVICES FOR THE ILLUMINATION OF REAR REGISTRATION PLATES ACCORDING TO REGULATION 4.00 ECE

Nombre y dirección del fabricante /  
Manufacturer's name and address : FRISTOM SPÓLKA Z OGRANICZONA  
ODPOWIEDZIALNOSCIA SPÓLKA  
KOMANDYTOWA  
UL. PRZEMYSŁOWA 5, 86-014  
85416 SICIENKO  
SICIENKO (POLONIA)

Marca comercial / Trade mark : FRISTOM

Tipo / Type : FT-270 LED

Identificación de las muestras /  
Sample identification : HTC-2104/0194

Categoría de la placa de matrícula /  
Category of rear registration plate lamp \* : ~~Categoría 1a / Category 1a (340 mm x 240 mm)~~  
~~- Categoría 1b / Category 1b (520 mm x 120 mm)~~  
~~- Categoría 1c / Category 1c (255 mm x 165 mm)~~  
~~- Categoría 2a / Category 2a (330 mm x 165 mm)~~  
~~- Categoría 2b / Category 2b (440 mm x 220 mm)~~

Número de dispositivos /  
Number of devices : 2

Número y categoría(s) de la(s) fuente(s) luminosa(s) en cada dispositivo /  
Light source(s) number and category(ies) in each device : 3 x LEDs

Módulo de fuente luminosa /  
Light source module \* : Si / Yes – No / No

Código específico de identificación del módulo de fuente luminosa /  
Light source module specific identification code: ----

\* Táchese lo que no proceda / Strike out what does not apply

\* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.  
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE

\* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN



**MOTIVO DE EXTENSIÓN/ REASON OF EXTENSION:**

- a) Dimensiones físicas del reflector de categoría IIIA se corrigen de acuerdo a: / *Phyycal dimensions of réflex reflector cat. IIIA han been corrected according to:* R003 – E/ECE/324/Add.2/Rev.4 E/ECE/TRANS/505/Add.2/Rev.4 Annex 5-par 2.6
- b) Se añade esquema de conexiones LED / *Scheme of LED connections has been added*

Validate this report with the security code «QZY0SBU3» at: <https://extranet.idiada.com/hom-cve>  
Verifique el informe con código de seguridad «QZY0SBU3» en: <https://extranet.idiada.com/hom-cve>

Lugar / *Place*: L'Albornar, Santa Oliva (Tarragona)  
Fecha / *Date*: 27/04/2021



Joan Fonts Sala  
INGENIERO DE ENSAYOS  
TEST ENGINEER

IDIADA PC21050060

- 
- \* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.  
*THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE*
  - \* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.  
*THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN*

DOCUMENTACIÓN TÉCNICA /  
*TECHNICAL DOCUMENTATION*



## INFORMATION FOLDER:

DATE: 16.04.2021

### 1. Specification data

Type	FT-270 LED	
Trade name or mark	Fristom	
Variants	See drawing	
Function	rear position R1 ; stop light S1 ; retro reflex reflector cat IIIA , rear fog light F1 ,registration plate light L, reversing light AR, rear direction indicator light 2a	
Color	red light color , white light color , amber light color	
Rated	Voltage	12V
	Wattage	R1=4W ; R1+L=5W ; S1=5W ; F1=5W ; AR=4W ; 2a=15W
Applicable Regulation	R03;R04;R06;R07;R23;R38	
Light Source and connection	R1 - 4 LED's serial connected in 2 parallel sections S1 - all 8 LED's series-parallel connected 2a - 3 LED's serial connected in 2 parallel sections F1 - all 8 LED's series-parallel connected AR- all 6 LED's series-parallel connected L - 3 LED's serial connected	
Location of marking	Light Source marks	See the drawing
	Trade mark	Marked on reflex reflector visible under lampshade
	Approval mark	Marked on the lampshade

### 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	--

### 2. 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:

a) Physycal dimensions of reflex reflector cat. IIIA has been corrected according:

R003 - E/ECE/324/Add.2/Rev.4 E/ECE/TRANS/505/Add.2/Rev.4 Annex 5 – par 2.6

b) schemes of LED connections has been added

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

**FRISTOM**  
Spółka z ograniczoną odpowiedzialnością Sp. k.  
86-014 SICIENKO, ul. Przemysłowa 5  
tel. 52 360 90 50  
www.fristom.com.pl  
NIP 5542926937 REGON 341640907  
MICHAŁ DYBISZ

IDIADA PC21050060



# Manufacturer

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



Drawn by: **Date:** **sheet Nr.**

Michał Dybicz 13-04-2020 1/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

## light source

LED Chip SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

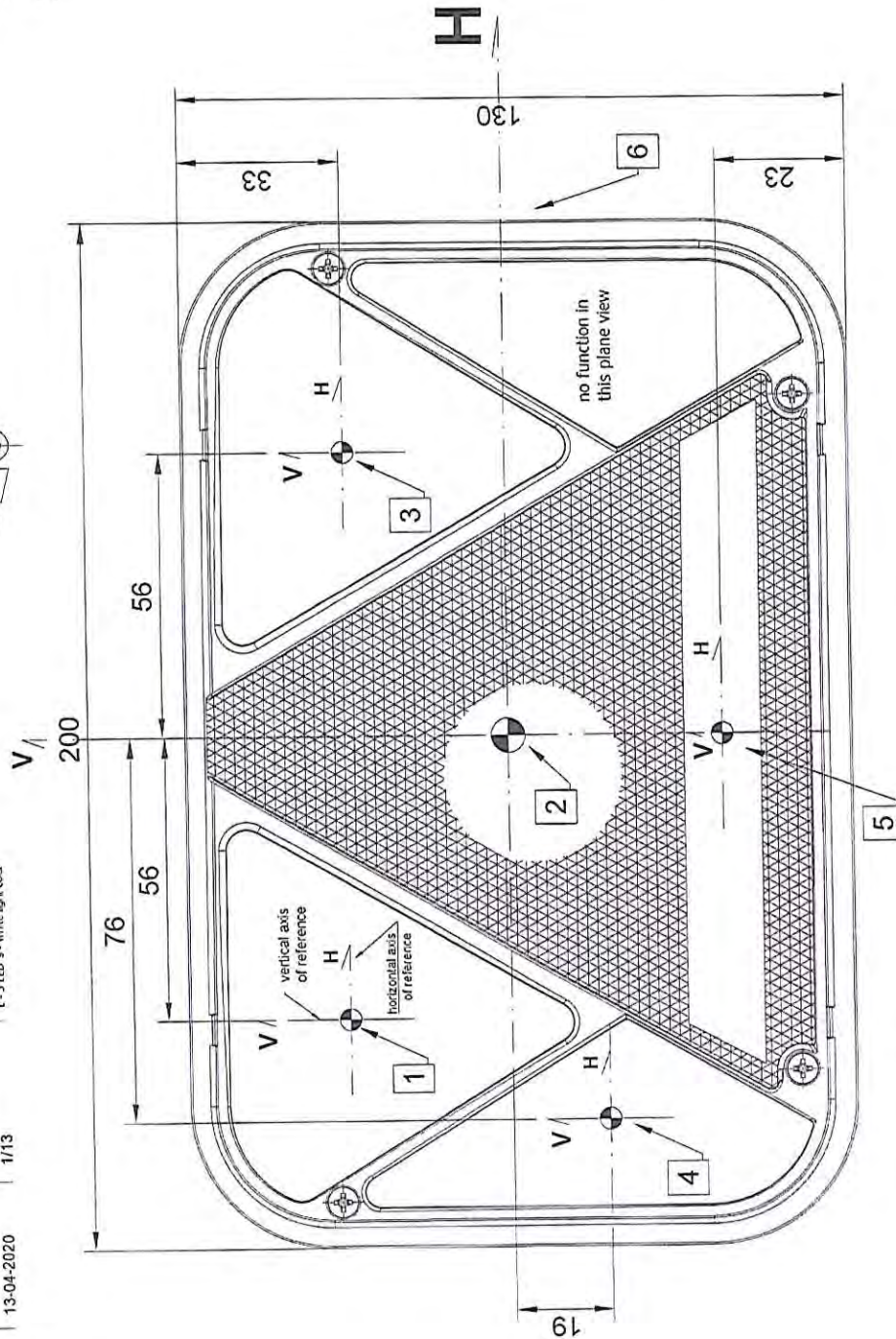
## sheet description

general drawing / lamp functions / assembly on vehicle  
This drawing is a part of the application for approval



## Material used in manufacturing :

- lensshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin



- 1 - center of reference direction indicator 2a
- 2 - center of reference reflex reflector cat IIIA
- 3 - center of reference rear fog or reversing light (F1 or AR)
- 4 - center of reference stop light cat S1
- 5 - center of reference rear position light cat R1
- 6 - registration plate light

note: FT- 270 LED left lamp view (right lamp is a mirror)  
only horizontal assembly

**FRISTOM**  
Spółka z ograniczoną odpowiedzialnością Sp. k.  
86-014 ŚCIENKO, ul. Przemysłowa 5  
tel. 52 360 90 50  
[www.fristom.com.pl](http://www.fristom.com.pl)  
REGON 341640907  
MICHAŁ DYBICZ

PC21050060



# Manufacturer

FRISTOM Spółka z ograniczoną odpowiedzialnością Sp. K.  
86-014 Ściénko / Polska  
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Drawn by: **Date:** 13-04-2020

Michał Dybicz

sheet Nr. 2/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

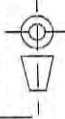
## light source

LED chip SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
Za - 6 LED's - amber light color  
L - 3 LED's - white light color

## sheet description

reflex reflector cat. IIIA dimension and surface

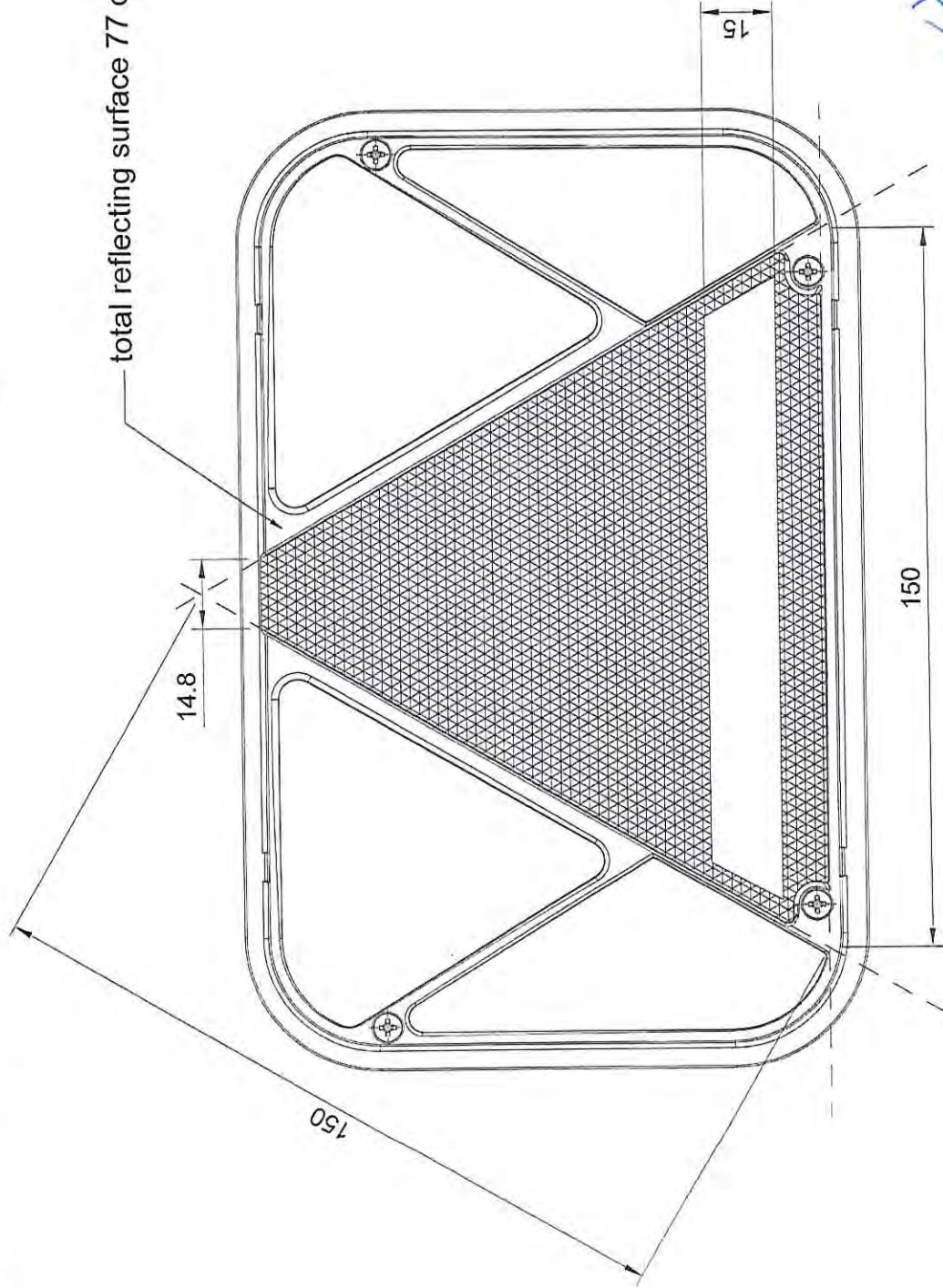
This drawing is a part of the application for approval



## Material used in manufacturing :

- lampshade PC transparent clear
- collimator AR PMMA transparent clear
- collimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens Za PMMA transparent amber
- IIIA reflector and R1 lens PMMA transparent red
- registration plate reflector ABS black vacuum metalized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- Za - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

total reflecting surface 77 cm<sup>2</sup>



FRISTOM

Spółka z ograniczoną odpowiedzialnością Sp. k.  
86-014 ŚCIENKO, ul. Przemysłowa 5

tel. 52 350 50 50

wym. fristom.com.pl

REGON 341640907

MICHAŁ DYBICZ

IDIADA PC21050060

# Manufacturer

FRISTOM Spółka z ograniczoną odpowiedzialnością Sp. K.  
86-014 Sicienko / Polska  
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NIP: 5542926937, KRS: 000028238  
Tel: +48 52 360 90 51 Fax: +48 52 327 75 41



Drawn by: **Date:** 13-04-2020

Michał Dybicz

sheet Nr.

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## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

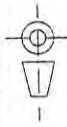
## light source

LED chip SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

## sheet description

vehicle assembly

This drawing is a part of the application for approval

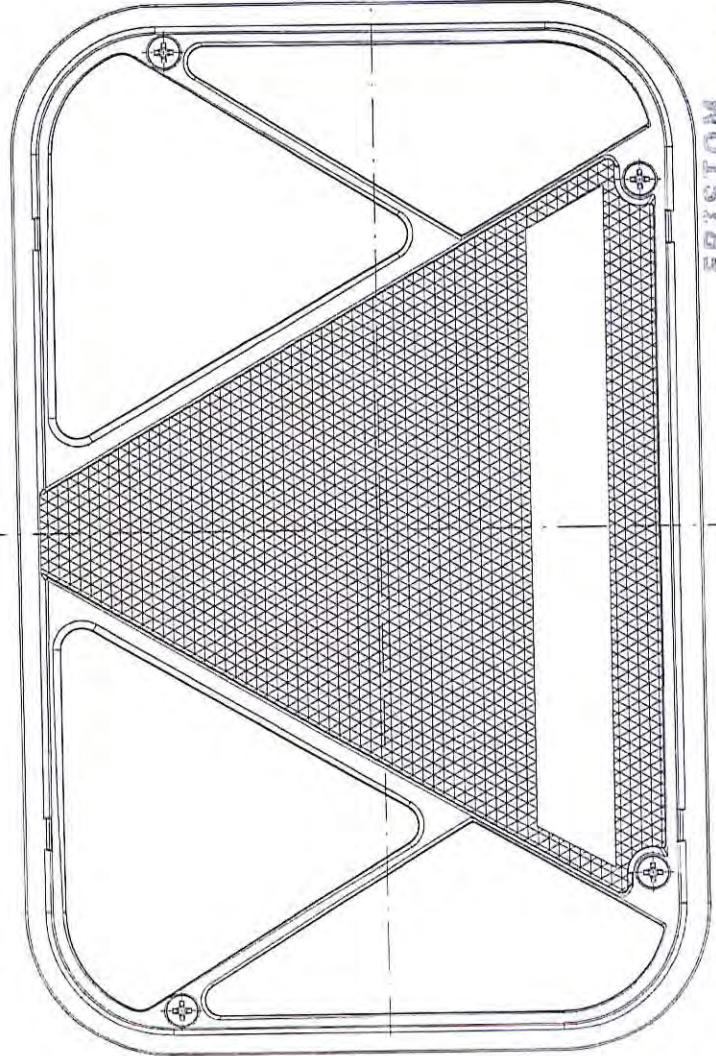


## Material used in manufacturing :

- lampshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- IIIA reflector and R1 lens PMMA transparent red
- registration plate reflector ABS black vacuum metalized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

V / top of vehicle

forward driving direction



**FRISTOM**  
Spółka z ograniczoną odpowiedzialnością Sp. k.  
86-014 Sicienko, ul. Przemysłowa 5  
tel. 52 360 90 50  
[www.fristom.com.pl](http://www.fristom.com.pl)

NIP: 5542926937 REGON: 341640907  
*Dyba*  
MICHAŁ DYBICZ

**iDiADA** PC21050060



# Manufacturer

FRISTOM Spółka z ograniczoną odpowiedzialnością Sp. K.  
62-014 Ścieżkowo / Polska  
ul. Przemysłowa 5  
NIP: 5542926937, KRS: 0000529238  
Tel.: +48 52 360 90 51, Fax: +48 52 327 75 41



Drawn by: **Date:** **sheet Nr.**

Michał Dybicz 28-05-2020 4/13

## electrical parameters

stop - 5W  
rear fog - 5W  
reversing - 4W  
rear position + reg. plate - 5W  
rear position only - 4W  
direction indicator - 15W

note:  
schemes  
shown are  
simplified

## Type

# FT- 270 LED - rear multifunction lamp for trailers EXT03

## light source

LED CHIP SMD chip mounted  
AR - 6 LED's - white light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
Za - 6 LED's - amber light color  
L - 3 LED's - white light color

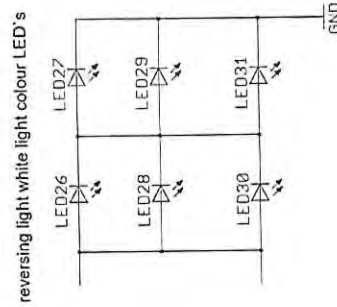
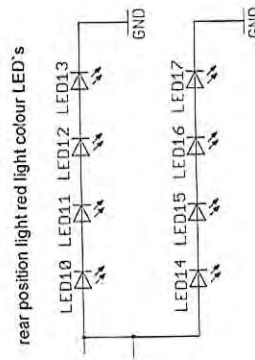
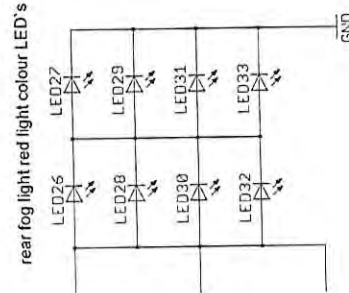
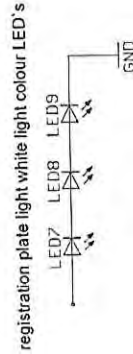
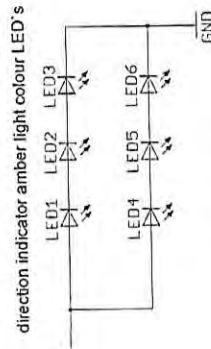
## sheet description

### LED connections

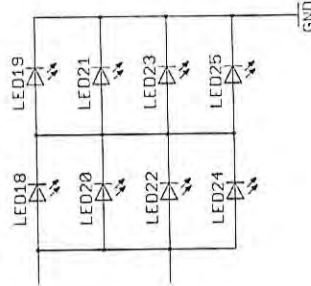
This drawing is a part of the application for approval

## Material used in manufacturing :

- lensshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator R1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens Za PMMA transparent amber
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- Za - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin



stop light red light colour LED's



registration plate light white colour LED's

reversing light white light colour LED's

## FRISTOM

Spółka z ograniczoną odpowiedzialnością Sp. k.  
86-014 ŚCIEŹKOWO, ul. Przemysłowa 5

tel. 52 360 90 50

www.fristom.com.pl

NIP: 5542926937 REGON: 341640907

ibidABA

PC21050060

## Manufacturer

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



Drawn by: **Date:**

Michał Dybicz 13-04-2020

sheet Nr.

5/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

## light source

LED CSP SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

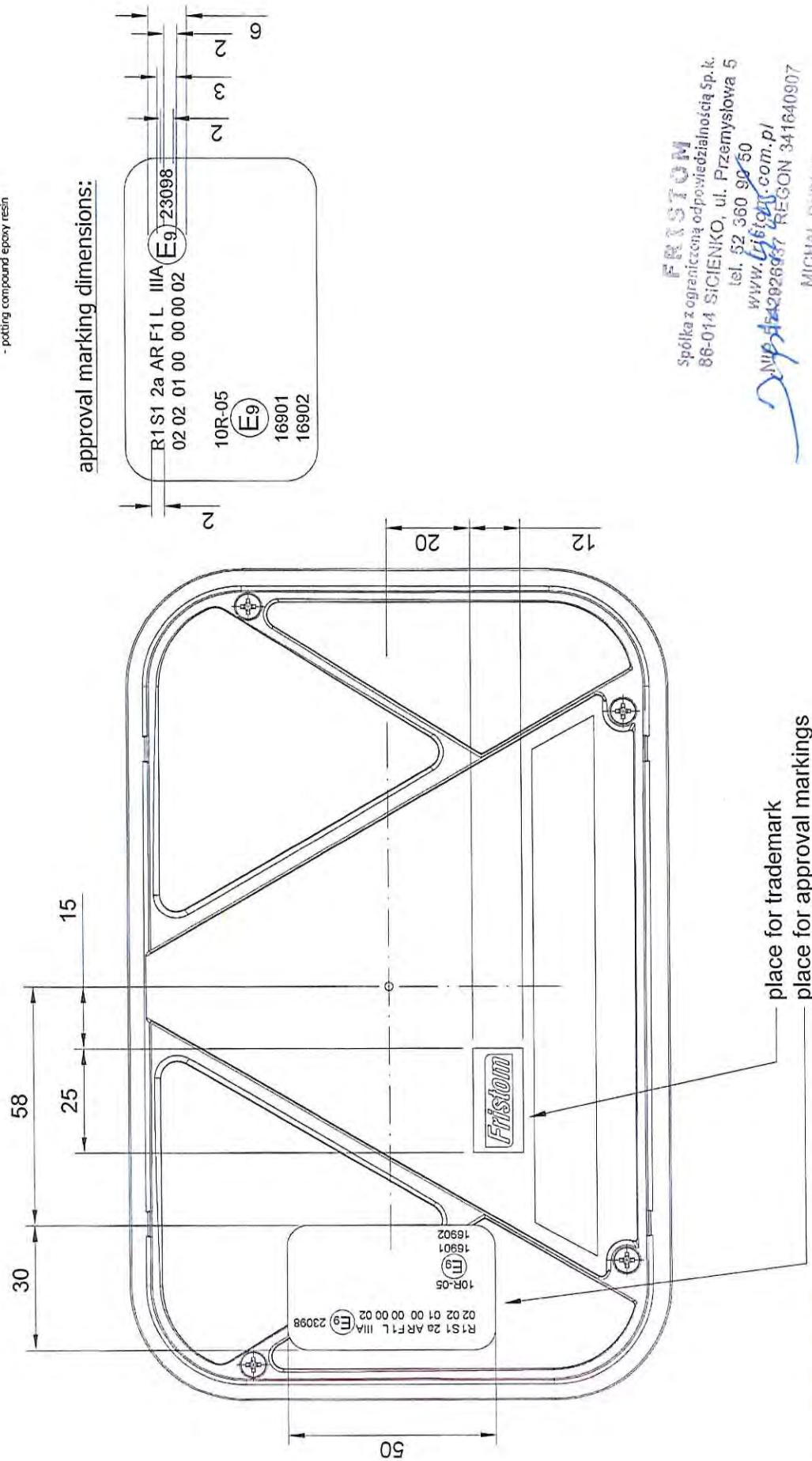
## sheet description

marking of trademark and approvals

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampholder PC transparent clear
- coilinator AB PMMA transparent clear
- coilinator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- IIIA reflector and R1 lens PMMA transparent red
- registration plate reflector ABS black vacuum metalized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin



## FRISTOM

Spółka z ograniczoną odpowiedzialnością Sp. k.  
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MICHAŁ DYBICZ

IDIADA PC21050060



# Manufacturer

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Drawn by: **Date:** 13-04-2020

sheet Nr. 6/13

Michał Dybicz

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

## light source

LED Chip SMD chip mounted  
AR - 8 LED's - red light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

## sheet description

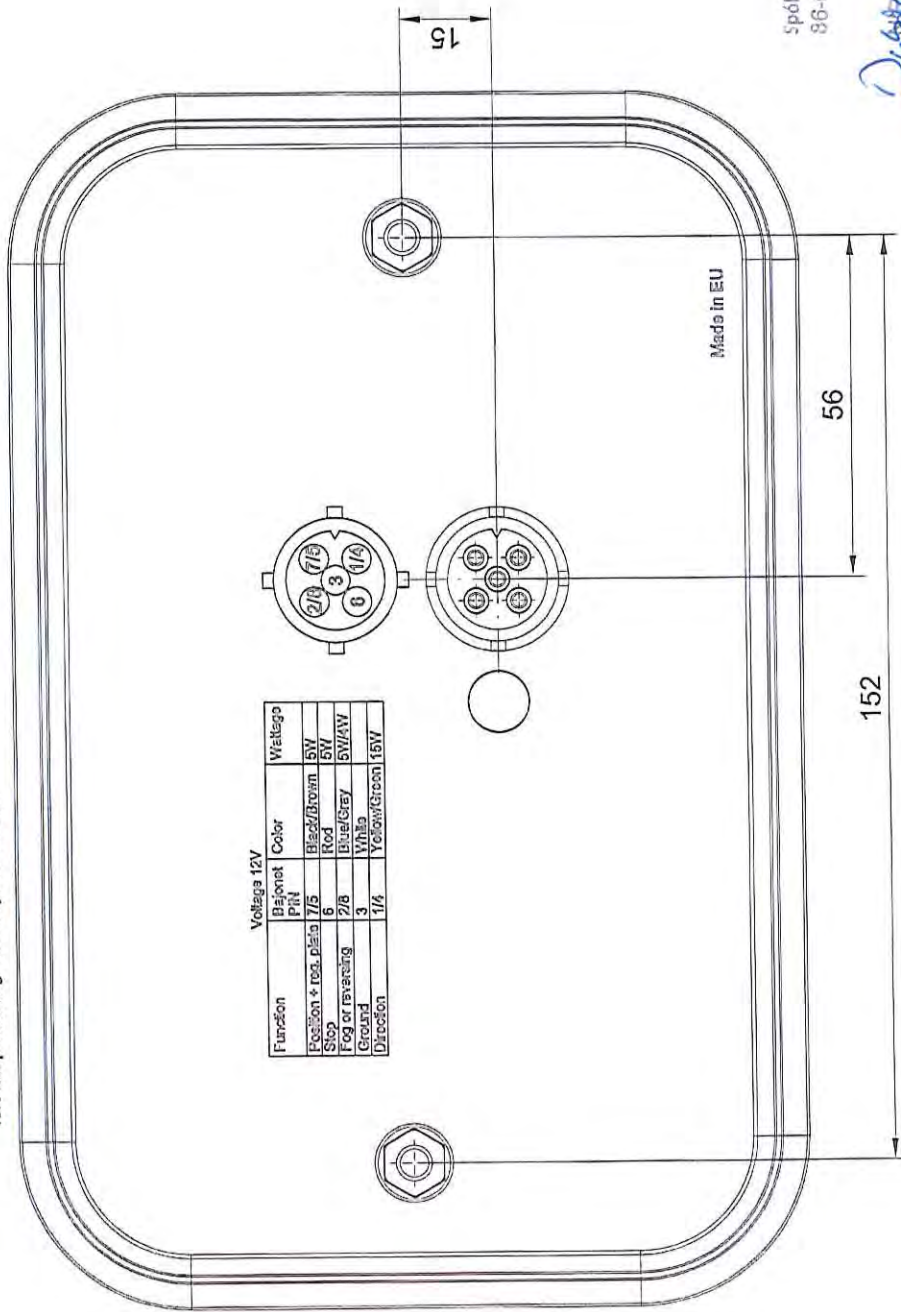
electrical parameters marking on housing

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- IIIA reflector and R1 lens PMMA transparent red
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 8 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

left lamp housing view bajonet version



IDIADA PC21050060

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Drawn by:

Date: 13-04-2020

Michał Dybicz

sheet Nr.

7/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

### light source

LED Chip SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 6 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - red light color  
L - 3 LED's - white light color

## Material used in manufacturing :

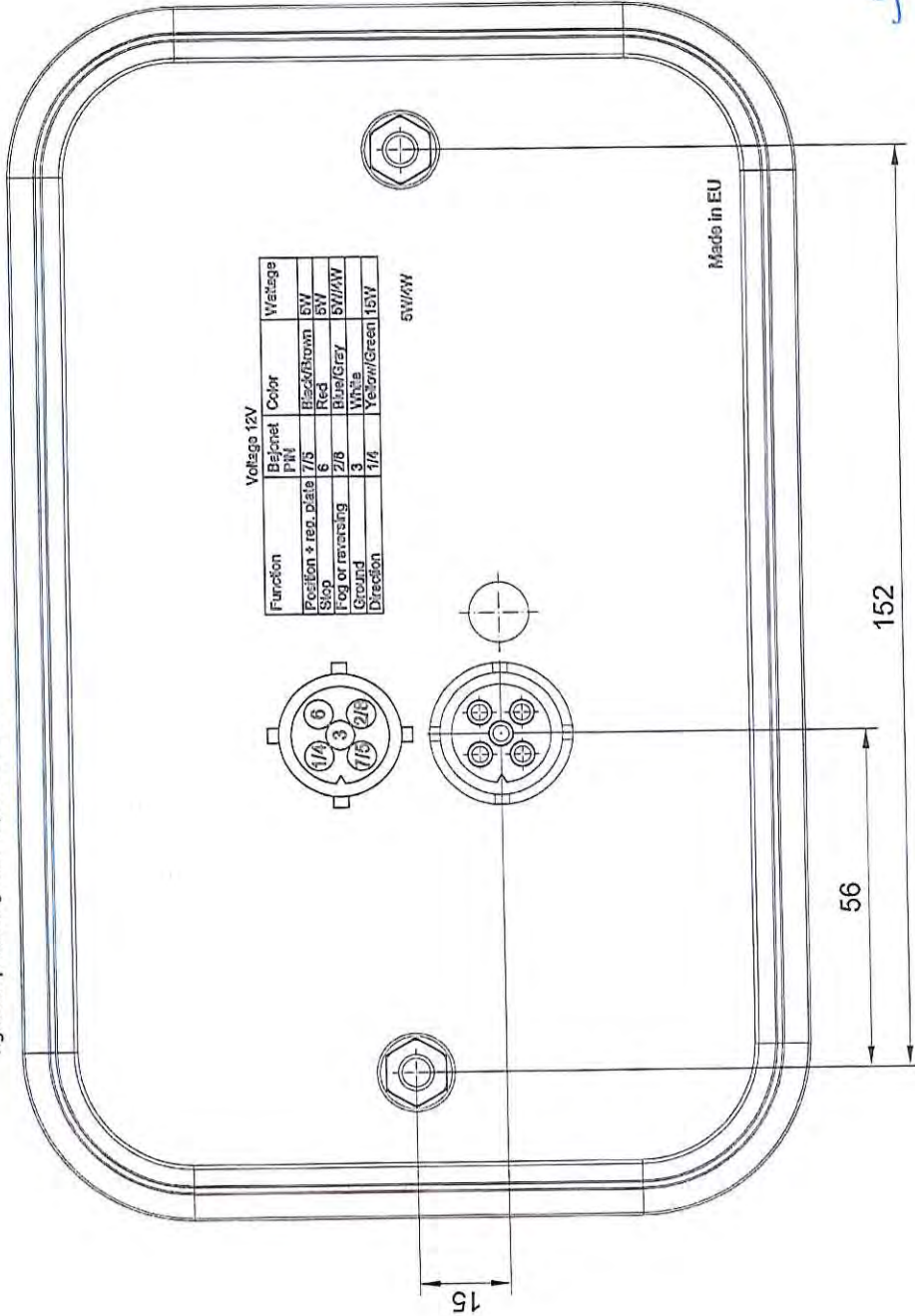
- lensshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 6 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - red light color
- L - 3 LED's - white light color
- potting compound epoxy resin

### sheet description

electrical parameters marking on housing

This drawing is a part of the application for approval

right lamp housing view bajonet version



IDIADA PC21050060

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MICHAŁ DYBICZ

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Drawn by: **Date:** 13-04-2020

Michał Dybicz

sheet Nr.

8/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

### light source

LED chip SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - white light color  
F1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - red light color  
L - 3 LED's - white light color

### sheet description

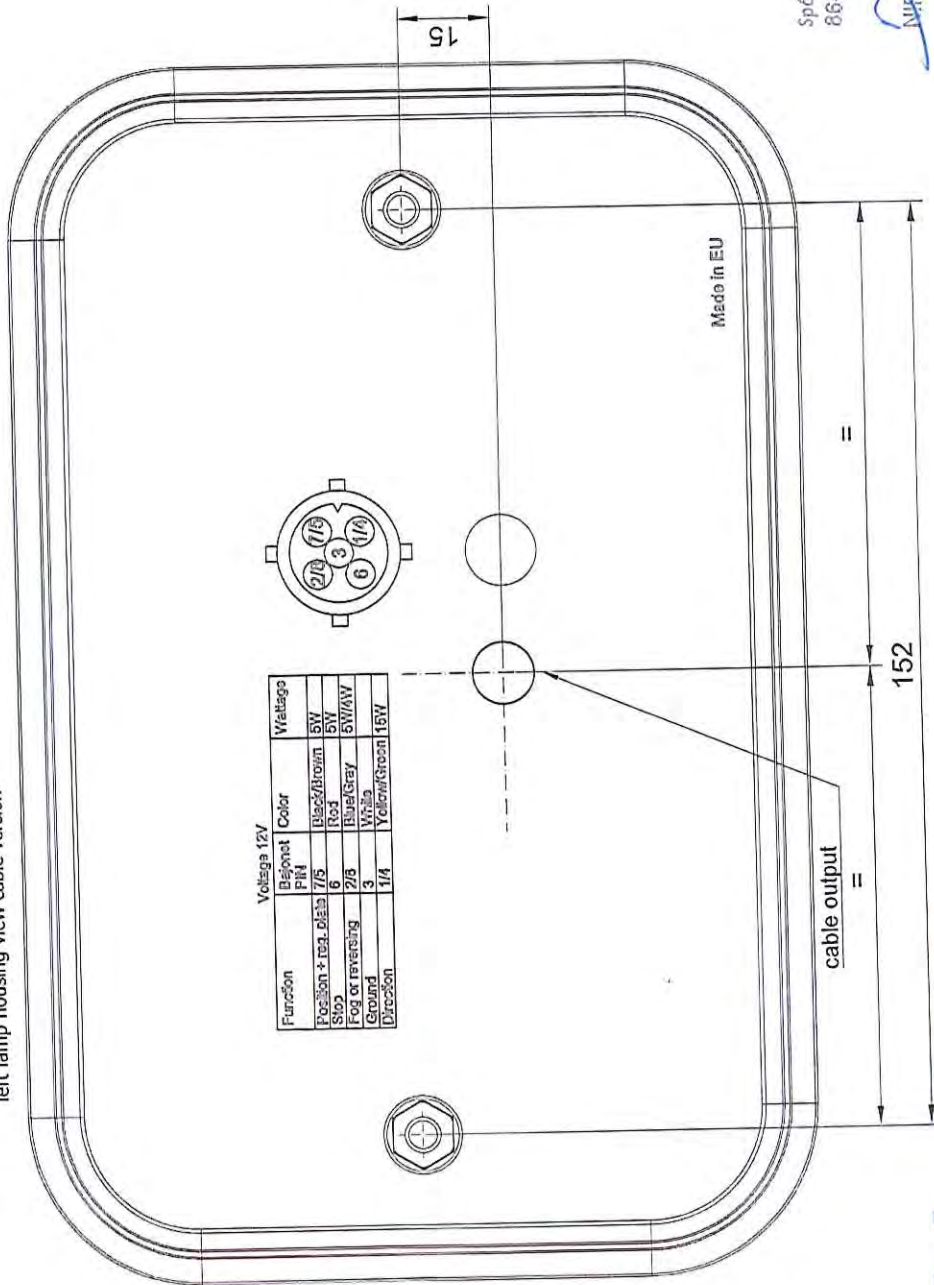
electrical parameters marking on housing

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- IIIA reflector and RL lens PMMA transparent red
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- RL - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - red light color
- L - 3 LED's - white light color
- potting compound epoxy resin

left lamp housing view cable version



IDIADA PC21050060

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Drawn by: Date: 13-04-2020

Michał Dybicz 9/13

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

## light source

LED Chip SMD chip mounted  
AR - 6 LED's - red light color  
F1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

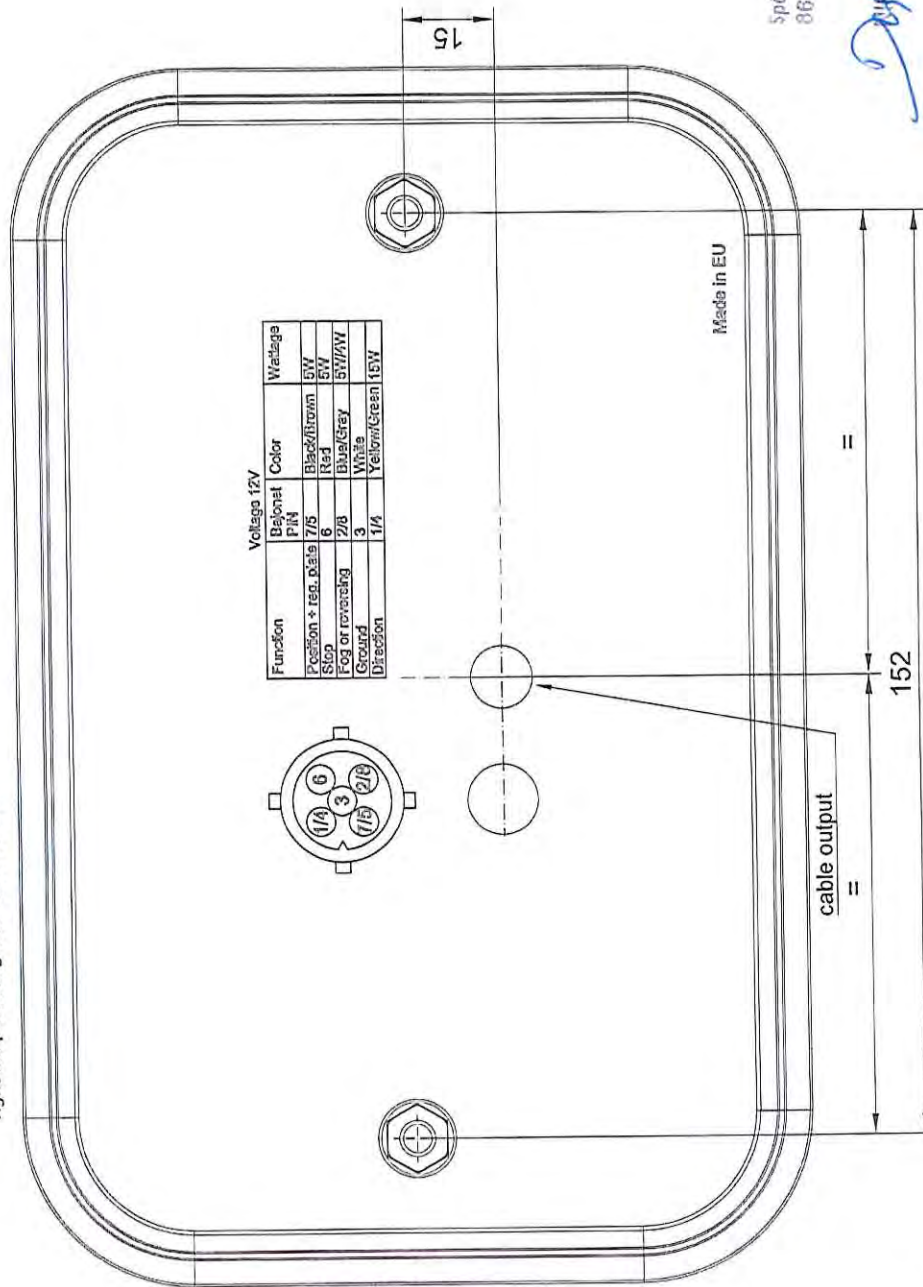
## sheet description

electrical parameters marking on housing  
This drawing is a part of the application for approval

## Material used in manufacturing :

- lensshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens za PMMA transparent amber
- IITA reflector and RL lens PMMA transparent red
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

right lamp housing view cable version



IBIADA PC21050060

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Drawn by: **Date:** 13-04-2020

sheet Nr. 10/13

Michał Dybicz

## Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

### light source

LED chip SMD die mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

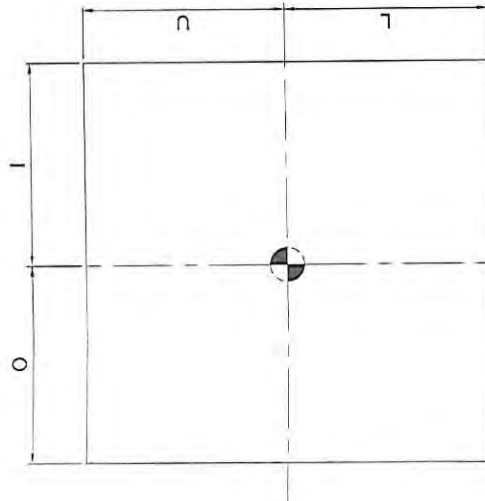
### sheet description

#### lighting surface

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- lens S1 PMMA transparent red
- registration plate reflector ABS black vacuum metalized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin



## lighting surface

function	U <sub>upper</sub> (mm)	L <sub>lower</sub> (mm)	O <sub>total</sub> (mm)	I <sub>total</sub> (mm)
reversing AR	23	23	25	25
rear fog F1	23	23	25	25
rear position R1	7,5	7,5	66	66
stop S1	44	44	18,5	18,5
direction indicator 2a	33	33	36	36

Determining the lower , upper and lateral limits of the illumination surface of the lamp device.

According to European Directive 91/663/EEC , Annex I "Installation of lighting and light-signalling devices" clause 1.9.2.

According to ECE regulation 48/06 "Installation of light and light-signalling devices" clause 2.10.3.2.

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REGON 341640907

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Drawn by: Date: sheet Nr.

Michał Dybicz 13-04-2020 11/13

## Type

## FT-270 LED - rear multifunction lamp for trailers EXT03

### light source

LED CUP SMD chip mounted  
AR - 6 LED's - white light color  
F1 - 8 LED's - red light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
2a - 6 LED's - amber light color  
L - 3 LED's - white light color

### sheet description

variant tradenames (sheet 1/2)

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampshade PC transparent clear
- colimator AR PMMA transparent clear
- colimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2a PMMA transparent amber
- IIIA reflector and R1 lens PMMA transparent red
- registration plate reflector ABS black vacuum metalized
- PCB FR4
- AR - 6 LED's - white light color
- F1 - 8 LED's - red light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- 2a - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

ITEM		
FT-270 L NT LED COF	FT-270 L NT LED COF Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 1 m cable.	
FT-270 L NT LED COF Mxx	FT-270 L NT LED COF Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, Mxx cable.	
FT-270 L NT LED COF BAJONET 5PIN	FT-270 L NT LED COF BAJONET 5PIN Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 5 PIN Bayonet connector.	
FT-270 L NT LED O COF BAJONET 5PIN	FT-270 L NT LED O COF BAJONET 5PIN Universal LED left rear lamp with reflective triangle, charged, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 5 PIN Bayonet connector.	
FT-270 L NT LED PM	FT-270 L NT LED PM Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 1 m cable.	
FT-270 L NT LED PM Mxx	FT-270 L NT LED PM Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, Mxx cable.	
FT-270 L NT LED PM BAJONET 5PIN	FT-270 L NT LED PM BAJONET 5PIN Universal LED left rear lamp with reflective triangle, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 5 PIN Bayonet connector.	
FT-270 L NT LED O PM BAJONET 5PIN	FT-270 L NT LED O PM BAJONET 5PIN Universal LED left rear lamp with reflective triangle, charged, 12V, 5-functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 5 PIN Bayonet connector.	
FT-270 L TB LED COF	FT-270 L TB LED COF Universal LED left rear lamp with reflective triangle 12V, 6-functional, STOP/POSITION/INDICATOR/REVERSING with side number plate light, 1 m cable.	
FT-270 L TB LED COF Mxx	FT-270 L TB LED COF Universal LED left rear lamp with reflective triangle 12V, 6-functional, STOP/POSITION/INDICATOR/REVERSING with side number plate light, Mxx cable.	
FT-270 L TB LED COF BAJONET 5PIN	FT-270 L TB LED COF BAJONET 5PIN Universal LED left rear lamp with reflective triangle 12V, 6-functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, 5 PIN Bayonet connector.	
FT-270 L TB LED O COF BAJONET 5PIN	FT-270 L TB LED O COF BAJONET 5PIN Universal LED left rear lamp with reflective triangle, charged, 12V, 6-functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, 5 PIN Bayonet connector.	
FT-270 L TB LED PM	FT-270 L TB LED PM Universal LED left rear lamp with reflective triangle, 12V, 6-functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 1 m cable.	
FT-270 L TB LED PM Mxx	FT-270 L TB LED PM Universal LED left rear lamp with reflective triangle, 12V, 6-functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, Mxx cable.	
FT-270 L TB LED PM BAJONET 5PIN	FT-270 L TB LED PM BAJONET 5PIN Universal LED left rear lamp with reflective triangle, 12V, 6-functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 5 PIN Bayonet connector.	
FT-270 L TB LED O PM BAJONET 5PIN	FT-270 L TB LED O PM BAJONET 5PIN Universal LED left rear lamp with reflective triangle, charged, 12V, 6-functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 5 PIN Bayonet connector.	

Where x is number for 0 till 9

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PC21050060



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Drawn by: **Date:** **sheet Nr.**

Michał Dybicz 13-04-2020 12/13

## Type

## FT- 270 LED - rear multifunction lamp for trailers EXT03

### light source

LED CHIP SMD dip mounted  
AR - 6 LED's - white light color  
R1 - 8 LED's - red light color  
S1 - 8 LED's - red light color  
L - 3 LED's - white light color

### sheet description

variant tradenames (sheet 2/2)

This drawing is a part of the application for approval

## Material used in manufacturing :

- lampshade PC transparent clear
- collimator AR PMMA transparent clear
- collimator F1 PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2x PMMA transparent amber
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- R1 - 8 LED's - red light color
- S1 - 8 LED's - red light color
- L - 3 LED's - white light color
- potting compound epoxy resin

FT 270 P NT LED COF	FT 270 P NT LED COF Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 1 m cable.
FT 270 P NT LED COF Mxx	FT 270 P NT LED COF Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, Mxx cable.
FT 270 P NT LED COF BAJONET SPIN	FT 270 P NT LED COF BAJONET SPIN Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 5 PIN Bayonet connector.
FT 270 P NT LED O COF BAJONET SPIN	FT 270 P NT LED O COF BAJONET SPIN Universal LED right rear lamp with reflective triangle, changed, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ REVERSING without number plate light, 5 PIN Bayonet connector.
FT 270 P NT LED PM	FT 270 P NT LED PM Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 1 m cable.
FT 270 P NT LED PM Mxx	FT 270 P NT LED PM Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, Mxx cable.
FT 270 P NT LED PM BAJONET SPIN	FT 270 P NT LED PM BAJONET SPIN Universal LED right rear lamp with reflective triangle, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 5 PIN Bayonet connector.
FT 270 P NT LED O PM BAJONET SPIN	FT 270 P NT LED O PM BAJONET SPIN Universal LED right rear lamp with reflective triangle, changed, 12V, 5 functional, STOP/ POSITION/ INDICATOR/ FOG without number plate light, 5 PIN Bayonet connector.
FT 270 P TB LED COF	FT 270 P TB LED COF Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, 1 m cable.
FT 270 P TB LED COF Mxx	FT 270 P TB LED COF Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, Mxx cable.
FT 270 P TB LED COF BAJONET SPIN	FT 270 P TB LED COF BAJONET SPIN Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, 5 PIN Bayonet connector.
FT 270 P TB LED O COF BAJONET SPIN	FT 270 P TB LED O COF BAJONET SPIN Universal LED right rear lamp with reflective triangle, changed, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ REVERSING with side number plate light, 5 PIN Bayonet connector.
FT 270 P TB LED PM	FT 270 P TB LED PM Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 1 m cable.
FT 270 P TB LED PM Mxx	FT 270 P TB LED PM Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, Mxx cable.
FT 270 P TB LED PM BAJONET SPIN	FT 270 P TB LED PM BAJONET SPIN Universal LED right rear lamp with reflective triangle, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 5 PIN Bayonet connector.
FT 270 P TB LED O PM BAJONET SPIN	FT 270 P TB LED O PM BAJONET SPIN Universal LED right rear lamp with reflective triangle, changed, 12V, 6 functional, STOP/ POSITION/ INDICATOR/ FOG with side number plate light, 5 PIN Bayonet connector.

Where x is number for 0 till 9

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MICHAŁ DYBICZ

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Manufacturer

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Drawn by: Date: 13-04-2020

Michał Dybicz

13/13

sheet Nr.

Type

FT- 270 LED - rear multifunction lamp for trailers EXT03

light source

LED CHIP SMD chip mounted  
AR - 6 LED's - white light color  
FI - 8 LED's - red light color  
RI - 8 LED's - red light color  
SI - 8 LED's - red light color  
2A - 6 LED's - amber light color  
L - 3 LED's - white light color

sheet description

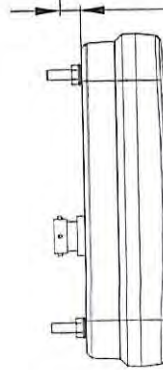
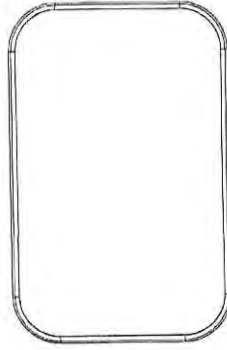
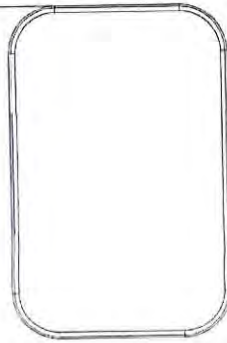
positioning of registration plate light

This drawing is a part of the application for approval

Material used in manufacturing :

- lampshade PC transparent clear
- collimator AR PMMA transparent clear
- collimator FI PMMA transparent red
- housing ABS black
- frame ABS black
- lens 2A PMMA transparent amber
- IIIA reflector and RI lens PMMA transparent red
- registration plate reflector ABS black vacuum metallized
- PCB FR4
- AR - 6 LED's - white light color
- FI - 8 LED's - red light color
- RI - 8 LED's - red light color
- SI - 8 LED's - red light color
- 2A - 6 LED's - amber light color
- L - 3 LED's - white light color
- potting compound epoxy resin

distance



level

lamp level [mm]	distance [mm]
4	26
8	50
14	100
28	200

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