



LA
SEMAFORICA

TRAFFIC
LIGHTS
OVERVIEW

Dear customer,

La Semaforica S.r.l. and TECSEN deal with traffic regulation and the development of ITS systems for Smart Mobility applications. Thanks to their experience and know-how gained in more than 75 years of experience in traffic regulation and management, today the group presents itself on the market with a complete and cutting-edge product range with the highest levels of quality and professionalism that distinguish us. We offer solutions and systems to improve traffic, safety and quality by integrating our knowledge of electronics, information technology and transport engineering for the design, maintenance and management of these systems.

PRODUCTS

The **PRODUCTS** division designs and manufactures components for traffic control and regulation according to the highest quality standards:

- 4 lines of traffic lights, two in polycarbonate and two in aluminium
- aluminium traffic light totems
- IP65 retrofit LED modules for traffic lights
- countdown traffic light modules
- pedestrian reservation devices (traditional and touch buttons) and horns (audio guides) for visually impaired people
- 4 lines of traffic light controllers with European standards
- products for traffic detection and classification using different technologies
- systems for detecting bicycles and for displaying the number of passages with an indication of the quantity of CO2 saved
- luminous signs for the protection of pedestrian crossings, warning signs and car park signs

SYSTEMS

We provide **SYSTEMS** on the **TMacs and SMacs software PLATFORMS** for the management of different integrated devices with the creation of different solutions such as:

- Monitoring and coordination of traffic lighted crossings or intersection grids to reduce waiting times and improve traffic flow
- Traffic light management with priority systems for the city's tramline
- Control and monitoring of urban traffic by means of data acquisition, for the development of campaigns to improve sustainable mobility
- Systems for the management of dynamic alternating one-way streets according to the traffic detected and the type of vehicle
- Dynamic control of simultaneous passage of heavy vehicles and management of one-way traffic on bridges with static problems
- Traffic light priority for public transport with proprietary Safety go system
- Flooding control systems for subways by means of automatic optical alerts with traffic light lanterns, information on VMS or display and closure of traffic by using automatic barriers
- Weather warning systems by means of devices measuring environmental parameters and transferring information on VMS and communication through social channels
- Bicycle detection systems with display of measured data on displays or totems
- Heavy vehicle detection systems
- Monitoring of vehicles in tunnel
- Subsystems harmonisation through Smart City central software in control rooms

TMacs PLATFORM MODULES:

- MACS TRAFFIC Urban Traffic Control System UTC
- MACS ANALYSIS System for traffic data management and analysis
- MACS FLOW Traffic optimisation through prediction and travel time estimation
- MACS TRACKING Surveying and priority management system
- MACS VISUAL Complete solution for VMS management
- MACS FLOOD Underpass flooding monitoring system
- MACS PARKING Management and Guidance Car Parks Control System
- MACS MMS Maintenance Management System
- MACS SAFETY Digital Twin for Road Safety
- MACS COOPERATIVE Management and Interfacing for C-ITS

SERVICES

The **SERVICES** division, which is divided into different levels, employs specialized and highly experienced personnel able to assist our customers from the installation and laying of materials, through the optimal setting of the devices to post-sales support and service help desk or on site:

HELP DESK ACTIVITIES:

Support activities for the use of the **TMacs centralization platform and SMacs Smart City Supervisor** on differentiated service levels.

ON SITE ACTIVITIES:

- Installation of traffic light systems, variable message panels, traffic monitoring systems, subway flooding control systems, etc.
- Scheduled routine maintenance of traffic light systems in accordance with regulations
- Extraordinary on-call maintenance with on-call service for restoring the equipment in the event of an accident, vandalism and/or accident, vandalism and/or external events of various kinds
- Functional and performance verification of the traffic light systems by verifying the vehicle flows detected in the field, with simulation of the operation of the traffic light system using dynamic microsimulation software.
- Optimization of the operation and plans of traffic light systems: according to the goals to achieve (reduction of queues, maximization of capacity, minimization of the average delay, principle of equalization, etc.), traffic light plans will be redefined both at fixed times and with implemented logic and for coordinated axes with green wave.
- Traffic monitoring campaigns with collection and analysis of vehicle flow data to create origin-destination matrices, average daily and weekly vehicle flow values, peak hours and type of vehicles passing through. The monitoring stations are supplied, installed and calibrated by our technicians
- Analysis of road traffic in road branches: survey of vehicle flows along the road axis, analyzing the flow through the maximum, minimum and average speeds for the different time slots. Thanks to the concentration and density rates, it will be possible to identify queuing phenomena and the times at which they occur.

La Semaforica has been awarded ISO 9001 certification for its quality processes in the design, manufacture, installation and maintenance of its products and maintenance of its products, ISO 45001 certification for the safety of its workers, and ISO 14001 for respect and protection of the environment.

SINCE 1945 WE DEPLOY SOLUTIONS FOR A BETTER WORLD

From the visionary idea of our company's founder to LED technology, the path was already set and all we had to do was follow it.

Our range of systems and products 100% MADE IN ITALY is synonymous with excellence, quality, expertise and efficient performance.

As in Marco Polo's path, our company has grown from a small Venetian business to become the ITALIAN LEADER in the sector and one of the main players in the global market.

+30
COUNTRIES

80
YEARS



Our company is one of the oldest companies in the sector that has managed to keep up with the times and has already successfully completed 2 generational changes, increasing its prestige. We export all over the world and we have customers in more than 30 countries.

+2.000.000
OF LED OPTICS MANUFACTURED

90%

Energy saving thanks to the LED technology that we use in our optics, compared to the traditional ones.



GALILEO



POLYCARBONATE TRAFFIC LIGHT WITH SLIM DESIGN

This traffic light has been designed to offer the opportunity to take advantage of multiple advantages: a reduction in weight thanks to its slim design, more than 15% compared to traditional polycarbonate signal heads, a saving in terms of environmental pollution consequently a lower use of polycarbonate, a visual impact reduction by means of its iconic design.

Equipped with the latest generation of LED technology modules called STARLED, which guarantee better efficiency and reduced energy consumption (over 90% savings compared to traditional optics), complete with all the accessories required by the market and multiple versions.

"Elegance meets design, a concept of eco-sustainability delivered through the sinuous shape of traffic lights GALILEO"

CE APPROVED EN12368

DETAILS

- STARLED optics for improved energy efficiency and performance
- Available in diameters d.200 and d.300 mm modular with each other
- Developed according to the principles of eco-sustainability
- Various colors and combinations available
- Elegant and iconic fits into any urban context
- Vandal-proof thanks to hidden door closures
- Practical and resistant thanks to Makrolon® polycarbonate
- Maintenance free and easy installation thanks to its concept

“Eco-sustainability, practicality of use, efficiency, iconic design, these are the cornerstones of our GALILEO series”

Diameter	Width	Depth	Height
200	265	110	246
300	363	152	346
G+Y 200mm R 300mm	363	152	865

Measurements in mm for single modules, the hybrid model is quoted for the whole traffic light.

SCAN FOR
FURTHER DETAILS



GIOTTO

SLIM ALUMINIUM TRAFFIC LIGHTS

Giotto is the top of the range, built with an aluminium housing, representing the state of the art in terms of design and robustness. Developed by guaranteeing the principles of anti-vandalism, but with a harmonious touch thanks to its unique and inimitable profile, which can be customized to suit your needs. Practical thanks to the opening front doors with double

closing hinge. Equipped with the latest generation of LED technology modules called STARLED, which guarantee better efficiency and reduced energy consumption (over 90% savings compared to traditional optics), complete with all the accessories required by the market and multiple versions.

"The GIOTTO traffic lights series, a distinctive icon for your city, vandal-proof, useful, customizable and versatile"

CE APPROVED EN12368

DETAILS

- STARLED optics for improved energy efficiency and performance
- Available in diameters d.100, d.200 and d.300 mm
- Developed according to the principles of eco-sustainability
- Robust and vandal-proof thanks to its housing totally customizable with colors chosen by the customer through RAL codes
- Useful and easy to maintain, thanks to the opening of the front doors also used for the CVE series, simplifying the management of spare parts
- Available with fixing arms in long or short version and adapter for DSI fastening systems (Dansk Signal Industri)

“Giotto can be integrated into any urban context, with its unique design that meets maximum strength”

Diameter	Width	Depth	Height 1	Height 2
100	180	155	150	104
200	327,6	109,5	245	116
300	432,8	130,5	345	116

Measurements in mm for single modules. Height 2 refers to the size of the aluminium heads.

SCAN FOR FURTHER DETAILS



GT100



ALUMINUM REPEATER LANTERN DIAM. 100MM

GT100 is the evolution of the 100 mm diameter repeater traffic lights.

Built using noble and recyclable materials such as aluminium.

Unique design and advanced optical technology, it uses 1 LED ensuring light output at the highest levels on the market today.

Ideal for applications such as traffic light repeaters, cycle paths, car parks

and mobile bollards.

Reduced consumption 5 Watts, light output up to 400 cd, optimal light diffusion

Ideal for combined use with traffic lights from the Giotto line and Giotto Lumina 200/300 mm

1,2,3 or 4 aspects with colored or natural gray external lenses.

"GT100 iconic design, excellent Italian technology and manufacturing."

BENEFITS

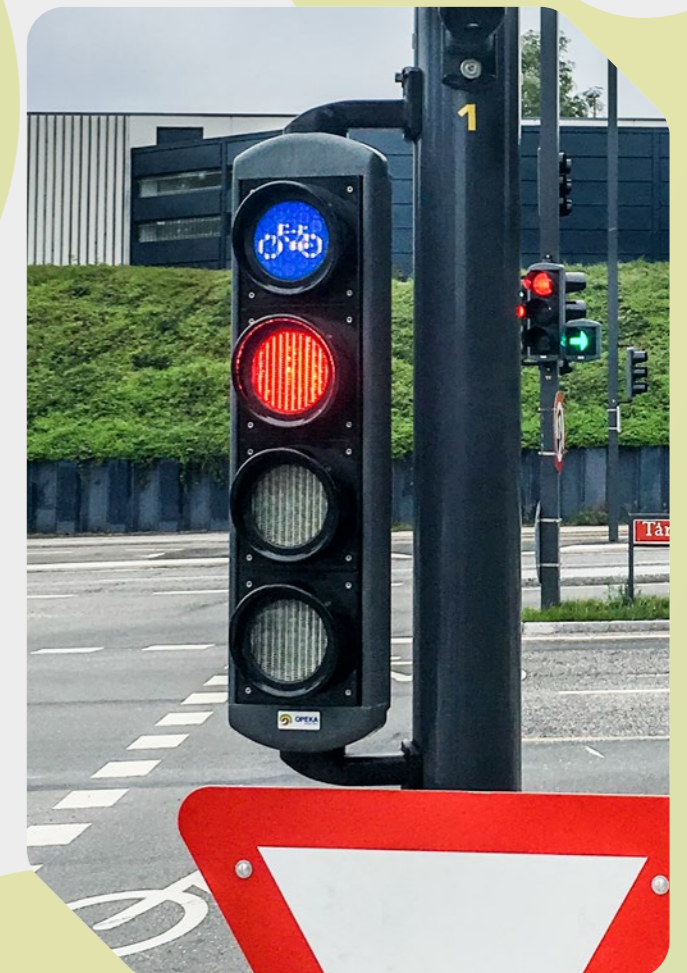
- Vandal-proof construction
- Quick and easy installation
- Slim and harmonious design
- Low consumption and high light output thanks to the new Starled100 optic
- Diffused light thanks to the Fresnell lens
- All symbols available on request
- Both vertical and horizontal installation
- Customizable with colors on request and adhesive logo
- Eliminates maintenance operations thanks to LED technology

"Built with fully recyclable materials, the GT100 stands out for its sturdiness and modern design."

	Height	Width	Depth With brackets
2 aspects	573	150	short 235
3 aspects	715	150	long 310

Measurements in mm

SCAN FOR
FURTHER DETAILS



LUMINA



TECHNOLOGICAL PROGRESS TURNS INTO EMOTION

The perfect synthesis of avant-garde design and cutting-edge technology, Giotto Lumina is the ultimate expression and style icon of our traffic light production.

Colours and components: feel free to customise the design according to the style of your city to make it even more unique and recognisable.

The ambition to revisit the concept of traffic lights is reflected in a design

inspired by minimalism and simple beauty that is inevitably meant to become an icon of its surrounding environment.

Impressive details emphasise the main features of the GIOTTO LUMINA: such as the slim body, the minimalist shaped hoods and the flush door closing systems.

"GIOTTO Lumina exceeds your expectations with the perfect combination of design and performance"

CE APPROVED EN12368

SPECIFICATIONS

- Unique design available with 200 and 300 mm lenses
- 100% aluminium alloy body and external structure
- Customisable on customer request
- In compliance with EN12368
- Available with fixing systems in compliance with the most common EU standards
- Complete with accessories: background contrast panels and directional masks etc.
- Durable over time and with low maintenance costs

“Discover the new series of 100% aluminium traffic lights with a unique design that can be customized according to your needs”

Diameter	Width	Depth	Height 1	Height 2
200	327,6	109,5	245	116
300	432,8	130,5	345	116

Measurements in mm for single modules. Height 2 refers to the size of the aluminium heads.

SCAN FOR
FURTHER DETAILS



RSL

LUMINA



RED SAFE LIGHT

Red Safe Light is the solutions that aims at improving road safety for pedestrians displaying directly on the sidewalk the red light of pedestrian traffic lights. In this way, even the red light will be highly visible even to pedestrians distracted by their smartphones.

The goal is preventing traffic injuries and accidents which involve mostly pedestrians.

Red Safe Light is the red-colored linear light projection on the road floor a few meters in front of the crosswalk.

"A special focus on weak road users in an increasingly fast-paced world"

Aspects	Width	Height	Depth
2 aspects	330	775	short brackets 395
3 aspects	330	980	long brackets 455

Measurements in mm

BENEFITS

SCAN FOR
FURTHER DETAILS

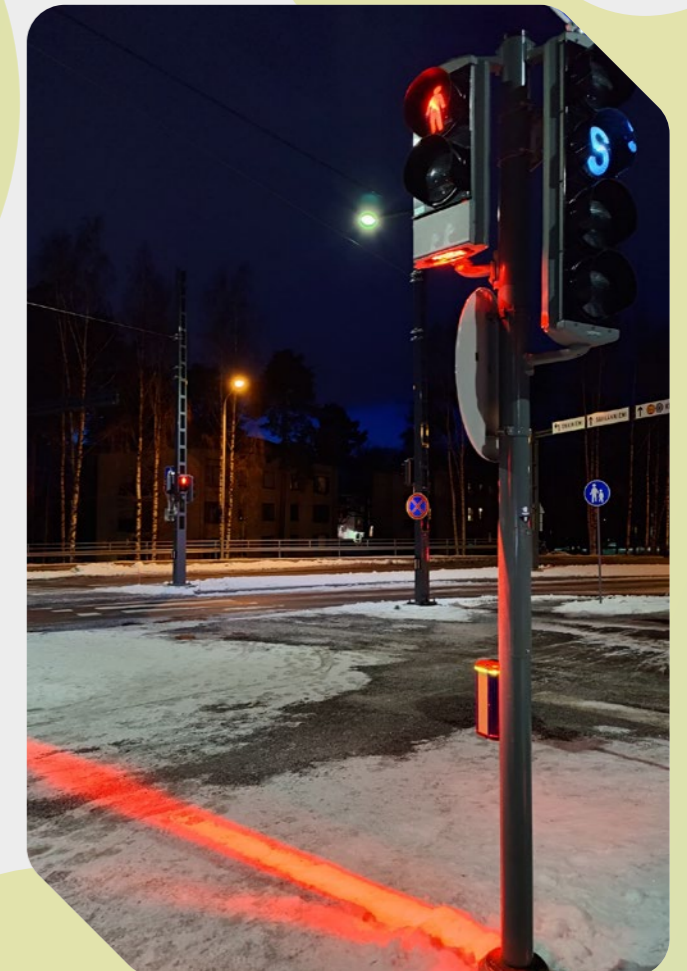


- Improves the perception of pedestrian waiting red for distracted users
- It does not require invasive construction works
- Simple maintenance
- It does not require special connections thanks to the internal adjustment during installation
- Up to 6 meters of light bar
- Can be used on single Lumina traffic light module for any safety application beyond traffic lights, for example railway, industrial and construction/site applications



TECHNICAL FEATURES

- IP67 bright optics
- Direct 12-36v or 230vac power supply transformed directly into the traffic light
- Luminous intensity greater than 3000 candelas
- 500 Lux on the ground
- Ground projection up to 5.5 meters long and 20 cm wide
- Lighting angle: narrow spot with in-line light effect
- Number of LEDs: 6 x 5W Cree LEDs
- Color: red light
- Waterproof: IP67
- Operating temperature -40 + 65 °C
- Lifespan: approximately 30,000 hours
- Input power 30w
- Power factor pf 0.95
- Harmonic distortions thdi 10%



RSL

GALILEO



RED SAFE LIGHT: IMPROVES PEDESTRIAN SAFETY

Inserted in a special traffic light body in polycarbonate of reduced dimensions designed to house it, Red Safe Light is the red light bar designed to alert the most distracted pedestrians.

Thanks to the study of a special "RSL" projection optics, it allows the entire area in front of the strips of the pedestrian crossing to be covered with a RED light bar, connected to the same

light as the pedestrian traffic light, with the specific purpose of alerting users distracted by their mobile devices.

Thanks to a special orientation system of the "RSL" optical unit, it allows any adjustment capable of adapting to the geometries of the pedestrian crossing even if the traffic light pole is shifted and far away from the horizontal crossing signs.

"Red Safe Light : the projection of a safer world that protects pedestrians distracted by their smartphones"

SCAN FOR
FURTHER DETAILS



TECHNICAL FEATURES

- Inserted in a polycarbonate case for combination with lanterns from the Galileo and CVE lines
- Module measurements: width 26.5cm depth 20.4cm height 13.2cm
- IP67 bright optics
- Direct 12-36v or 230vac power supply transformed directly into the traffic light
- Luminous intensity greater than 3000 candelas
- 500 Lux on the ground
- Ground projection up to 5.5 meters long and 20 cm wide
- Lighting angle: narrow spot with in-line light effect
- Number of LEDs: 6 x 5W Cree LEDs
- Color: red light
- Waterproof: IP67
- Operating temperature -40 + 65 °C
- Lifespan: approximately 30,000 hours
- Input power 30w
- Power factor pf 0.95
- Harmonic distortions thdi 10%
- All fixing systems available in continuity with the Galileo traffic light head or as a retrofit for Galileo and CVE

Width	Depth	Height
265	204	132

Measurements in mm referring to the single additional module



TOTEM



TRAFFIC LIGHT TOTEM MADE IN ALUMINIUM

This traffic light has been designed to offer the opportunity to take advantage of multiple advantages: a reduction in weight thanks to its slim design, more than 15% compared to traditional polycarbonate signal heads, a saving in terms of environmental pollution consequently a lower use of polycarbonate, a visual impact reduction by means of its iconic design.

Equipped with the latest generation of LED technology modules called STARLED, which guarantee better efficiency and reduced energy consumption (over 90% savings compared to traditional optics), complete with all the accessories required by the market and multiple versions.

"Totem Giotto with its unique design is the most authentic solution to distinguish yourself"

DETAILS

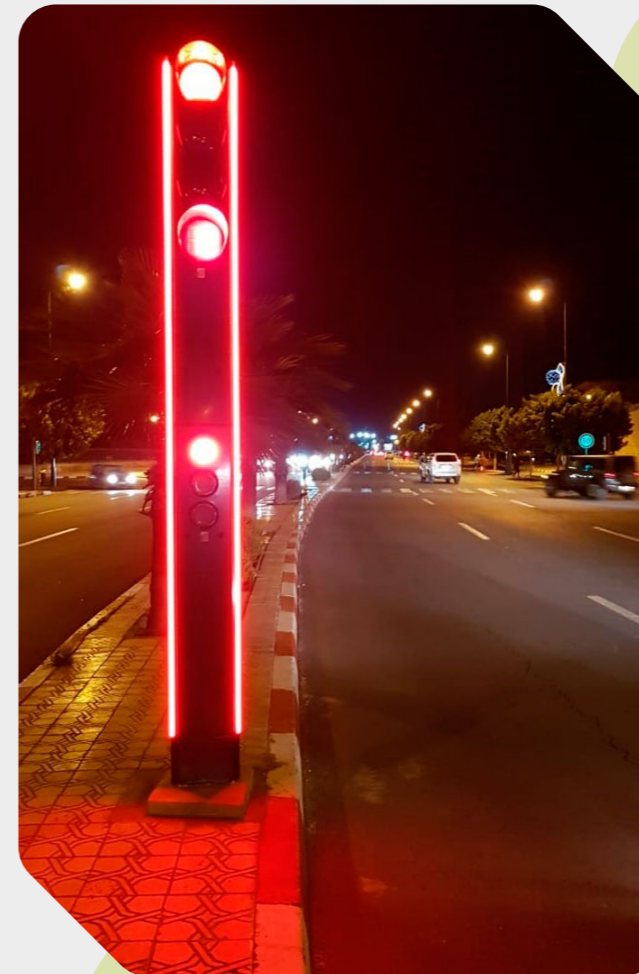
- STARLED optics for improved energy efficiency and performance
- Available in diameters d.100, d.200 and d.300 mm
- Developed according to the principles of eco-sustainability
- Robust and vandal-proof housing, with customizable height and available with colors chosen by the customer (with RAL codes)
- Useful and easy to maintain thanks to the simplified front sectional opening
- "Ready to use" is supplied with everything needed for its installation
- Available with RGB light strips on the sides to increase the visual impact

"Totem Giotto can also be used to define pedestrian areas, parking lots, pedestrian crossings, restricted zones, etc."

Diameter	Width	Depth	Height
100	180	155	1265
200	327,6	109,5	3600
300	432,8	130,5	4000

Measurements in mm, referred to standard configurations.

SCAN FOR FURTHER DETAILS



Totem 100

CVE LED



CLASSIC POLYCARBONATE TRAFFIC LIGHTS

This series of traffic light has been deployed to meet the needs of an old-fashion design, combining characteristics of strength and practicality, thanks to the MAKROLON® polycarbonate used for its production, and to the front opening of the easy and durable double-hinged doors closing, interchangeable with the Giotto aluminium series.

Equipped with the latest generation of LED technology modules called STARLED, which guarantee better efficiency and reduced energy consumption (over 90% savings compared to traditional optics), complete with all the accessories required by the market and multiple versions.

"Quality, robustness, versatility, dressed in a classic and timeless design, CVE is the answer to your needs"

CE APPROVED EN12368

DETAILS

- STARLED optics for improved energy efficiency and performance
- Available in diameters d.100, d.200 * and d.300 * mm (* modular to each other)
- Different versions, colors and combinations available
- Useful and easy to maintain, thanks to the opening of the double closing hinged front doors, reducing waste in terms of managing spare parts
- Classic design that adapts to any urban context and goes beyond fashion
- Developed according to the principles of eco-sustainability

“From Northern Europe to the Arabian Peninsula, quality and durability make the CVE the most versatile traffic light in our lineup”

Diameter	Width	Depth	Height
100	150	110	170
200	265	185	245
300	365	185	345
G+Y 200mm	365	185	843
R 300mm			

Measurements in mm for single modules, the hybrid model is quoted for the whole traffic light.

SCAN FOR
FURTHER DETAILS



RS SERIES



POLYCARBONATE REPEATER LANTERN DIAM. 100MM

Modular with modular elements equipped with quick-fit doors with four screw locking points with front tightening.

Sun visor printed together with the door with the possibility of fixing it to the body of the traffic light even in a horizontal position for particular traffic light applications, see for example signs inserted on advertising signs.

Attachments for modular pole supports Ø102 mm equal at the top and bottom and can be used with the most popular supports, the same attachments can be fixed to Band-it, they are available

with adapters on request for fixing on flat surfaces.

4 types of long and short fixing arms available in band it and quick coupling combinations

IP55 protection rating

Operating temperature Compliant with EN12368 class A,B,C -40°C - +60°C-

Symbol masks of all types available

Adjustable at 90°

"RS, the "mini" traffic light with "maxi" results."

BENEFITS

- An elegant line with a refined and subtle design
- Diameter 100 mm
- High brightness and excellent visibility
- Lightweight and easy to install
- Resistant to the most adverse external climatic agents
- Ideal for applications such as cycle paths, car parks, private access management and industrial signaling

“Design, efficiency and eco-sustainability merged into a single solution: the RS line stands out on multiple fronts.”

	Height	Width	Depth with brackets
2 aspects	440	150	short 280
3 aspects	600	150	long 325

Measurements in mm.

SCAN FOR FURTHER DETAILS



CD RGB



CD RGB 200mm

“COUNTDOWN” TRAFFIC LIGHT WITH RGB LED

The “countdown RGB” traffic light uses the most modern LED technology currently available on the market, capable of displaying the remaining time until the associated traffic light phase is switched on.

Furthermore, the LED-RGB technology together with the microcontroller technology inserted in the device allows the achievement of brightness levels proportional to those of all pedestrian and vehicular traffic lights, so as not to disturb the visibility of the latter and not to cause visual nuisances for road users.

Motorists and pedestrians receive information on how much remaining green time will be given to the direction they are interested in, the

same countdown lantern at the end of the green phase signals the seconds of yellow phase and then the waiting time on red*.

Available in 200 mm 2 digit and 300 mm 2 1/2 digit formats.

Simple use both on dynamic cycle systems using the specific CDI communication interface and on pre-set cycle systems.

Thanks to the CDI interface combined with the TMacS centralization system, all countdown diagnostic events can be managed remotely as well as any reprogramming of the latter..

*In compliance with the regulatory provisions and laws of each individual country of use, the colors of the lights and their operation can be modified.

“Highly advanced technology and simple installation at the service of traffic”

refer to STARLED3 for measurements



CD RGB 300mm



CDI interface

SCAN FOR FURTHER DETAILS



SPECIFICATIONS

- High brightness thanks to the RGB type led optic
 - Sturdy and reliable structure inserted in traffic lights - diameter 200 and 300 mm
 - Simple installation
 - Advanced electronics consisting of 1 power supply board and 1 display board with microprocessor control
 - Self-learning of the times to be displayed with the connection in parallel with the traffic lights; or display of digits with communication via RS485 serial port
 - Green, yellow and red in the same Aspect
 - Supply voltage 230 Vac, 42 Vac, 12 VDC *
 - Power consumption 3 - 24 W **
- * Upon request
** Depending on the selected brightness class / displayed figure

CDI-COUNTDOWN INTERFACE

It is an electronic device contained in a box made of UL94-V0 self-extinguishing PC/ABS blend.

Thanks to CDI, it is possible to use the RGB Countdown in centralized systems or systems regulated by implemented or semi-implemented traffic light plans or in any case with non-pre-established phase duration. It incorporates a micro-controller electronic board with high

computing power, various communication, input and output interfaces and the possibility of remote connection to the system in which it is installed.

Thanks to the CDI interface combined with the TMac's centralization system, all countdown diagnostic events can be managed remotely as well as any reprogramming of the latter.

MATRIX

DYNAMIC DISPLAY WITH LED GRAPHIC MATRIX

The Matrix module adopts a revolutionary graphic matrix communication system that can be interacted via a local command and control interface or in the "plus" version via remote connection.

Through the remote connection on the TMacs platform it is possible to use Matrix as a dynamic communication display towards the outside world.

In the extended concept of SMART CITIES it is possible to range from

the ordinary use as a dynamic traffic light countdown display, up to the possibility of transmitting information on vehicular, pedestrian and cycle mobility.

High resolution and prestigious technical features make it versatile in the management of moving or variable images depending on the level values to be displayed such as hourglasses, stopwatches, animated pedestrians, etc.

main features

- Dynamic display capable of performing animations
- Available with 300 mm lenses
- High resolution
- Remote management through the TMacs platform
- Wide choice of image databases
- Integrated on STARLED housings and on the various traffic light frames from our range of products.

SCAN FOR FURTHER DETAILS



refer to STARLED3 for measurements



STOP-GO

LED TRAM SIGNAL FOR TRAVEL DIRECTION

STOP-GO is a traffic light signal designed to provide a clear travel signal to tram drivers on tram lines.

Built using LED technology, this signal is able, through 21 luminous dots made up of strips of 6 individual LEDs, to display 6 different symbols which allow

the tram driver to drive in complete safety.

STOP-GO can be inserted into GIOTTO traffic light boxes made of aluminium or GALILEO and CVE made of polycarbonate.

SPECIFICATIONS

- Material: Aluminium and/or UV stabilized Bayer Makrolon® Polycarbonate
- Impact resistance: Class IR3 (Ref. EN12368, Ref. EN 60598-1:2004)
- IP protection rating: IP55 (Ref. EN60529), Class IV (Ref. EN12368)
- Standard colour: Gray (RAL 7035) any color available on request
- Diameter: 300 mm ± 10% (Ref. EN12368)
- Temperature range: -40°C, +60°C (Ref. EN60068-2-1-14), Class A,B,C (Ref. EN12368)
- Permanent deflection: < 0.04 % (Ref. EN12368)
- Temporary Flexion: < 2 % (Ref. EN12368)

SCAN FOR
FURTHER DETAILS



refer to STARLED3 for measurements



TOTEM BIKE

GIOTTO TOTEM BIKE COUNTER

Make your citizens more aware of their participation in the fight against pollution, our TOTEM Bike Counter will display day and night the information collected from different traffic monitoring stations, combining multiple technologies for accurate results.

Data collected will be available remotely through the TMacS Platform, and displayed real-time after data

validation to avoid showing non-reliable specifics.

The information that appears on the TOTEM could be various and different, from the number of bikes counted in the last day, last month, even year, the current date and time or even the amount of CO2 saved thanks to the cyclists of your city, promoting the fundamental concept of sustainable mobility.

“Resistant and highly customizable aluminium frame to best adapt to installation in any urban environment”

SCAN FOR FURTHER DETAILS



La Semaforica TOTEM is perfectly integrated into the TMacs Smart City environment; thanks to the TMacs platform.

TOTEM can display data collected from all TMacs compatible traffic monitoring stations, enabling continuity and shared vision across the city and celebrate sustainability as a whole.

Thanks to the TMacs platform it is also possible to create and plan personalized messages and distribute them to all the connected TOTEMs in a single step.

The MacsVisual module of the TMacs platform allows to view and analyze the data collected by sensors on the field to inform and help decisions in managing traffic in your city.

VERSIONS

SINGLE SIDED TOTEM

64 x 128 pixel Graphic area

Full Color RGB 320 x 640mm, 5mm steps

2460 x 433 x 130,5 mm total dimensions

DOUBLE SIDED TOTEM

Double 64 x 32 pixel Graphic area

Full Color RGB 320 x 160mm on each side, 5mm steps

2460 x 433 x 261 mm total dimensions

SINGLE SIDED OR DOUBLE SIDED DISPLAY

64 x 64 pixel Graphic area

Full Color RGB 320 x 320mm, 5mm steps

620 x 694 x 90 mm total dimensions with frame



SENTINEL

LUMINA



SENTINEL, THE FIRST "SMART" TRAFFIC LIGHT

Sentinel is the "smart" traffic light that revolutionizes the world of traditional traffic lights.

Thanks to the newly designed modular polycarbonate case, Sentinel can be easily fitted to the traffic lights of the Galileo series or through "retrofit" couplings it can be mounted on already installed Galileo and CVE traffic lights.

Adjustable camera and lens allow for easy calibration once positioned on the traffic light of interest.

Sentinel integrates a camera with high-end technical specifications

which, thanks to dedicated algorithms, is able to detect vehicular/pedestrian traffic in real time and in the first case to tweak traffic light times in adaptive mode.

Ideal for vehicle data surveying and classification thanks to its integration with the TMacs platform.

Remote configuration and implementation of traffic light times in adaptive mode make it an easy-to-integrate and modern product that matches the highest levels of ITS standards.



SCAN FOR
FURTHER DETAILS



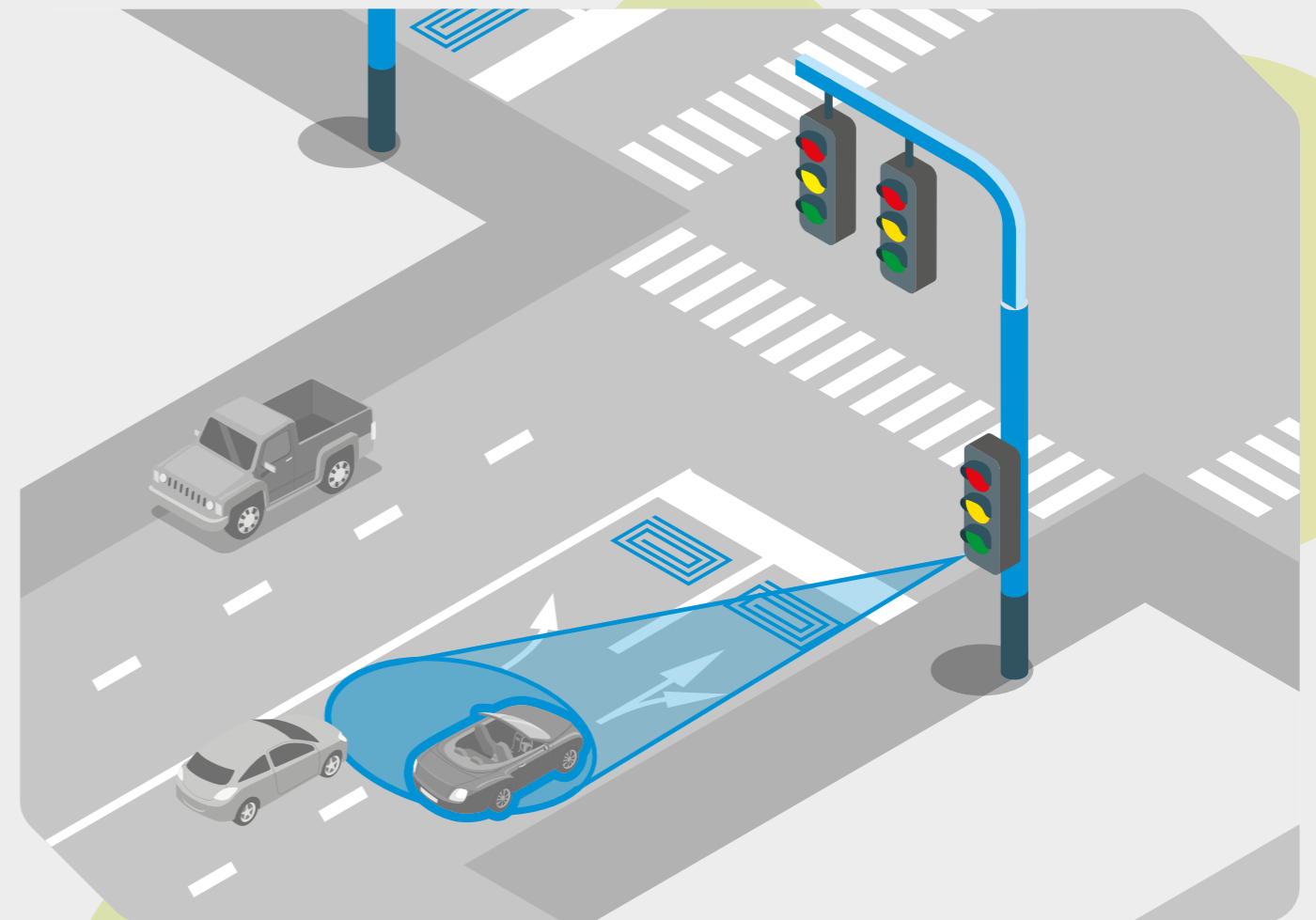
ADVANTAGES

- Robust and discreet
- Design aesthetics to meet the most demanding architectural standards
- Adaptive
- Configurable remotely thanks to the TMacS platform
- Avoid installing sensors external to the system which can be subject to vandalism
- Provides data on vehicle transits
- Available for 200 and 300 mm traffic lights in the GIOTTO version

Thanks to the **SAFETY GO APP** it is able to guarantee preferential treatment of the vehicles associated with it and authorized on the platform.

Diameter	Width	Depth	Height	Height 2
200	327,6	109,5	245	116
300	432,8	130,5	345	116

Measurements expressed in mm for each module. The Height 2 measurement indicates the size of the heads



SENTINEL

GALILEO



THE "SMART" TRAFFIC LIGHT BECOMES INTERACTIVE

Sentinel is the "smart" traffic light that revolutionizes the world of traditional traffic lights.

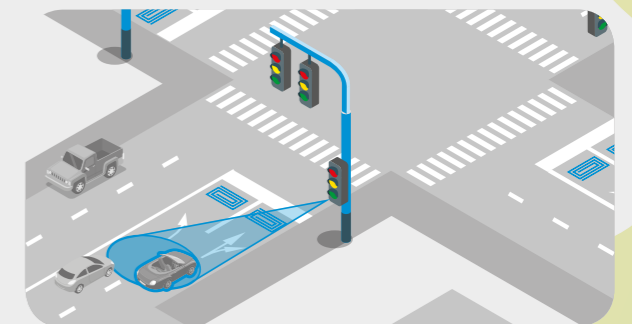
Thanks to the newly designed modular polycarbonate casing, Sentinel is able to be integrated seamlessly with the traffic lights of the Galileo series or through "retrofit" coupling on both Galileo and CVE traffic lights already installed.

Adjustable camera and lens allow for easy calibration once positioned on the traffic light of interest.

Sentinel integrates a camera with high technical specifications which, thanks to dedicated algorithms, is able to detect vehicular/pedestrian traffic in real time and in the first case to adapt traffic light times in adaptive mode.

Ideal for vehicle surveying and classification thanks to the integration with the TMacs platform

Remote configuration and implementation of traffic light times in adaptive mode make it an easy-to-integrate and modern product that matches the highest levels of ITS standards.



SCAN FOR FURTHER DETAILS



BENEFITS

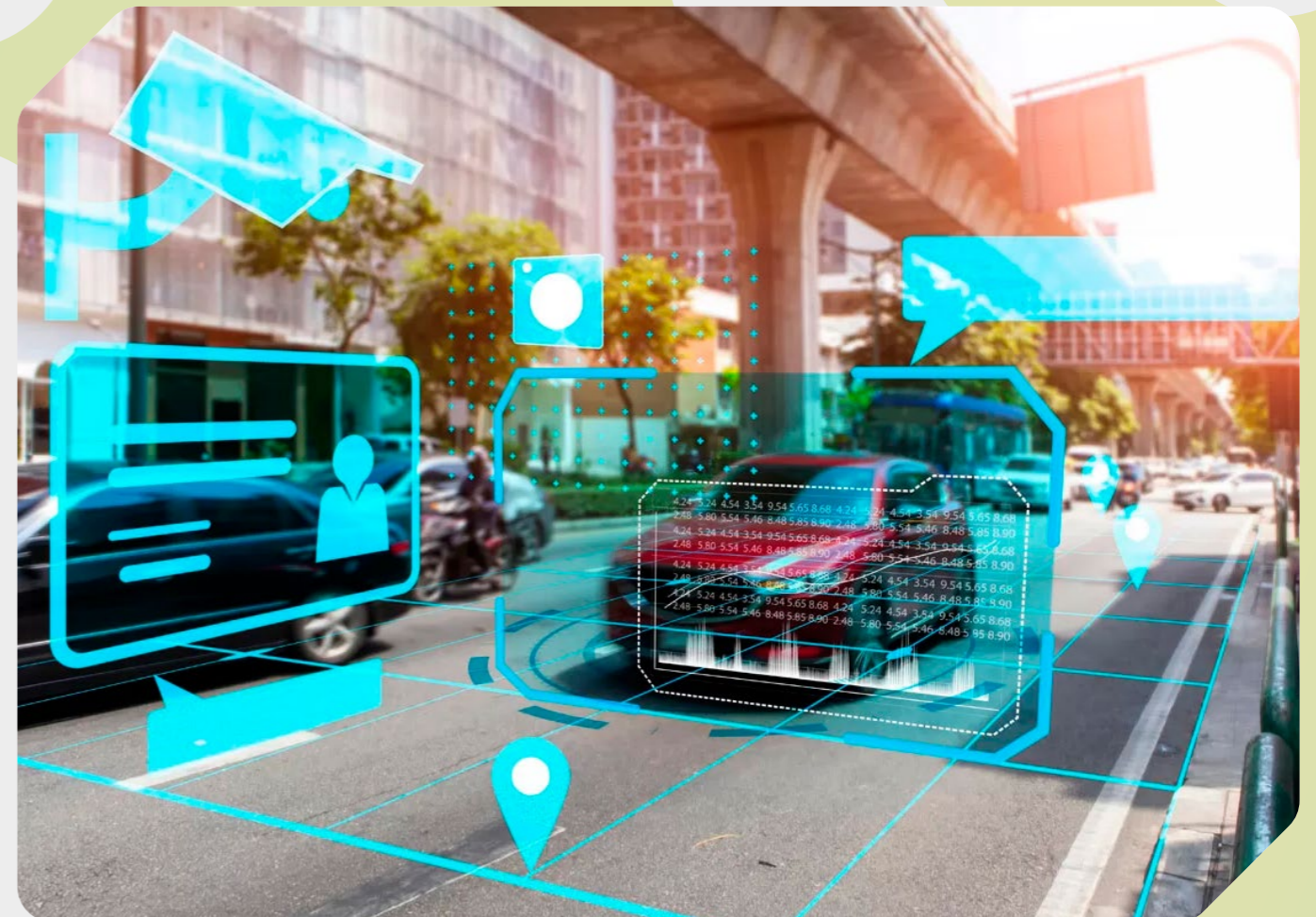
- Made on shockproof polycarbonate case
- Modular casing to be combined with 200 and 300 mm
- Adjustable
- IP55 protection rating
- Operating range -40°C + 60 °C
- Robust and discreet
- Design aesthetics to meet the most demanding architectural standards
- Adaptive
- Configurable remotely thanks to the TMacS platform
- Avoid installing sensors external to the system which can be subject to vandalism
- Provides data on vehicle transits



“Incident-detection, counting and classification perfectly integrated into a design traffic light”

Width	Depth	Height
265	189	132

Measurements in mm referring to the single additional module



SONUS DNV

ACOUSTIC PEDESTRIAN TRAFFIC LIGHT

Sonus DNV integrates into the traditional traffic light the module with acoustic warning device for the orientation of the visually impaired on systems with pedestrian crossings.

A modern and practical acoustic guidance device equipped with many smart functions that can be activated according to specific needs, such as the call to the pole, adjustable volume and integration with the Leti Smart system.

Built in a modular polycarbonate case with a minimalistic and elegant design, it is suitable for being integrated with traffic lights of the Galileo series as

an extension of the regular models as a retrofit on traffic lights of the CVE series or as a single separate device that can be installed with a specific bracket.

Thanks to the powerful acoustic speaker and the electronic control board, it is able to perform different functions depending on the country and the regulations in use.

Easily orientable, SONUS DNV is simple to use even where the pole supporting the pedestrian traffic light is installed distant from the pedestrian crossing.

"Traffic light with integrated acoustic device for guidance of the visually impaired."



BENEFITS

- Elegant and modern design
- IP55 protection rating
- Easily orientable
- Modular installation
- Leti Smart compatible
- Operation foreseen by the Italian highway code is available
- Available with call to the booking request pole
- Operating range -40 + 60 °C

“ A smart audio guidance system for the visually impaired pedestrians, SONUS DNV is at the service of a more inclusive society ”

Width	Depth	Height
265	189	132

Measurements in mm referring to the single additional module

SCAN FOR
FURTHER DETAILS



LETISMART

powered by

TMACS

LIGHT ENGINEERING TAG INFORMATION

Thanks to a TAG inserted in the ZEBRA pedestrian reservation devices, installed on acoustic traffic lights, and the exclusive LoRa communication system, LETIsmart is able to create a direct communication between the VOCE white cane usually supplied to blind / partially sighted citizens and acoustic sounders for the blind.



The two-way communication allows the user to receive audio information from the walking stick regarding the references of the pedestrian crossing and to INTERACT with the traffic light itself, ALL from his own white cane.



SCAN FOR
FURTHER DETAILS



BENEFITS

- Allows to make pedestrian calls using just the cane supplied to visually impaired users without the need to press the button of the traffic light system,
- Allows to identify the direction of the crossing,
- Allows the dialogue with the traffic lights system.

HOW IT WORKS

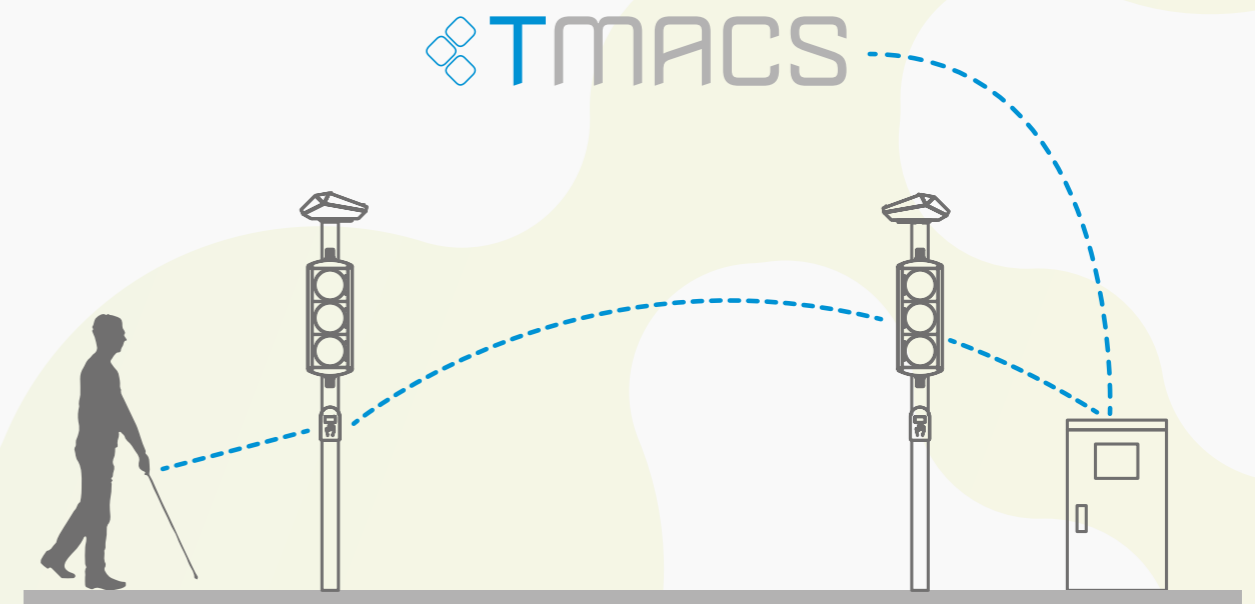
The system therefore allows you to activate the directional sound of the beacon (LETISmart TAG) to be guided to the exact crossing point but above all it allows to activate the acoustic traffic light at the next green light cycle WITHOUT the need to search for the pole and / or button.

This reduces the risks for the user to end up in the middle of the busy roadway and eliminates the button search time, avoiding getting dirty.

The radio interface sends encrypted communication on the LoRa band at 868Mhz to keep the system secure and uses a dedicated protocol to avoid overlapping between different devices. The electronics are the result of a careful and in-depth engineering study that led to a considerable miniaturization of the circuit, making it easy to adapt to even the smallest enclosures on the market with zero visual impact and without affecting the overall size and weight.

TMacS takes care of receiving the call signal of the visually impaired users from their cane and develops an ad hoc traffic light plan designed on specific needs with increased crossing times and above all with longer intermediate times for improved safety.

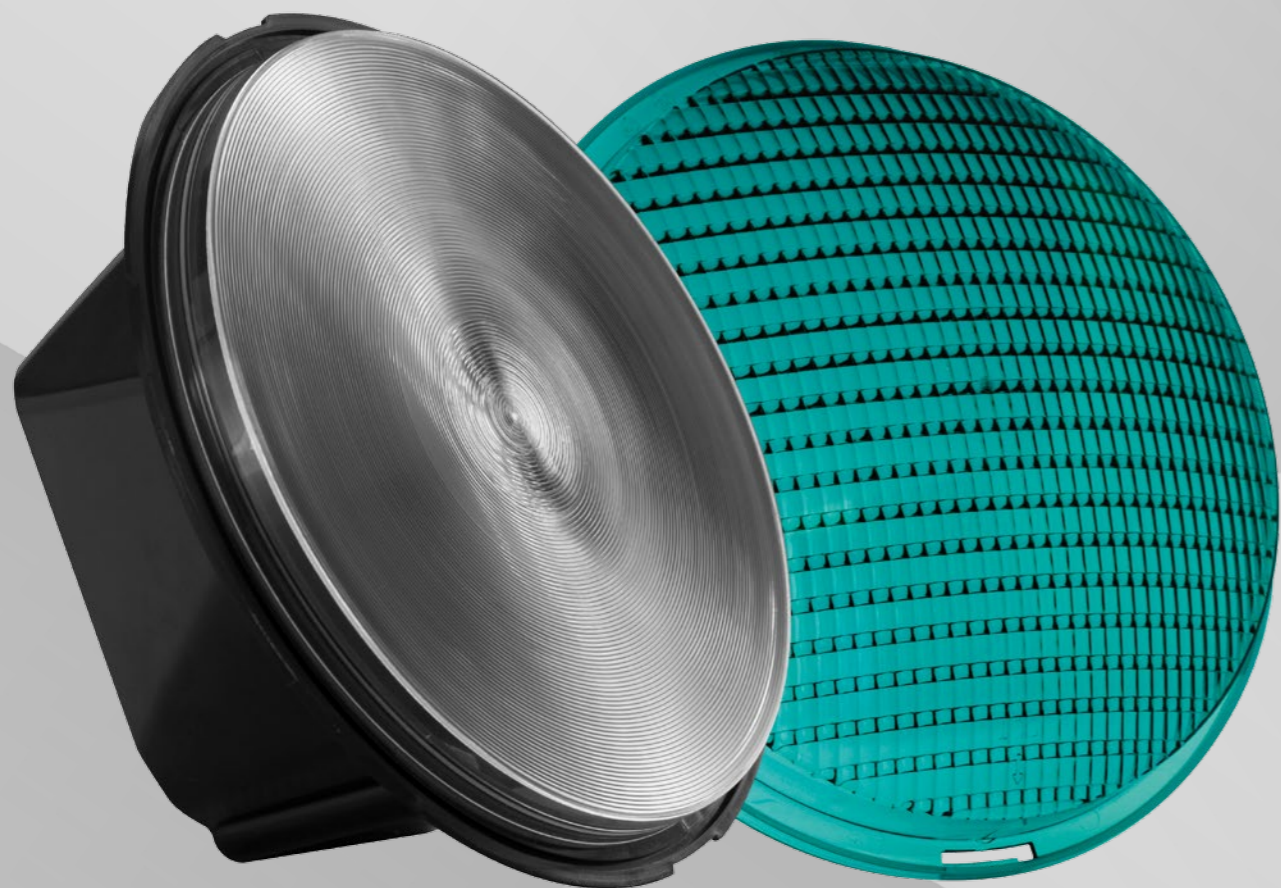
Every call made through the system is recorded and the logs are stored at the control center for future reference both for statistical purposes and in case of need for any disputes in the event of an accident



In addition to being used in traffic lights, LETI SMART can also be implemented for the following uses:

- urban information system (public events, temporary road construction sites, etc.)
- indoor commercial communications such as shops, bars, post offices, banks, etc.
- information on BUS and TAXI
- information on TRAINS AND TRAM

Starled 3



THE CONTINUOUS EVOLUTION OF EXCELLENCE

Starled3 represents the technological innovation in the field of one-piece traffic lights LED optics.

Developed on the basis of the previous model produced in millions of units, the new Starled3 derives from the previous models, combining characteristics of the highest quality from both the electrical and luminous point of view.

Starled3, thanks to the new microprocessor management, offers different power supply options according to the highest European standards in traditional and/or dimming configuration.

The real revolution of this LED optic, thanks to the use of materials of extraordinary quality, is its exceptional ability to communicate information as well as operating parameters to Macs Traffic using a TMacs platform.

SPECIFICATIONS

- Optical performance according to EN 12368
- EMC EN50293 compliance
- Ambient temperature range according to EN12368 Class A, B, C (from -40°C to +60°C)
- Protection class Safety class II according to EN 61140
- IP65 sealing according to EN 60529
- Impact resistance class IR3; according to EN 60598-1
- Lens/Housing Material: UV Stabilized Polycarbonate
- Cable 2 x 0.50 mm²; 1 m

SCAN FOR FURTHER DETAILS



BENEFITS

- No visible LED dots, very uniform light signal with central light source and very high efficiency Fresnell lens
- Maximum anti-phantom performance (class 5)
- Minimal power consumption and bright light output
- Products traceable by serial number
- Custom masks that allow any symbol to be displayed
- Life cycle > 5 years
- Management of the thermal effect designed for maximum LED life
- Automatic light compensation in case of LED diode failure
- Proven and reliable technology
- Also available with colorless lens
- Available with white LEDs for public transport indications and blue for special applications
- Available in diameters 200 / 300 mm

Diameter	Depth	Weight
208	96	230gr
300	150	562gr

Measurements in mm.

Starled 2



SCAN FOR
FURTHER DETAILS



The company know-how, the result of continuous development that began over 75 years ago, has allowed us to create and produce LED technology modules with efficiencies that were unthinkable even just a few years ago. Starled2 represents the state of the art in the sector of optics for vertical signs. Installed globally in more than 2 million units since its first version, from

the coldest environments of Northern Europe, to the hottest ones of the Arabian Peninsula and the Moroccan desert areas bordering the Sahara, chosen by the largest European capitals such as Rome, Lisbon, Copenhagen, Dublin, Belgrade and many others. Many versions available, adaptable as traffic light retrofits, Countdown with RGB LED technology and customizable

"A global product, which with over 2 MLN of units sold, represents the business card of our LED modules"

Starled 2 R+G



DOUBLE COLOR MODULE ON SINGLE ASPECT

Our history of over 75 years of experience has driven us to create one of the most innovative solutions for the traffic lights based on LED technology.

An electronic control driver manages two central lights generated by LED High Flux that thanks to the dual lens system allow to obtain a uniform, bright light.

Reliable, technologically advanced, easy to install and built in compliance

with the EN12368 now optical led series Starled2 R+G are introduced at the market as a response to the growing demands for reduced power consumption and environmental friendliness.

Low consumption power sources to provide actualized solutions with the new applications such as photovoltaic panels and other.

main features

- Uniformly distributed light
- Low consumption with very high brightness output
- Reduction of ghost effect to the minimum levels required by EN12368
- Average life above 10 years
- Neutral lenses
- Option with quick coupling system with slide guides and gaskets
- Simplified opening of the module with lens screw and internal Fresnel with pressure lens-mount
- Available all symbol templates provided by Highways rules and on demand custom versions

SCAN FOR
FURTHER DETAILS



macs
WEATHAIR
TOTAL ENVIRONMENT MONITORING

macs
SAFETY
PROACTIVE SAFETY INSIGHTS

macs
ANALYSIS
TRAFFIC ANALYSIS SYSTEM

macs
COOPERATIVE
CONNECTED INFRASTRUCTURE SYSTEM

macs
FLOOD
FLOOD MONITORING SYSTEM

macs
MMS
MAINTENANCE MANAGEMENT SYSTEM

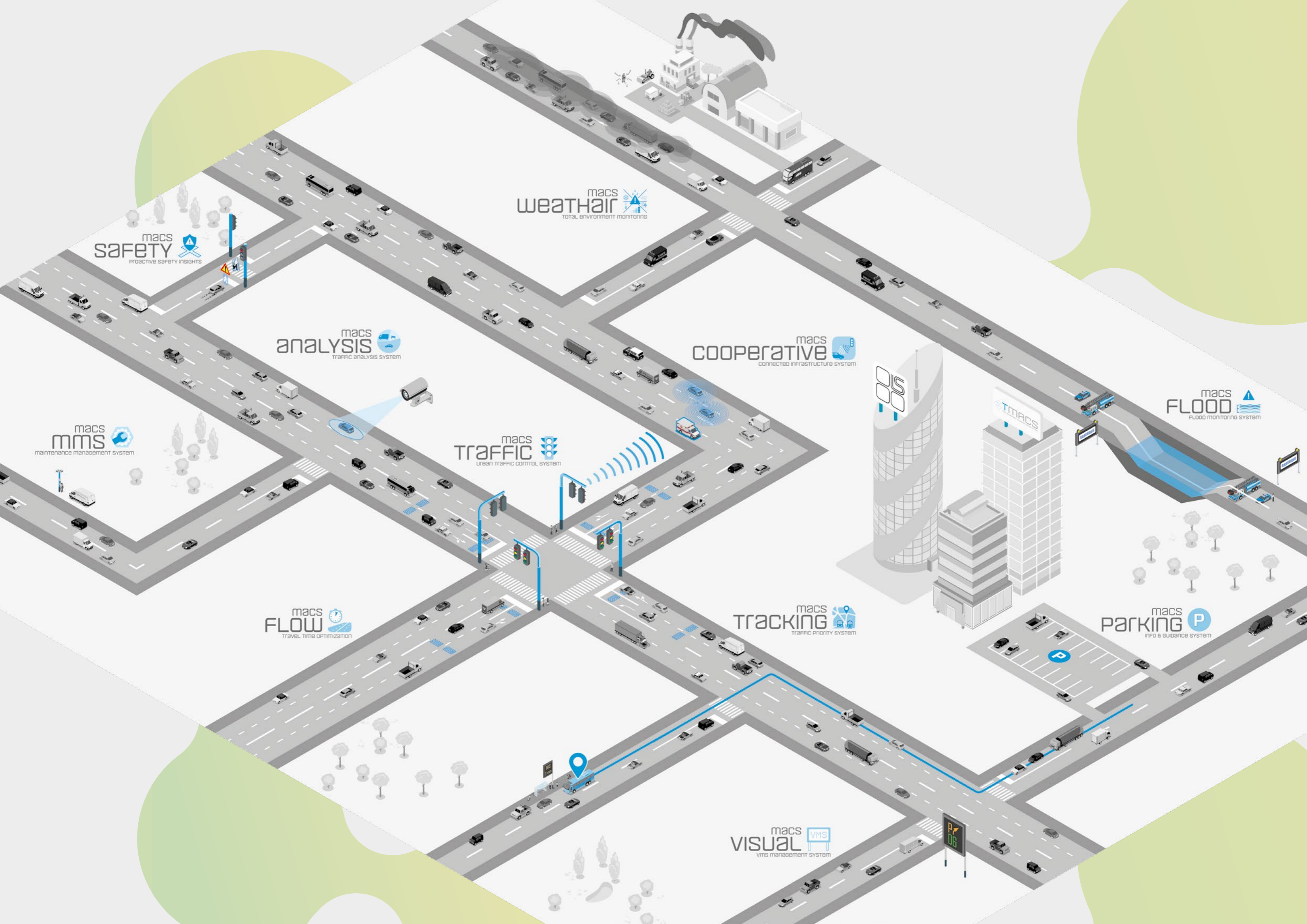
macs
TRAFFIC
URBAN TRAFFIC CONTROL SYSTEM

macs
TRACKING
TRAFFIC PRIORITY SYSTEM

macs
PARKING
INFO & GUIDANCE SYSTEM

macs
FLOW
TRAVEL TIME OPTIMIZATION

macs
VISUAL
VMS MANAGEMENT SYSTEM



TMACS

TOTAL MANAGEMENT ADVANCED CONTROL SYSTEM

TMacs is an open ITS platform and is an essential and powerful tool for traffic control and management.

The configuration of the system is completely customizable and TMacs offers maximum performance in any application related to Infomobility.

The open architecture of TMacs allows the control of different devices (traffic controllers, sensors, control devices for public lighting, variable message signs, weather stations, car parks, etc.) and offers local authorities the possibility to delegate the management and maintenance of the various subsystems.



macs
TRAFFIC
URBAN TRAFFIC CONTROL SYSTEM

macs
ANALYSIS
TRAFFIC ANALYSIS SYSTEM

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MAINTENANCE MANAGEMENT SYSTEM

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SAFETY
PROACTIVE SAFETY INSIGHTS

macs
COOPERATIVE
CONNECTED INFRASTRUCTURE SYSTEM

SMACS

SMART CITY SYSTEM

Introducing SMacs, the future of smart city management.

Designed to transcend the traffic focused capabilities of TMacs, SMacs represents a new horizon in urban management, offering a unified platform for overseeing a multitude of urban subsystems.

Its key strength lies in its holistic approach, integrating traffic control, environmental monitoring, public safety, and more into a single, user-friendly interface.

With its advanced data analysis and reporting tools, SMacs empowers city officials with the insights needed for informed decision-making and efficient resource allocation.


Its flexible and scalable architecture ensures compatibility with a wide range of technologies, making it adaptable to cities of any size.

By enabling real-time monitoring and response, promoting sustainability, and enhancing safety, SMacs is not just an evolution in smart city management: it's a revolution, setting a new standard for how cities operate and evolve.





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