

PRODUCT GUIDE

Emergency Service Equipment



SMART POLICE - FIRE & AMBULANCE - HEAVY DUTY

Federal Signal Vama, European market leader for Emergency Warning Systems, offers integrated solutions for police, ambulance, fire, rescue and service vehicles market.



WHO ARE WE?

Federal Signal Corporation (FSC, with website www.federalsignal.com) designs and manufactures a suite of products and integrated solutions for municipal, governmental, industrial, and commercial customers under a variety of recognized brand names.

Environmental Solutions (ESG) that offers environmental solutions due to its complete product range (Vacuum trucks, sewer cleaners, hydro-excavators, street sweepers, waterblasters etc.) and **Safety and Security Systems (SSG)** are the two business groups that belongs to FSC.

SSG has the following divisions:

Integrated Warning Systems for Emergency vehicles (Public Safety Systems, PSS), Indoor and outdoor mass warning and notification systems division (Integrated Systems), Signaling products and mining and electrical safety equipment division.

Federal Signal Vama (FSV), belonging to PSS division, serves these Emergency Warning Systems in the European markets, which offers integrated solutions for Police, Ambulance, Fire, Rescue and Service markets. Furthermore, we install and make transformations to all kinds of emergency and service vehicles. Our large range of products and services together with our engineering and manufacturing flexibility ensure we are able to customize the solution expected by each customer.

FSV leading engineering and manufacturing capabilities have resulted in the most dependable emergency warning equipment available in Europe.

Innovative engineering and skilled workmanship have earned FSV a reputation for quality and performance appreciated by the customers we serve throughout Europe.



OUR MISSION

Providing Products and Services to Protect People and Our Planet.

OUR VALUES

We operate with the highest principles and deliver results through customer focus, innovation, continuous improvement, teamwork and investing in our people.

WHERE ARE WE?

European central office

- Vilassar de Dalt - Barcelona (Spain)

Production plants in Europe

- Vilassar de Dalt - Barcelona (Spain)

- Bytom (Polonia)

Comercial office (Central administration)

- Madrid (Spain)



FACILITIES

Federal Signal Vama is a company founded in 1969, pioneering the concept of police cars as we know them today. In 1992 it was acquired by the Federal Signal Corporation Industrial Group, a world leader in warning systems, which is listed on New York stock exchange. Federal Signal Vama became the European market business unit responsible for the emergency sector (Police, Fire and Ambulance) and services (Heavy Duty).

With important annual investments to develop new products, the engineering department can offer integrated solutions for all end user requirements. Because of Federal Signal Vama employee's constant development and innovation Federal Signal Vama has built an excellent reputation for quality and performance that is appreciated by customers all over Europe.

INGENEERING AND R+D

Federal Signal Vama's R and D department comprises a team of engineers divided in three technical categories; **software, electronics and mechanics**. This way, Federal Signal Vama offers integrated hardware and software solutions to enable the management of all the communications systems in the emergency and service vehicles.

A 3D printer allows the rapid development of prototypes in the early stages of the product development project. Thanks to this, Federal Signal Vama's engineers can check that the project is practical and the product is suitable for its intended market. Market information is collected both by marketing and commercial departments.

QUALITY

The Quality department does a variety of tests and checks to ensure the products meet the level of quality expected by the European market, Federal Signal Vama's main market place. These tests include life tests, vibration, temperature, humidity and many more, to ensure the applicable legal requirements; among them those included in Regulation R65 relating to colour, light intensity and flash patterns and Regulation R10 of Electromagnetic Compatibility. This high level of quality has lead to Federal Signal Vama achieving ISO 9001, ISO 14001 and UCA (Automobile Certification Unit).



PRODUCTION LINE

With two production facilities (one in Poland and one in Barcelona, Spain), Federal Signal Vama achieves a leadership and manufacturing capability that leads to a high reliability in its emergency warning systems, one of its highlights.

Our Barcelona manufacturing facility covers 7,500 square meters. Within this is our printed circuit production area utilizing Pick and Place robots, mounting components directly onto multilayer printed circuit boards. Final soldering in a convection oven is also fully automated.

Once the printed circuit boards have been checked, they have a protective varnish applied to ensure protection from adverse climatic conditions and to help to achieve an excellent performance.

Federal Signal Vama produces more than 400,000 wiring harnesses every year, using over 1,400,000 meters of electrical cable. Wiring harnesses are designed to assist installation into the emergency vehicle. All wiring harnesses are manufactured using electrical cables matched to the electrical loads and fitted with appropriate connectors.

Our lightbar production lines supply lightbars to all Europe. Federal Signal Vama manufactures more than 10 different lightbar platforms, among these, Valor lightbars with its "V" form, which reduces the risk and increases the emergency vehicle security at intersections, or the Traffic Storm lightbar, that includes a foldable LED panel, providing additional information in emergency situations. Each lightbar model is designed to meet the requirements of the different European markets.

The **grill light assembly area** produces lights using the latest LED technology, taking a special care in lights' sealing, to ensure perfect waterproof products when required.

In the special production area the well known Prisoner Kits are manufactured. This system converts the rear passenger area of a police vehicle into a secure area for the prisoner, while ensuring the safety of the police officers. A thermo forming machine manufactures the different elements included on the kit, like the separated shield and the rear seats, with a 5 axis CNC machine which finishes the process and gives the final and distinctive appearance.

In the mechanical workshop a computer programed punching machine starts the manufacture of the metal housings.

The metal housings then continue to a computer programmed bending machine which finishes the product ready for final assembly.

MAIN WARNING LIGHTS

LIGHTBARS

Traffic Storm Plus Series	6
Bifrost Series	10
Bifrost-V Series	14
Quasar Solaris Series	18
Traffic Storm Solaris Series	24
Valor Solaris Series	28
Allegiant Series	30
Legend Solaris Series	32

MINI LIGHTBARS

Mini Legend Solaris	34
Highligther Micro	35

LED BEACONS

LM500-D Solaris Series	36
Geminis Series	37
LM800 / LP800 Solaris Series	39
LM400 / LP400 Solaris Series	40
Trident III Solaris Series	41
NightSpire Series	42

IWS MODULES

IWS- BC Modules	43
-----------------	----

SUPPLEMENTAL WARNING LIGHTS

DIRECTIONAL LED LIGHTS

NanoLED Bicolor Series	46
NanoLED Series	47
NanoLED Round Series	50
MicroLED Advance Series	51
Serie LD116 Advance	53
QuadraFlare Advance	54
Motorcycle Kit LD400/LD410 Solaris & CO400 Solaris	55

DIRECTIONAL WARNING LIGHTS

SignalMaster Solaris	56
----------------------	----

LED SIGNS

FSX Sun Visor	58
LSG900 Series	59
LSG750/752	60

INTERNAL WARNING LIGHTS

INTERIOR LIGHTS

NanoLED Viper	62
---------------	----

AREA LIGHTING

SCENE LIGHTS

LineLED	66
---------	----

WORKLIGHTS

LEDs	67
------	----

SIRENS & AUDIBLE WARNING

COMPACT SIRENS

ASX Series	70
SoundStar-D Series	72

ELECTRONIC SIREN AMPLIFIERS

AS600 Series	73
AS400 Series	74
AS300 Series	75
FEDHORN System	76
AS200 Series	77

INTEGRATED SIRENS

PA300-FSV	78
-----------	----

LOUDSPEAKERS

Loudspeakers	79
Compact Speakers	80

CONTROLLERS

Direct wire converter	82
-----------------------	----

ACCESORIES

GUN-LOCKS

AMK Series	84
------------	----

RECHARGEABLE FLASHLIGHTS

L500 Series	85
-------------	----

READING LAMPS

Littlite	87
----------	----

CONTROL UNITS

SW Series	88
Megaphones	88

BACK-UP ALARMS

Back-up alarms	89
----------------	----

LIGHTING ACCESSORIES

Flashers and relays	90
---------------------	----

RISK REDUCTION

DISTRIBUTORS

ABOUT THE PRODUCT GUIDE 2025

- Products are classified according to their categories (main warning lights, supplemental warning lights, internal warning lights, area lighting, sirens & audible warning, controllers and accessories).
- Within each category, products are grouped in families or Series.
- For each product the Reference number (#), model and description are shown. Product reference numbers are the same as those used in our business system. Please order the product by its corresponding reference number.
- Lightbar options cannot be bought separately from the lightbar.
- For a proper and safe installation and operation, remember to read all installation manuals carefully.

* Provided information about price, product, dimensions, features and specifications could be subject to change without notice.

FEATURED PRODUCTS

LIGHTBARS

Highlighter Micro

page. 35



LED SIGNS

LSG750/752

page. 60



ACCESSORIES

AMK-400 Series

page. 84



Sales conditions

(1) AGREEMENT AND LIMITATIONS. The agreement between Seller and Buyer (the "sales contract") with respect to the sale of goods (the "goods") described on the other side hereof shall consist of the terms appearing hereon and on the other side hereof together with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in Buyer's purchase order or in any other communication from Buyer to Seller unless specifically agreed to by Seller in writing. Except as expressly stated in the sales contract, no reference to Buyer's purchase order or other communication from Buyer shall be deemed to incorporate by reference any terms appearing therein. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person. Prior courses of dealing, trade usage and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to, detract from, supplant or explain the sales contract, shall not be binding on Seller.

(2) TERMINATION OR MODIFICATION. The sales contract may be modified or terminated only upon Seller's written consent except that stenographic and clerical errors are subject to correction by Seller or upon Seller's written consent. If Seller shall declare or consent to a termination of the sales contract, in whole or in part, Buyer, in the absence of contrary written agreement signed by Seller, shall pay termination charges based upon expenses and costs incurred in the production of the goods or in the performance of the services to the date such termination is accepted by Seller including, but not limited to, expenses of disposing of materials on hand or on order from suppliers and the losses resulting from such disposition, plus a reasonable profit. Notwithstanding the foregoing any goods substantially completed or services performed on or prior to such termination shall be accepted and paid for in full by Buyer.

(3) PRICE AND PAYMENT. Seller reserves the right to increase the quoted order price at any time before delivery to Buyer to reflect any increase in Seller's costs to manufacture or deliver the ordered product due to any factor beyond the reasonable control of Seller. Seller shall provide Buyer with prompt electronic notice of any such price increase. Buyer shall have five days from receipt of such notice to cancel its order, absent which Buyer shall be deemed to have consented to the price increase. Prices are subject to increase by Seller based on Seller's prices in effect at the time of shipment in all instances where specified shipment date is later than 30 days from date of order. Unless otherwise specified in the sales contract or Seller's applicable price list, prices are EXWORKS. Seller's point of shipment, and the terms of payment are NET 30 days from the date of invoice. If the sales contract is for more than one unit of goods, the goods may be shipped in a single lot or in several lots at the discretion of Seller. In such event each such shipment shall be paid separately and Buyer shall be responsible for all transportation charges. Seller may require full or partial payment or payment guarantee in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. Payment by credit card may be subject to a service charge.

(4) PAST DUE INTEREST. Amounts not paid when due shall be subject to past due interest at the rate of 18% per year or the highest rate permitted by law, whichever is less.

(5) RISK OF LOSS. The risk of loss of the goods or any part thereof shall pass to the buyer upon delivery thereof by Seller to the carrier. Buyer shall have sole responsibility for processing and collection of any claim of loss against the carrier.

(6) TAXES. Prices do not include taxes. Buyer shall pay Seller, in addition to the price of the goods, any applicable excise, sales, use or other tax (irrespective of how it is designated) imposed upon the sale, production, delivery or use of the goods ordered to the extent required or not forbidden by law to be collected by Seller from Buyer, whether or not so collected at the time of the sale, unless valid exemption certificates acceptable to the taxing authorities are furnished to Seller before the date of invoice.

(7) DELIVERY. Promises of delivery from stock are subject to prior sale. Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller shall in good faith endeavour to meet estimated delivery dates but shall not be liable to Buyer for any damages as a result of any delay caused or contributed to by circumstances beyond Seller's reasonable control.

(8) DEDUCTIONS AND RETURNS. A Return Material Authorization (RMA) must be obtained before returning merchandise for credit. Returns are subject to 20% or more restocking charges unless otherwise agreed upon at the time RMA is issued. All returns are subject to inspection of merchandise and any defects in the units will be charged back to the Buyer at the cost of parts and labour. Credit deductions will not be honoured unless covered by a credit memorandum. Goods shipped to the Buyer may be returned to Seller for credit only upon the Seller's prior written consent (such consent to be in the sole discretion of Seller) and upon terms specified by Seller, including prevailing restocking, freight, and handling charges. Buyer assumes all risk of loss for such returned goods until actual receipt thereof by Seller. Seller representatives are not authorized to accept, returned goods or to grant allowances or adjustments with respect to Buyer's account. We don't accept returns of special products developed under customer requirements, as well as lightbars or prisoner transport kits. Federal Signal Vama only accepts product returns shown at product guide, general price list or spare parts list, and for a period of 2 years starting from the product manufacturing date.

(9) INSPECTION. Buyer shall inspect the goods immediately upon the receipt thereof. All claims for any alleged defect in Seller's performance under this sales contract, capable of discovery upon reasonable inspection, must be fully set forth in writing and received by Seller within thirty days of Buyer's receipt of the goods. Failure to make any such claim within said thirty-day period shall constitute a waiver of such claim and an irrevocable acceptance of the goods by Buyer.

(10) LIMITED WARRANTY. Federal Signal Vama, S.A.U warrants each new product to be free of defects in material and labor cost, under normal use and service, for a period of two years from the manufacturing date unless different enterprise communication supports (product bulletins, product guides, price lists, email communications, etc.) stated otherwise. All products have been subjected to abuse, misuse, extraordinary work conditions, inadequate maintenance or installation, or its use, maintenance or installation are different from user's manual are excluded of this warranty. Lamps, flash tubes, or batteries are not covered under warranty as well. During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal discloses to be defective in material and/or workmanship. The customer will return by RMA the defective part for analysis and verification in a period of one month maximum. Federal reserves the right to charge the product and transport if the defective parts after examination by Federal don't discloses to be defective in material and/or workmanship, or in the case of not receiving the defective product part for analysis when this product has been replaced in warranty. Only in case of reparation or substitution of any product part is impossible, or when the product can't recover its function or former quality through the reparation or substitution, Federal Signal Vama S.A.U. could refund the purchase price paid for its distributors or professional customers to them. Except for specific circumstances, reparations under this warranty have to be done by Federal Signal Vama S.A.U.'s authorised Service Centres. If this reparation can't be done at authorised Federal Signal Vama S.A.U Service Centres and the product has to be repaired in other place, the distributor or professional customer has to paid all Federal Signal Vama S.A.U or SAT personnel's travel expenses and living allowances. This warranty covers all expenses relating to assembly and disassembly, and labour of the defective part, according to current price list communicated by Federal Signal Vama S.A.U. If distributor or professional customer decides to send to Federal Signal Vama S.A.U. in order to repair it, this warranty covers shipment expenses of the repaired or substituted part by regular shipment from Federal Signal Vama S.A.U. to the distributor or professional customer. Shipment expenses of supposedly defective part from distributor or professional customer to Federal Signal Vama S.A.U. have to be paid by distributor or professional customer. Repaired or substituted parts have got a (3) three months warranty or they have got the remaining warranty time from the part applied, if this is greater. Federal Signal Vama S.A.U. not offers any other warranty, whether explicit or implicit, including (but not limited) any implicit warranty for a commercial or suitable specific purpose. Under any circumstance Federal Signal Vama S.A.U. has to be responsible for possible benefit losses or direct damages resulting from defective material or manufacturing products. This commercial warranty is applicable without prejudice to current customer protection or legal warranties laws.

(11) PATENTS. Seller shall hold Buyer harmless, to the extent herein provided, against any rightful claim of any third person stating that the goods, under the same conditions as they left the factory, infringe any United States and/or European Union patent. However, if the Seller followed Buyer's instructions in that respect, the Buyer shall hold Seller harmless from any claim arising from the compliance with such instructions. Seller's acceptance in this paragraph to hold Buyer harmless shall not apply to any infringement consisting of the use of goods manufactured by Seller as a part of any combination with goods manufactured by Buyer or others. In the event of any claim of infringement in respect of any goods manufactured by Seller and the subsequent prohibition of use, Seller, if unable within a reasonable time to secure for Buyer the right to continue using such goods, either by suspension of the injunction, by providing for Buyer a license, or through other ways, shall either replace such goods with non-infringing goods or modify such goods so that they become non-infringing or accept the return of the prohibited goods and refund the purchase price paid by Buyer less allowance for any period of effective use. Except as in this paragraph provided, Seller makes no warranty that the goods will be delivered free of the rightful claim of any third person by way of infringement or the like and Buyer's remedies will be limited to those provided in this paragraph.

(12) ASSIGNMENT AND DELEGATION. No right or interest in this sales contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or of the performance of any obligation, by Buyer shall be made without Seller's prior written consent. Any attempted assignment or delegation shall be void and totally ineffective for all purposes unless made in conformity with this paragraph 9, 10 and 11 hereof, and if effective shall be subject to all limitations of this sales contract.

(13) SEVERABILITY. If any term, clause or provision contained in the sales contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision herein contained.

(14) INSTALLATION. Installation shall be provided and shall be paid for by Buyer unless otherwise specifically stated on the sales contract.

(15) GOVERNING LAW AND LIMITATIONS. The formation and performance of the sales contract shall be governed by the laws of Spain.

Any action for breach of the sales contract or any covenant or warranty contained herein must be commenced within the term of one year after breach of agreement has occurred.

(16) MINIMUM ORDER. With the aim to increase our customer service level and efficiency, we will establish a minimum customer order amount of 75 €. We would not be able to manage orders below that amount. Do not hesitate to contact our customer service for further information.

MAIN WARNING LIGHTS

➤	Lightbars.....	6
➤	Mini lightbars.....	34
➤	LED beacons.....	36
➤	IWS modules.....	43



TRAFFIC STORM PLUS Series

Federal Signal Vama presents the **TRAFFIC STORM PLUS**, the new low-profile lightbar with single colour, bicolour and tricolour technology. Its modular architecture allows the integration of different options such as folding LED sign, 100W speaker and/or siren amplifier. In addition, you can integrate Smart Police systems such as ALPR and/or video cameras, all this through a single roof connector, reducing installation and maintenance cost.

All the available options (acoustic, lights and the foldable sign) are controlled by CAN BUS communication, providing greater versatility and allowing the automation of systems.

A new design of the parabolic reflector offers an uniformity light, avoiding the appearance of shadows and reducing the risk in emergency situations.

An adjustable mounting kit facilitates its installation absorbing the vehicle's roof curvatures.

- BICOLOUR AND TRICOLOUR TECHNOLOGY

The new **TRAFFIC STORM PLUS** offers bicolour technology for the priority lights and tricolour technology for the secondary lights.

- MODULAR

The modular design of the **TRAFFIC STORM PLUS** allows different options to be updated according to new requirements or scenarios.

- FULL INTEGRATION

Thanks to its modular design, the new **TRAFFIC STORM PLUS** allows the integration of lights, acoustic and camera systems on the same lightbar.

- ROTATION SYSTEM

ALPR cameras with rotation system to adjust the orientation of the cameras and facilitate the reading of license plates at different heights.

- INFRARED

Infrared light emergency signalling available.

- ROOF CONNECTOR

Integration of all the available options through a roof connector, reducing installation and maintenance cost.

- PHOTOCELL SENSOR

Thanks to the photocell sensor, the day/night function is activated automatically, always adapting to existing lighting conditions.

- URBAN APPLICATIONS

ALPR cameras have been designed for traffic applications, such as vehicle traffic in cities, parked vehicles and license plate recognition on roads with two lanes.



REF.	MOD.	DESCRIPTION
Priority lights - Options		
Basic lightbar		
TSP-SL		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue, amber or red light, UN R65 approved class 2
TSP-SL-BIC		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue/amber, blue/red or amber/red light, UN R65 approved class 2
With speaker		
TSP-SL-SPK		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue, amber or red light, UN R65 approved class 2, with speaker
TSP-SL-BIC-SPK		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue/amber, blue/red or amber/red light, UN R65 approved class 2, with speaker
With siren amplifier		
TSP-SL-SPKF+		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue, amber or red light, UN R65 approved class 2, with siren amplifier integrated
TSP-SL-BIC-SPKF+		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue/amber, blue/red or amber/red light, UN R65 approved class 2, with siren amplifier integrated
With speaker and siren amplifier		
TSP-SL-SPK+		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue, amber or red light, UN R65 approved class 2, with speaker and siren amplifier integrated
TSP-SL-BIC-SPK+		1150mm basic lightbar, (4) Solaris modules of (18) LEDs, blue/amber, blue/red or amber/red light, UN R65 approved class 2, with speaker and siren amplifier integrated
TSP-IR		Infrared function for priority lights
(*) Mounting kit is not included in price and must be ordered separately.		
Lateral section - Options		
TSP-AL		(2) Solaris modules of (3) LEDs, white light, alley light
TSP-AL-BIC		(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension and (3) LEDs, white light, alley light
TSP-AL-TRIC		(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension and (3) LEDs, white light, alley light
TSP-LE		(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension
TSP-LE-BIC		(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension
Front & Center Section - Options		
TSP-FF		(2) Solaris modules of (3) LEDs, white light, steady burn and/or flashing
TSP-FF-BIC		(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension and (3) LEDs, white light, steady burn and/or flashing
TSP-FF-TRIC		(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension and (3) LEDs, white light, steady burn and/or flashing
TSP-LE		(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension
TSP-LE-BIC		(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension
TSP-LP		(2) Solaris modules of (6) LEDs, red light, "stop light" function
TSP-LP-TRIC		(2) Solaris modules of (9) LEDs, blue/amber light, priority lights extension and red light, "stop light" function
TSP-CI		Illuminated frontal sign without text (The text message must be ordered separately)
Supplement for 2 extension Solaris modules		
Supplement for 3-6 extension Solaris modules		
Supplement for 7-8 extension Solaris modules		
(*) Text must be requested separately.		

REF.	MOD.	DESCRIPTION
Rear & Center - Options		
	TSP-FF	(2) Solaris modules of (3) LEDs, white light, steady burn and/or flashing
	TSP-FF-BIC	(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension and (3) LEDs, white light, steady burn and/or flashing
	TSP-FF-TRIC	(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension and (3) LEDs, white light, steady burn and/or flashing
	TSP-LE	(2) Solaris modules of (6) LEDs, blue, red or amber light, priority lights extension
	TSP-LE-BIC	(2) Solaris modules of (12) LEDs, blue/amber, blue/red or amber/red light, priority lights extension and SignalMaster function
	TSP-A/SM	(2) Solaris modules of (6) LEDs, amber light, flashing or SignalMaster function
	TSP-CI	Illuminated frontal sign without text (The text message must be ordered separately)
		Supplement for 2 extension Solaris modules
		Supplement for 3-6 extension Solaris modules
		Supplement for 7-8 extension Solaris modules
		(*) Text must be requested separately.
ALPR cameras - Options		
	TSP-ST-ALP	Preparation of the structure for the installation of <u>ALPR cameras</u> .
	TSP-1ALP	ALPR camera
	TSP-2ALP	Module of 2 ALPR cameras
Video Cameras - Options		
	TSP-ST-VD	Preparation of the structure for the installation of <u>video cameras</u> .
	TSP-VD	Module of video camera.
ALPR and Video cameras - Options		
	TSP-STVD+ALP	Preparation of the structure for the installation of <u>ALPR cameras and video cameras</u> .
	TSP-1ALP	ALPR camera
	TSP-2ALP	Module of 2 ALPR cameras
	TSP-VD	Module of video camera.
	TSP-2ALP+VD	Module of 2 ALPR cameras and 1 video camera.
Foldable LED Sign - Options*		
	TSP-CLF	(1) LSG900, foldable LED Sign, red light, 200 programmable messages from the user with normal and/or mirror view and scrolling.
	TSP-CLP	(1) LSG900, foldable LED Sign, red light, rear signalisation, integrated SignalMaster (directional lighting system), 200 programmable messages from the user with normal view and scrolling.
	TSP-CLF/P	(1) Front LED Sign, red light, front and rear signalisation, 200 programmable messages from the user with normal and/or mirror view(front) and scrolling.
Mount accesories		
	A-CT23	23 ways roof connector
8234231	TSP-FP-A	Permanent mounting kit for vehicles roof with high curvature
8234230	TSP-FP-B	Permanent mounting kit for vehicles roof with low curvature
Control heads		
BCT3000		
	BCT3000	Control head for Traffic Storm series
AS320 DIG CAN BUS siren amplifier		
	AS320DIG 12V	100W Siren amplifier
Public address		
	AS320-PA CB	Public adress kit with remote control. Volume and microphone functions control (for control head BCT3000) 12V
Programming Accesories		
	S2ME	SmartSign 2 Message Editor, for editing and downloading messages from PC. Only available for LSG900 programmable LED sign in Traffic Storm PLUS and Traffic Storm lightbars series.





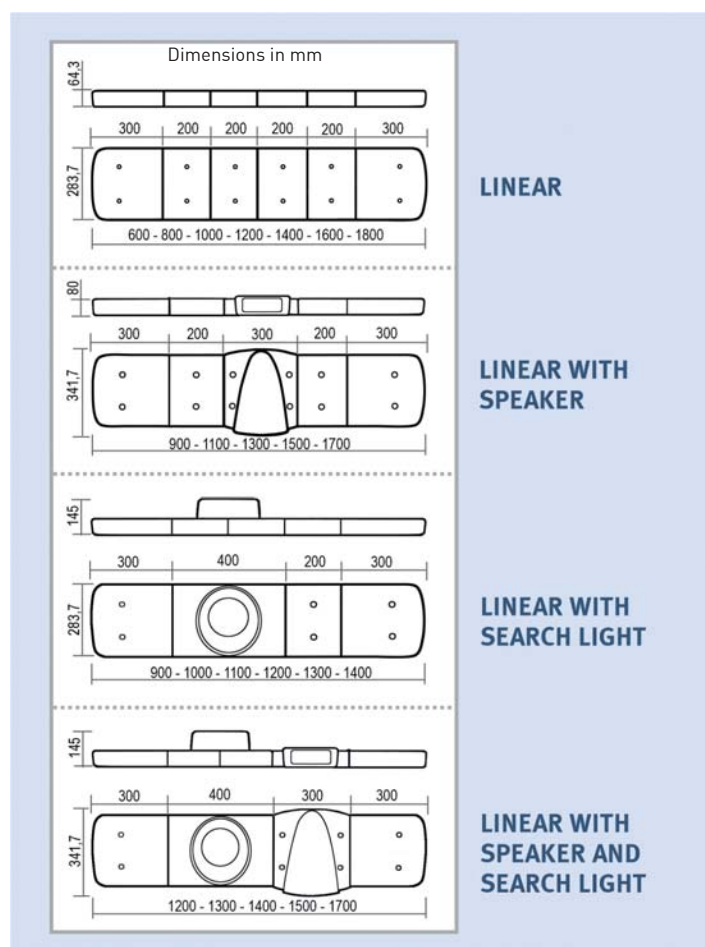
BIFROST Series

FEDERAL SIGNAL VAMA presents the new **BIFROST** lightbar Series with LED technology, low profile and aerodynamic design. It allows to integrate a 100W speaker, a 100W siren-amplifier AS600 series and a LED searchlight, becoming the most versatile low profile lightbar on the market.

Its design is completely modular and flexible, both in its structure and different LED modules, allowing a quick replacement of each module. It has multiple lighting options: main lights and extension lights with cruise function, illuminated sign, SignalMaster KS, front, rear and / or lateral work lights and independent flashing lights among others.

Additionally, the different lower bases and upper lenses are configurable: Spreader or Smooth lower base, available in blue, amber, red and clear. The upper lenses are available in blue, amber, red and clear.

New tones "Stadt/Land" available for Germany.



Bifrost lightbar Series 1 level



Bifrost lightbar Series 2 levels

REF.	MOD.	DESCRIPTION
CONFIGURABLE SYSTEM (specify options)		
Basic lightbar (1 level)		
BI-B600		Bifrost series lineal lightbar, base 600 mm, wiring harness, bitension
BI-B800		Bifrost series lineal lightbar, base 800 mm, wiring harness, bitension
BI-B1000		Bifrost series lineal lightbar, base 1000 mm, wiring harness, bitension
BI-B1200		Bifrost series lineal lightbar, base 1200 mm, wiring harness, bitension
BI-B1400		Bifrost series lineal lightbar, base 1400 mm, wiring harness, bitension
BI-B1600		Bifrost series lineal lightbar, base 1600 mm, wiring harness, bitension
BI-B1800		Bifrost series lineal lightbar, base 1800 mm, wiring harness, bitension
Basic lightbar (2 levels)		
BI-B600 2N		Bifrost series lineal lightbar, base 600 mm, wiring harness, bitension, 2 levels
BI-B800 2N		Bifrost series lineal lightbar, base 800 mm, wiring harness, bitension, 2 levels
BI-B1000 2N		Bifrost series lineal lightbar, base 1000 mm, wiring harness, bitension, 2 levels
BI-B1200 2N		Bifrost series lineal lightbar, base 1200 mm, wiring harness, bitension, 2 levels
BI-B1400 2N		Bifrost series lineal lightbar, base 1400 mm, wiring harness, bitension, 2 levels
BI-B1600 2N		Bifrost series lineal lightbar, base 1600 mm, wiring harness, bitension, 2 levels
Basic lightbar with speaker (1 level)		
BI-B900SPK		Bifrost series lineal lightbar, base 900 mm, wiring harness, bitension, with speaker
BI-B1100SPK		Bifrost series lineal lightbar, base 1100 mm, wiring harness, bitension, with speaker
BI-B1300SPK		Bifrost series lineal lightbar, base 1300 mm, wiring harness, bitension, with speaker
BI-B1500SPK		Bifrost series lineal lightbar, base 1500 mm, wiring harness, bitension, with speaker
BI-B1700SPK		Bifrost series lineal lightbar, base 1700 mm, wiring harness, bitension, with speaker
Basic lightbar with speaker (2 levels)		
BI-B900SPK 2N		Bifrost series lineal lightbar, base 900 mm, wiring harness, bitension, with speaker, 2 levels
BI-B1100SPK 2N		Bifrost series lineal lightbar, base 1100 mm, wiring harness, bitension, with speaker, 2 levels
BI-B1300SPK 2N		Bifrost series lineal lightbar, base 1300 mm, wiring harness, bitension, with speaker, 2 levels
BI-B1500SPK 2N		Bifrost series lineal lightbar, base 1500 mm, wiring harness, bitension, with speaker, 2 levels
BI-B1700SPK 2N		Bifrost series lineal lightbar, base 1700 mm, wiring harness, bitension, with speaker, 2 levels
Basic lightbar with search light (1 level)		
BI-B900FB		Bifrost series lineal lightbar, base 900 mm, wiring harness, bitension, with search light
BI-B1000FB		Bifrost series lineal lightbar, base 1000 mm, wiring harness, bitension, with search light
BI-B1100FB		Bifrost series lineal lightbar, base 1100 mm, wiring harness, bitension, with search light
BI-B1200FB		Bifrost series lineal lightbar, base 1200 mm, wiring harness, bitension, with search light
BI-B1300FB		Bifrost series lineal lightbar, base 1300 mm, wiring harness, bitension, with search light
BI-B1400FB		Bifrost series lineal lightbar, base 1400 mm, wiring harness, bitension, with search light
Basic lightbar with speaker and search light (1 level)		
BI-B1200SPFB		Bifrost series lineal lightbar, base 1200 mm, wiring harness, bitension, with speaker and search light
BI-B1300SPFB		Bifrost series lineal lightbar, base 1300 mm, wiring harness, bitension, with speaker and search light
BI-B1400SPFB		Bifrost series lineal lightbar, base 1400 mm, wiring harness, bitension, with speaker and search light
BI-B1500SPFB		Bifrost series lineal lightbar, base 1500 mm, wiring harness, bitension, with speaker and search light
BI-B1700SPFB		Bifrost series lineal lightbar, base 1700 mm, wiring harness, bitension, with speaker and search light

(*) Mounting kit is not included in price and must be ordered separately.

REF.	MOD.	DESCRIPTION
CAN BUS OPTIONS**		
Lighting options Bifrost 1 level		
Lighting options - Priority lights		
BI-SLR65		Blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) or red (Approved UN R65 class 1). with cruise light, day / night and lamp failure detector
BI-SLR65-BIC		Bicolor blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) and/or red (Approved UN R65 class 1). with cruise light, day / night and lamp failure detector
Lighting options - Secondary lights		
BI-SLE3		Module of (3) Solaris LEDs with parabolic reflector, blue, amber, red or white light
BI-SLE3-BIC		Bicolor module of (6) Solaris LEDs with parabolic reflector, blue, amber and/or, red. Only available as bicolor extension lights and/or monocolour extension light plus SignalMaster.
BI-RE		Option only (1) reflector without LED
Lighting options Bifrost 2 levels		
Lighting options upper level (1st level)		
BI-SLR65-2N		Blue LEDs Priority lights (Approved UN R65 class 1). With cruise light, day / night and lamp failure detector.
BI-SLE3-2N-INT		Module of (3) Solaris LEDs with parabolic reflector, blue, central section extension lights
Lighting options upper level (2nd level) - Secondary lights		
BI-SLE3-2N-SUP		2 modules of (12) Solaris LEDs with parabolic reflector, blue, extension light
Lighting options lower level - Secondary lights		
BI-SLE3-2N-INF		Module of (3) Solaris LEDs with parabolic reflector, blue, amber, red or white light
Sign options		
BI-CIL2		(1) Front and back LEDs sign module
BI-AD		Self-adhesive vinyl for illuminated sign, front and back, with or without text
Acoustic options		
AS600-CB		100W AS600 CAN BUS siren amplifier, 1 auxiliary output synchronized with priority lights, 1 tacograph output, connection to horn and radio, attenuator option according to control head, 10-30V. Does not include public address.
8235984AUD PA-CB12		Public Address kit with remote control. Volume and microphone functions control (for CAN BUS AS600 siren amplifier) (BCT2000 and BCT3000 control heads) 12V
82351038AUDPA-CB24		Public Address kit with remote control. Volume and microphone functions control (for CAN BUS AS600 siren amplifier) (BCT2000 and BCT3000 control heads) 24V
Control heads		
BCT2004-01	BCT2004	BCT2000 Series control head, 4 control keys.
BCT2006-01	BCT2006	BCT2000 Series control head, 6 control keys.
BCT2010-01	BCT2010	BCT2000 Series control head, 10 control keys.
BCT2015-01	BCT2015	BCT2000 Series control head, 15 control keys.
BCT2021-01	BCT2021	BCT2000 Series control head, 21 control keys.
8216160	BCT500CB	BCT500CB Series control head. 13 control keys (public address included)

(*) The current BCT500CB series control heads are not compatible with the Bifrost Series. The valid control heads must include in their reference -AUD.

(**) Bifrost series CAN BUS lightbars of Federal Signal Vama are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue"

REF.	MOD.	DESCRIPTION
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ANALOGIC OPTIONS

Lighting options - Priority lights

BI-SLR65AN	Blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) or red (Approved UN R65 class 1) with cruise light and day / night.
BI-SLR65ADF	Blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) or red (Approved UN R65 class 1) with cruise light, day / night and lamp failure detector

Lighting options - Secondary lights

BI-SLE3	Module of (3) Solaris LEDs with parabolic reflector, blue, amber, red or white light
BI-RE	Option only (1) reflector without LED

Sign options

BI-CIL2	(1) Front and back LEDs sign module
BI-AD	Self-adhesive vinyl for illuminated sign, front and back, with or without text

Signalmaster options

BI-SML6-KS	SignalMaster Solaris, directional lighting system, (6) modules (3) LEDs with parabolic reflector, control head, red, amber or blue colour
BI-SML8-KS	SignalMaster Solaris, directional lighting system, (8) modules (3) LEDs with parabolic reflector, control head, red, amber or blue colour

Acoustic options

	AS600-AN	100W AS600 Integrated Analogic siren amplifier, 1 auxiliary output synchronized with priority lights, 1 tacograph output, connection to horn and radio, lamp failure and/or attenuator option, 10-30v. Does not include public address.
8235970	PAC-AN	Public Address kit with remote control. Control of priority lights and siren, PTT for public address and volume control 12-24V

MOUNT OPTIONS

8234174	LGD/FP	Permanent mounting bracket
	BI-FB	Metal mounting kits on bars (contact our sales department for available models)
8234189	BI-FM	Magnetic mount, Bifrost 600mm
	A-CT23	Roof connector, 23-ways
4004536		Cover for lineal lightbars, 1100mm. (44")



BIFROST-V Series

Federal Signal Vama presents the new **BIFROST-V** lightbar Series with LED technology, low profile and aerodynamic design. Its V-shape design offers a greater efficiency in emergency situations and risk reduction in the intersections. It allows to integrate a 100W speaker and a 100W siren-amplifier AS600 series.

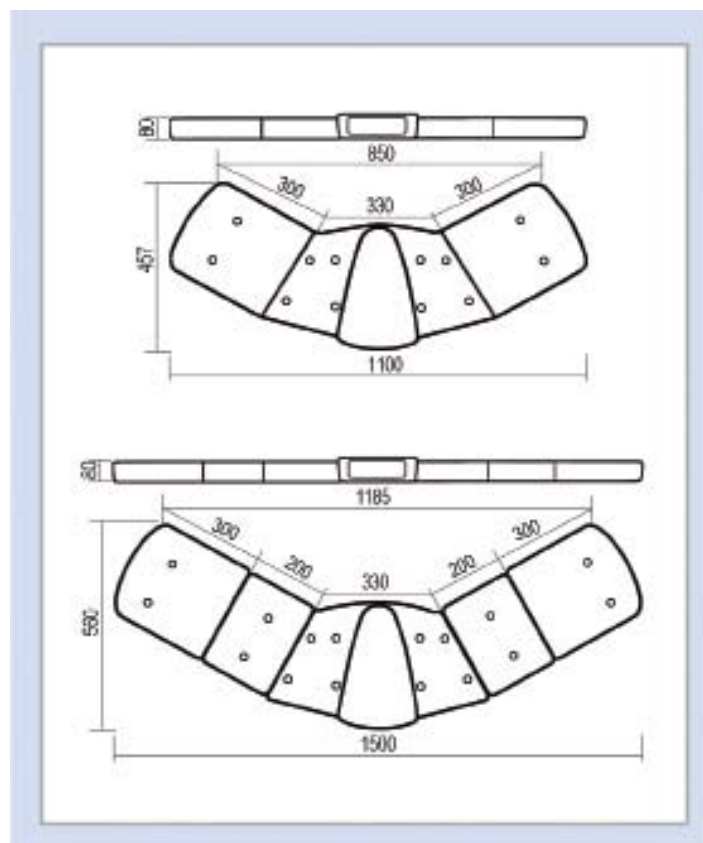
Its design is completely modular and flexible, both in its structure and different LED modules, allowing a quick replacement of each module. It has multiple lighting options: main lights and extension lights with cruise function, illuminated sign, SignalMaster, front, rear and / or lateral work lights and independent flashing lights among others.

Additionally, the different lower bases and upper lenses are configurable: Spreader or Smooth lower base, available in blue, amber, red and clear. The upper lenses are available in blue, amber, red and clear.

New tones "Stadt/Land" available for Germany.



Bifrost-V lightbar Series dimensions in mm.



REF.	MOD.	DESCRIPTION
CONFIGURABLE SYSTEM (specify options)**		
Basic lightbar (1 level)		
BI-B1100V		Bifrost series V-shape lightbar, base 1100 mm, wiring harness, bitension
BI-B1500V		Bifrost series V-shape lightbar, base 1500 mm, wiring harness, bitension
Basic lightbar (2 levels)		
BI-B1100V 2N		Bifrost series V-shape lightbar, base 1100 mm, wiring harness, bitension, 2 levels
Basic lightbar with speaker (1 level)		
BI-B1100VSPK		Bifrost series V-shape lightbar, base 1100 mm, wiring harness, bitension, with speaker
BI-B1500VSPK		Bifrost series V-shape lightbar, base 1500 mm, wiring harness, bitension, with speaker
Basic lightbar with speaker (2 levels)		
BI-B1100VSPK 2N		Bifrost series V-shape lightbar, base 1100 mm, wiring harness, bitension, with speaker, 2 levels
CAN BUS OPTIONS		
Lighting options Bifrost 1 level		
Lighting options - Priority lights		
BI-SLR65V		Blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) or red (Approved UN R65 class 1). with cruise light, day / night and lamp failure detector
BI-SLR65V-BIC		Bicolor blue LEDs Priority lights (Approved UN R65 class 1), amber (Approved UN R65 class 1) and/or red (Approved UN R65 class 1). with cruise light, day / night and lamp failure detector
Lighting options - Secondary lights		
BI-SLE3		Module of (3) Solaris LEDs with parabolic reflector, blue, amber, red or white light
BI-SLE3-BIC		Bicolour module of (6) Solaris LEDs with parabolic reflector, blue, amber and/or, red. Only available as bicolor extension lights and/or monocolour extension light plus SignalMaster.
BI-RE		Option only (1) reflector without LED
Sign options		
BI-CIL2		(1) Front and back LEDs sign module
BI-AD		Self-adhesive vinyl for illuminated sign, front and back, with or without text
Lighting options Bifrost 2 levels		
Lighting options - Priority lights		
BI-SLR65V-CL1		Blue LEDs Priority lights (Approved UN R65 class 1). With cruise light, day / night and lamp failure detector
BI-SLR65V-CL2		Blue LEDs Priority lights (Approved UN R65 class 2). With cruise light, day / night and lamp failure detector
Lighting options - Secondary lights - lower level		
BI-SLE3-NI		Module of (3) Solaris LEDs with parabolic reflector, blue, amber, red or white light
Lighting options - Secondary lights - upper level		
BI-SLE3-NS		2 modules of (12) Solaris LEDs with parabolic reflector, blue, extension light
Sign options		
BI2N-CI1		(1) Front LEDs sign module
BI2N-CI2		(1) Front and back LEDs sign module
BI-AD		Self-adhesive vinyl for illuminated sign, front and back, with or without text


REF.	MOD.	DESCRIPTION
Acoustic options		
	AS600-CB	100W AS600 CAN BUS siren amplifier, 1 auxiliary output synchronized with priority lights, 1 tacograph output, connection to horn and radio, attenuator option according to control head, 10-30V. Does not include public address.
8235984AUD	PA-CB12	Public Address kit with remote control. Volume and microphone functions control (for CAN BUS AS600 siren amplifier) (BCT2000 and BCT3000 control heads) 12V
82351038AUD	PA-CB24	Public Address kit with remote control. Volume and microphone functions control (for CAN BUS AS600 siren amplifier) (BCT2000 and BCT3000 control heads) 24V
Control heads		
BCT2004-01	BCT2004	BCT2000 Series control head, 4 control keys.
BCT2006-01	BCT2006	BCT2000 Series control head, 6 control keys.
BCT2010-01	BCT2010	BCT2000 Series control head, 10 control keys.
BCT2015-01	BCT2015	BCT2000 Series control head, 15 control keys.
BCT2021-01	BCT2021	BCT2000 Series control head, 21 control keys.
8216160-AUD	BCT500CB	BCT500CB Series control head. 13 control keys (public address included)
(*) The current BCT500CB series control heads are not compatible with the Bifrost Series. The valid control heads must include in their reference -AUD. (**) Bifrost series CAN BUS lightbars of Federal Signal Vama are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue		
MOUNTING OPTIONS		
8234224	BI-FPB-V	Low permanent mounting bracket
	BI-FB-V	Metal mounting kits on bars (contact our sales department for available models)
	A-CT23	Roof connector, 23-ways



Bifrost Lineal

BIFROST

LED lightbar



Bifrost-V

✓ **BICOLOR** 

✓ Modular LED Technology

✓ Low profile and aerodynamic design

✓ Built-in siren and speaker



QUASAR Series

FEDERAL SIGNAL VAMA offers the New **Integrated Warning system QUASAR**, a revolutionary Solaris technology lighting system completely integrated into the roof and with modular technology, provides high visibility through 360 degrees of emergency vehicle with high light power, increasing visibility and reducing risks. The lights integration into the roof give the vehicle aerodynamics and modernity.

- MODULAR TECHNOLOGY

Modular system perfectly adapted to emergency professionals, where LED lights, sign options, alley and/or front lights, LED light colour, RAL section colour, directional warning lights, rear recording and displaying camera, etc. could be chosen.

- FRONT SECTION R65 T-CATEGORY CLASS 2 APPROVED

Front section according to R65 Regulation T-Category, class 2, in blue and amber colours. Furthermore, front and rear sections are according together with R65 Regulation T-Category, class 2, as well, for same LED light colours.

- BICOLOUR AND TRICOLOUR LIGHT

Bicolour lights for priority lights and tricolour lights for auxiliary lights to meet end user needs.

- ULTRA-LOW PROFILE

Its low profile, lower than 150 mm., reduces aerodynamic resistance allowing a better emergency vehicle grip, a better low height spaces access and a unique design.



- SPLIT ROOF

Independent front and rear sections, so they could be ordered separately, providing high versatility to the system, according customer needs.

- EXCLUSIVE DESIGN

Integrated Quasar System design is for the exclusive use of Federal Signal Vama according to European Union Design Certificate.

- LOW MAINTENANCE COST

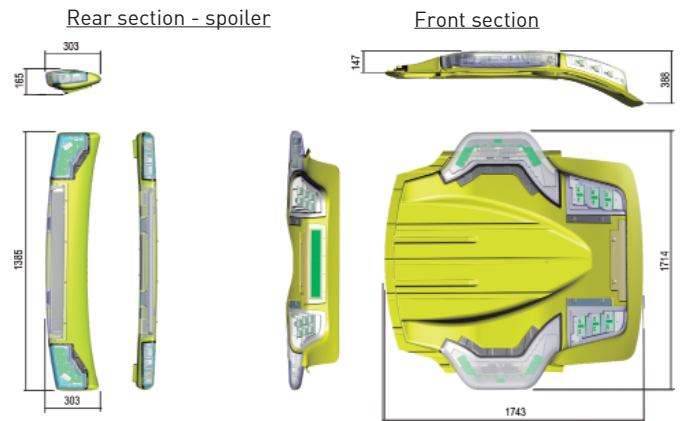
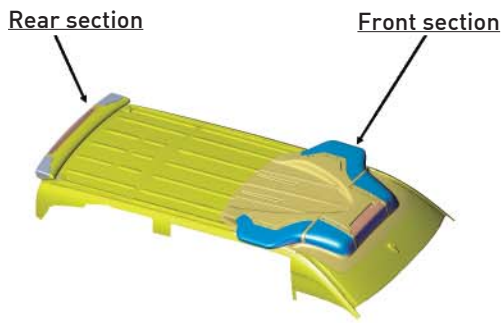
Removable, waterproof optical systems, allowing fast module replacement to any incident that may occur, reducing maintenance cost and increasing vehicle availability.

- VENTILATION SYSTEM

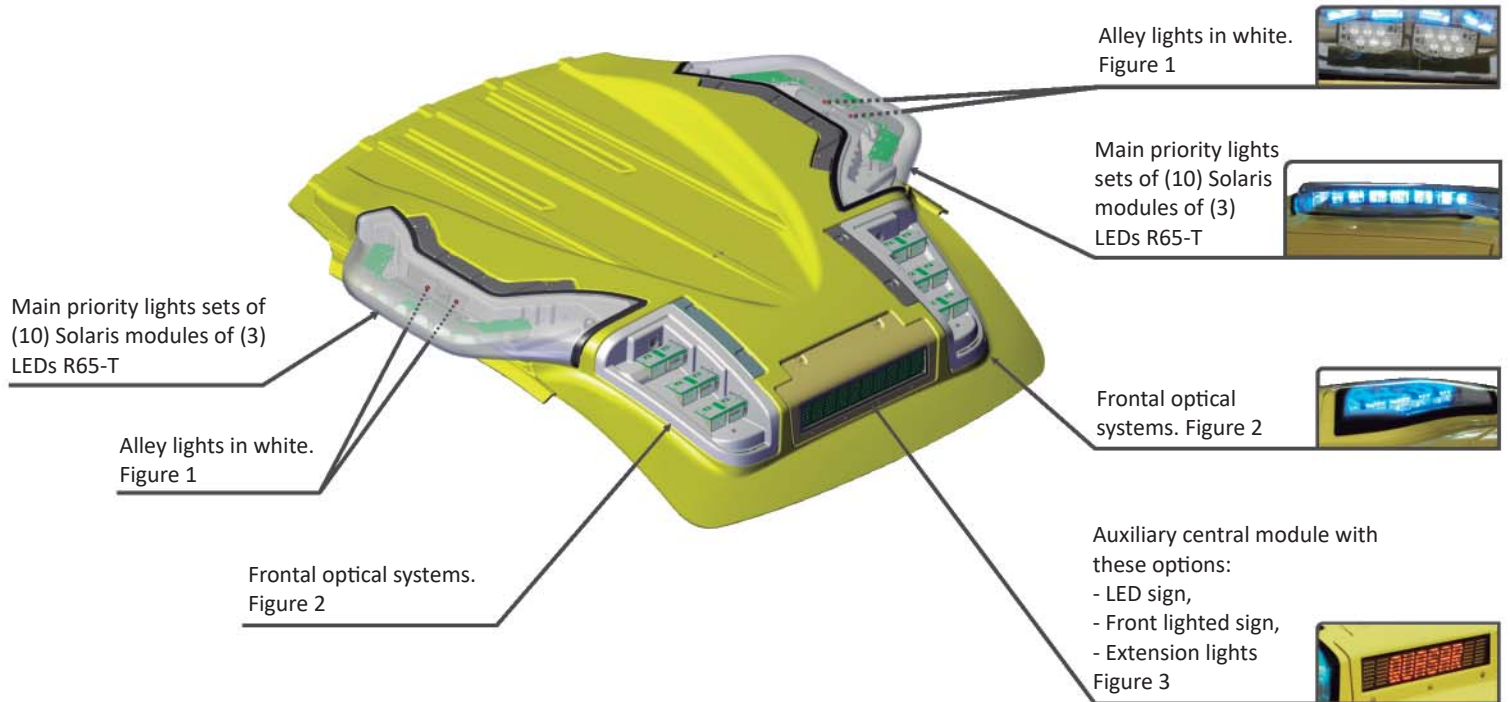
A fan system prevents inside lens condensation, assuring full light output emission.

- LEDS SOLARIS LIGHTS

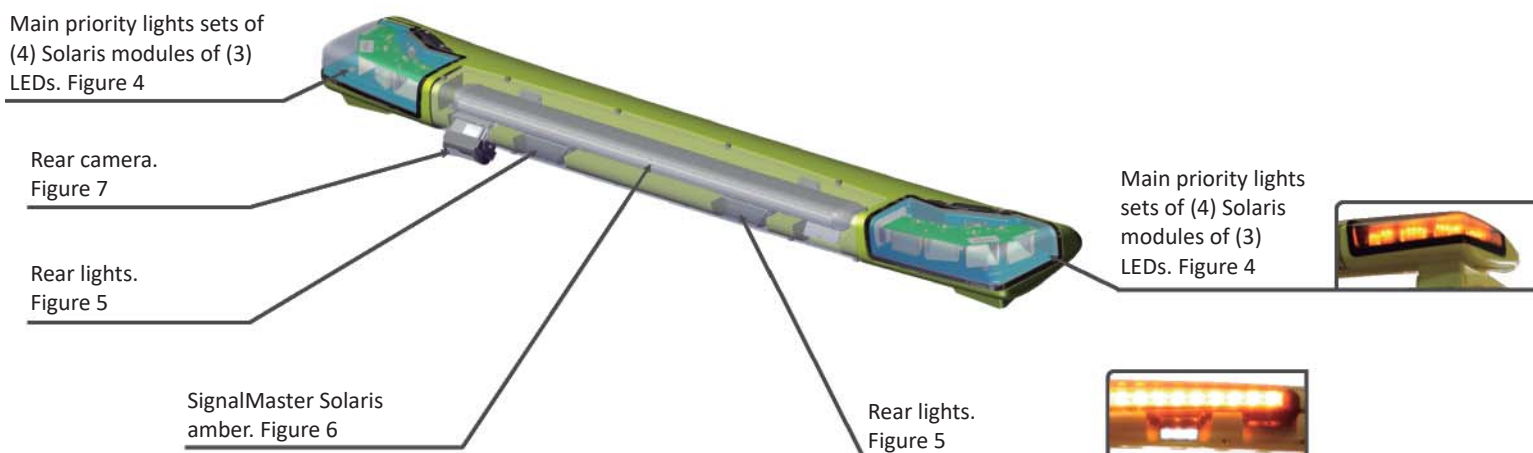
Traditional light systems spread the light in a random direction, LED Solaris technology reflects a strong light beam where it is needed most, on a wide angle, avoiding dark spots.



QUASAR SYSTEM - FRONT SECTION



QUASAR SYSTEM - REAR SECTION - SPOILER

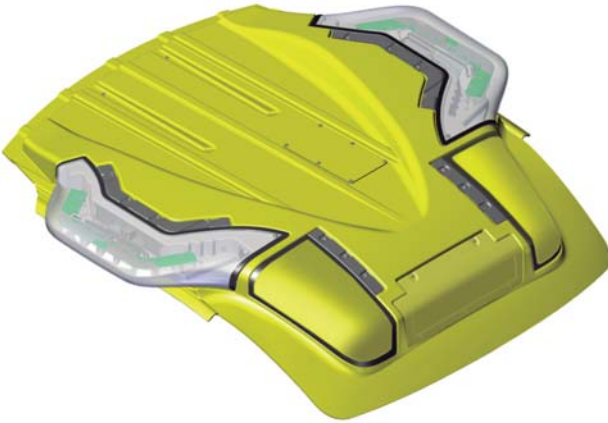


THE FRONT AND REAR SECTIONS CAN BE PURCHASED SEPARATELY.

Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4,325 mm and it has got high roof. Other vehicles please consult.

MOD. DESCRIPTION

QUASAR BASIC SYSTEM - FRONT SECTION



QS-BASFR Front section from Quasar emergency warning system, with (2) main priority lights sets of (10) Solaris modules of (3) LEDs for front section. Available in amber, blue or red colours. **SINGLE-COLOUR**.

Amber and blue main priority lights approved according R65 norm T category all around 360° of the vehicle, without adding any additional warning light.

Amber or red priority lights with silver base, and blue priority lights in blue base.

Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4.325 mm and it has got high roof. Other vehicles please consult.

(*) Specify RAL colour of the basic system Quasar base when ordering.

ADDITIONAL LIGHTING OPTIONS

OSL-1C-AD **BICOLOUR** priority lights option.



Figure 1. Alley lights lower view

QSFL-2 (4) alley light kit (2 for right side and 2 for left side) for the vehicle. They illuminate the area under main priority lights.

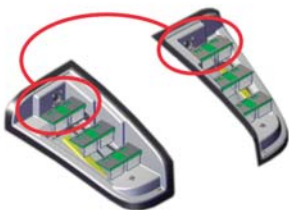


Figure 2. Frontal optical systems

QSFDI-M (2) **SINGLE-COLOUR*** LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red or white colours

QSFDI-B (2) **BICOLOUR*** LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red and/or white colours

QSFD1-T (2) **TRICOLOUR*** LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red and/or white colours.

(*) Three sets of (2) modules maximum for each frontal optical system.

CENTRAL FRONT SECTION OPTIONS

Select a single option for the central front section.



Figure 3.

QSCL (1) Programmable LED sign for central front section - LSG700



Figure 3.

QSCI (1) Front lighted sign with text for central front section



Figure 3.

QSNL-2M (2) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for central front section

QSNL-4M (4) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for central front section

MOD.	DESCRIPTION
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QUASAR BASIC SYSTEM - REAR SECTION - SPOILER

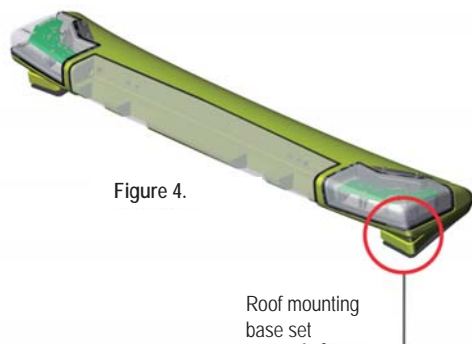


Figure 4.

QS-BASPS

(1) Rear section spoiler from Quasar emergency warning system, with (2) main priority lights sets of (4) Solaris modules of (3) LEDs for rear section. Available in amber, blue or red colours. **SINGLE-COLOUR.** (See Figure 4).

Amber and blue main priority lights approved according R65 norm T category together with vehicle front section. Amber or red priority lights with silver base, and blue priority lights in blue base.

Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4,325 mm and it has got high roof. Other vehicles please consult.

(*) Specify RAL colour of the basic system Quasar base when ordering.

QS-APOYO-PS

(1)Roof mounting base set, please consult available vehicle models.

REAR SECTION OPTIONS

QSP-1C-AD

BICOLOUR priority lights option

QSNLPS-2M

(2) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for rear section (See figure 5).

QSSML

(1) Signalmaster Solaris low-profile directional warning light, with (4) flash patterns (right, left, centre-out and center-out flashing mode) (See figure 6).

Recording and displaying options

Rear camera displaying images

QSDXT-RC-01

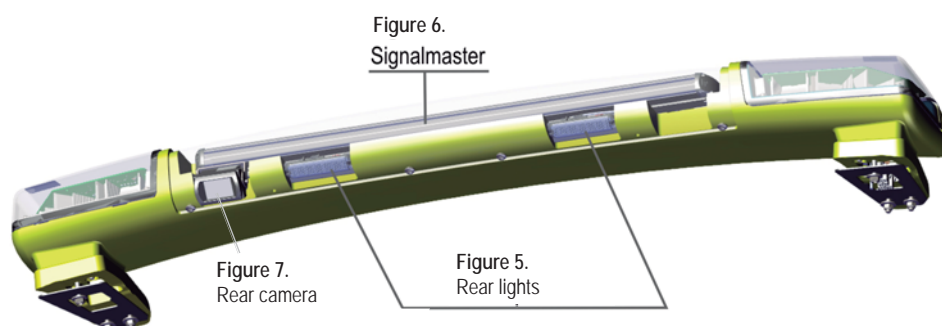
(1) Left side rear camera for rear section

4520093-02

(1) 10,2" Display and management screen

Rear camera recording and displaying images

(1) Atenea FEDVISION basic system. High definition video and audio recording system. It manages and stores video images and audio through user-defined approaches, and it allows a pre-recording mode an remote video streaming visualization.



REF.	MOD.	DESCRIPTION
ANALOG CONTROL system		
8216112		LCD700 Control head w/ LCD back-lit screen to display messages. (Please specify language when ordering)
Acoustic options		
2021047	AL-252N	100W Speaker, round horn, neodymium driver, metal L- bracket (1) (Please specify the international tones when ordering)
2020256	AS-320DIG	100W Siren amplifier, (3) tones, remote control, P.A., (1) light output, (1) auxiliar output, wiring harness, 12V
CAN BUS Controllers		
BCT3000-14	BCT3000	BCT3000, Control Head for lights, sirens and LED Signs (no P.A.)
BCT2004-01	BCT2004	BCT2000 Series control head, 4 control keys.
BCT2006-01	BCT2006	BCT2000 Series control head. 6 control keys.
BCT2010-01	BCT2010	BCT2000 Series control head. 10 control keys.
BCT2015-01	BCT2015	BCT2000 Series control head. 15 control keys.
BCT2021-01	BCT2021	BCT2000 Series control head. 21 control keys.
8216160	BCT500CB	BCT500CB Series control head. 13 control keys (public address included)
Converter ANALOG CAN BUS		
8235978		CANBUS Control box (Activation of functions via direct cable by positive)
8299753		SOLARIS CANBUS control head connection kit (not necessary when the system does not have a lightbar)
Acoustic options		
2021047	AL-252N	100W Speaker, round horn, neodymium driver, metal L- bracket (1) (Please specify the international tones when ordering)
2020269	AS320DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included
8235984	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT3000) 12V

Maximum lighting around the perimeter of the vehicle





TRAFFIC STORM Series



Configurable lightbars.

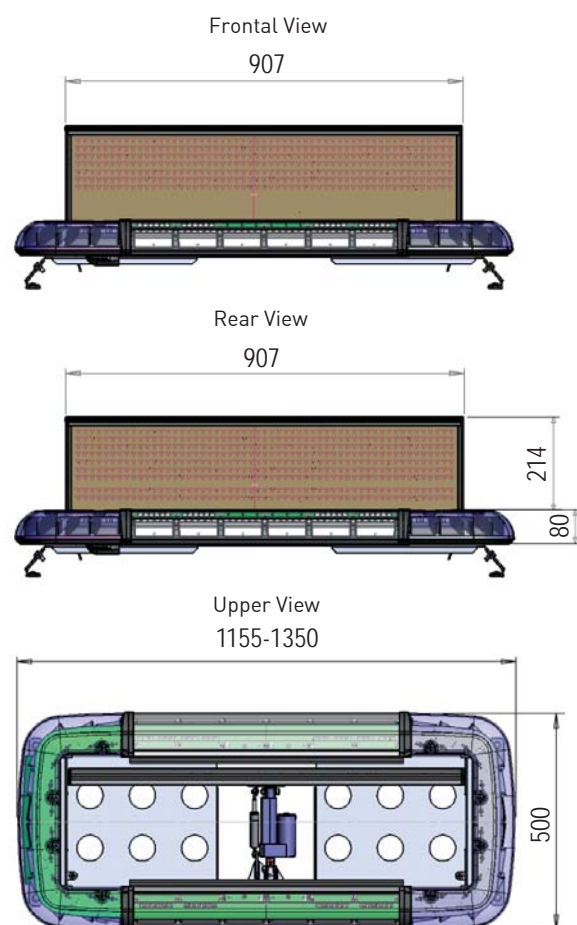
Low profile lightbar with ROC Solaris technology and foldable led sign specially designed for applications where the signal through a text message or voice is essential.

Two levels of light allow multiple combinations of lights and colours, thereby optimizing the internal capacity of the lightbar without losing any option for auxiliary signalling.

It is equipped with one or two powerful foldable Led signs for front and/or rear legend.

The lightbar being Can Bus controlled, it can activated multiple programmable functions just by pressing a single button on the keypad.

The Traffic Storm Series obtains the approval R65 class 2 (in blue and amber), R10 and complies with the ICAO certification.



Traffic Storm dimensions (mm)

Voltage:	12V
Standby consumption:	0,3Amp
Main warning lights, total average consumption:	3,2A in flash, 0,5A in cruise light
Front modules (white light), average consumption:	1A for module
Lateral modules (white light), average consumption:	0,5A for module
Supplementary modules (amber light), average consumption:	1A for module
Lighted sign, average consumption:	0,4A for module
Complete rear and front foldable LED sign. LED Panel: 630 LEDs. SignalMaster: 288 LEDs	3,2A for panel + 1A SignalMaster



REF.	MOD.	DESCRIPTION
Options - Priority lights		
TF-SL		45" Basic lightbar, (20) Solaris modules of (3) LEDs, blue light or amber, wiring harness, UN R65 approved class 2
TF-SL13		53" Basic lightbar, (20) Solaris modules of (3) LEDs, blue light or amber, wiring harness, UN R65 approved class 2
TSA1D-45		1155mm lightbar, 28 LED collimators, amber light, wiring harness. ICAO Type D Certificate.**
TSA1D-53		1350mm lightbar, 28 LED collimators, amber light, wiring harness. ICAO Type D Certificate.** (*) Mounting kit is not included in price and must be ordered separately (**) Not possible to select Lighting options - Alley lights (Ref. CT/TF-FL)
Options - Lateral Section - Alley light		
TF-FL		(4) Solaris modules of (3) LEDs, white, blue or amber light
Options - Front & Center Section - Lower Level		
TF-FF		(2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing.
TF-LE		(2) Solaris modules of (6) LEDs, blue light, priority lights extension.
TF-LP		(2) Solaris modules of (6) LEDs, red light, flashing
TF-CI		(2) Solaris modules of (6) LEDs, white light, lighted sign without text or vinyl* (*) The text message must be ordered separately.
Options - Rear & Center Section - Lower Level		
TF-FPT		(2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing.
TF-LE		(2) Solaris modules of (6) LEDs, blue light, priority lights extension.
TF-A/SM		(2) Solaris modules of (6) LEDs, amber light, flashing or SignalMaster (directional lighting system).
TF-CI		(2) Solaris modules of (6) LEDs, white light, lighted sign without text or vinyl* (*) The text message must be ordered separately.
Options - Front & Center Section - Upper Level		
TF-LP-S		(2) LED modules, red light, flashing
Options - Rear & Center Section - Upper Level		
TF-A/SM-S		(2) LED modules, amber light, flashing or SignalMaster (directional lighting system).
Options Foldable LED Sign		
* Please contact with our sales department for Traffic Storm without foldable led sign availability		
TF-CLF		(1) LSG900, foldable LED Sign, red light, 200 programmable messages from the user with normal and/or mirror view and scrolling.
TF-CLP		(1) LSG900, foldable LED Sign, red light, rear signalisation, integrated SignalMaster (directional lighting system), 200 programmable messages from the user with normal view and scrolling.
TF-CLF/P		(1) Front LED Sign, red light, front and rear signalisation, 200 programmable messages from the user with normal and/or mirror view(front) and scrolling.
Mount Accessories		
TF-CT		Roof connector, 19-ways (obligatory)
8234176	TF-FP	Permanent mounting kit (recommended)
	TF-FB	Metal mounting kits on bars
4004536		Cover for 1100mm. (44")

REF.	MOD.	DESCRIPTION
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Control head

BCT3000	Control head for Traffic Storm series* 10 buttons for emergency and auxiliary systems. Delayed public address. Voice player/recorder (1 message)** TCAN BUS technology with LCD screen. Voice and text messages can be previewed Volume control for public address and voice player. SignalMaster control. USB connection.
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(*) Contact our sales department for available models.

(**) BCT3000 enables to pre-programm diferent voice messages. For further information, contact our sales department.

AS320 DIG CAN BUS siren amplifier

2020268	AS320DIG 12V	100W siren amplifierfor BCT3000. Features: Horn-ring connection. Radio repeat. Relay output (10A) for auxiliary lights synchronized with priority lights. Realy output (1A) for tachograph. Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head.
2020270	AS320DIG 24V	100W siren amplifierfor BCT3000. Features: Horn-ring connection. Radio repeat. Relay output (10A) for auxiliary lights synchronized with priority lights. Realy output (1A) for tachograph. Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head.

Public address

8235984	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT3000) 12V
82351038	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT3000) 24V

Programming Accessories

2025473	S2ME	"SmartSign 2 Message Editor, for editing and downloading messages from PC. Only available for LSG900 programmable LED sign in Traffic Storm lightbars series. (* All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue
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VALOR Series

Valor® Lightbar is the first and only low profile V-shaped LED lightbar. A lightbar that increases visibility, optimizes performance, and reduces risk to any emergency situation. The Spectralux technology provides a fully programmable range of color combinations for optimum warning capability to flood light performance.

- INCREASED SAFETY

Valor The V-shaped design provides coverage of critical angles at intersections.

- SOLARIS® LED LIGHTS

Solaris LED reflector design to significantly maximize the LED light source for full light coverage.

- SPECTRALUX® TECHNOLOGY

Provides the ability for a LED light head to change the color of the LEDs (red, blue, amber and white) according to the desired configuration.

- ROC TECHNOLOGY

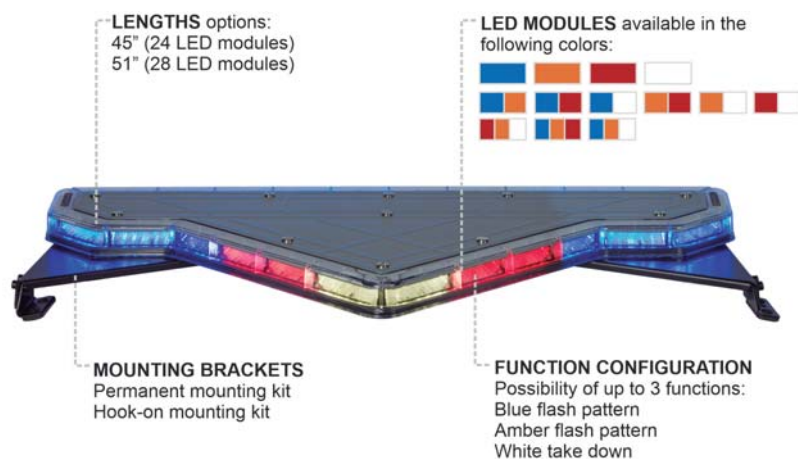
Lineal circuit board-to-board connection which reduce the number of electrical connections in a lightbar.

- UNIQUE DESIGN

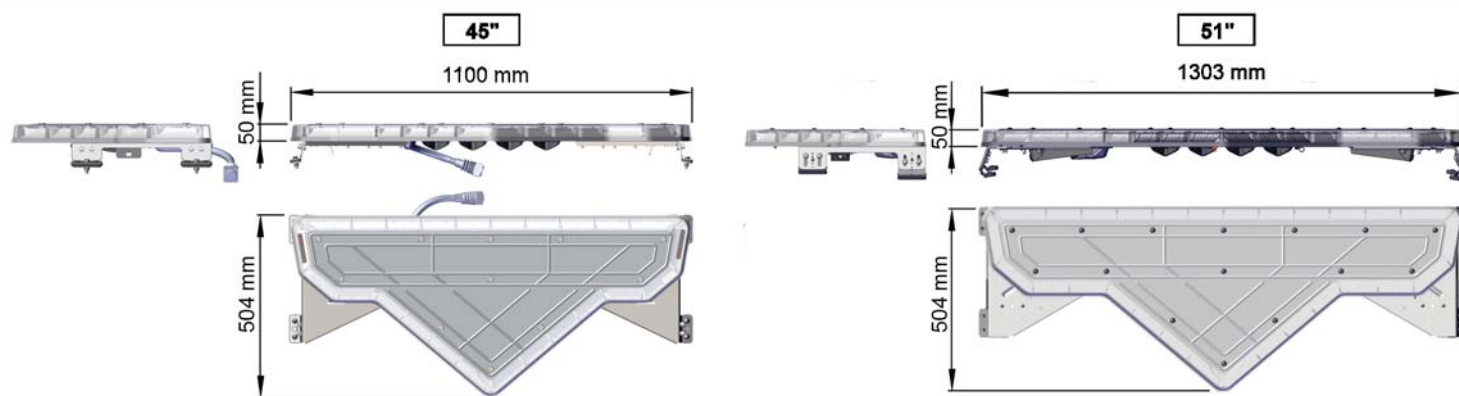
Valor lightbar design is FEDERAL SIGNAL use exclusively due to European Union Community Design registration 001925753-0001.

- CAN BUS

The Valor® lightbar communicates with the control head via CAN BUS technology.



Voltage	12V
Temperature of use	-40°C to 65°C
LED colour	Blue, amber, red and white
Lens colour	Clear
Number of LED modules	45": 24 modules – 51": 28 modules
Dimensions (L x W x H)	45": 1110 x 504 x 50 mm - 51": 1303 x 504 x 50 mm
Weight (with mounting brackets)	45": 17,8 kg - 51": 19,6 kg



Dimensions Valor lightbar in mm.

REF.	MOD.	DESCRIPTION
Configurable system		
VALR44		44" lightbar Valor Series, with 24 modules of 1 color (amber, blue, red or white).
VALR51		51" lightbar Valor Series, with 24 modules of 1 color (amber, blue, red or white).
VALR-2C		Two-color modules (combinations of amber, blue, red or white)
VALR-3C		Three-color modules (combinations of amber, blue, red or white)
Converter ANALOG CAN BUS		
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the functions are activated through positive cable)
Accessories		
8234204	VALR-FT	Hook-on mounting kit (hook-on not included)
8234205	VALR-FP	Permanent mounting kit
A-CT19		19 ways roof connector for Valor



ALLEGiant® Series

Federal Signal Vama introduces the new **Allegiant** lightbar with dual color LED technology, ultra low-profile and aerodynamic design for emergency vehicles.

Built with our exclusive SpectraLux® multicolor LED technology, it provides optimal warning signaling capability and offers the possibility to change the color of the light source. With our Solaris® LED reflector technology, it maximizes the LED light source to eliminate dark spots and distribute true 360° light coverage.

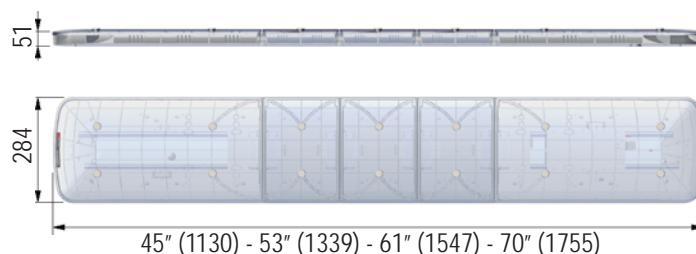
Completely modular design provides multiple configurable lighting options and the possibility to select the color of the top cover of the lightbar.



- ULTRA-LOW PROFILE LIGHTBAR (51 MM)
- MULTICONFIGURABLE
- PROGRAMMABLE
- SPECTRALUX AND SOLARIS TECHNOLOGY
- ANALOG AND CAN BUS CONTROL

Input voltage:	12 or 24V	
Operating temperature:	-40° to 80° C	

Current draw	12V	24V
45":	9A	5A
53":	11A	6A
61":	13A	7A
70":	15A	8A



Allegiant lightbar dimensions in mm.



REF.	MOD.	DESCRIPTION
Configurable system (specify options)		
ALG-45		45" base Allegiant Series, wiring harness + INTERFACE control box for conversion to analog connection
ALG-53		53" base Allegiant Series, wiring harness + INTERFACE control box for conversion to analog connection
ALG-61		61" base Allegiant Series, wiring harness + INTERFACE control box for conversion to analog connection
ALG-70		70" base Allegiant Series, wiring harness + INTERFACE control box for conversion to analog connection
Priority lights		
ALG-AZ ALG-AM ALG-RO		Priority lights blue (UN R65 class 2 approved), amber or red. With cruising light.
ALG-FTCL		Auto-dimming sensor for day/night function
Single-color secondary modules		
ALG-LE6-A ALG-LE6-B ALG-LE6-R ALG-LE6-W ALG-LE6-G		(6) LED module, blue, amber, red, white, white or green light
Dual-color modules		
ALG-AUX3-A ALG-AUX3-B ALG-AUX3-R ALG-AUX3-W ALG-AUX3-G		Additional (3) LEDs module, blue, amber, red, white or green light
ALG-LE6-A ALG-LE6-B ALG-LE6-R ALG-LE6-W ALG-LE6-G		(6) LED module, blue, amber, red, white, white or green light
ALG-AUX9-A ALG-AUX9-B ALG-AUX9-R ALG-AUX9-W ALG-AUX9-G		Additional (9) LEDs module, blue, amber, red, white or green light
Converter ANALOG CAN BUS		
8235978-24		CAN BUS Control box for lightbars with conventional connection (Activation of functions via direct cable by positive)
8299753		BCT control head connection kit
Control heads		
BCT2015-XX		BCT2000 Series control head, 15 control keys.
Mount accessories		
8234174	LGD/FP	Permanent mounting kit
ALG-CT19	A-CT19	19 ways roof connector (*) Mounting kit is not included in price and must be ordered separately.



LEGEND Series

The **Legend** model stands out for a popular, low-profile lightbar. This lightbar system is made of 3rd generation Solaris LEDs and integrates the ROC (Reliable Onboard Circuitry) technology, which eliminates approximately 85% of the potential failure points in a typical lightbar. The optimized Solaris LED lights maximize the warning signals at 360°.

All **Legend** lightbars contain an advanced micro-processor which provides three modes of operation, a library of flash patterns, adjustable Alley and Takedown lights, front/rear cut-off, dimming, and intersection warning.

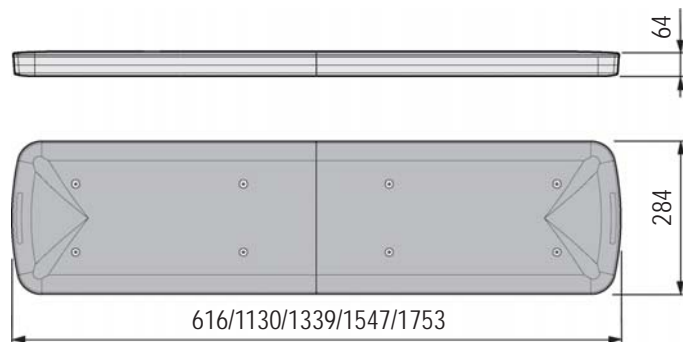
Legend can be easy reconfigured in minutes, right on the vehicle, without removing and rewiring individual light modules. ROC boards are also individually labelled to make the reconfiguration easy.

Legend can be configured with secondary warning lights: Takedown and Alley lights, and Solaris SignalMasters*.

Latest bicolour LEDs generation available upon request.



Legend Series dimensions (mm).



(*) SignalMaster 8-modules on 1100 lightbar.

(*) SignalMaster 11-modules on 1340 lightbar.

Voltage:	10-30V
Dimensions:	24", 45", 53", 61", 70" (616, 1130, 1339, 1547, 1753 x 284 x 64 mm)
Solaris LEDs colours:	blue, amber, red, green, white

REF.	MOD.	DESCRIPTION
Specify All Options System		
	LGD-B45"	45" (1130 mm) Legend Lightbar, wiring harness
	LGD-B53"	53" (1339 mm) Legend Lightbar, wiring harness
	LGD-B61"	61" (1547 mm) Legend Lightbar, wiring harness
	LGD-B70"	70" (1753 mm) Legend Lightbar, wiring harness
		(*) Mounting kit is not included in price and must be ordered separately
Priority Lights		
	LGD-SL	(16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN 65 Approved) or red light (UN 65 approved)
	LGD-SL BI	(16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN 65 Approved) or red light (UN 65 approved) BICOLOUR
Lighting Options		
	LGD-SL	(1) modules of (3) high-intensity LEDs with parabolic reflector, blue, amber, red and white light*
		"(*) The function for each Solaris module in the lower level must be specified when the lightbar is ordered.
		(**) Please contact your Sales Dept. for availability of configurations and versions."
100W Siren amplifier		
2020269	AS320DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible with with BCT2000 and BCT500CB control heads series. Public address not included
2020271	AS320-24DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible with with BCT2000 and BCT500CB control heads series. Public address not included
Public address		
8235984	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 12V
82351038	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 24V
Control Heads		
BCT2004-01	BCT2004	BCT2000 Series control head. 4 control keys.
BCT2006-01	BCT2006	BCT2000 Series control head. 6 control keys
BCT2010-01	BCT2010	BCT2000 Series control head. 10 control keys
BCT2015-01	BCT2015	BCT2000 Series control head. 15 control keys
BCT2021-01	BCT2021	BCT2000 Series control head. 21 control keys
8216160	BCT500CB	BCT500 Series control head. 13 control keys (public address included)
		(*) Please contact your Sales Dept. for availability.
Mounting options		
	LGD-FB	Integrated search light for Legend Series lightbar 12V*
	LGD-FB-24	Integrated search light for Legend Series lightbar 24V*
8234174	LGD/FP	Permanent mounting kit
	LGD-FB	Metal mounting kits on bars (contact our sales department for available models)
	A-CT19	Roof connector, 19-ways
4004536		Cover for 1100mm. (44")
		(*) The inclusion of integrated search light al Legend lightbar doesn't allow to install auxiliary lights below this integrated search light.
Converter CAN BUS - ANALOG		
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the functions are activated through positive cable)
		(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue

MINI LEGEND

Federal Signal Vama develops and introduces the new, low-profile **Legend Solaris 24" Mini lightbar**. It provides a 360-degree coverage and superior off-axis warning and increased up-time for your fleet. On the other hand, **Legend Solaris 24" Mini lightbar** offers, in minimum space, technological advantages thanks to its special design:

- 360° DEGREE COVERAGE

Solaris technology and ROC design provides exceptional 360 degree coverage, which results in the elimination of any dark spots and superior off-axis warning around the lightbar.

- ROC TECHNOLOGY (Reliable Onboard Circuitry)

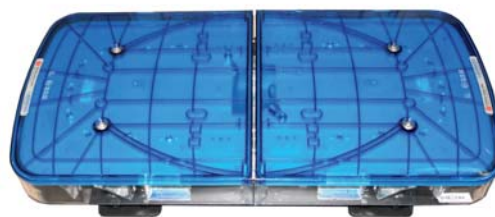
ROC technology eliminates 85% of potential failure points in the lightbar, reducing repair costs and increasing the hours your emergency vehicles stay on the road. ROC incorporates a printed circuit board in one assembly to reduce the amount of electrical connections found in a typical lightbar.

- INCREASED SECURITY

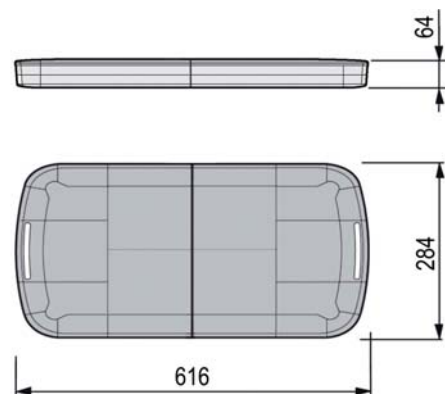
Better grip, stability and security to the vehicle on the road due to its less aerodynamic drag.

- COST SAVINGS

Less fuel consumption thanks to its low-profile and improved aerodynamics. Furthermore, ROC technology reduces repairing costs and it allows more



Mini-Legend Solaris dimensions (mm).



Voltage:	12/24 V
Operating temperature:	-20°C to 50°C
Average consumption (flashing mode):	3.5 Amp (12V) / 2.5 Amp (24V)
LEDs colours:	Blue, amber and red
Lens colours:	Blue, amber and red
Dimensions:	616 x 284 x 64 mm
Weight:	7.500 g

REF.	MOD.	DESCRIPTION
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Legend 24" mini-lightbar (616 mm), 18 Solaris modules LED lights, non configurable, no CANBUS.

Magnetic mount

2059193	LGD24 PP FM	Legend Solaris Series lightbar, 616 mm, amber-amber, magnetic mount, cigarette plug, bitension, R65 class 1 approval.
2059154	LGD24 BB FM	Legend Solaris Series lightbar, 616 mm, blue-blue, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval.
2059191	LGD24 RR FM	Legend Solaris Series lightbar, 616 mm, red-red, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval.
2059195	LGD24 RB FM	Legend Solaris Series lightbar, 616 mm, red-blue, magnetic mount, cigarette plug, bitension.
2059197	LGD24 RP FM	Legend Solaris Series lightbar, 616 mm, red-amber, magnetic mount, cigarette plug, bitension.
2059199	LGD24 BP FM	Legend Solaris Series lightbar, 616 mm, blue-amber, magnetic mount, cigarette plug, bitension.

Permanent mount

2059194	LGD24 PP FP	Legend Solaris Series lightbar, 616 mm, amber-amber, wiring harness, permanent mount, bitension, R65 class 1 approval.
2059155	LGD24 BB FP	Legend Solaris Series lightbar, 616 mm, blue-blue, wiring harness, permanent mount, bitension, R65 class 1 and class 2 approval.
2059192	LGD24 RR FP	Legend Solaris Series lightbar, 616 mm, red-red, wiring harness, permanent mount, bitension R65 class 1 and class 2 approval.
2059196	LGD24 RB FP	Legend Solaris Series lightbar, 616 mm, red-blue, wiring harness, permanent mount, bitension.
2059198	LGD24 RP FP	Legend Solaris Series lightbar, 616 mm, red-amber, wiring harness, permanent mount, bitension.
2059200	LGD24 BP FP	Legend Solaris Series lightbar, 616 mm, blue-amber, wiring harness, permanent mount, bitension.

HIGHLIGHTER Micro®

Mini LED lightbar with an exceptional 360° light coverage, designed to increase the safety of the emergency or service vehicle. The compact dimensions allows the installation at various points around the vehicle and requiring a minimum of space.

Available in amber and blue LED lights, amber or clear lenses to adapt to different market needs.

- DIMENSIONS

The compact size of the mini LED lightbar allows to install it at various points around the vehicle, occupying a minimum of space.

- DIVERSITY OF APPLICATIONS

Designed to suit different needs for Police, Fire, Ambulance and Heavy Duty.

- INSTALLATION OPTIONS

The permanent version allows easy installation with a fixed mounting bracket.

- SOLARIS® LED REFLECTOR

Solaris® LED reflector technology maximizes the distribution of the light beam in the 360° surrounding the vehicle, avoiding the appearance of shadows and eliminating dark spots.

- ROC TECHNOLOGY

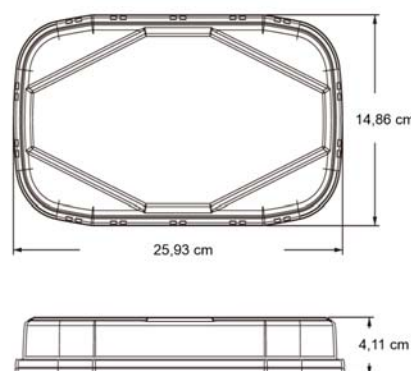
It connect the electronic circuits to each other, considerably reducing the number of electrical connections inside the lightbar.

- APPROVALS

The Highlighter Micro mini LED lightbar is approved according to European Standard R65 and complies with the European Electromagnetic Compatibility Directive R10.



Voltage	12-24V
Temperature of use	-40°C to 65°C
LED colour	Blue, Amber
Lens colour	Amber, Clear
Dimensions (L x W x H)	Permanent: 259 x 148 x 41mm
Weight (with mounting brackets)	Permanent: 0.77 kg



Dimensions Highlighter Micro permanent

REF.	MOD.	DESCRIPTION
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Permanent mount

2010891PL	Highlighter Micro Amber LEDs, Amber dome, permanent mount, 12-24V, R65 class 1
2010892PL	Highlighter Micro Amber LEDs, Clear dome, permanent mount, 12-24V, R65 class 1
2010893PL	Highlighter Micro Blue LEDs, Clear dome, permanent mount, 12-24V, R65 class 1



LM500-D Series

LM500-D Series combines technology warning light and siren Solaris compact LEDs manufactured in ABS with fiberglass and aluminum.

Optical system composed of a microprocessor integrated electronic circuit, 15 high intensity LEDs and a parabolic reflector maximizes light intensity of LEDs and avoids the appearance of black shadows.

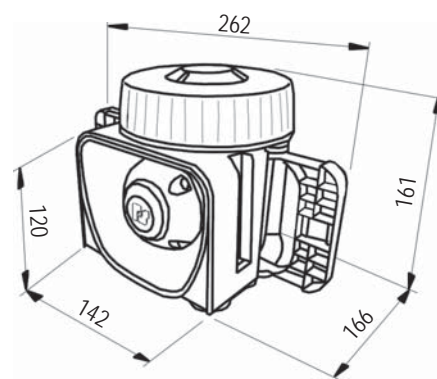
His acoustic system consisting of a 30W speaker, with programmable tone, with a cigarette lighter socket 3 positions.

A wire mesh filter prevents the ingress of solid particles by the broadcaster of the siren, a drainage system prevents the accumulation of water in the membrane and a rubber gasket prevents water ingress into the electronic circuitry.

LM500-D Solaris, has a magnet system with a set of 4 magnets with silicone anti-scratch protection and 4 cups.

Available in blue, amber or red LED.

New tone "Statd" available for Germany.



LM500-D Solaris Series dimensions (mm).

Voltage:	12 V
Light current consumption:	0.6 Amp
Siren current consumption:	3 Amp
Siren output power:	30W
Siren output voltage:	23 V
Operating temperature:	-20°C to 50°C
Weight:	2.28 kg

REF.	MOD.	DESCRIPTION
2003059	LM500-DP	Solaris LED warning light blue with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category
2003060	LM500-DP	Solaris LED warning light amber with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category
2003061	LM500-DP	Solaris LED warning light red with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category

(*) For other tones, please contact with the Sales Department.

(**) Magnetic mounting models produced for a temporary use on the roof of the vehicle.

GEMINIS Series

Federal Signal Vama presents the **dual colour warning light GEMINIS Series**, a single and dual colour omnidirectional LEDs priority light.

GEMINIS standard single colour and dual colour version allows combining 2 colours between blue, red and amber. Furthermore, this model can be chosen with permanent fixation DIN or magnetic mounting. According to R65 European Regulation Class 2.

GEMINIS-B incorporates a rechargeable battery, and it is available in single colour and dual colour (blue/amber) with magnetic mounting.

- DUAL COLOUR TECHNOLOGY

Thanks to this advanced product range and its improved bicolour technology, the priority light Geminis allows to combine 2 colours from: blue - amber, blue - red and red - amber.

- VERY COMPACT AND LIGHT

To guarantee its usage in an unexpected emergency situation, the magnetic version can be operated within one hand only, allowing a fast and simple setting.

- 360° LIGHT DISTRIBUTION

The applied technology and the special lens impression enables to maximize the beam light distribution in 360° around the vehicle, avoiding dark spots and shadows.

- PHOTOCELL SENSOR

For standard version, due to the photocell sensor included inside the Geminis magnetic version, the day/night function is changed automatically. This allows to be permanently adapted to lighting conditions.

- SYNCHRONIZABLE

For standard version, Geminis series allows the synchronization with other warning lights of the same product range.

- HIGH RESISTANCE

Polycarbonate and impact-resistant lens.

- PROTECTION AGAINST DUST AND WATER

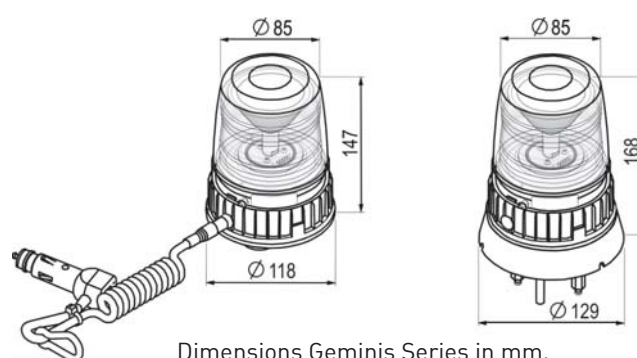
Geminis Series according with IPX6 and IPX9K dust and water protection grades.

- THERMAL PROTECTION

To avoid the overheating of the light due to high sun exposures, they include a thermal protection, a need in areas where the lights are exposed to extreme warm environments.

- WITH BATTERY

Magnetic mounting and battery version available.



Dimensions Geminis Series in mm.

	Geminis standard	Geminis-B
Voltage:	10 - 30V / 12V	12V
Operating temperature:	-30°C to + 60°C	-30°C to + 50°C
Consumption 12V (Maximum):	5,2 A (blue and amber) 4,4 A (red)	2,6 A (blue and amber)
Consumption 24V (Maximum):	3,4 A (blue and amber) 2,5 A (red)	-
Consumption 12V (Average):	1,7 A (blue and amber) 1,5 A (red)	1,0 A (blue and amber)
Consumption 24V (Average):	1,2 A (blue and amber) 0,8 A (red)	-
Cruise mode consumption:	0,3 A	-
Charging consumption:	-	2,0 A
Maintenance consumption:	-	0,05 A
Colors of LEDs:	Blue, red and amber	Blue and amber
Color of lenses:	Clear	Clear
Dimensions:	Permanent: 168 x 129mm Magnetic: 147 x 118mm	Magnetic: 147 x 118mm
Weight:	Permanent: 1.011 gr Magnetic: 1.210 gr	Light: 1.007 gr Cable: 163,5 gr
Mount:	Permanent DIN/ Magnetic	Magnetic
N° de Flash Patterns:	2 (QUAD R65 & S-A R65)	2 (QUAD R65 & S-A R65)
Flash frequency:	2 Hz	2 Hz
Flash rate (per/min):	120	120
Operation time/charging:	-	180 / 90 minutes



REF.	MOD.	DESCRIPTION
Magnetic mounting *		
2002409		Warning light, (1) level, (2) flash patterns, blue light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved.
2002411		Warning light, (1) level, (2) flash patterns, red light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved.
2002410		Warning light, (1) level, (2) flash patterns, amber light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved.
2002412		BICOLOUR Warning light, (1) level, (2) flash patterns, blue-red light, clear lens, magnetic mount and cigarette lighter plug, 12V. R65 Class 2 (flash mode) approved.
2002403		BICOLOUR Warning light, (1) level, (2) flash patterns, blue-amber light, clear lens, magnetic mount and cigarette lighter plug, 12V. R65 Class 2 (flash mode) approved.
2002413		BICOLOUR Warning light, (1) level, (2) flash patterns, amber-red light, clear lens, magnetic mount and cigarette lighter plug, 12V. R65 Class 2 (flash mode) approved.
(*) Magnetic mounting models are produced for a temporary use on the roof of the vehicle.		
DIN Permanent mount		
2002405		Warning light, (1) level, (2) flash patterns, blue light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved.
2002407		Warning light, (1) level, (2) flash patterns, red light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved.
2002406		Warning light, (1) level, (2) flash patterns, amber light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved.
2002404		BICOLOUR Warning light, (1) level, (2) flash patterns, blue-red light, clear lens, DIN permanent mount, 12V. R65 Class 2 (flash mode) approved.
2002402		BICOLOUR Warning light, (1) level, (2) flash patterns, blue-amber light, clear lens, DIN permanent mount, 12V. R65 Class 2 (flash mode) approved.
2002408		BICOLOUR Warning light, (1) level, (2) flash patterns, amber-red light, clear lens, DIN permanent mount, 12V. R65 Class 2 (flash mode) approved.
Accessory		
8299997		Connector Kit for permanent mount
GEMINIS-B, MAGNETIC MOUNT AND WITH RECHARGEABLE BATTERY		
2002414		Warning light LEDs, (1) level, (2) flash patterns, blue light, clear lens, rechargeable battery, magnetic mount and cigarette lighter plug, 12V. Not Homologated UN R65*
2002415		Warning light LEDs, (1) level, (2) flash patterns, blue-amber light, clear lens, rechargeable battery, magnetic mount and cigarette lighter plug, 12V. Not Homologated UN R65*
(*) The European regulation R65 does not allow to approve devices with power through rechargeable batteries, it is only allowed to approve devices with continuous power.		

LM800 / LP800 Series

New **LP/LM800 SOLARIS** warning lights, with Solaris LED reflector technology of Federal Signal Vama provide excellent results as priority lights on emergency and undercover vehicles. It can be installed either permanently (LP models) and temporally using strong magnets and suction cups (LM model). Other features are:

- 360° LIGHT BEAM DISTRIBUTION

Solaris technology and its special spreader lens maximizes light beam distribution through 360° around vehicle, avoiding dark spots.

- EVERY NEED SOLUTIONS

Beacon lights with 1 or 2 levels of 15 Solaris LED rings with blue, amber or red lights, permanent mount for emergency vehicles, or magnetic mount for undercover ones, etc.

- HIGH STRENGTH HOUSING

Durable shockproof polycarbonate lens with reinforced polyamide base. With IP protection IPX9K.

- SYNCRONIZABLE

LP800 Series could be synchronized with other Federal Signal Vama vehicle priority lights (LP400).



LM800

LP800

	LM800	LP800
Voltage:	12-24V	12-24V
Operating temperature:	-20°C to +50°C	-20°C to +50°C
Current draw (average):	2 A - 1 A (blue and red) 1,2 A - 0,6 A (amber)	2 A - 1 A (blue and red) 1,2 A - 0,6 A (amber)
LED colours:	Blue, red and amber	Blue, red and amber
Lens colours:	Blue, amber or red	Blue, amber, red or clear
Dimensions:	140 mm (diam - dome) 164 mm (diam - base) 120 mm (height)	140 mm (diam - dome) 164 mm (diam - base) 102.5 mm (height)
Weight:	1200 gr (1 level) 1300 gr (2 levels)	590 g (1 level) 700 g (2 levels)

REF.	MOD.	DESCRIPTION
Magnetic mounting *		
2003039	LM800 Solaris	(1) level, (2) flash patterns, light amber, amber lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved.
2003040	LM800 Solaris	(1) level, (2) flash patterns, blue light, blue lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved.
2003041	LM800 Solaris	(1) level, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage.
2003043	LM800 Solaris	(2) levels, (2) flash patterns, light amber, amber lens, day / night, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved.
2003044	LM800 Solaris	(2) levels, (2) flash patterns, blue light, blue lens, day / night, magnetic mounting and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved.
2003042	LM800 Solaris	(2) levels, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage.
(*) Magnetic mounting models produced for a temporary use on the roof of the vehicle.		
Permanent mount		
2003034	LP800 Solaris	(1) level, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003026	LP800 Solaris	(1) level, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003035	LP800 Solaris	(1) level, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage.
2003036	LP800 Solaris	(2) levels, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) approved.
2003038	LP800 Solaris	(2) levels, blue light-amber, clear lens, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003027	LP800 Solaris	(2) levels, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) and Class 1 (rotative mode) approved.
2003037	LP800 Solaris	(2) levels, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
Accessory		
8232795	BD-LP800	DIN base for LP800



LM400 / LP400 Series

New low profile LED beacons, which feature high luminosity, compact and aerodynamic design.

The Solaris Technology is formed by a high-efficiency PC board with integrated microprocessor, 15 high-luminosity LED diodes of the latest generation, integrated on the PC board and a parabolic reflector that maximises LEDs luminosity.

The **LM400 Solaris** model features a magnetic mounting kit with 2 magnets (with anti-scratch silicone) and 2 suction cups. It includes a cigarette lighter plug for easy power source connection.

This LED beacon is ideal for undercover police vehicles.

The **LP400 Solaris** is fitted out with a permanent mount and a rubber gasket improve for perfect adaptation to the roof.

The LP400 enables to connect two lights synchronized.

Available colours in blue, red, amber and green.



LM400
LM400



LP400
LP400

Voltage:	12V or 10-30V	12V or 10-30V
Operating temperature:	-20°C to +50°C	-20°C to +50°C
Current draw (average) in rotator mode:	1 Amp (blue, red and green) 0.6 Amp (amber)	1 Amp (blue, red and green) 0.6 Amp (amber)
Current draw (average) in flashing mode:	1 A (blue, red and green) 0.6 A (amber)	1 A (blue and red) 0.6 A (amber)
Light technology:	Solaris	Solaris
LED colours:	Blue, red, amber, green	Blue, red and amber
Lens colours:	Blue or clear	Blue, clear or red
Dimensions:	140 mm (diam - dome) 147 mm (diam - base) 60 mm (height)	140 mm (diam - dome) 147 mm (diam - base) 60 mm (height)
Weight:	616 g	395 g

REF.	MOD.	DESCRIPTION
		Magnetic mounting*
2002389	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002392	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs latest generation, high luminosity, amber LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002391	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002401	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, red lens, magnetic mounting and cigarette lighter plug, 12V.
2002397	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, green LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V.
2003017	LM400SL	LED beacon, (2) flash pattern (rotator/flash), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved.
2003018	LM400SL	LED beacon, (2) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, amber LEDs, amber lens, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved.
2003083	LM400SL	LED beacon, (2) levels of light intensity (day/night) with photocell, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 class 2 approved.
2003053	LM400SL	LED beacon, (8) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved.
2003024	LM401SL	LED beacon, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 approved, with selector for 360° or 180°.
		Magnetic mounting BICOLOUR model
2003076	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue/amber BICOLOUR LEDs, magnetic mounting, 10-30V, R-65 approved.
2003078	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red/blue BICOLOUR LEDs, magnetic mounting, 10-30V, R-65 approved.
		(*) Magnetic mounting models produced for a temporary use on the roof of the vehicle.
		Permanent mount
2002390	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, permanent mount, 12V, R-65 approved.
2002393	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, clear lens, permanent mount, 12V, R-65 approved.
2002394	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, clear lens, permanent mount, 12V, R-65 approved.
2003016	LP400SL	LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, blue lens, permanent mount, 10-30V, R-65 approved.
2003019	LP400SL	LED beacon, (8) flash pattern and rotating effect, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, amber lens, permanent mount, 10-30V, R-65 approved.
2003086	LP400SL	LED beacon, (2) levels of light intensity (day/night) with photocell, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, permanent mount, 10-30V, R65 class 2 approved.
2003030	LP400SL	LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, red lens, permanent mount, 10-30V, R-65 approved.
		Permanent mount BICOLOUR model
2003069	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue/amber BICOLOUR LEDs, permanent mount, 10-30V, R-65 approved.
2003079	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red/blue BICOLOUR LEDs, permanent mount, 10-30V, R-65 approved.

TRIDENT III Series

Federal Signal Vama presents the new new generation of lights **Trident III**, with a more modern and aerodynamic design.

The **Trident III** series is composed by Solaris LED warning lights and a searchlight.

The **Trident III** models are suitable for priority warning, or they can be combined with lightbars to increase the emergency lighting efficiency.

The **Trident III** Solaris series is composed of 1 level with 15 high-intensity LEDs and a parabolic reflector system that maximizes the luminosity of the LEDs.

The Search Light has a powerful light beam consisting of 6 high efficiency LEDs and a high focusing precision for lighting a work area.



TRIDENT III



TRIDENT III FB LED

Trident III FB LED
Search light

	Trident III	Trident III FB LED Search light
Voltage:	10-30V	12V
Operating temperature:	-40 to +50° C	-40°C to +55°C
Average consumption:	Blue: 1 A (12V)	2A
Light technology:	Solaris	LEDs CREE XPE2 8333cd
LEDs colours:	Blue	White
Lenses colours:	Blue	Clear
Dimensions:	180 x 305 x 155 mm	180 x 305 x 155 mm
Weight:	1100gr	1150 gr (search light) 90 gr (remote control)

REF.	MOD.	DESCRIPTION
Trident III Solaris*		
2010866	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, right side, permanent mount, bitension, STANDARD model. Base mounting kit already included
2010867	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, left side, permanent mount, bitension, STANDARD model. model. Base mounting kit already included
2010728	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, right side, permanent mount, bitension for ALFA ROMEO GIULIETTA model. Base mounting kit already included
2010729	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, left side, permanent mount, bitension for ALFA ROMEO GIULIETTA model. Base mounting kit already included
2010741	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, right side, permanent mount, bitension for JEEP RENEGADE model. Base mounting kit already included
2010742	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, left side, permanent mount, bitension for JEEP RENEGADE model. Base mounting kit already included
2010743	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, right side, permanent mount, bitension for FIAT GRANDE PUNTO model. Base mounting kit already included
2010744	TRIDENT 3 LEDS	TRIDENT III with Solaris LED, blue light, 1 level, left side, permanent mount, bitension for FIAT GRANDE PUNTO model. Base mounting kit already included (*) For other Trident III Series base mounting kits, please consult to our Commercial Department.
Trident III Search Light*		
2010868	TRIDENT 3 FB LEDS	TRIDENT III, LED search light, permanent mount, 12V (remote control head with cable included), STANDARD model. Base mounting kit already included
2010701	TRIDENT 3 FB LEDS	TRIDENT III, LED search light, permanent mount, 12V (remote control head with cable included) for ALFA ROMEO GIULIETTA. Base mounting kit already included
2010703	TRIDENT 3 FB LEDS	TRIDENT III, LED search light, permanent mount, 12V (remote control head with cable included) for JEEP RENEGADE. Base mounting kit already included
2010745	TRIDENT 3 FB LEDS	TRIDENT III, LED search light, permanent mount, 12V (remote wireless control head included) for FIAT GRANDE PUNTO. Base mounting kit already included (*) For other Trident III Series base mounting kits, please consult to our Commercial Department.
Trident III Accessory		
8216151	MC-TRIDENT II FB	Remote control head with spiral cable, 12V
2010861		Base mounting kit standard



NIGHTSPIRE Series

Federal Signal Vama presents the **NIGHTSPIRE**, the new adjustable spot and flood search light with wireless control.

Providing 360° of continuous rotation to direct light where it is needed.



Search light with wireless control

Light Technology	LED
Amp Draw	3,25 Amps Peak
Voltage	12Vdc
Dome Color	Clear
Permanent mount dimensions	15'24 x 15'24 x 18'03 (cm)
Magnet mount dimensions	13'03 x 13'03 x 17'62 (cm)
Controller dimensions	15'9 x 2'85 x 4'5 (cm)



Magnet mount, Cigarette Plug



Permanent Mount

REF.	MOD.	DESCRIPTION
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NS200-M		NIGHTSPIRE, search light with wireless control, magnet mount, cigarette plug, 12V.
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NS200-P		NIGHTSPIRE, search light with wireless control, permanent mount, 12V.
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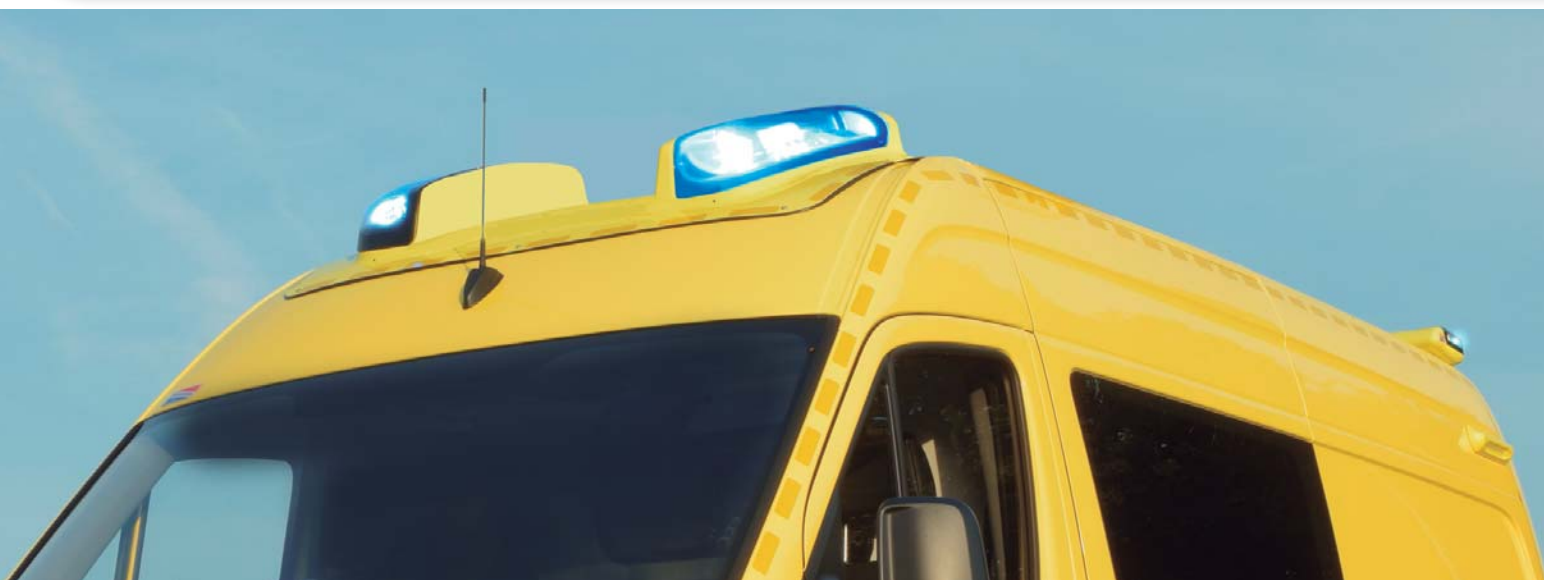
Accessories

200NS-TALL		Branch guard
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NSCTRL-1		Wireless Controller
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864901329		Bracket kit for mounting to Allegiant/Legend
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NSCTRL-BKT		Wireless controller dash mount bracket
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IWS-BC Modules Integrated Warning System

Federal Signal Vama presents the **IWS series**, the new Integrated Warning System for emergency vehicles. A powerful light solution with LEDs modules, with or without integrated flasher, providing an exceptional 360° degrees coverage around this vehicle at any emergency situation.

- SINGLE COLOUR OR DUAL COLOUR

Its range includes single colour or dual colour lights.

- EVERY NEED SOLUTIONS

Easy to install and with a wide range of solutions: with or without integrated flasher, day/night mode and cruise light.

- CONNECTION SIMPLICITY

Connect the set of 8 modules with each other without any flasher or control box.

- MODULAR

Thanks to the wide range of sets, the IWS series provides a great variety of possible installations.

- COMPACT

Its compact low profile design allows installation in limited spaces.

- LONG LIFE

Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

Models without integrated flasher:

Set of one module



Set of two modules



Set of four modules



Set of four modules



Control box



Models with integrated flasher:

Set of eight modules





REF.	MOD.	DESCRIPTION
Sets of 1 module		
2011051		Set of 1 LED module in blue with cruise lights and day/night functions.
2011064		Set of 1 LED module in red with cruise lights and day/night functions.
2011068		Set of 1x2 LED modules in blue/red with cruise lights and day/night functions.
2011052		Set of 1x2 LED modules in blue/amber with cruise lights and day/night functions.
Sets of 2 modules		
2011053		Set of 2x1 LED modules in blue with cruise lights and day/night functions.
2011063		Set of 2x1 LED modules in red with cruise lights and day/night functions.
2011067		Set of 2x2 LED modules in blue/red with cruise lights and day/night functions.
2011054		Set of 2x2 LED modules in blue/amber with cruise lights and day/night functions.
2011074		Set of 2x2 LED modules in amber/blue with cruise lights and day/night functions.
Sets of 4 modules		
2011055		Set of 4x1 LED modules in blue with cruise lights and day/night functions.
2011061		Set of 4x1 LED modules in red with cruise lights and day/night functions.
2011065		Set of 4x2 LED modules in blue/red with cruise lights and day/night functions.
2011057		Set of 4x2 LED modules in blue/amber with cruise lights and day/night functions.
2011073		Set of 4x2 LED modules in amber/blue with cruise lights and day/night functions.
2011056		Set of 4x1 LED modules in blue with cruise lights and day/night functions.
2011062		Set of 2x1 LED modules in red with cruise lights and day/night functions.
2011066		Set of 4x2 LED modules in blue/red with cruise lights and day/night functions.
2011058		Set of 4x2 LED modules in blue/amber with cruise lights and day/night functions.
Sets of 8 modules		
2011069		Set of 8x1 LED modules in blue with cruise lights and day/night functions.
2011059		Set of 8x1 LED modules in amber with cruise lights and day/night functions.
2011076		Set of 8x1 LED modules in amber with cruise lights and day/night functions for using as turn signals.
2011071		Set of 8x1 LED modules in red with cruise lights and day/night functions.
2011072		Set of 8x1 LED modules in white
2011070		Set of 8x2 LED modules in blue/amber with cruise lights and day/night functions.
2011060		Set of 8x2 LED modules in blue/red with cruise lights and day/night functions.
Control box		
82351075		Control box for sets of LED modules.

(*) For A R65 regulations in these emergency lights, they must be approved together with the lenses and the type of vehicle installation.

SUPPLEMENTAL WARNING LIGHTS

➤ Directional LEDs lights.....	46
➤ Direccional warning lights.....	56
➤ LED signs.....	58

NANOLED BICOLOR Series

Federal Signal Vama introduces the **NanoLED BICOLOR**, ultra-compact lights with independent control and R65 approved in CL1 and CL2.

The **NanoLED BICOLOR** incorporates 12 intensity multi-voltage LEDs (10-30V). Its multiple bicolor combinations, flashing modes and simultaneous or alternate synchronism, provide high versatility for priority or secondary signaling in emergency vehicles.

Its LED lights guarantee a long useful life, reducing maintenance costs and increasing the use time of the vehicle.

- ULTRA COMPACT

Especially designed to be lighter and more compact.

- HIGH INTENSITY

The 12 LED lights included in the NanoLED bicolor improve energy efficiency and light intensity, providing more security in vehicles when there is an emergency situation.

- LONG OPERATIONAL LIFE

Federal Signal Vama's LED technology guarantees a long operational life for this supplemental warning light, reducing maintenance costs and vehicle's life.

- EASY AND VERSATILE INSTALLATION

Thanks to its reduced dimensions, weight and mounting accessories availability, its installation is very easy.

- SOLUTION FOR ANYMARKET NEEDS

As a result of having several light colours and due to its versatility, NanoLED bicolor lights can be integrated in the grill, inside or outside the vehicle, in the trunk or in the vehicle's rear side.



Voltage:	Multivoltaje (10-30V)
Number of LEDs:	12
Consumption 12V intermitent mode:	0,5 A red, 0,8 A blue/amber
Consumption 24V intermitent mode:	0,3 A red, 0,4 A blue/amber
Flash patterns:	7
Operating temperature:	-40 a 65°C.
Measures (without joint):	104 x 24 x 9,3 mm
Measures (with joint):	107,5 x 27,5 x 9,3
Weight:	42 gr.

- WATER PROTECTION.

Follow protection certification IPX9K IPX6.

- CONNECTION SIMPLICITY

NanoLED's bicolor installation only requires one wire and its installation is made from vehicle's outside side.

- SYNCHRONIZABLE

NanoLED bicolor allows simultaneous or alternative synchronization up to 12 lights.

- CRUISE LIGHT

Option for class 1.

REF.	MOD.	DESCRIPTION
2010862		NanoLED Bicolor, LED directional light blue/amber, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 1 approved, cruise light
2010832		NanoLED Bicolor, LED directional light blue/amber, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 2 approved.
2010863		NanoLED Bicolor, LED directional light blue/red, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 1 approved, cruise light
2010833		NanoLED Bicolor, LED directional light blue/red, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 2 approved.
2010864		NanoLED Bicolor, LED directional light amber/red, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 1 approved, cruise light
2010834		NanoLED Bicolor, LED directional light amber/red, clear lens, whit flasher, multivoltage 10-30V, UN R65 class 2 approved.

NANOLED Series

Federal Signal Vama introduces the new **NanoLED** series, the new and revolutionary ultra compact warning lights comprising of 6 LEDs. Thanks to its small size, light weight, easy installation and great light intensity, the **NanoLED** series break with standard products existing in the market, revealing a versatile installation and increasing security in emergency situations.

NanoLED series incorporate 6 multivoltage LED lights (10-30V), providing higher light intensity and improving energy efficiency. Its LED lights assure a long operational life, reducing maintenance costs and increasing vehicle's life.

Its range includes single colour and dual colour lights, both available with a variety of flash patterns, to correctly satisfy the different market needs.

- EXTREMELY COMPACT

Especially designed to be lighter and more compact than ever.

- THE HIGHEST INTENSITY

The 6 LED lights included in the Nanoled series improve energy efficiency and light intensity, providing more security in vehicles when there is an emergency situation.

- SINGLE COLOUR OR DUAL COLOUR LIGHTS

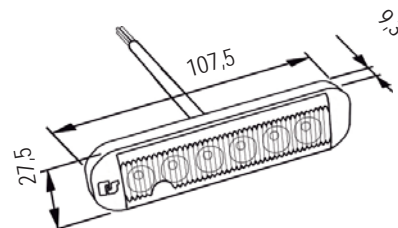
Its range includes single colour (same colour for all 6 LEDs) or dual colour lights (3 LEDs in each colour).

- LONG OPERATIONAL LIFE

Federal Signal Vama's LED technology guarantees a long operational life for this supplemental warning light, reducing maintenance costs and vehicle's life.

- EASY AND VERSATILE INSTALLATION

Thanks to its reduced dimensions, weight and mounting accessories availability, its installation is very easy.



NanoLED dimensions in mm.

- SOLUTION FOR ANY MARKET NEEDS

As a result of having several light colours and due to its versatility, Nanoled series lights can be integrated in the grill, inside or outside the vehicle, in the trunk or in the vehicle's rear part.

- WATER PROTECTION

Follow protection certification IPX9K IPX6.

- CONNECTION SIMPLICITY

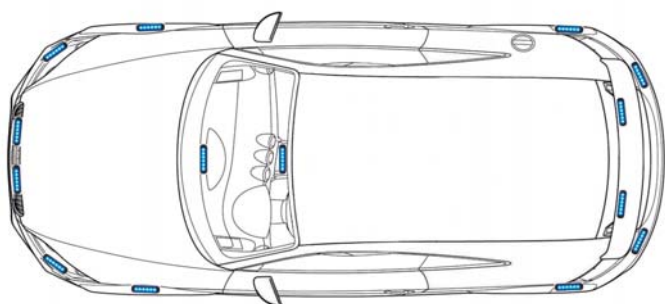
Nanoled's installation only requires one cable and its installation is made from vehicle's outside part.

- SYNCHRONIZABLE

Nanoled series allows simultaneous or alternative synchronization up to 12 lights.

- CRUISE LIGHT

Cruise light option for blue, red or amber lights.



Multiple installation possibilities.

Voltage:	Multivoltaje (10-30V).
Number of LEDs:	6 (single colour or dual colour).
Consumption 12V:	Flash pattern: 0.75 Amp.
Consumption 24V:	Flash pattern: 0.45 Amp.
Flash pattern (single colour):	7
Flash pattern (dual colour):	16
Operating temperature:	-40 to 80°C.
Dimensions (with bezel):	107,5 x 27,5 x 9,3mm.
Dimensions (without bezel):	104 x 24 x 9,3 mm.
Weight:	42 gr.

REF.	MOD.	DESCRIPTION
2010718	NanoLED	NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010718-01	NanoLED	NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with cruise light
2010709	NanoLED	NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved.
2010712	NanoLED	NanoLED, LED directional light, white/amber, clear lens, with flasher, multivoltage 10-30V.
2010710	NanoLED	NanoLED, LED directional light, blue/amber, clear lens, with flasher, multivoltage 10-30V.
2010705	NanoLED	NanoLED, LED directional light, blue /blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010705-02	NanoLED	NanoLED, LED directional light, blue/blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with cruise light
2010707	NanoLED	NanoLED, LED directional light, blue /blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved.
2010713	NanoLED	NanoLED, LED directional light, blue/white, clear lens, with flasher, multivoltage 10-30V.
2010708	NanoLED	NanoLED, LED directional light, blue/red, clear lens, with flasher, multivoltage 10-30V.
2010717	NanoLED	NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010717-01	NanoLED	NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with cruise light
2010711	NanoLED	NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved.
2010723	NanoLED	NanoLED, LED directional light, amber/red, clear lens, with flasher, multivoltage 10-30V.
2010714	NanoLED	NanoLED, LED directional light, red/white, clear lens, with flasher, multivoltage 10-30V.
2010706	NanoLED	NanoLED, LED directional light, white/white, clear lens, with flasher, multivoltage 10-30V.

NanoLED with independent light control 3+3

2010746	NanoLED	NanoLED, LED directional light, 3 blue + 3 amber LEDs clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with independent light control
2010732	NanoLED	NanoLED, LED directional light, 3 blue + 3 white LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control
2010733	NanoLED	NanoLED, LED directional light, 3 blue + 3 red LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control
2010734	NanoLED	NanoLED, LED directional light, 3 amber + 3 red LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control
2010735	NanoLED	NanoLED, LED directional light, 3 red + 3 white LEDs, with flasher, multivoltage 10-30V, with independent light control
2010736	NanoLED	NanoLED, LED directional light, 3 white + 3 amber LEDs, with flasher, multivoltage 10-30V, with independent light control

Area lighting NanoLED

2010727	NanoLED	NanoLED, directional area LED light white-white/clear lens, no flasher, multivoltage
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NanoLED vertical

2010806	NanoLED	Vertical NanoLED, LED directional light, blue/blue, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved.
2010809	NanoLED	Vertical NanoLED, LED directional light, blue/blue, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved with cruise light.
2010803	NanoLED	Vertical NanoLED, LED directional light, blue/blue, clear lens, with flasher, multivoltage 10-30V. UNR65 class 2 approved.
2010807	NanoLED	Vertical NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved.
2010810	NanoLED	Vertical NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved with cruise light.
2010804	NanoLED	Vertical NanoLED, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UNR65 class 2 approved.
2010808	NanoLED	Vertical NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved.
2010811	NanoLED	Vertical NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UNR65 class 1 approved with cruise light.
2010805	NanoLED	Vertical NanoLED, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UNR65 class 2 approved.



REF.	MOD.	DESCRIPTION
Mount Accesories		
8232851	NanoLED	Simple "L" mounting accessory
8232852	NanoLED	Double "L" horizontal mounting accessory
8232853	NanoLED	Double "L" vertical mounting accessory
8232854	NanoLED	Swivelling mounting accessory
8232893	NanoLED	Hood support with adhesive or screwed bracket
8232894	NanoLED	Hood support with metal bracket
8232863	NanoLED	Grille support for VW Crafter
8232863-01	NanoLED	Crille support for VW CRAFTER v.2019
8232864	NanoLED	Grille support for Renault Master
8232865	NanoLED	Right Grille support for Sprinter
8232866	NanoLED	Left Grille support for Mercedes Sprinter
8232940	NanoLED	Grille support for MERCEDES Sprinter v.2019
8232868	NanoLED	Grille support for Mercedes Vito
8232867	NanoLED	2 racks grill support for VW T6
8232870	NanoLED	3 racks grill support for VW T6

(*) All models include a black bezel.

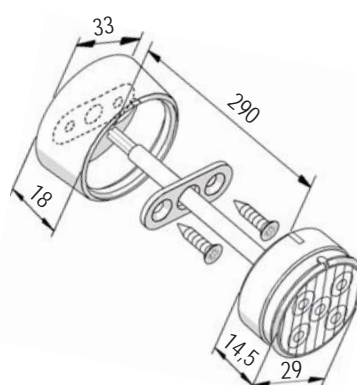
NANOLED ROUND Series

Federal Signal Vama introduces the new **NanoLED Round** series, the new ultra compact round warning lights with integrated flasher for emergency and service vehicles. Additionally, it can be combined with lightbars and other directional lights as the Nanoled series.

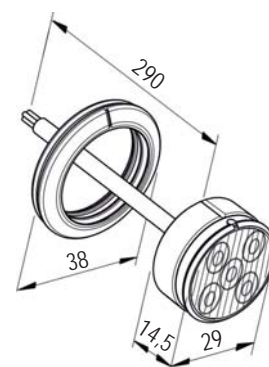
NanoLED Round series incorporates 5 multivoltage LED lights (10-30V), providing high intensity. Its LED lights assure a long operational life, reducing maintenance and increasing vehicle's life.

Its range includes cruise light models, to adapt to the needs of any market.

	Flush / surface mounting:
Voltage:	Multivoltage (10-30 V)
Number of LEDs:	5
Consumption 12V:	0,65A
Consumption 24V:	0,40A
Flash patterns:	7
Operating temperature:	-40° to 65°C
Measures (without gasket):	Ø 29 x 14,5 mm
Measures (with gasket) flush / surface mounting:	Ø 38 x 14,5 mm. / Ø 33 x 18 mm.
Weight flush / Surface mounting:	29 gr / 40 gr



NanoLED Round surface mounting dimensions in mm.



NanoLED Round flush mounting dimensions in mm.

REF.	MOD.	DESCRIPTION
Nanoled Round recessed mounting		
2010823	NanoLED Round	Nanoled Round, LED directional light, blue, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved.
2010835	NanoLED Round	Nanoled Round, LED directional light, blue, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved with cruise light.
2010865	NanoLED Round	Nanoled Round C2, set of two LED directional lights, blue, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 2 approved.
2010824	NanoLED Round	Nanoled Round, LED directional light, amber, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved.
2010836	NanoLED Round	Nanoled Round, LED directional light, amber, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved with cruise light.
2010825	NanoLED Round	Nanoled Round, LED directional light, red, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved.
2010837	NanoLED Round	Nanoled Round, LED directional light, red, clear lens, with flasher, multivoltage 10-30V, recessed mounting. UN R65 class 1 approved with cruise light.
2010829	NanoLED Round	Nanoled Round, LED directional light, white, clear lens, with flasher, multivoltage 10-30V, recessed mounting.
NanoLED Round surface mounting		
2010880	NanoLED Round	NanoLED Round, LED directional light, blue, clear lens, with flasher, multivoltage 10-30V, surface mounting. UN R65 class 1 approved.
2010881	NanoLED Round	NanoLED Round, LED directional light, amber, clear lens, with flasher, multivoltage 10-30V, surface mounting. UN R65 class 1 approved.



MICROLED Advance Series

MicroLED Advance supplemental warning LED light offers additional security on emergency situations, and could be installed in almost every place of all emergency vehicle types: rear deck, rearview mirrors, grilles, bumpers, etc. Its main features are:

- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. MicroLED Advance offers maximum optical performance with minimal amperage draw.

- LONG LIFE

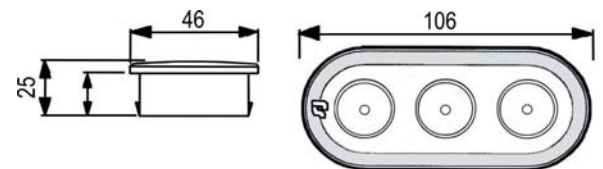
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

- EVERY NEED SOLUTIONS

Easy to install and with a wide range of solutions: multivoltage references, blue, amber, red or clear lenses, with or without flasher, etc.

- WATERPROOF HOUSING

High density silicone rear sealed, avoiding dust and / or water penetration inside the circuit board. IP protection grade IP9K.



MicroLed Advance dimensions (mm).

	W/O FLASHER	WITH FLASHER	R65
Voltage:	Multivoltage (10-30V)	Multivoltage (10-30V)	Multivoltage (10-30V)
Number of LEDs:	3 x 2 W	3 x 2 W	3 x 2 W
Average consumption:	0.2 Amp (Ref. 2010589, 0.4A)	0.4 Amp	0.4 Amp
Average consumption (flashing mode):	0.2 Amp	0.4 Amp (blue, white and green) 0.2 Amp (amber, red)	0.4 Amp (blue, amber) 0.3 Amp (red)
Flash patterns:	8 or steady burn	8 + steady burn	R65 + 7 + steady burn
Weight:	80 g	80 g	80 g
Dimensions:	106 x 46 x 25 mm	106 x 46 x 25 mm	106 x 46 x 25 mm

REF.	MOD.	DESCRIPTION
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Spread R65 lens

2010595	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, white light, amber spread lens, multivoltage
2010596	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue spread lens, multivoltage
2010597	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear spread lens, multivoltage
2010598	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear spread lens, multivoltage
2010599	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red spread lens, multivoltage

Smooth and fresnel V15 lens w/ flasher

2010573	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber smooth lens, w/flasher, multivoltage
2010580	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber Fresnel V15 lens, w/flasher, multivoltage
2010574	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/flasher, multivoltage
2010581	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear Fresnel V15 lens, w/flasher, multivoltage
2010570	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue smooth lens, w/flasher, multivoltage
2010578	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue Fresnel V15 lens, w/flasher, multivoltage
2010571	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear smooth lens, w/flasher, multivoltage
2010579	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear Fresnel V15 lens, w/flasher, multivoltage
2010576	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear smooth lens, w/flasher, multivoltage
2010575	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red smooth lens, w/flasher, multivoltage
2010577	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, green light, clear smooth lens, w/flasher, multivoltage
2010572	MicroLED Advance	MicroLED Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear smooth lens, w/flasher, multivoltage

Mount Accesories*

2010230	Surface mount kit, (2) joints, (surface mount)
2010231	Flush mount kit, (2) joints, (flush mount)
2010279	L Bracket for permanent mounting
81523056	Fixation platen, 1 Microled Advance** (*) Choose a mounting kit when ordering (**) Should be folded by the installer

LD116 Advance Series

Federal Signal Vama presents the upgraded version of LEDs compact lights for **LD116 Advance Series**, the most modular light of our lights especially designed for emergency vehicles.

- HIGH INTENSITY

Latest generation Advance Technology LEDs, provides light output and longest lifetime.

- A SOLUTION FOR EVERY NEED

The wide range of mounting kits makes this compact light very flexible, offering solutions all over the vehicle perimeter.

- APPROVALS

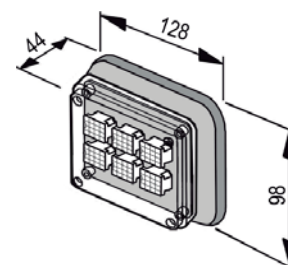
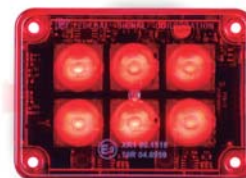
According to R65 and R10 European Regulations.

- WATERPROOF HOUSING

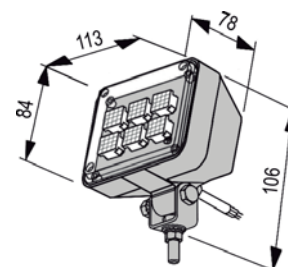
High-density silicone rear sealed avoiding dust and/or water penetration inside the circuit board IP9K Approved.

- LONG LIFE

Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.



LD116 Advance dimensions (mm)
Surface mounting kit.



LD116 Advance dimensions (mm)
Swivel mounting kit.

Operating voltage:	Multivoltage (10–30V)
Operating temperature:	-20° / +50°
Dimensions:	109x79x22,5 mm

REF.	MOD.	DESCRIPTION
2010674CR	LD116 ADV	Directional Advance LED light, amber LED, amber lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.
2010673CR	LD116 ADV	Directional Advance LED light, blue LED, blue lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.
2010675CR	LD116 ADV	Directional Advance LED light, red LED, red lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.

Accessories

2010263	LD116-SB	Surface mounting kit, black colour
2010262	LD116-SC	Surface mounting kit, chrome colour
2010264	LD116-SWB	Swivel mounting kit, black colour

Optional Accessories

9022209		Wiring harness 3x0,75 (sold in meter, the lenght required has to mentioned in the order)
8216090	SW-521	Swith 2 positions ON-OFF with key protector

QUADRAFLARE Advance

Federal Signal Vama introduces new, large **Quadraflare Advance** LED lights, specially designed for emergency vehicles, such as ambulance and fire fighting vehicles.

- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. Quadraflare Advance offers maximum optical performance with minimal amperage draw.

- EVERY NEED SOLUTIONS

Available in blue, amber, red, white or green lights, multivoltage, R65 approved (Class 1 and Class 2) and with or without flasher (8 flashing modes).

- SYNCRONIZED

Quadraflare Advance without flasher could be synchronized with other Federal Signal Vama vehicle products (MLP, Intelli-Flash intermittent relays, ICS2000 Series intelligent controllers).

- APPROVED

Quadraflare Advance satisfy UN R65 and UN R10 approvals from United Nations Economic Commission for Europe. (UNECE). With IP protection IPX9K.



Voltage:	Multivoltage (10 - 30 V)
Average consumption:	1 Amp (12 V, fixed mode) 0.5 Amp (12 V, flash mode) 0.1 Amp (12 V & 24 V, cruise light mode)
LEDs colours:	Blue, amber, red, green, white
Lens colours:	Blue, amber, red, green, clear
Dimensions:	Light: 167 x 38 x 107 mm Mounting kit: 211 x 48 x 132 mm

- INCREASED SECURITY

New Negative Temperature Coefficient (NTC) regulates light intensity, avoiding heat disfunction on supplemental warning light.

REF.	MOD.	DESCRIPTION
Quadraflare Advance WITHOUT flasher		
2010617	Quadraflare Advance	Directional Advance LED light, blue LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010618	Quadraflare Advance	Directional Advance LED light, blue LEDs, blue lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010619	Quadraflare Advance	Directional Advance LED light, amber LEDs, amber lens, w/o flasher, multivoltage. R65 Class 1 approved.
2010620	Quadraflare Advance	Directional Advance LED light, amber LEDs, clear lens, w/o flasher, multivoltage. R65 Class 1 approved.
2010623	Quadraflare Advance	Directional Advance LED light, red LEDs, red lens, w/o flasher, multi-voltage. R65 Class 2 approved.
2010624	Quadraflare Advance	Directional Advance LED light, red LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010461-01	Quadraflare Advance	Directional Advance LED light, white LEDs, clear lens, w/o flasher, multivoltage.
Installation Accessories for references without flasher		
2006035	MLP-F4	External flasher (4) lights, (8) flash patterns, multivoltage.
2006030	MLP-F8	External flasher (8) lights, (8) flash patterns, multivoltage.
Quadraflare Advance WITH flasher		
2010610	Quadraflare Advance	Directional Advance LED light, blue LEDs, blue lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010609	Quadraflare Advance	Directional Advance LED light, blue LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010611	Quadraflare Advance	Directional Advance LED light, amber LEDs, amber lens, w/flasher, multi-voltage. R65 Class 1 approved.
2010612	Quadraflare Advance	Directional Advance LED light, amber LEDs, clear lens, w/flasher, multi-voltage. R65 Class 1 approved.
2010616	Quadraflare Advance	Directional Advance LED light, red LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010615	Quadraflare Advance	Directional Advance LED light, red LEDs, red lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010607	Quadraflare Advance	Directional Advance LED light, white LEDs, clear lens, w/flasher, multi-voltage.
Installation Accessories (Choose (1) Mounting kit when ordering)		
QL64MC-01	Quadraflare	Surface mounting kit with chrome ring and gasket

Motorcycle Kit LD400/LD410



Federal Signal Vama presents its new **LD400** and **CO400** series, a priority warning LED kit for police motorcycles R-65 approved.

The **LD400 Solaris** consist on 1 front low profile light head which distribute the light beam at a horizontal angel of 120 degrees. The revolutionary reflector optical design provides a powerful lighting.

The light source of the **CO400 Solaris** telescopic pole is formed by the brand-new Solaris system.



LD400



CO400 Solaris

- EASY MAINTAINANCE AND INSTALLATION

There is no need for an external power supply, and all necessary electrical connections are provided.

- WATERPROOF HOUSING AND CONNECTOR

IPX9K approved for LD400 LED lights.

- LIGHTNESS AND SHOCK RESISTANT

Thanks to its polycarbonate reflector and lenses and fiberglass support.

- LOW AMP DRAW AND LONG LIFE

LED technology assures long warning light life, and helps to reduce vehicle maintenance costs.

	LD400	LD410	
Voltage:	12V	12V	12V
Average consumption in flashing mode:	blue: 0,25A amber and red: 0.25Amp	blue: 0.20Amp	blue and red: 1 Amp amber: 0.6 Amp
N° of LED diodes:	5 LEDs Solaris	4 LEDs Solaris 1 LED Solaris	Omnidirectional parabolic reflector with 15 LEDs
Weight:	220 g	220 g	1580 g (CO400) 1240 g (CO421)
Dimensions (without mounting brackets):	90 x 50 x 150 mm	90 x 50 x 150 mm	140 x 650 - 1515 mm (3-section pole) 140 x 550 - 760 mm (2-section pole)

REF.	MOD.	DESCRIPTION
LD400 - LD410 SOLARIS Front Light with flasher integrated		
2010630	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, blue light, blue spreader lens, cruise light, swivel mount, 12V. UN R65 approved Class 1
2010631	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, blue light, blue spreader lens, cruise light, swivel mount, 12V. UN R65 approved Class 1
2010644	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, red light, red spreader lens, cruise light, swivel mount, 12V
2010645	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, red light, red spreader lens, cruise light, swivel mount, 12V
2010642	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, amber light, amber spreader lens, cruise light, swivel mount, 12V
2010643	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, amber light, amber spreader lens, cruise light, swivel mount, 12V
2010632	LD410-D Solaris	Solaris LED directional light (right side), (4) LEDs blue light and (1) LED red light "Stop Light" function, spreader lens, swivel mount, 12V. UN R65 approved Class 1
2010633	LD410-I Solaris	Solaris LED directional light (left side), (4) LEDs blue light and (1) LED red light "Stop Light" function, spreader lens, swivel mount, 12V. UN R65 approved Class 1
CO400 SOLARIS Telescopic Mast with flasher integrated		
2005388	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved
2005389	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, amber light, amber spreader lens, cruise light, 12V. UN R65 approved
2005390	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, red light, red spreader lens, cruise light, 12V. UN R65 approved
2005430	CO421 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (2) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved
Mount Accesories		
4004233-01	MC300	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series; priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continous siren.
4004352	MC300/A	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series; priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continous siren and power limiter.
Mount Accesories		
8216098	BA-6	Kit silent blocks telescopic pole, only available for poles in 3 sections.
82441524-03	LD400-CBLDO	Adapter wiring from LD350/LD360 to LD400/LD410
82441589	82441589	Motorbike wiring kit (LD410- CO400, SCS1000-D and control head)
82441588	82441588	Motorbike wiring kit (LD400- CO400, SCS1000-D and control head)

SIGNALMASTER SOLARIS

Federal Signal Vama presents the new ultra-low profile **SignalMaster Solaris** directional warning light. It offers an excellent results as an emergency light, thanks to its several flash patterns with different functions (day / night effect, fast / slow, scroll) to satisfy all needs. Its main features are:



- HIGH INTENSITY

The built-in Solaris technology onto SignalMaster directional warning light has exponentially increased light intensity compared to similar products on the market.

- EVERY NEED SOLUTIONS

SignalMaster Solaris has got 4 different flash patterns (right, left, centre-out sequences and middle-out flashing mode), and day / night*, slow / fast* and scroll function with a non-stop effect on a CAN BUS version.

- ULTRA-LOW PROFILE

Its low profile gives it less aerodynamic drag with less fuel consumption and better vehicle tire grip, for an increased security. Further more, it has an attractive design without losing any functionality and it allows easier installation in any vehicle.

- WATERPROOF HOUSING

Highly prepared to fight against most adverse weather conditions, thanks to its IP protection IPX9K.

(*) Features available on analogical version with ICS2009 multifunction controller.

Voltage:	10-30 V
Average consumption:	<u>0.3 Amps each LED modules (12V)</u> <u>10V 30V</u> SMLLED 6/8: 2.6 Amp 1.3 Amp SMLLED 6/8 KS: 2.6 Amp 1.3 Amp SMLLED 8/11 CB: 1.8 Amp 1.3 Amp
Dimensions:	6-modules: 800 x 32 x 68 mm 8-modules: 1070 x 32 x 68 mm 8-CB modules: 800 x 32 x 68 mm 11-CB modules: 1070 x 32 x 68 mm
Weight:	6-modules: 705 g 8/11-modules: 940/995 g

SignalMaster GEN I



SignalMaster Solaris



Analogical and KS SignalMaster have fully interchangeable electrical connections for easy installation.



REF.	MOD.	DESCRIPTION
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Analogical SignalMaster

2010560	SMLED6 SL CT	Directional lighting system, (6) Solaris LED modules, roof connector, amber, multivoltage
2010561	SMLED8 SL CT	Directional lighting system, (8) Solaris LED modules, roof connector, amber, multivoltage

Installation accesories

82441451		Analogical SMLED wiring, roof connector, 5M
82441445		Analogical SMLED wiring, roof connector, 10M

2010601	SMLED6 SL CM	Directional lighting system, (6) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1)
2010602	SMLED8 SL CM	Directional lighting system, (8) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1)

KS ECO SignalMaster

2010646	SMLED6 -ECO SL	Directional lighting system, (6) Solaris LED modules, KS control head included, 15M wiring harness included, waterproof connector, amber, bitension
2010647	SMLED8 -ECO SL	Directional lighting system, (8) Solaris LED modules, KS control head included, 15M wiring harness included, waterproof connector, amber, bitension

CANBUS SignalMaster (2)

2010564	SMLED8-CB SL	Directional lighting system, (8) continuous LED mode, CAN BUS, amber, multivoltage
2010565	SMLED11-CB SL	Directional lighting system, (11) continuous LED mode, CAN BUS, amber, multivoltage

Installation accesories

82441446		SMLED KS/CB wiring, wiring harness, 5M
82441447		SMLED KS/CB wiring, wiring harness, 10M
82441476		SMLED KS/CB wiring, wiring harness, 15M

(1) Without waterproof connector.

(2) CANBUS SignalMaster must be controlled with a CANBUS control head BCT2000 or BCT500CB.

Accesory

8234188		Kit Silent Blocks SMLED SL Solaris
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(*) All the models must be acquired by its correspondent wiring connection (except 2010601 and 2010602 references).

FSX Sun visor

Federal Signal Vama's **FSX sun visor** provides clear identification for emergency services and highly visible temporary marking for vehicles. Used extensively by various emergency services including Police, Fire, Search and Rescue, Ambulances and Doctors. The **FSX sun visor** is perfect for marking any emergency vehicle that may be out of service, just out on test or for unmarked police cars working within an emergency or rescue service. This sign is discreet and remains unseen when not in use but highly effective when required.

- ANTI-DAZZLE FEATURE

Light output dimming control to avoid emergency officers dazzle inside emergency vehicle.

- EASY INSTALLATION AND USE

Simply slides over existing vehicle's sun-visor and plug it to the cigarette plug.

- NO FIXING BRACKETS OR STICKING

It can be attached to your normal car visor easily without the need for any special tools, permanent brackets or sticking materials.

- EASY REMOVAL AND STORAGE WHEN NOT IN USE

When not in use, simply fold away your vehicle's visor so it is out of sight or if preferred, simply slide off your visor and keep it inside the glove box.

- FLEXIBILITY

Wide selection of texts available. Please consult our sales people and we will see if we can assist you.

- RUGGERISED

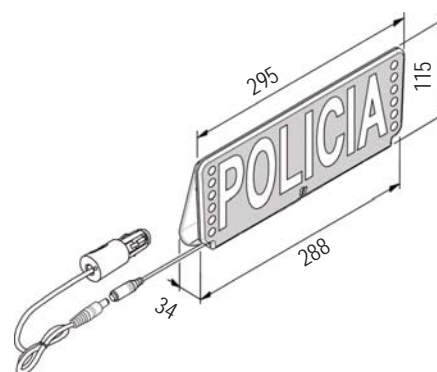
UV stable and shatterproof.

- PATENTED

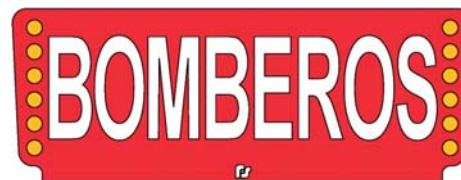
Approved according to European Utility Patent approval.



High-visibility warning lights



Dimensions FSX Sun Visor in mm



REF.	MOD.	DESCRIPTION
2030001	FSX	FSX sun visor, with (2) blue LED warning lights, with "POLICIA" sign, cigarette plug, 12V/24V
2030011	FSX	FSX sun visor, with (2) blue LED warning lights, with "POLICE" sign, cigarette plug, 12V/24V
2030012	FSX	FSX sun visor, with (2) blue/red LED warning lights, with "POLICE" sign, cigarette plug, 12V/24V
2030005	FSX	FSX sun visor, with (2) amber LED warning lights, with "BOMBEROS" sign, cigarette plug, 12V/24V
2030023	FSX	FSX sun visor, with (2) red LED warning lights, with "FIRE" sign, cigarette plug, 12V/24V

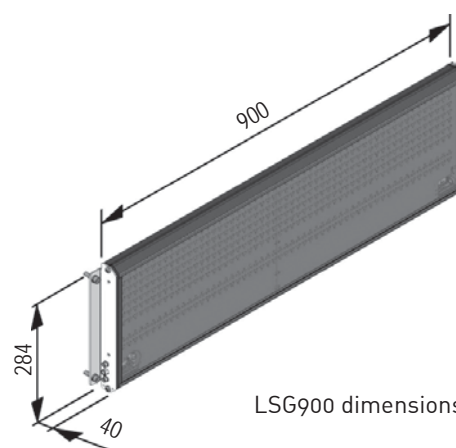
(*) For other texts please consult with our sales network. Minimum order 10 units.

Serie LSG900

The **LSG900** sign is a vertical mounting programmable LED sign, for up to 200 fully programmable messages. The message length is up to eight lines of ten characters. This new LED sign has a SignalMaster integrated in the lower level.

The sign is controlled through the BCT3009-19 control head, with LCD screen and keys of silicone. It allows, through a simple menu system, select and preview the message before it appears on the LED sign.

With Smartsign Message Editor2 software you can edit and download 200 messages to the control head. Allows programming of letters, numbers and symbols (arrow, filled square, etc.). It also has an extensive library of most common messages in different countries.



LSG900 dimensions (mm).

Voltage:	12 V
Number of programmable messages:	200
Number of lines by message:	8
Number of characters in display:	10
Character size:	125 x 85 mm
Matrix size:	21 x 15 LEDs
LED colour:	red / amber
LED:	SMD
Radiation angle:	+15°
Dimensions:	LED Sign: 965 x 284 x 40 mm Control head: 185 x 60 x 33 mm
Weight:	Led Sign: 4 Kg Control head: 197,5 gr

REF.	MOD.	DESCRIPTION
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LSG900

2025446	LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, red LEDs and Signalmaster function.
2025486SE	LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, amber LEDs.
2025519	LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, amber LEDs and Signalmaster function.
8216136-01	LCD900	Control head w/ LCD back-lit screen to display messages for LCD900, 200 Programmable messages.
2025336	SSME	SmartSign Message Editor, for editing and downloading SmartSign programmable LED sign messages from PC.

Accessory

8234178	Silent block kit for LSG900 (Recommended for installations subject to vibrations)
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LSG750/752

The **LSG750** is a CAN BUS foldable and programmable LED sign, with two levels of light intensity (day/night) and capacity for 200 totally programmable messages. In addition the **LSG750 2N** version includes 2 integrated NanoLEDs in vertical position with flash pattern and cruise light.

LSG752 model includes the same electronic features as the LSG750, but with a vertical mounting system.

The LSG750/752 sign range are controlled through the BCT3009, with LCD screen and selection buttons. It allows, through a simple menu system, to select and preview the message before it appears on the LED sign.

Through the SmartSign 2 Message Editor software, it is easy to edit and upload the 200 messages to the control head. It allows to program letters, numbers and symbols (arrows, square, etc.), and integrates scrolling and mirror effect message options. In addition, it has a wide library of the most usual messages in different countries.



Sign LSG750



Sign LSG750 2N



Sign LSG752

Voltage:	12 V
Number of programmable messages:	200
Number of lines by message:	8
Number of characters in display:	10
Dimensions screen:	LSG 750: 440 x 65 mm LSG 750 2N: 440 x 65 mm LSG 752: 500 x 79 mm
Dimensions screen:	60 x 7 LEDs
LED colour:	Red

Day/night function:	LSG 750: Yes LSG 750 2N: No LSG 752: Yes
Current consumption:	4 A
Radiation angle:	+/- 15°
Dimensions sign:	LSG 750: 570 x 160 x 160 mm LSG 750 2N: 570 x 160 x 160 mm LSG 752: 538 x 103 x 17 mm
Weight:	LSG 750: 2800 gr LSG 750 2N: 2900 gr LSG 752: 705 gr

REF.	MOD.	DESCRIPTION
2025583	LSG750	Programmable and foldable LED sign with day/night function. 200 Programmable messages by SmartSign 2 Message Editor, controlled through the BCT3009 control head with screen to display messages.
2025584	LSG750 2N	Programmable and foldable LED sign, with (2) blue NanoLED integrated (approved UN R65 Class 1). 200 Programmable messages by SmartSign 2 Message Editor, controlled through the BCT3009 control head with screen to display messages.
2025587	LSG752	Programmable and fixed mounting LED Sign with day/night function. 200 Programmable messages by SmartSign 2 Message Editor, controlled through the BCT3009 control head with screen to display messages.
BCT3009	BCT3009	Control head*
2025473	S2ME	SmartSign2 Message Editor, for editing and downloading SmartSign programmable LED Sign messages from PC.

*For other control head, please consult to our Commercial Department.

INTERNAL WARNING LIGHTS

➤ **Internal lights.....62**



NANOLED VIPER

Federal Signal Vama presents the **NanoLED VIPER**, the new internal warning LED lights, with a more compact and renewed design. It is the ideal solution for camouflaged vehicles or reinforce the lighting on emergency vehicles, increasing the efficiency of emergency signaling, when combined with the lightbars.

The **NanoLED VIPER** incorporate 6 LED lights (SINGLE version) or 12 LED lights (DUAL version), providing higher light intensity and improving energy efficiency. Its range includes single color and dual color lights, as well as R65 class 1 and class 2 models.

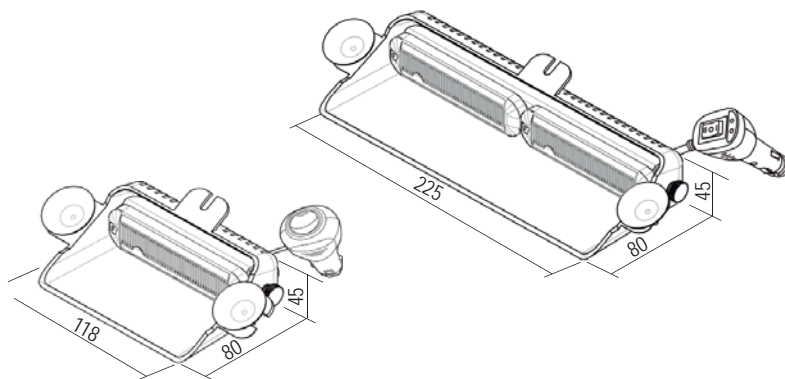


NanoLED Viper SINGLE



NanoLED Viper DUAL

	SINGLE	DUAL
Voltage:	10-30V	10-30V
Consumption (Flash pattern):	0,75 A (12V) 0,45 A (24V)	0,75 A (12V) 0,45 A (24V)
Operating temperature:	-40°C to 80°C	-40°C to 80°C
Dimensions:	80 x 45 x 118 mm	80 x 45 x 225 mm
Weight:	CL1: 226 gr CL2: 250 gr	CL1: 323 gr CL2: 362 gr
Flash pattern:	7 (single colour) 16 (dual colour)	7



NanoLED Viper SINGLE and DUAL dimensions in mm.

AVAILABLE COLOURS





REF.	MOD.	DESCRIPTION
NanoLED VIPER SINGLE		
2010770		NanoLED VIPER SINGLE, blue LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 1 approved.
2010771		NanoLED VIPER SINGLE, amber LED, class 1, clear lens, cigarette plug, 10-30V. UN R65 class 1 approved.
2010772		NanoLED VIPER SINGLE, red LED, with flasher, clear lens, cigarette plug, 10-30V. UN R65 class 1 approved.
2010773		NanoLED VIPER SINGLE, blue LED, with flasher, clear lens, cigarette plug, 10-30V. UN R65 class 2 approved.
2010774		NanoLED VIPER SINGLE, amber LED, with flasher, clear lens, cigarette plug, 10-30V. UN R65 class 2 approved.
2010775		NanoLED VIPER SINGLE, red LED, with flasher, clear lens, cigarette plug, 10-30V. UN R65 class 2 approved.
2010776		NanoLED VIPER SINGLE, blue-red LED, with flasher, clear lens, cigarette plug, 10-30V. Class 1.
2010777		NanoLED VIPER SINGLE, blue-amber LED, with flasher, clear lens, cigarette plug, 10-30V. Class 1.
2010778		NanoLED VIPER SINGLE, blue-white LED, with flasher, clear lens, cigarette plug, 10-30V. Class 1.
2010779		NanoLED VIPER SINGLE, amber-red LED, with flasher, clear lens, cigarette plug, 10-30V. Class 1.
NanoLED VIPER DUAL		
2010780		NanoLED VIPER DUAL, blue-blue LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 1 approved.
2010781		NanoLED VIPER DUAL, amber-amber LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 1 approved.
2010782		NanoLED VIPER DUAL, red-red LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 1 approved.
2010783		NanoLED VIPER DUAL, blue-blue LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 2 approved.
2010784		NanoLED VIPER DUAL, amber-amber LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 2 approved.
2010785		NanoLED VIPER DUAL, red-red LED, clear lens, with flasher, cigarette plug, 10-30V. UN R65 class 2 approved.
2010786		NanoLED VIPER DUAL, blue-red LED, clear lens, with flasher, cigarette plug, 10-30V. Class 1.
2010787		NanoLED VIPER DUAL, blue-amber LED, clear lens, with flasher, cigarette plug, 10-30V. Class 1.
2010788		NanoLED VIPER DUAL, blue-white LED, clear lens, with flasher, cigarette plug, 10-30V. Class 1.
2010789		NanoLED VIPER DUAL, amber-red LED, clear lens, cigarette plug, 10-30V. Class 1.
2010790		NanoLED VIPER DUAL, blue-red LED, clear lens, with flasher, cigarette plug, 10-30V. Class 2.
2010791		NanoLED VIPER DUAL, blue-amber LED, clear lens, with flasher, cigarette plug, 10-30V. Class 2.
2010792		NanoLED VIPER DUAL, blue-white LED, clear lens, with flasher, cigarette plug, 10-30V. Class 2.
2010793		NanoLED VIPER DUAL, amber-red LED, clear lens, with flasher, cigarette plug, 10-30V. Class 2.



AREA LIGHTING

- **Scene lights.....66**
- **Worklights.....68**

LINELED

Federal Signal Vama presents the new **LineLED** Scene light, composed by 6/12/24 very high efficiency LEDs and has been specially developed for surface mount. Its design allows covering 120° light angle and enables an easy installation at vehicle's body, turning LineLED into an excellent worklight.

With an anodized aluminum body and ABS finishing, this light become a lighter and strong model, with IP protection against dust and water.

- HIGH INTENSITY

The high lighting efficiency of the optical system and LED diodes, provides LineLED Series with a 500/1000/2000 Lumens powerful light intensity.

- EASY INSTALLATION

Straightforward and easy installation thanks to its surface mounting.

- LONG OPERATIONAL LIFE

LED technology guarantees long operational life reducing maintenance costs.

- WATER AND DUST PROTECTION

IP67 direct lighting and IP65 diffused lighting approved.

- WIDE ANGLE

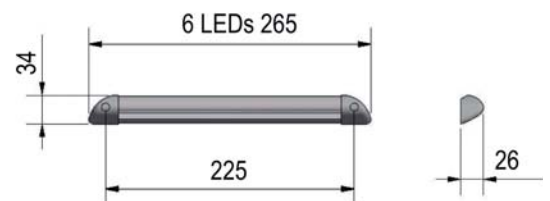
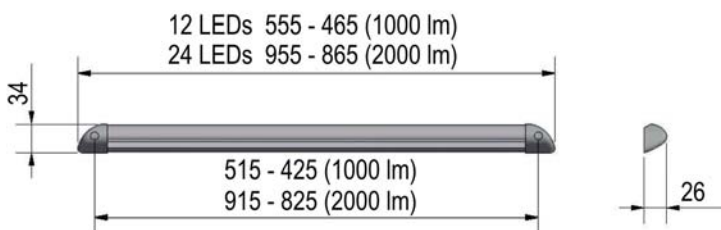
Its wide light output angle (120°) ensures lighting in a wide working area.

- EVERY NEED SOLUTIONS

Available with direct or diffused beam, according to end user needs.



	24 LEDs	12 LEDs	6 LEDs
INTENSITY LIGHT OUTPUT	2000 lm	1000 lm	500 lm
Power:	26W	13W	6,5W
Operating voltage:	12/24V	12/24V	12/24V
Current draw:	12V = 1,86A 24V = 0,93A	12V = 0,93A 24V = 0,47A	12V = 0,47A 24V = 0,24A
Operating temperature:	-30° -+ 40°	-30° -+ 40°	-30° -+ 40°
LED angle beam:	120°	120°	120°
Life time at 85°:	50.000 hours	50.000 hours	50.000 hours
LEDs Colours:	White	White	White
Connection:	Cable	Cable	Cable
Weight: ref. 2101158A	-	-	102,5 gr
Weight: ref. 2101159A	-	-	115 gr
Weight: ref. 2101160A	-	177,5 gr	-
Weight: ref. 2101161A	-	190 gr	-
Weight: ref. 2101167A	360 gr	-	-
Weight: ref. 2101164A	370 gr	-	-



Dimensions LineLED In mm.

REF.	MOD.	DESCRIPTION
2101158A	LineLed	Scene light with 6 high intensity LEDs, 265 x 34 x 26 mm, surface mount with flat base. Direct lighting, IP67. 120° angle. Bitension 12/24V
2101159A	LineLed	Scene light with 6 high intensity LEDs, 265 x 34 x 26 mm, surface mount with flat base. Diffused lighting, IP65. 120° angle. Bitension 12/24V
2101160A	LineLed	Scene light with 12 high intensity LEDs, 465 x 34 x 26 mm, surface mount with flat base. Direct lighting, IP67. 120° angle. Bitension 12/24V
2101161A	LineLed	Scene light with 12 high intensity LEDs, 555 x 34 x 26 mm, surface mount with flat base. Diffused lighting, IP65. 120° angle. Bitension 12/24V
2101167A	LineLed	Scene light with 24 high intensity LEDs, 865 x 34 x 26 mm, surface mount with flat base. Direct lighting, IP67. 120° angle. Bitension 12/24V.
2101164A	LineLed	Scene light with 24 high intensity LEDs, 955 x 34 x 26 mm, surface mount with flat base. Diffused lighting, IP65. 120° angle. Bitension 12/24V.

LEDs Worklights

Federal Signal Vama **LED worklights** are specially designed for Heavy Duty applications (heavy vehicles, platforms, excavators, tractors, etc.), and can be installed on all types of vehicles. Additionally, its special focus design creates **an excellent light distribution** to operate whether on close (flood light or wide (spot light) areas. Furthermore, thanks to die-cast aluminum housing with polycarbonate lens and stainless steel mounting hardware, these worklights are shock resistant and are prepared for working in a high-vibration environments.



Flood permanent light



Spot permanent light



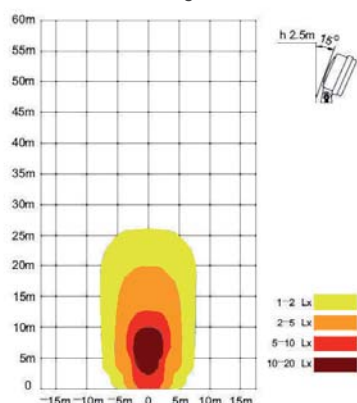
Flood magnetic light



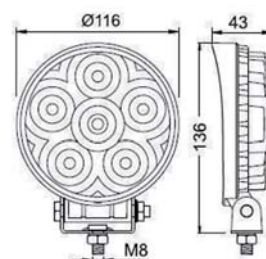
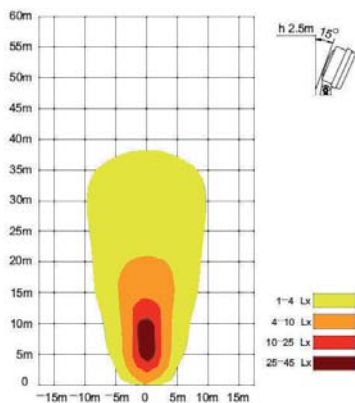
Spot magnetic

Voltage:	10-30V
Amperage:	1.00Amp (12V) / 0.5Amp (24V)
Power:	18W
Light output:	1350 Lumens
Viewing angle:	120° (flood light), 30° (spot light)
Certifications:	IP67 against dust and water

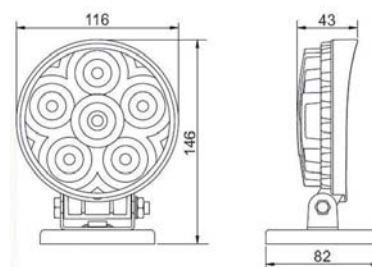
Flood light



Spot light



Permanent light dimensions (mm).



Magnetic light dimensions (mm).

REF. MOD. DESCRIPTION

Led Work lights, permanent mount

2010639A Round worklight, LED, flood, permanent mount, multivoltage

2010659A Round worklight, LED, spot, permanent mount, multivoltage

Led Work lights, magnetic mount

2010638A Round worklight, LED, flood, magnetic mount, multivoltage

2010660A Round worklight, LED, spot, magnetic mount, multivoltage

(*) All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.

(**) Magnetic mounting models produced for a temporary use on the roof of the vehicle.



SIRENS & AUDIBLE WARNING

➤ Compact sirens.....	70
➤ Electronic siren amplifiers.....	73
➤ Integrated sirens.....	78
➤ Loudspeakers.....	79
➤ Compact speackers.....	80

ASX Series

Federal Signal Vama presents one of the most compact sirens in the market, regarding its weight and dimensions, **ASX series**, which it also produces a clean and powerful sound. It meets R10 European Regulation, it is bitension, protected against water and dust and due to its different models, **ASX** is a product highly adaptable to any market need.

Wide product range available for every need, following different countries and application regulations. Consult at the end of this document the different models available.

- COMPACT

Due to the siren reduced dimensions, it can be installed in all type of police, fire and ambulance vehicles.

- EASY TO INSTALL

ASX series installation only requires one cable, which is already provided with waterproof connectors. Therefore, its installation is very simple.

- HERMETIC, WATERPROOF AND DUST RESISTANT

Both the siren and the speaker are prepared to be placed in any position regardless of weather conditions. Siren has IP66 and IP69K protection grade, speaker has IP66 and connector has IP67.

- SOLUTION FOR ANY MARKET NEED

Thanks to the different siren available models according to both its technology and tones, plus the 2 different wiring sizes, ASX Series is suitable for all markets and needs.

- HIGH EFFICIENCY

Especially designed to operate at a constant temperature, made to avoid overheating.



- NEODYMIUM MOTOR

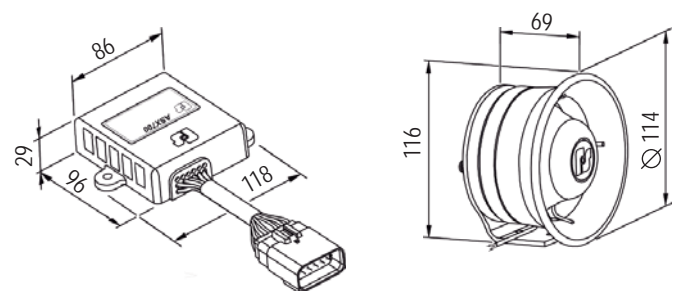
The speaker has a Neodymium motor, which offers higher acoustic pressure (117 dB) than other market products. This increases siren product life and raises its efficiency.

- IMPACT-RESISTANT CASE

Its structure is made of polycarbonate and it is reinforced with UV protection, achieving to dispel the heat and avoid color loss due to the long sun exposures.

- EUROPEAN REGULATION COMPLIANCE

The siren meets R10 European Regulation.



Siren and speaker dimensions in mm.

Siren

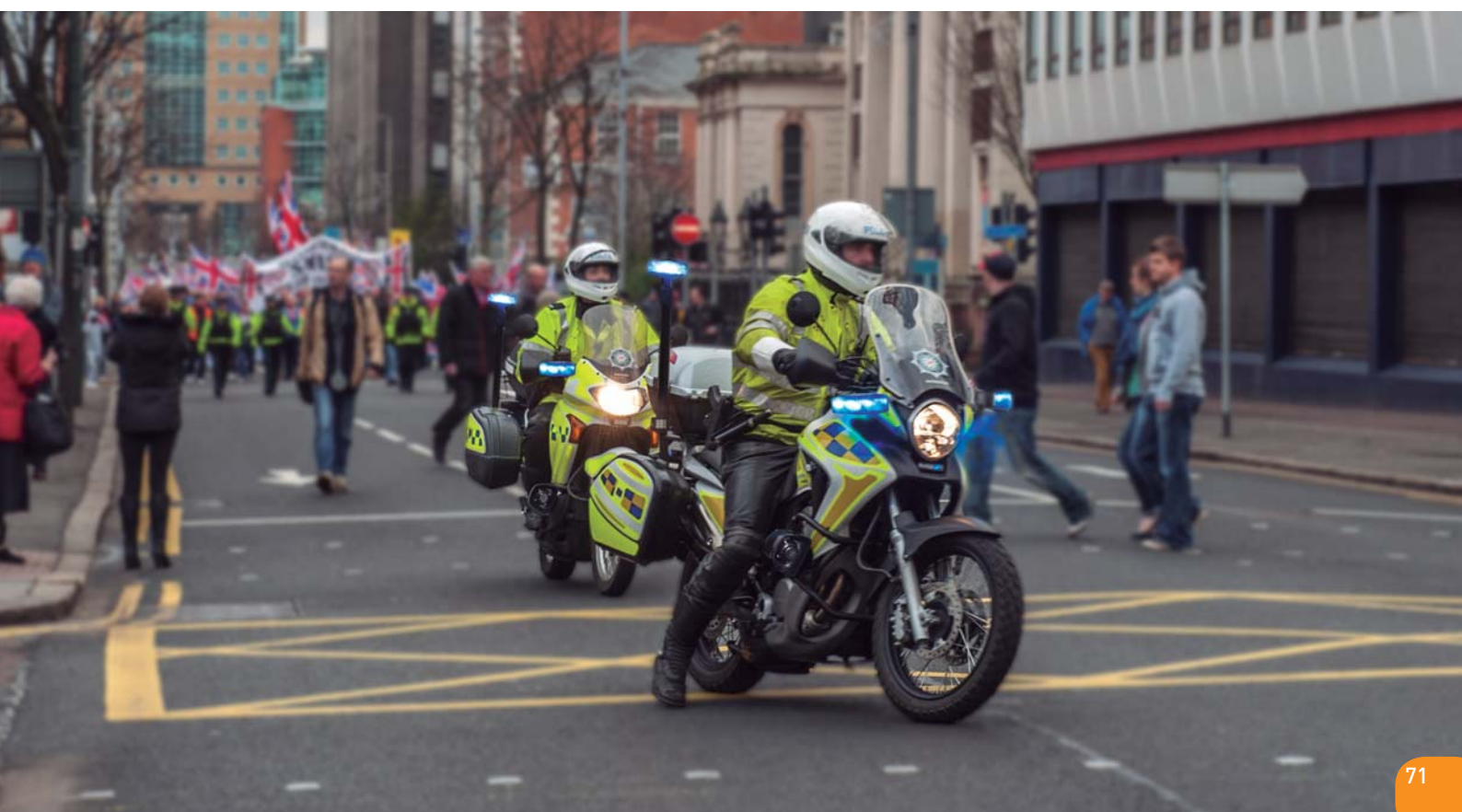
Voltage:	10 – 30V
Output power:	140 W (max.)
Auxiliary lights output:	1 x 5 A
Auxiliary output:	1 x 1 A
Frequency and tone:	According to selected tone
Dimensions:	96 mm x 29 mm x 86 mm
Weight:	450 gr
Operating temperature:	-30°C to 65°C

Speaker

Coil impedance:	4 Ohms
Maximum output power:	70W
Acoustic pressure (dB) at 2m:	1 speaker: 117 dB 2 speakers: 120 dB
Operating temperature:	-20°C to 50°C
Dimensions:	116 mm x 69 mm x 114 mm diameter
Weight:	1.080 gr

REF.	MOD.	DESCRIPTION
Sirens without public address		
2020286	ASX700	70 W Siren amplifier, analogic system, day / night function, claxon, without auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020286AH	ASX700	70 W Siren amplifier, analogic system, day / night function, claxon, without auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020287	ASX710	70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020287AH	ASX710	70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020288	ASX800	70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020288AH	ASX800	70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020289	ASX810	70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020289AH	ASX810	70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxilliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
Mount Accesories		
82441700	ASX700 - 800 - 810	1 Meter wiring, waterproof connectors, for ASX700, ASX800 and ASX810 siren models
82441701	ASX700 - 800 - 810	4 Meter wiring, waterproof connectors, for ASX700, ASX800 and ASX810 siren models
82441702	ASX710	1 Meter wiring, waterproof connectors, for ASX710 siren model
82441703	ASX710	4 Meter wiring, waterproof connectors, for ASX710 siren model
Speakers		
2021069	AL-ALX	70W Compact speaker, 4 Ohms, neodymium driver, reduced dimmensions, 117dB, 12V, black colour, mount bracket included .

(*) Do not connect only 1 speaker to 24V.



SOUNDSTAR-D Series

The **SCS1000** compact siren is a powerful acoustic signalling system with built-in amplifier and loudspeaker in a single unit.

It is built of ABS with glass fibre and injected aluminium. The **SCS1000** siren includes 16 pre-programmed tones which are easy to select using the microswitches conveniently located on the back of the siren. The fuse is included also in the back. A mesh filter prevents solid particles from entering the siren, while a drainage system prevents the accumulation of water on the membrane. A rubber seal joint prevents water from entering the electronic circuits. It includes a vehicle mount system valid for motorcycles or priority vehicles. Siren control is by external switches.

Soundstar is available as Standard or Neodymium versions.

Accessories include ALS1000 (30 W compact loudspeaker), SCS1000-PA (Public address kit) and SCS1000-SBLOCK (anti-vibration kit).



	Ferrite	Neodymium
Voltage	12 V	
Operating temperature	-30°C to +50°C	
Output power	30 W + 30 W	
Coil impedance	6 Ohms	
Maximum consumption	3A (SCS1000-D) 6A (SCS1000-D + ALS1000-D)	
Output voltage	23Vpp	
Frecuencies and tones	32 selectable tones	
Acoustic pressure to 2m at 12v. Two tones (450Hz and 600Hz to 33c/m) (SCS1000-D)	109 dBA	111 dBA
Acoustic pressuer to 3,5m at 12v. Two tones (450Hz and 600Hz at 33c/m) (SCS1000-D + ALS1000-D)	114 dBA	116 dBA
Dimensions	Sirena: 135 x 110 x 113 mm	
Siren Weight	1.250 g	1.085 g
Speaker Weight	1.135 g	0,970 g

REF.	MOD.	DESCRIPTION
Ferrite Driver		
2020277	SCS1000-D	30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories)
2020277-BL	SCS1000-DBL	30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, white colour (connectors NOT included. See accesories)
Neodymium Driver		
2020277N	SCS1000-DN	30W Compact Siren, neodymium driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories)
Mount Accesories		
8216113	SCS1000-PA	Public address kit, w/ volume and microphone functions control.
8299306	SCS1000-BLOCK	Silent block kit, SCS1000-D and ALS1000-D
8299910	8299910	Sealed connector for SCS1000-D
82441589	82441589	Motorcycle complete wiring harness (LD410, CO400, SCS1000-D)
82441588	82441588	Motorcycle complete wiring harness (LD400, CO400, SCS1000-D)
82441605	82441605	Wiring to adapt SCS1000 to SCS1000-D
MC300 Series		
4004233-01	MC300	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continuous siren
4004352	MC300/A	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light, continuous siren and power limiter

AS600 Series

Federal Signal Vama presents its new siren amplifier **AS-600**, the smallest of the Federal Signal Vama's range. UN R65 approved, multivoltage.

Thanks to the possibility of reprogramming the tones, it can be easily adapted to any market need, following the regulations of the different countries and applications.

- COMPACT

Thanks to its small measures, the AS-600 siren amplifier can be integrated into a low profile lightbar.

- MULTIVOLTAGE

The AS-600 siren amplifier, is multivoltage (10V-30V), and it can be connected to any equipment.

- REPROGRAMMABLE TONES

The tones of the AS-600 can be reprogrammed by FSVAMA and its distributors through an external communication program.

- VERSATILITY

The AS-600 stands out for its great versatility in the way functions are activated. Both in analog mode, through switches, as in digital mode (CANBUS) with the corresponding controlheads, combining the use of these with the vehicle's horn.



Siren dimensions in mm.

Input Voltage:	10V - 30V
Speaker power:	100W
Light Output:	4x5A
Auxiliary Output:	1X5A
PAS (Public Address System):	Yes
Dimensions:	154 x 42,5 x 76 mm
Weight:	380 grs
Horn connection:	Yes
Light lamp failure:	Yes
Radiotelephone connection:	Yes
Programmable tones:	Yes
Tachograph:	Yes
Day/night function:	Yes
Lightbar function:	Yes

REF.	MOD.	DESCRIPTION
Analogical option		
100W siren amplifier integrated		
2020298	AS600-AN	100W AS600 Siren amplifier analogical, 5 aux. outputs, 10-30v. P.A. not included.
Cabling		
82441813		Cabling of 1 meter for AS600 analogical
82441813-01		Cabling of 4 meters for AS600 analogical
Public address		
8235970	PAC-AN	Public address kit with remote control. Volume and microphone functions control (for AS600 analogical Siren amplifier ref. 2020298) 12-24V
CAN BUS option		
100W siren amplifier integrated		
2020297	AS600-CB	100W AS600 CAN BUS Siren amplifier, 5 aux. outputs, 10-30v, P.A. not included.
Cabling		
82441812		Cabling of 1 meter for AS600 CAN BUS
82441812-01		Cabling of 4 meters for AS600 CAN BUS
Public address		
BCT2000		
8235984AUD	PA-CB12	Public address kit with remote control. Volume and microphone functions control for AS600 CAN BUS 12V
82351038AUD	PA-CB24	Public address kit with remote control. Volume and microphone functions control for AS600 CAN BUS 24V



AS400 Series

The **AS400 Series** brings together priority lights, auxiliary lights and siren in just one control unit. The siren is compact and easily installed. Made of black aluminium for easy and unobtrusive vehicle installation (trunk or under seat).

The control head is in black nylon and includes a microphone with public address. The keypad is in translucent silicon, with built-in illumination for easier use in poor lighting conditions. These materials make the control head totally robust and water-resistant.

The volume control and on/off switch are located in the intermediate connection box.

Two basic models are available:

AS-422 siren amplifier with two light outputs.

AS-422/6S siren amplifier with six light outputs and two multi-function keys for light control.



AS-422

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary output:	1 x 10 Amp
Dimensions:	Siren: 65 x 130 x 165 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	

(*) AS-422 (2020155) with the ES100C speaker, complies with the acoustic specifications according to SAE J1849-Revised OCT2012.

AS-425

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary outputs:	1 x 10 Amp
Outputs for external relays:	1 x 1 Amp
Dimensions:	Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	

AS-422/6S

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary outputs:	3 x 10 Amp
Multifunction outputs:	2 x 10 Amp
Dimensions:	Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	

REF. MOD. DESCRIPTION

Sirens w/ public address (P.A.)

2020155	AS-422	100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 12V
2020156	AS-422-24	100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 24V
2020141-1	AS-422/6S	100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 12V
2020162-1	AS-422/6S-24	100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 24V
2020099	AS-425	100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 12V
2020103	AS-425-24	100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 24V

AS300 Series

The **AS-300 Series** comes in 5 different models specially designed for each application: AS-320DIG, AS-324 and AS-380.

All models include a siren amplifier in black anodized aluminium for unobtrusive on-board installation. The AS300 siren amplifier includes a kit for fast and easy mounting.

- **AS-320DIG** includes a small and compact remote control for controlling lights, siren and public address with volume control. Also includes an alternative switch-operated control system.
- **AS-324** has a switch-operated control system only.
- **AS-380** delivers 400W power via a slave amplifier. Includes remote control pad.



Voltage:	12 or 24 V
Output power speaker:	100 W
Light output:	1 x 10 Amp
Auxiliary output:	1 x 1 Amp
Dimensions:	Siren: 170 x 135 x 55 mm Control head: 115 x 42 x 35 mm
Weight:	Siren: 1300 g
Radioconnection	
Horn ring connection	
Lamp failure connection	

(*) AS-320DIG (2020256) with the ES100C speaker, complies with the acoustic specifications according to SAE J1849-Revised OCT2012.

REF.	MOD.	DESCRIPTION
Sirens w/ public address (P.A.)		
2020256	AS-320DIG	100W Siren amplifier, (3) tones, remote control, P.A., (1) light output, (1) auxiliar output, wiring harness, 12V
2020257	AS-320-24DIG	100W Siren amplifier, (3) tones, remote control, (2) lights outputs, (1) auxiliar output, wiring harness, 24V
2020236	AS-380M	100W + 100W Siren amplifier, (4) tones, remote control, P.A., wiring harness, 12V
2020237	AS-380S	Amplifier for installation along with model AS-380M. Together offer a maximum power of 400W.
Sirens w/ public address (P.A.)		
2020269	AS320DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included
2020271	AS320-24DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included
Public address		
8235984	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT) 12V
82351038	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT) 24V
Sirens w/o public address (P.A.)		
2020188	AS-324	100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 12V
2020183	AS-324-24	100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 24V



FEDHORN System

The **FEDHORN system** is an electronic sirens system with horn sound.

- HORN SOUND

Two synchronized sirens connected to two 100W speakers reproduce the sound of horn by electronic technology.

- EASY INSTALLATION

Compact and modular system with an easy fitting into the vehicle, taking advantage of every space inside it.

- EASY MAINTENANCE

Elimination of maintenance cost associated to oil compressor and air membranes systems due to use of a fully electronic system.

- FLEXIBILITY

Specific configuration for different countries.

- PUBLIC ADDRESS OPTION

Remote microphone connection.

- DAY/NIGHT

An internal sound damping assure a sound reduction during the night.

- CANBUS

Communication System between lights, sirens and controller head. This system minimizes wiring installation and allows controlling all the elements by a single remote control.



Current Draw:	12V	24V
Output power with 13.5V:		
with one 11 ohm speaker:	100 W	100 W
with two 11 ohm speaker:	180 W	180 W
Intensity with one 11 ohm speaker:	10 A maximum	5 A maximum
with two 11 ohm speakers:	18 A maximum	8 A maximum
Output voltage:	60V	60V

Frequencies (depending on siren version) 600- 1350 Hz

WAIL	12 cycles per minute
YELP	180 cycles per minute
BITONAL	450 - 600Hz
Harmonic distortion	0,87% (35 W, 100 Hz)
Passing band +/- 3 dB	90 Hz - 28,000 Hz
Radio signal level	2,5 V maximum

Intensity of auxiliary outputs

Lights relay	10 A maximum
Auxiliary relay	1 A maximum
Operating temperatures	-30°C - +50°C
Shipping weight	1300 gr (each siren)
Amplifier dimensions	55 x 135 x 170 mm

REF.	MOD.	DESCRIPTION
KC FEDHORN-12		2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 12V. Compatible only with BCT2000 Series.
KC FEDHORN-24		2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 24V. Compatible only with BCT2000 Series.
Public address		
8235984	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 12V
82351038	AS320-PA CB	Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 24V
Speakers (two units are necessary)		
2021047	AL-252N	100W Speaker, round horn, replaceable neodymium driver, metal L- bracket (1)
2021004	AL-257N	100W Speaker, rectangular horn, driver housing, exterior protector, white
ES100C	ES100	ES100 100W Compact Speaker, w/o bail bracket compact, small size
Mount Accessories		
ESB-U	MNT-ES100	Speaker mounting kit ES100
CANBUS Control Box		
BCT2010-15	BCT2010	BCT2000 Series control box with 10 keys to control: Priority lights, Cruise light, Day/night mode, Take down lights, Rear lights, Alley lights and tacograph. Siren with wail, stand/land and FEDHORN tones, Manual mode and Radio.
BCT2015-19	BCT2015	BCT2000 Series control box with 15 keys to control: Priority lights, Cruise lights, Day/night mode, Take down lights, Alley lights and Signalmaster. Siren with wail, yalp, bitonal, FEDHORN tones, high/low intensity, Manual model and Radio.
Connectors kit for CANBUS Control Head		
8299753		Connectors kits for Control HEAD (It is necessary when there is no lightbars on the system)

(*) Must be specified when ordering, which international tones are desired.



AS200 Series

The **AS-250 Series** is totally water-resistant thanks to its extruded casing and connector assembly with Santoprene sheath for full weather insulation of electrical connections. This electronic siren is made of extruded black anodized aluminium. The **AS-250 Series** is controlled by using external switches.

Also available (optional): shock-absorbent silent block for use in conditions subject to intense

Voltage:	12 V
Output power speaker:	100 W
Auxiliary output:	1 x 1 Amp
Dimensions:	180 x 86 x 60 mm
Weight:	600 g
Horn ring connection	

REF.	MOD.	DESCRIPTION
Sirens w/o public address (P.A.)		
2020147	AS-250	100W Siren amplifier, (3) tones, w/o P.A., (1) auxiliary output, waterproof, w/o wiring harness, 12V

PA300-FSV

The **PA300-FSV** electronic siren delivers exceptional performance and durability thanks to its integrated circuits and silicon transistors.

This siren offers multiple features such as peak-and-hold and TAP II, which enables the driver to change the siren tone via the vehicle's horn ring or any remotely mounted switch. The public address includes a system to remove interference that provides high-quality voice reproduction.

The **PA300-FSV** series is approved according to the European Regulation R10.



Voltage:	12 or 24 V
Output power speaker:	200 W
Dimensions:	194 x 156 x 59 mm
Weight:	2900 g

REF.	MOD.	DESCRIPTION
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Sirens w/ public address (P.A.)

2020293	PA300-FSV12	200W Siren amplifier, (5) tones, P.A., 12V
2020292	PA300-FSV24	200W Siren amplifier, (5) tones, P.A., 24V

SIREN ACCESSORIES

Mount Accesories

8216117	AV-D/N	Power limiter for siren amplifier - day/night -
2006021	SF-20A	Lamp failure detector, 12V
2006024	SF-20A-24	Lamp failure detector, 24V

AL-252N

This speaker is equipped with 100 W Neodymium motor, 11 Ohms impedance. The round ABS diffuser is designed for better sound propagation and includes a black anodized L-bracket for mounting.

The Neodymium loudspeaker motor is lighter and smaller than ferrite models.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	150 x 135 mm

AL-257N

AL-257 is a white 100 W high-performance loudspeaker, 11 Ohms impedance. Its rectangular ABS diffuser with easy-to-replace motor stands out for its durability and reliability.

It includes a flat base for mounting on vehicle roofs.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	210 x 223 x 155 mm (Height incl. mounting kit: 180 mm)

REF.	MOD.	DESCRIPTION
2021047	AL-252N	100W Speaker, round horn, replaceable neodymium driver, metal L- bracket*
2021004	AL-257N	100W Speaker, 11 Ohms, ABS rectangular horn, exchangeable neodymium driver, exterior protector, high performance, white

(*) We have a large range of mounting brackets for undercover vehicles. Please check availability with our sales department



SOUNDSTAR ALS1000

The **ALS1000** compact loudspeaker is made of ABS with glass fibre and injected aluminium. This speaker features modern, compact design and fully compatible with other 30 W sirens.

A mesh filter prevents solid particles from entering the siren, while a rubber seal joint prevents water from entering the electronic circuits. It is equipped with drainage system to prevent water accumulation on the membrane.

ALS1000 is the perfect complement to the SCS1000 compact siren. Installed together they deliver 60 W of power.



Power:	30 W
Ohm:	6
Driver:	Neodymium or Ferrite
Dimensions:	135 x 110 x 113 mm
Weight:	1150 g

ES100C

The **DynaMax** offers a unique design which enables to install the speaker in many locations on ambulance cars. It can be mounted easily behind the grille or flush between bumper and hose tray of a large apparatus.



Power:	100 W
Ohm:	11
Dimensions:	140 x 150 x 58 mm
Weight:	2300 g

AS124

AS124 Series speaker uses advanced housing material and field replaceable neodymium drivers to provide effective, high quality sound at an affordable price.

The housing is made of black polyethylene terephthalate, which made the speaker very lightweight, robust and water-resistant.

It includes a mounting kit for easy vehicle installation.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	196 x 119 x 145 mm
Weight:	2900 g

REF. MOD. DESCRIPTION

Ferrite Driver

2020278	ALS1000-D	30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12v, black colour
2020278-BL	ALS1000-DBL	30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12v, white colour

Neodymium Driver

2020278N	ALS1000DN	30W Compact speaker, 6 Ohms, neodymium driver, reduced dimensions, 12v, black colour
750501	AS124	High output 100W Speaker, 11 Ohm, neodymium driver, mount hardware
ES100C	ES100	ES100 100W Compact Speaker, w/o bail bracket compact, small size

Mount Accesories

ESB-U	MNT-ES100	ES100 mounting kit
8299306	SCS1000-BLOCK	Kit, silent block for SCS1000 and ALS1000

CONTROLLERS

➤	Direct wire converter.....	82
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Direct wire converter

CAN BUS system power manager can manage, through an analogic control head, any CAN BUS emergency vehicle light in a simple way.



CAN BUS Converter

REF.	MOD.	DESCRIPTION
CAN BUS CONVERTER - ANALOG		
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable)

ACCESSORIES

➤	Gun-locks.....	84
➤	Rechargeable flashlights.....	85
➤	Reading lamps.....	87
➤	Control units.....	88
➤	Back-up alarms.....	89
➤	Lighting accessories.....	90

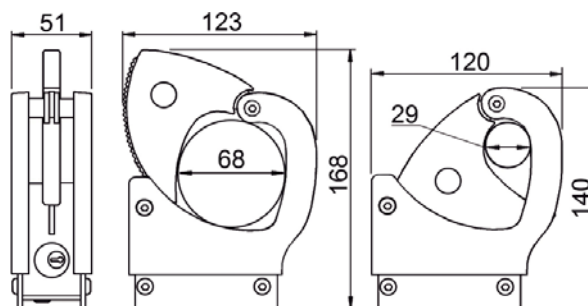
AMK-400 Gun-lock

Safety Gun-lock with an adjustable cavity to adapt to various standard weapons of the law enforcement and security forces. This model can be unlocked manually by key and electromagnetically and can be installed in vehicles and in police stations.

The **AMK-400** Safety Gun-lock offers comfort and ease of access to the weapon for agents and provides security and protection by avoiding access to unauthorized persons and preventing the risk of accidents.



Unblocking:	Manual and electromagnetic
Voltage	12V
Weight	0,96Kg
Adjustable cavity	29 – 68 mm
Dimensions (L x W x H)	Max. aperture: 140 x 120 x 51 mm Min. aperture: 168 x 123 x 51 mm



AMK-400 Gun-lock dimensions

REF.	MOD.	DESCRIPTION
1204036	AMK-400	Universal safety gun-lock with adjustable cavity, manual release by key or electromagnetic, cavity dimensions: min. 29 mm, max. 68 mm
Accessories		
1204017	TA-210	Timer for Gun-lock, electromagnetic
8216091	SW-523	OFF-ON Push button, illuminated w/ protection
9133436	ACUAL	Rifle stock support

L500 Series

L500 series stands out for robust, reliable and rechargeable flashlights for professional use. L500 series flashlights are watertight and shock-resistant thanks to their aluminium and polyamide construction, with high-luminosity LEDs lamps providing adjustable beam spread and a rubber optics guard ensuring shock absorption in the event of knocks and falls.

Operating with nickel metal hydride batteries, they offer durability without memory effect of conventional battery performance.

The L500 series comes in different versions: standard, flashing mode, LED, with fast charger.

The new versions are Full LEDs and are available with (20) white light luminosity LED or with strobe flashing mode.

Available accessories: light-spreader cones, light-spreader paddle "STOP/ARROW SIGN", metal bracket for storage of cones and paddles, multiple charger for 5 flashlights, etc.

(*) Charger sold separately.



L560 and L570 LED flashlights



L550 Rechargeable LED capacitors flashlight

L500R Rechargeable LED flashlight

REF.	MOD.	DESCRIPTION
LED capacitors flashlights		
2101153	L-550C/S	Rechargeable LED capacitors flashlight, 1 LED diode, (2) light levels, adjustable focus, charge in 6 minutes, w/out charger, multivoltage 10-30V.
LED flashlights		
2102028	L-510RLED/S	Rechargeable LED flashlight, 1 white LED, (1) light level flashing, (20) high luminosity LED (10 amber LEDs and 10 red LEDs), (2) light levels, adjustable focus, fast charge time, w/out charger, 12V
2101195	L-570LED/S	Rechargeable LED flashlight, 1 white LED, (1) light level flashing, (20) high luminosity LED (10 amber LEDs and 10 red LEDs), (2) light levels, adjustable focus, w/out charger, 12V
2101171	L-560LED/S	Rechargeable LED flashlight, 1 white LED, (2) light levels and strobe flashing, adjustable focus, w/out charger, 10-30V.
2102018	L-500RFLED/BL/S	Rechargeable LED flashlight, 3 LED diodes flashlight, (20) white high luminosity LED, (2) light levels, adjustable focus, fast charge time, w/out charger, 12V
2102019	L-500RFLED/S	Rechargeable LED flashlight, 3 LED diodes flashlight, (2) light levels and strobe flashing, adjustable focus, fast charge time, w/out charger, 12V



	L500R	L550	L560	L570
Voltage:	12V	10-30V	10-30V	10-30V
LEDs:	20 white LEDs	1 white LED	1 white LED	10 amber LEDs 10 red LEDs
Rechargeable battery:	Niquel-Metal Hidruro 6V 3'5 Ah	Capacitors	LiFePo4 3'2V 5 Ah	LiFePo4 3'2V 5 Ah
Charge time:	2 hours and 30 minutes	6 min	< 4h	< 4h
Battery life:	White LEDs: 6-12h Flashing mode: 2h 40' High intensity: 2h Low intensity: 2h 40' High intensity 3 LEDs: 2h 30' Low intensity 3 LEDs: 3h 40' Flashing mode 3 LEDs: 2h	45 min. High intensity/ flashing mode 3 hours low intensity	>2,5h high intensity >6h flashing mode >8h low intensity	>2,5h high intensity >16h amber/red LED crown

REF. MOD. DESCRIPTION

Accessories

Flashlight Charger * Charger sold separately

2101176REC	CL-560	Standard flashlight charger for L560 Series flashlights, 10-30V
2101094REC	CL-510	Standard flashlight charger for L500 Series flashlights, 12V
2101121REC	CL-510R	Fast flashlight charger for L500R Series flashlights, 12V
2101098	CM-510	Multiple charger, (5) L500 Series flashlights, 220V
2102013	AL-500/400	Adapter, 12VDC/220V AC, for CL510 and CL510R flashlight charger
2101154REC	CL-550	Capacitors flashlight charger for L550C Series, multivoltage 10-30V

Light-Spreader

9151270	DL-500	Light-spreader cone for L500 series flashlight, (fluorescent yellow colour)
9151270-01	DL-500	Light-spreader cone for L500 Series flashlight, (fluorescent red colour)
9151270-02	DL-500	Light-spreader cone for L500 series flashlight, white (Recomended the use with L500LED flashLight series for signaling traffic)
2101099	DL-500/2C	Light-spreader cone for L500 series flashlight, amber/red spreading-Lens.
2101100	DL-500/3C	Light-spreader cone for L500 series flashlight series, white/ amber/red spreading-Lens.

Paddles

1005066	PD-500	Luminous paddle for L500 series flashlight w/ 'Stop' and Arrows Signs.
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Support for light-spreader and paddle

8299018	SCO-500/400	Metal bracket for flashlight cone, black
8136813	SPD-500/400	Luminous paddle metal bracket, Series L500

LITTLITE LED

Sleek, low profile gooseneck lamps efficiently produce light in a concentrated area and can be aimed exactly where you need it.

Littlite is designed to meet the most demanding needs. The bright white light is perfect for reading maps, etc.



Voltage:	12 V
Consumed intensity:	LED: 0.1 Amp
Dimensions:	18 x 76 x 25 mm
Gooseneck length:	Depending on model
Weight:	500 g

REF.	MOD.	DESCRIPTION
LED		
LF12ES-LED	LF12ES-LED	12" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 30cm gooseneck
LF18ES-LED	LF18ES-LED	18" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 45cm gooseneck
2101131-01	LEC-35	LED lamp reading, with flange, on/off switch control, 35cm gooseneck
2101130-01	LEC-50	LED lamp reading, with flange, on/off switch control, 50cm gooseneck

(*) All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.



SW Series

The **SW Series** of switches is made in black plastic for unobtrusive installation in vehicles or on motorcycles. They include illuminated function displays and protective rubber cases ensuring water-resistance in wet conditions.



REF.	MOD.	DESCRIPCIÓN
8216090	SW-521	ON-OFF Switch, illuminated w/ protection
8216089	SW-522	ON-OFF-ON Conmuter, illuminated w/ protection
8216091	SW-523	OFF-ON Push button, illuminated w/ protection

Mounts Accesories

8150748	BM-SW2	Metal base (2) SW Series switches
8150749	BM-SW3	Metal base (3) SW Series switches

Voice Gun

Electronic **Voice Gun** megaphone, with batteries, ABS resistant housing and trigger button.

A12SA Amdt.A

Power:	16 W
Batteries:	8 x "AA"
Dimensions:	267 x 257 x 185 m
Weght:	1400 g



REF.	MOD.	DESCRIPCIÓN
2020118-01	A12SA Amdt.A	Voice gun megaphone, 16W output, aproximate range 400 meters, (batteries not included)

Back-up alarms

Federal Signal back-up alarms are dependable, affordable alarms ideal for use on utility, construction and other specialty vehicles. Each of the models features a glass reinforced nylon housing for long-lasting durability that can be steam cleaned.

The **EVACUATOR (Plus)** models are available with dual- or single-function feature. The dual-function feature allow users to choose from a 'pulse' tone, which is intermittent signal used for back-up warning, or a 'constant-on' tone, which is a solid signal that can be used to signal motion such as a truck-platform lifting or moving outriggers. Single-function models only have the 'pulse' tone.

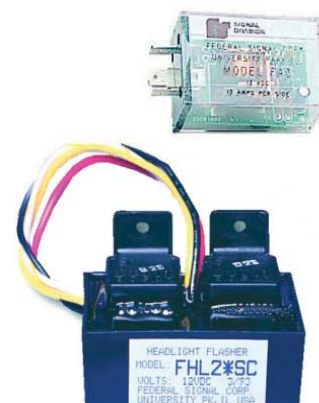


Voltage:	12-48 VDC
Current Draw (at 12vdc):	0.17 Amp
Sound Output:	112dB
Dimensions:	73 x 73 x 62mm
Ship Weight:	0.3 kg

REF.	MOD.	DESCRIPTION
210335	210335SSG	Evacuator Plus, 12-48V, output 112 dBA

Flashers and relays

Available is a wide range of flashers for LED and halogen lights. There are different models, like for flashing mode, simultaneous flashing, alternated flashing, etc.



REF.	MOD.	DESCRIPTION
9019075	FHL-HL	7 selectable patterns, (2) 9,5 amp loads w/ high-beam deactivation
RI-V12	RI-FSV12	Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55w 12V
RI-V24	RI-FSV24	Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55w 24V
2006021	SF-20A	Speaker failure detection sensor, 12V
2006024	SF-20A-24	Speaker failure detection sensor, 24V
2006022	SF-20L	Lamp failure detection sensor, 12V

Risk Reduction: Priority Signaling

Increasing number of vehicles, slow, difficult and heavy traffic, driver distraction caused by radios, cell phones, conversations with other passengers, etc, hinder the work of emergency vehicles when they need to use its right of way, or indicate their presence at any time.

To ensure own and other citizens safety, emergency professionals should equip their vehicles with effective optical and acoustic signalling.

Optics and Acoustics Signs

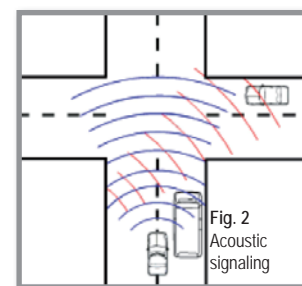
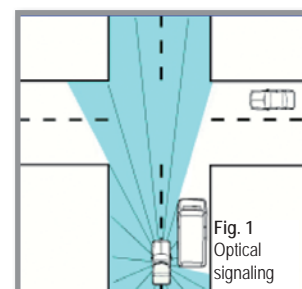
In most European countries, priority vehicles must be identified by warning blue lights and sirens.

Optical signal (priority lights) is only visible with no obstacles between it and the observer. Once perceived by this observer, emergency vehicle identification is safe and immediate.

(See Fig.1)

Audible signal (siren) is perceptible even if vehicle is not on observer's visual field, although by this way he does not identify easily priority vehicle. (See Fig.2)

Both systems are complementary and their combination ensures accurate identification, early enough to get a quick and safely passageway.



Light Sources and European Regulation

In Europe, warning lights must comply with R65 Regulation from Geneva Accords, which regulate flash frequency, intensity, colour, temperature, sealing, etc.

Lights regulations can be grouped into three categories: rotating (halogen lamp rotating beam), strobe (gas discharge lamp xenon) and LED diodes (light emitting diodes). Three technologies are used on emergency vehicles signalisation.

R65 Regulation allows an emergency vehicle to be equipped with two warning lights, or even more, synchronized in two groups.

Siren Sounds and Regulation

In Europe does not exist in a common regulation for sirens use on emergency vehicles.

Several regulations cover different sound pressure in dB, harmonic frequencies and sound patterns. FEDERAL SIGNAL VAMA has got different versions available, approved in all European countries, which accurately reproduce different required sounds.

The obtained signal is amplified by the speaker, in order to reach different sound pressures.

▶ **Non-regulated priority lights**

Nowadays, directional lights have been used to enhance other vehicle priority lights.

Some countries have regulations for this kind of lights, including blue colour LEDs lights.

▶ **Traffic Signalling for stopped or slow vehicles**

As important as optical and acoustics of a vehicle, traffic signals for a perfect identification of stopped or slow vehicles became an important part of emergency warning lights.

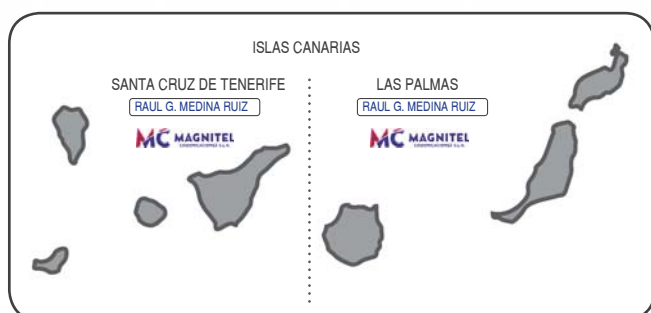
Blue lights help in this case, but rear-facing amber lights are more effective. These could be LED lights or directional warning lights (SignalMaster).

▶ **Other supplemental warning lights**

According to their different functions, emergency vehicles could use auxiliary lights to make emergency situations more comfortable, safe and effective.

These lights emit white light whose beam could be concentrated or diffused. According to their function, they can be safety lights, work lights, side lights, etc.







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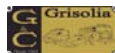
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