



MINISTERIO
DE INDUSTRIA, COMERCIO Y
TURISMO

DIRECCIÓN GENERAL DE INDUSTRIA Y
DE LA PEQUEÑA Y MEDIANA EMPRESA

SUBDIRECCIÓN GENERAL DE
CALIDAD Y SEGURIDAD INDUSTRIAL

E9*3R02/17*23172*00

Página / Page 1/3



COMUNICACIÓN / COMMUNICATION:

Concerniente a ⁽¹⁾: LA CONCESIÓN DE HOMOLOGACIÓN
LA EXTENSIÓN DE HOMOLOGACIÓN
LA DENEGACIÓN DE HOMOLOGACIÓN
LA RETIRADA DE HOMOLOGACIÓN
EL CESE DEFINITIVO DE PRODUCCIÓN

Concerning ⁽¹⁾: APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL REFUSED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

de un tipo de dispositivo catadióptrico en aplicación del Reglamento N°3.
of a type of retro reflecting device pursuant to Regulation No.3.

N° de homologación / Approval No.: E9*3R02/17*23172*00

Extensión N° / Extension No.: ---

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-600 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: 12/03/2020
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: 27/03/2020
8. Número del informe emitido por dicho servicio / Number of report issued by that service: PC19070362

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



E9*3R02/17*23172*00

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9. Breve descripción / *Concise description*:

- Aislado / forma parte de un conjunto de dispositivos ⁽¹⁾ / ~~In isolation~~ / *part of an assembly of devices* ⁽¹⁾
- Color de la luz emitida: ~~blanco~~ / rojo / ~~amarillo~~-auto ⁽¹⁾ / *Colour of light emitted: white / red / amber* ⁽¹⁾
- Montaje como parte integrante de una luz integrada en la carrocería de un vehículo / *Installation as an integral part of a lamp which integrated into the body of a vehicle: sí* - no / *no* ⁽¹⁾
- Condiciones geométricas de instalación y variaciones relacionadas, en su caso / *Geometrical conditions of installation and relating variations, if any: ---*
- Solamente para instalación limitada en altura igual o inferior a 750 mm por encima del suelo / *Only for limited mounting height of equal to or less than 750 mm above the ground: sí* - no / *no* ⁽¹⁾

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)*: ---

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 Se concede/~~deniega/~~extiende/~~retira~~ la homologación ⁽¹⁾ / ~~Approval granted/refused/extended/withdrawn~~ ⁽¹⁾

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

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

Manufacturer

FRISTOM Spółka z ograniczoną odpowiedzialnością Sp. z o.o.
86-014 Sicienka / 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 18-03-2020

sheet Nr.

1/7

Type

FT- 600 LED - rear LED multifunction lamp

light source

LIGHT SOURCE : LED CHIP SMD chip mounted
see table page 2

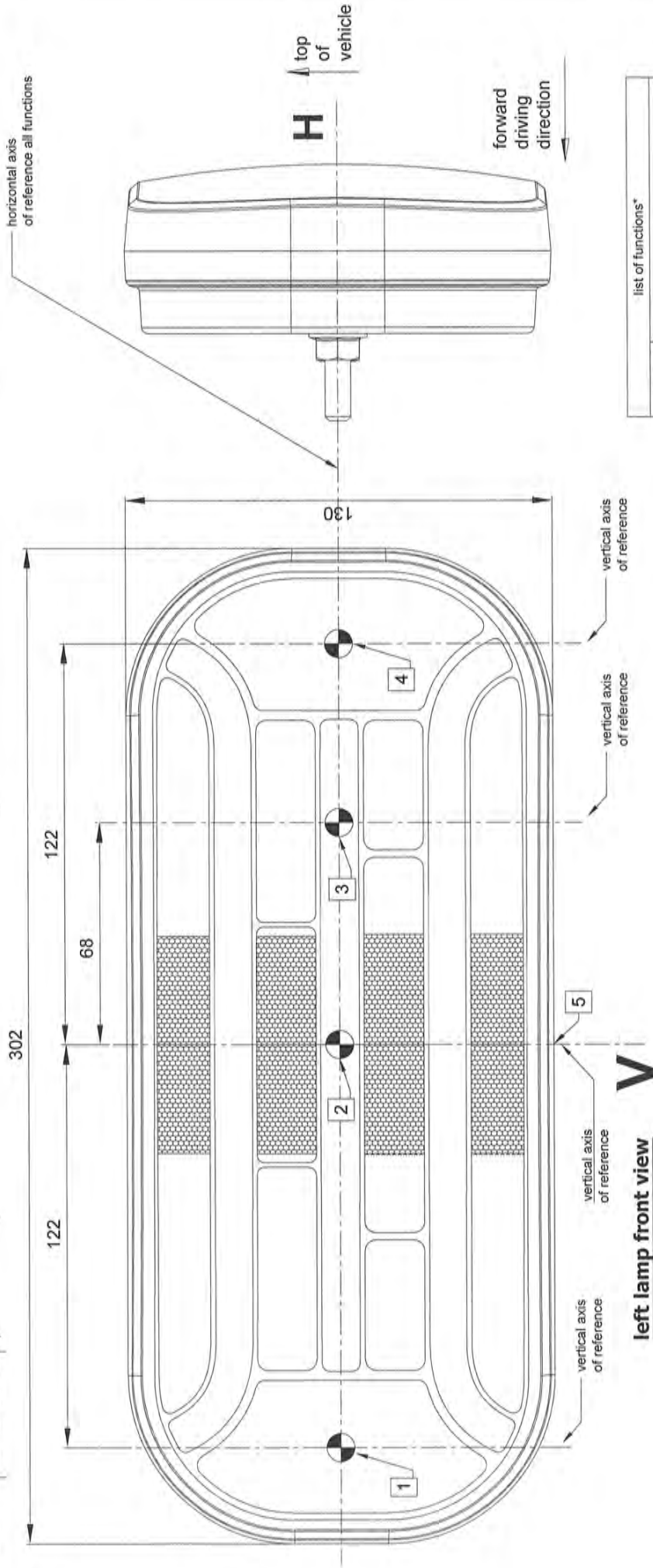
sheet description

general drawing / lamp functions / assembly on vehicle

This drawing is a part of the application for approval

Material used in manufacturing :

- lampshade PC transparent clear
- collimator / filter insert R1 PC red transparent
- collimator / filter insert S1 PC clear transparent
- collimator / filter insert 2a PMMA transparent amber
- housing ABS black
- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin



point of reference	function	list of functions*
1	rear fog F1	rear fog F1
2	rear direction indicator 2a - sequential	rear direction indicator 2a - sequential
3	retro reflecting device cat IA	retro reflecting device cat IA
4	rear position light R1	rear position light R1
5	stop light S1 (full function)	stop light S1 (full function)
6	stop light S1 (reduced stop variant)	stop light S1 (reduced stop variant)
7	reversing AR	reversing AR
8	registration plate light	registration plate light

lamp includes REDUCED STOP variant !

FRISTOM

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NIP 5542926937 REGON 341640907

MICHAŁ DYBICZ

iBIA DA PC19070362

Manufacturer

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Drawn by: **Date:** 18-03-2020
Michał Dybicz

sheet Nr. 2/7

Type

FT- 600 LED - rear LED multifunction lamp

Material used in manufacturing :

- lampshade PC transparent clear
- collimator / filter insert R1 PC red transparent
- collimator / filter insert S1 PC clear transparent
- collimator / filter insert 2a PMMA transparent amber
- housing ABS black
- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin

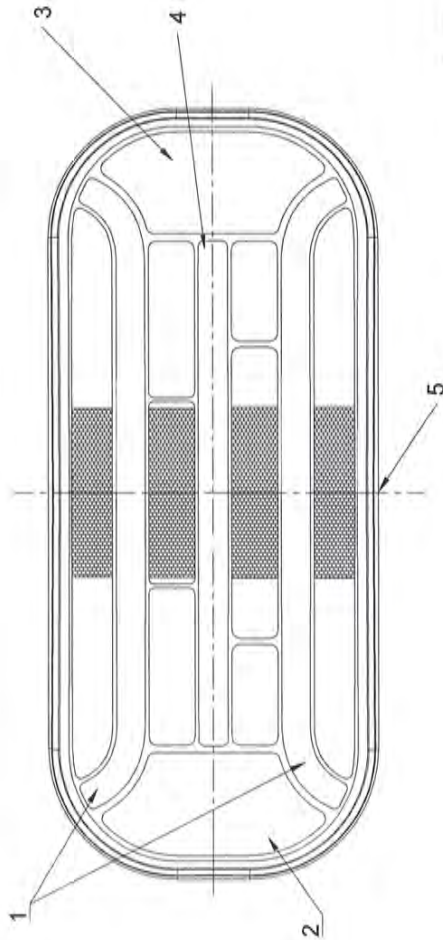
light source

LIGHT SOURCE : LED CHIP SMD chip mounted
see table page 2

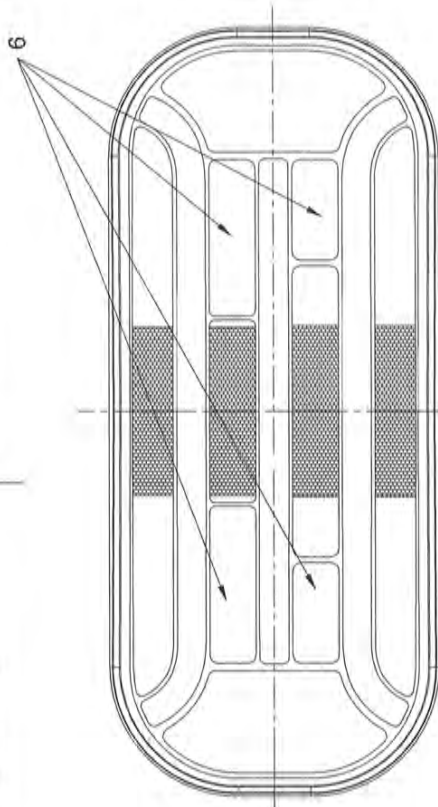
sheet description

LED sources and connections

This drawing is a part of the application for approval



left lamp front view



functions and LED connections					
1	R1	12 / 24 V - 2 / 4 W	4 LED's serial connected in 10 parallel sections	40 Led's red light color	
2	R1+L	12 / 24 V - 2.5 / 5 W			
3	F1	12 / 24 V - 2 / 4 W	4 LED's serial connected in 2 parallel sections	8 Led's red light color	
4	AR	12 / 24 V - 2.5 / 6 W	3 LED's serial connected in 2 parallel sections + 2 LED's serial connected in 1 section	8 LED's white light color	
5	2a	12 / 24 V - 10 / 20 W	3 LED's serial connected in 6 parallel sections	18 LED's amber light color	
6	L	12 / 24 V - 0.5 / 1 W	3 LED's serial connected in 2 parallel sections	6 LED's white light color	
7	S1	12 / 24 V - 4 / 8 W	4 LED's serial connected in 4 parallel sections	16 Led's red light color	
	S1 reduced	12 / 24 V - 2 / 4 W	4 LED's serial connected in 2 parallel sections	8 Led's red light color	

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MICHAŁ DYBICZ

In case of failure of one light source of the rear direction indicator a signal of activation of the tail is produced

PC19070362

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Drawn by: Michał Dybicz

Date: 18-03-2020

sheet Nr. 3/7

Type

FT- 600 LED - rear LED multifunction lamp

Material used in manufacturing :

- lampshade PC transparent clear
- collimator / filter insert R1 PC red transparent
- collimator / filter insert S1 PC clear transparent
- collimator / filter insert 2a PMMA transparent amber
- housing ABS black
- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin

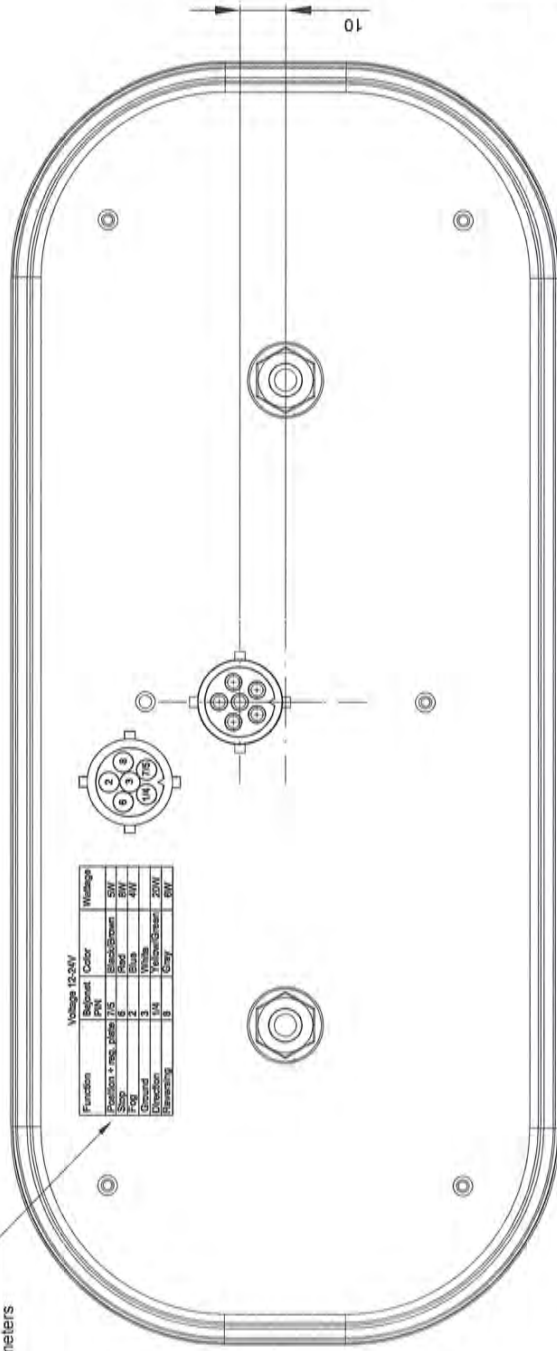
light source

LIGHT SOURCE : LED CHIP SMD clip mounted
see table page 2.

sheet description

general drawing lamp bottom/rear view / electrical parameter engravings
This drawing is a part of the application for approval

marking of
electrical parameters



Function	Bajonet PIN	Color	Wattage
Position + req. plate	7/5	Black/Brown	5W
Stop	6	Red	8W
Fog	2	Blue	4W
Ground	3	White	
Direction	1/4	Yellow/Green	20W
Reversing	8	Gray	8W

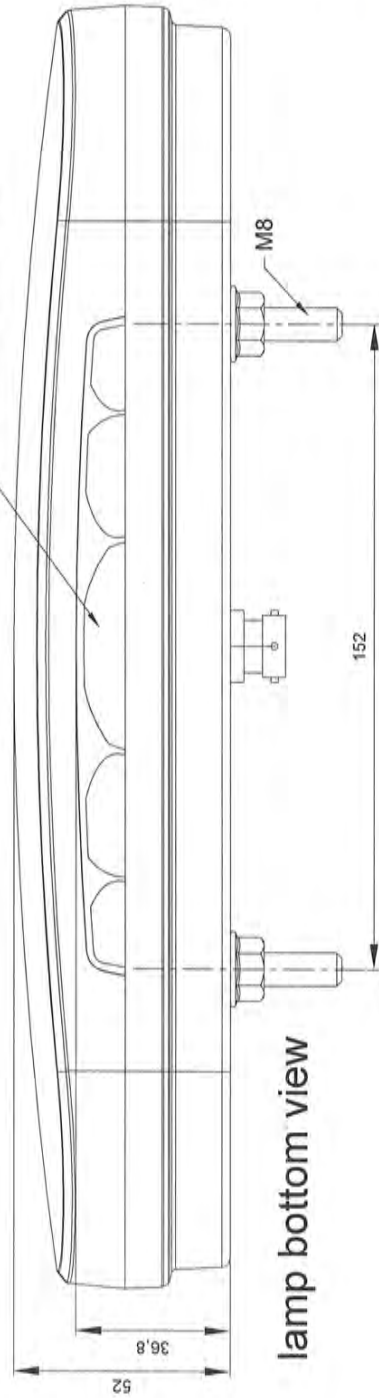
parameter table

Voltage 12-24V

Function	Bajonet PIN	Color	Wattage
Position + req. plate	7/5	Black/Brown	5W
Stop	6	Red	8W
Fog	2	Blue	4W
Ground	3	White	
Direction	1/4	Yellow/Green	20W
Reversing	8	Gray	8W

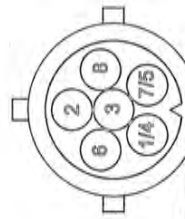
lamp rear view - bajonet version

Registration plate light L



lamp bottom view

pin settings



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İDİADA PC19070362

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Drawn by: **Date:**

Michał Dybicz 18-03-2020

sheet Nr.

4 / 7

Type

FT- 600 LED - rear LED multifunction lamp

light source

LIGHT SOURCE - LED CHIP SMD chip mounted
see table page 2

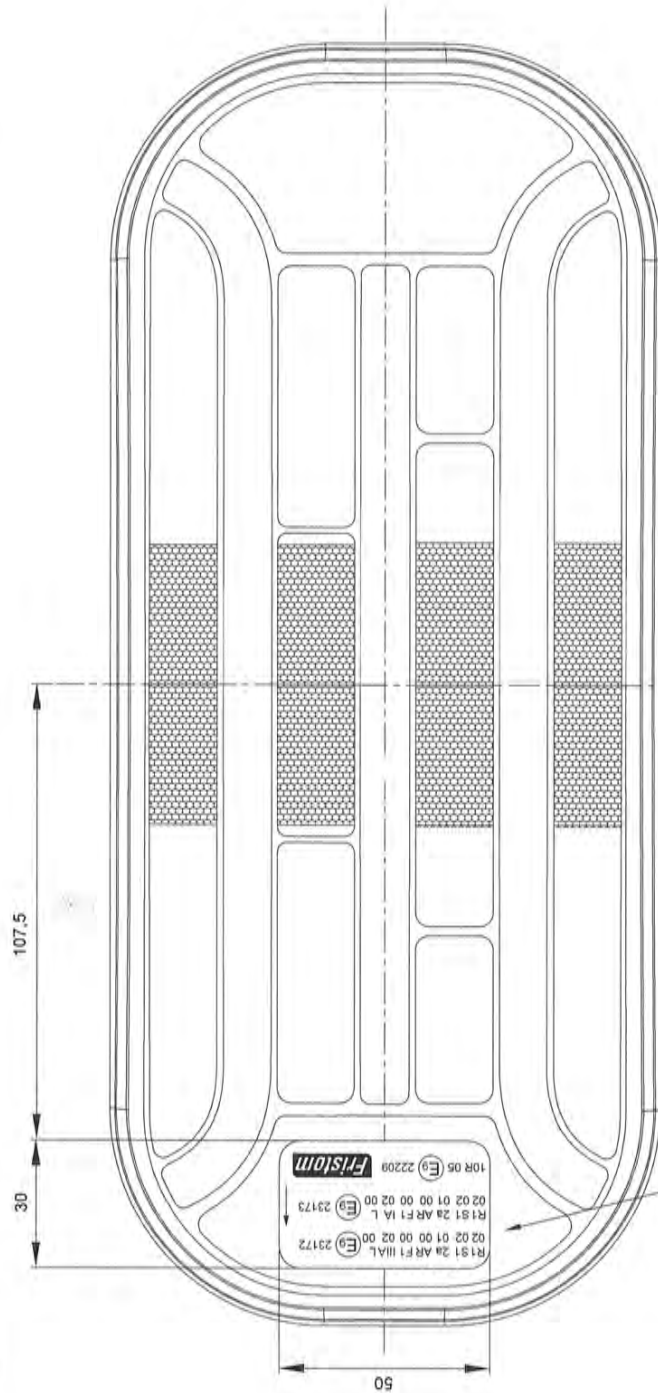
sheet description

general drawing / lamp functions / assembly on vehicle

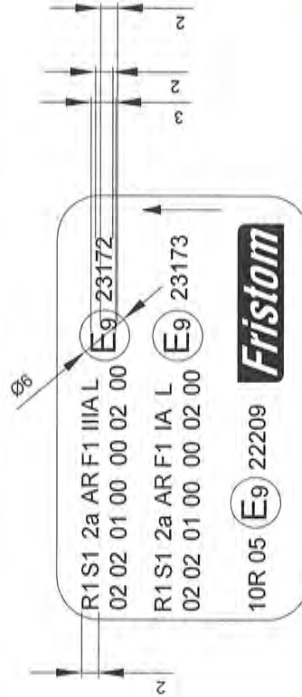
This drawing is a part of the application for approval

Material used in manufacturing :

- lampshade PC transparent clear
- collimator / filter insert R1 PC red transparent
- collimator / filter insert S1 PC clear transparent
- collimator / filter insert 2a PMMA transparent amber
- housing ABS black
- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin



approval markings and trademark on lampshade



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Drawn by: Michał Dybiec
Date: 18-03-2020
sheet Nr. 5/7

Type

FT- 600 LED - rear LED multifunction lamp

light source

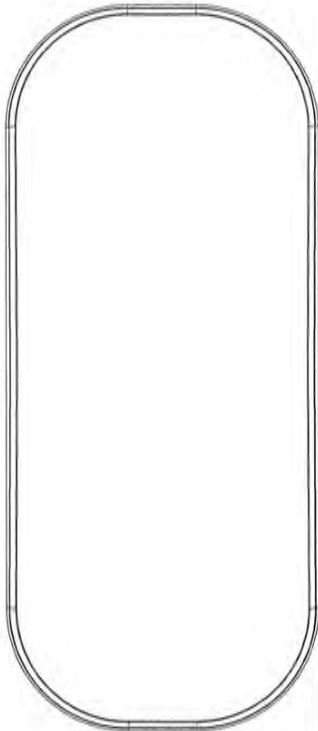
LED CHIP SMD chip mounted
see table page 2

sheet description

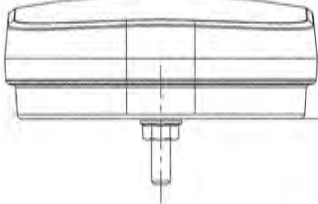
registration plate light and positioning
This drawing is a part of the application for approval

Material used in manufacturing :

- lampshade PC transparent clear
- collimator / filter insert R1 PC red transparent
- collimator / filter insert S1 PC clear transparent
- collimator / filter insert 2a PMMA transparent amber
- housing ABS black
- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin



registration plate 520x120



10

10

Manufacturer

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Drawn by: Michał Dybicz

Date: 18-03-2020

sheet Nr. 6/7

Type

FT- 600 LED - rear LED multifunction lamp

light source

LIGHT SOURCE : LED CHIP SMD chip mounted
see table page 2

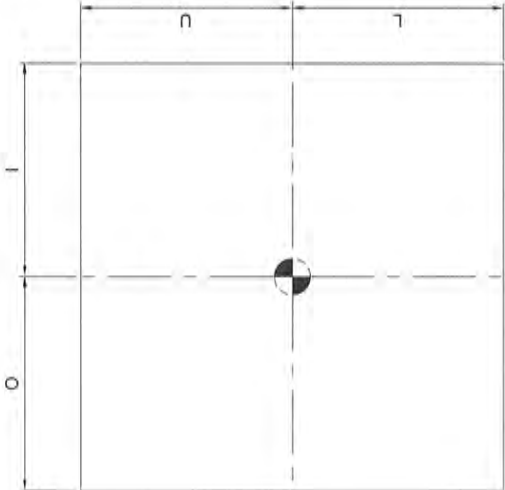
sheet description

lighting surface

This drawing is a part of the application for approval

Material used in manufacturing :

- lampshade PC transparent clear
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- collimator / filter insert 2a PMMA transparent amber
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- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin

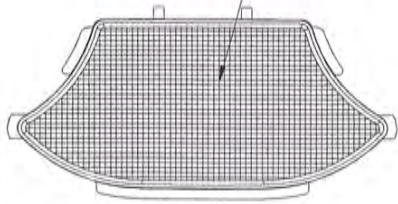


function	lighting surface				I (mm) (mm)
	U _{upper} (mm)	L _{lower} (mm)	O _{center} (mm)	I _{center} (mm)	
stop S1 Full	25	25	98		98
stop S1 reduced	25	25	31		31
direction indicator 2a	5	5	98		98
fog F1	42	42	18		18
reversing AR	42	42	18		18
position R1	52	52	124		124

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.



lighting area of rear fog light function
~23 cm²

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Dybis
MISIAŁ DYBICZ

Manufacturer

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Drawn by: **Date:** 18-03-2020 **sheet Nr.** 7/7

Michał Dybicz

Type

FT- 600 LED - rear LED multifunction lamp

light source

LIGHT SOURCE : LED CHIP SMD chip mounted
see table page 2

sheet description

variant tradenames and descriptions

This drawing is a part of the application for approval

Material used in manufacturing :

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- collimator / filler insert 2a PMMA transparent amber
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- frame ABS black
- registration plate reflector ABS white
- PCB FR4
- potting compound epoxy resin

FT-610 L LED AMP	FT-610-15 LED universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, left without registration plate light, with connector AMP 7PIN.
FT-610 L T LED AMP	FT-610-135 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, left with registration plate light, with connector AMP 7PIN.
FT-610 P LED AMP	FT-610-25 LED universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, right without registration plate light, with connector AMP 7PIN.
FT-610 P T LED AMP	FT-610-235 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, right with registration plate light, with connector AMP 7PIN.
FT-610 L LED BAJ 6PIN	FT-610-16 LED universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, left without registration plate light, with connector BAJONET 6PIN.
FT-610 L T LED BAJ 6PIN	FT-610-136 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, left with registration plate light, with connector BAJONET 6PIN.
FT-610 P LED BAJ 6PIN	FT-610-26 LED universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, right without registration plate light, with connector BAJONET 6PIN.
FT-610 P T LED BAJ 6PIN	FT-610-236 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, right with registration plate light, with connector BAJONET 6PIN.
FT-610 L LED	FT-610-14 LED universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, left without registration plate light, 2m cable
FT-610 L T LED	FT-610-134 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, left with registration plate light, 2m cable
FT-610 P LED	FT-610-24 universal LED lamp with triangular reflex reflector, 12-36V, 6-functions, right without registration plate light, 2m cable
FT-610 P T LED	FT-610-234 LED universal LED lamp with triangular reflex reflector, 12-36V, 7-functions, right with registration plate light, 2m cable

FRISTOM

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MICHAŁ DYBICZ