

★ ★ ★ ★ ★
WORLDWIDE №1
ALL-IN-ONE
MODULAR SYSTEM
ARGON GAS FILLED

1
MOST INNOVATIVE
PRODUCT AWARD

1
PRODUCT CATEGORY
WINNER

MIDDLE EAST
LIGHTING
DESIGN
SUMMIT 2019

light | AWARDS
MIDDLE EAST | 2019



MORE THAN LIGHT

CUTTING-EDGE LIGHTING

Durability &
High Performance

SMART CONTROL

SmartBox &
ClassicBox

SAFE CITIES

Video Surveillance
Systems



Western General Trading,
Representation @ Commercial Agencies Estab

المؤسسة الغربية للتجارة العامة وتمثيل الشركات والوكالات التجارية



member of VIP-VIRANT group
Lumenova[®]
new ideas for light

www.lumenova.net

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23	Ocean & Lake Ambient luminaires

ALL-IN-ONE

Modular system



1. Choose the HOUSING



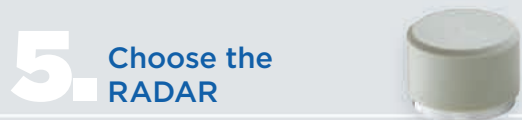
2. Choose the OPTICS



3. Choose the CONTROLLER



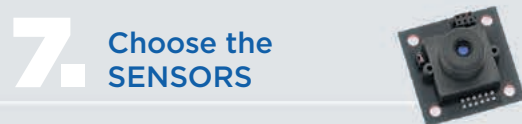
4. Choose the VIDEO SURVEILLANCE



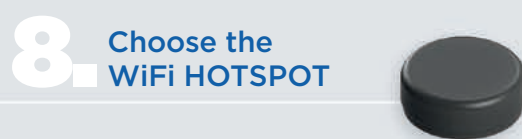
5. Choose the RADAR



6. Choose the ANTENNA



7. Choose the SENSORS



8. Choose the WiFi HOTSPOT

A wide knowhow, modern technologies and goal-driven work



have been forming the corner stone for Lumenova since 2007.

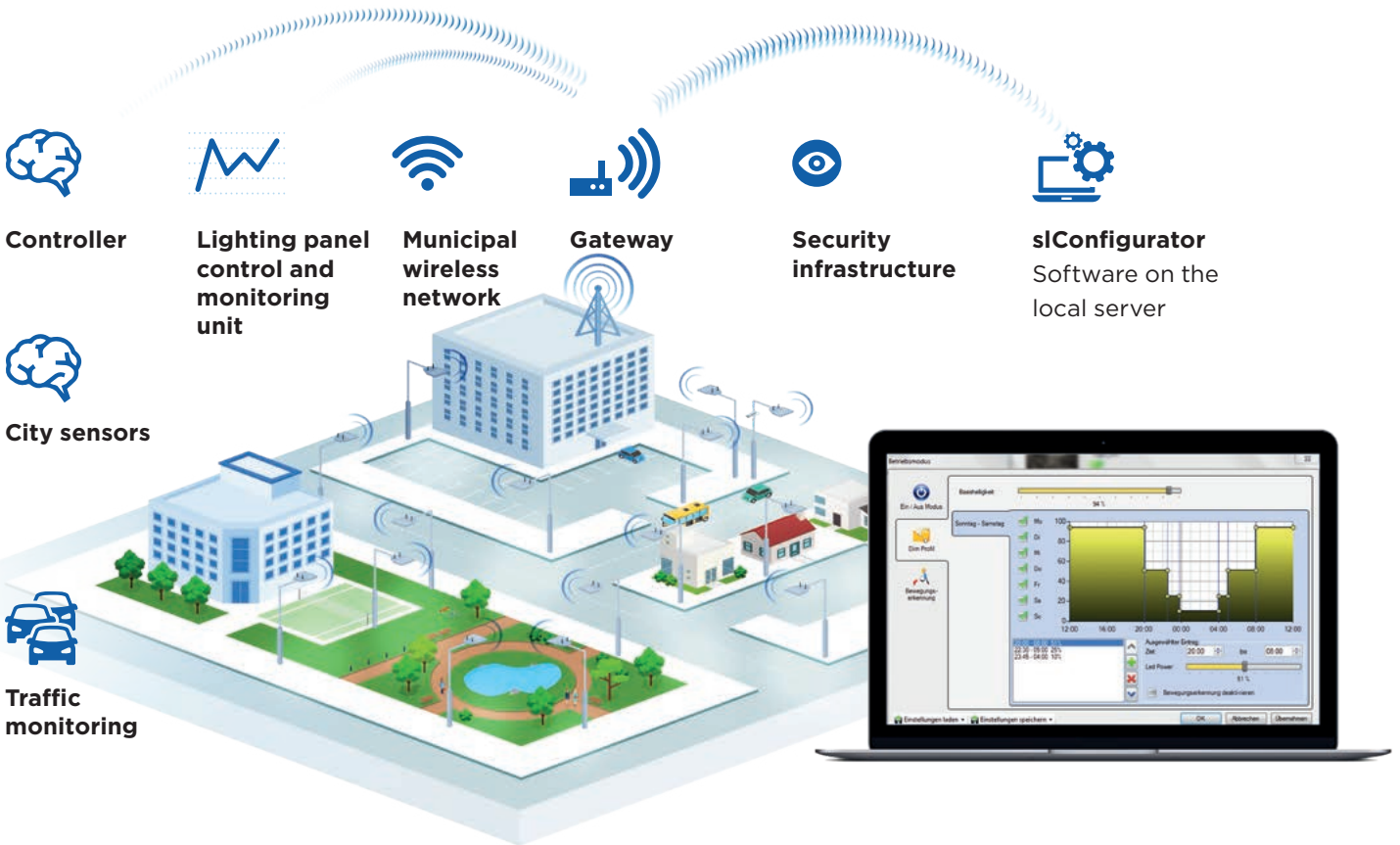
LUMENOVA is amongst the fastest growing manufacturer of high-quality lighting based on LED technology in Central and Western Europe with the set Goal of providing Customers with the Unique choices delivered through a own development and innovations.

We have recently newly set our Brand portfolio following development guidelines resulting from close cooperation with partners around the World.

Our LED LUMINAIRES, SMART CITIES and VIDEO SURVEILLANCE SOLUTIONS have enjoyed a great interest and received positive feedback about our UNIQUENESS.

Connect with the light

The future of street lighting



The intelligent street lighting

sIControl offers an intelligent street lighting solution. Energy consumption and therefore ongoing operating costs can be significantly reduced, without compromising comfort and security, by the targeted dimming of LED lights. In addition to reduced energy consumption, dimming also extends the lifetime of lights and makes a valuable contribution to reducing light pollution.

Street lights can be dimmed automatically through sIControl, as long as no or just a little light is needed. If the sensors detect pedestrians, cyclists or cars the intensity of the lighting is raised and adapted for a specific street section. In addition to the standard built-in wireless communication, various sensors can be connected as required.

Overview of street lighting control

- Information about luminaire status for proactive maintenance and early detection of failures
- Individual adjustment of the illumination through smooth dimming
- Read and set the luminaire operating mode
- Read the power consumption and the operating times
- No ring connection required, as optionally equipped with dusk sensor
- Combines the respective advantages of the central and self-sufficient controls
- Real-time profiles with day-dependent dimming levels
- Active monitoring of the luminaire temperature

All-in-one modular system

Lumenova smart luminaires



VIDEO SURVEILLANCE

- Control and monitoring of traffic density: pedestrians and vehicles
- Managing operations of traffic signalization
- Higher fluidity of traffic at intersection, etc.
- Increasing traffic safety



RADAR

Speed control and managing traffic safety in accordance with the rules and regulations.



SMART LINK

Connection for smart system



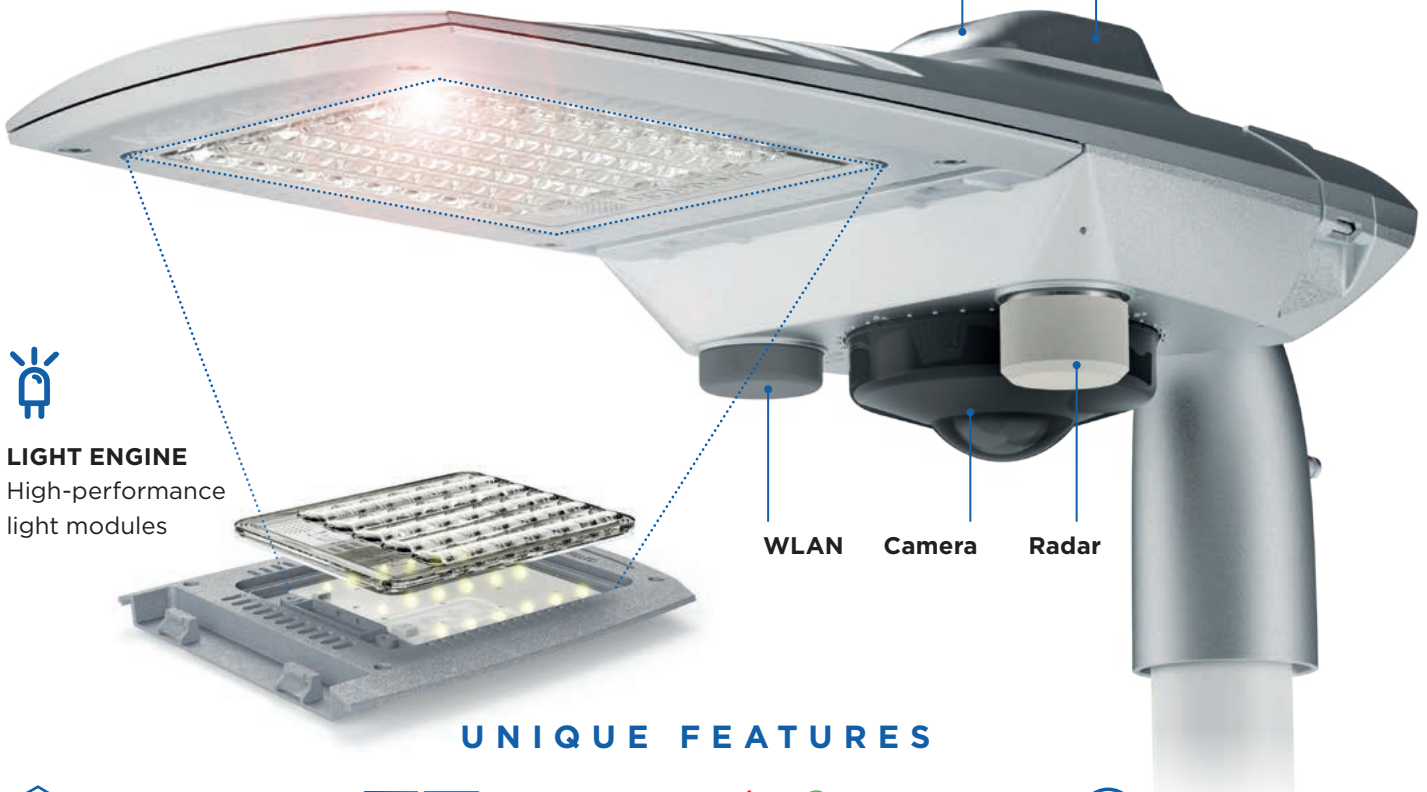
WLAN

- Open access point to the internet
- Added value for citizens, tourists, emergency services, public transport, police, etc.
- Availability to access: anonymous, protected with password, etc.



GPRS (LTE)

- Easy connection to the Internet
- Application of basic existing infrastructure
- LAN access point
- UP - LINK connection is carried out with GPRS - LTE



LIGHT ENGINE

High-performance light modules

UNIQUE FEATURES



ALL-IN-ONE MODULAR SYSTEM

To ensure with luminaires answer to individual requirements



FILLED WITH ARGON GAS

Prevents the oxidation and discoloration of the LED



FOR EXTREME CLIMATIC CONDITIONS

Current regulation by the controller board protects the LEDs



EASY INSTALLATION

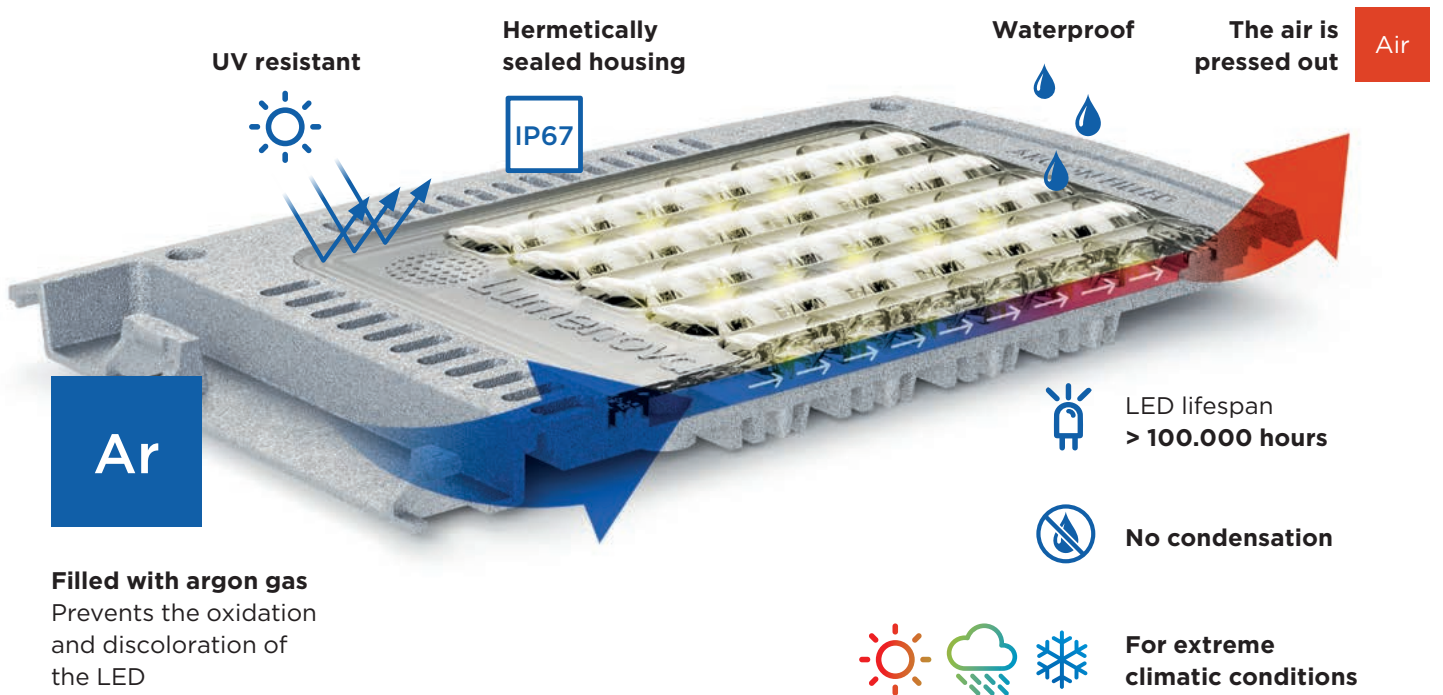
Opening without the use of tools

Light engines

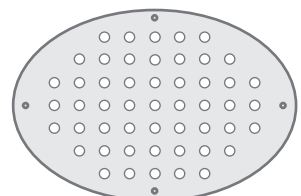
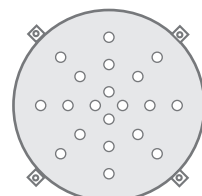
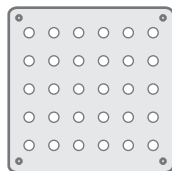
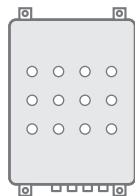
The hermetically sealed “Light Engine” is predestined for extreme weather conditions. The entire electronics of the LEDs are located in a cassette, filled with inert gas (Argon), which protects them from condensation and consequently against corrosion. In heat, the module solution has several advantages; the additional, special filling with argon gives an even higher efficiency to the existing

temperature management, which has a positive effect on the lifetime of the LEDs, and on the other hand, the sensitive electronics are optimally protected from dust and sand.

The smart light engine is also available with a wide range of optional sensors such as: radar, motion and brightness sensors, as well as camera systems.



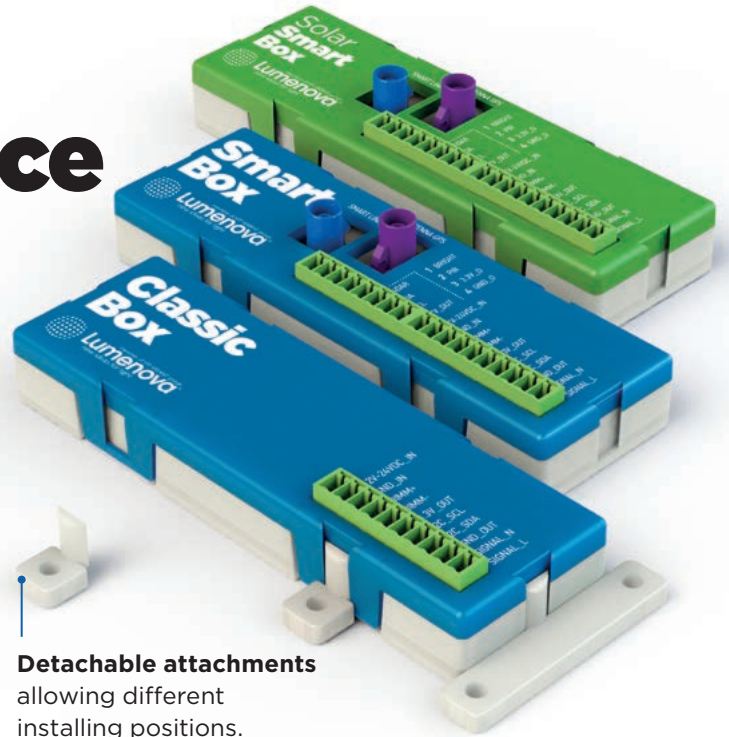
Also available in different shapes, sizes or variations to fit with different types of customers light housings.



SmartBox, ClassicBox and SolarBox

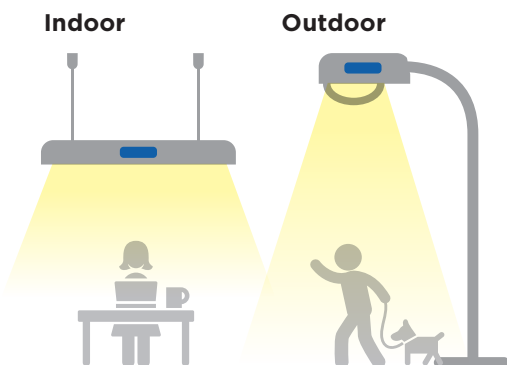
Advancing the performance of luminaires

Achieving great functionality of luminaires with SmartBox, ClassicBox and SolarBox modules. Remote control option, real-time 0-100 % dimming, proximity sensors and more to ensure unique lighting experience. Modules are designed for seamless integration into the luminaires and providing full control over its performance.

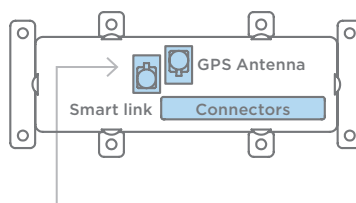


	SmartBox	ClassicBox	SolarBox
Dimming	✓ Real time remote 0-100%	✓ 4 levels, on site programmable	✓ Real time remote 0-100%
Programmable time schedule dimming	✓ Remote	✓ On site	✓ Remote
Overheating protection	✓ Available	✓ Available	✓ Available
Programming and monitoring	✓ Real time remote monitoring and programming	✓ On site	✓ Real time remote monitoring and programming
Adaptive illumination	✓ IR sensor, microwave sensor	Not available	✓ IR sensor, microwave sensor
Power consumption monitoring	✓ Real time remote	Not available	✓ Real time remote
Usage monitoring	✓ Real time remote	Not available	✓ Real time remote
Wireless connection	✓ Available	Not available	✓ Available
Battery monitoring	Not available	Not available	✓ Available

Used with indoor and outdoor lighting



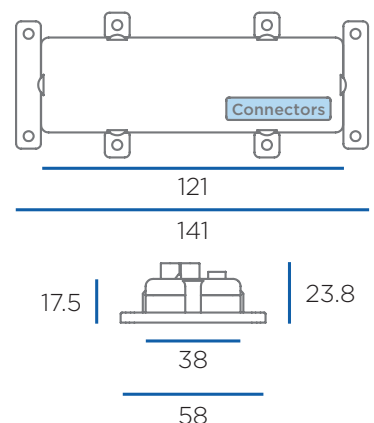
SmartBox



Communication with control server

SmartBox uses radio frequencies in open 2.4 GHz range to communicate with control server via gateway.

ClassicBox



Energy efficiency

Street light control system

Traffic (pedestrian or vehicular): light is on with dynamic motion dimming of neighbouring lights.

No traffic: Up to 100% dimming
1.1 Watt Standby

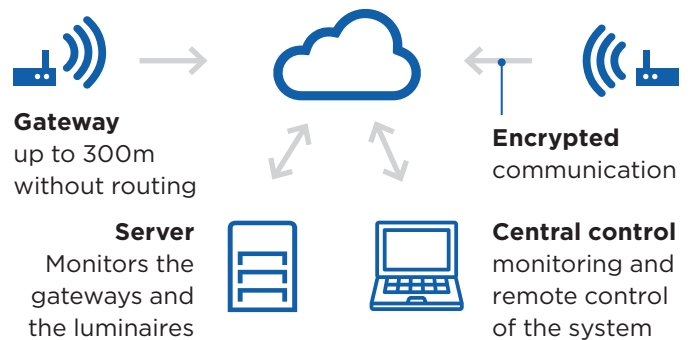


Compared to normal LED street lighting you increase energy efficiency up to 90% with the intelligent lighting system. This extends the lifetime of the luminaires and reduces maintenance costs.

The system can always be adapted to new conditions, so that a perfect illumination of the road is always guaranteed. Since the illumination of a street section is only increased as required, the light pollution can be considerably reduced.

User-friendly and intuitive software

Street lights which are equipped with SmartBox automatically connect via a wireless network. By a laptop or tablet and the sIControl USB-Dongle you can access the network to configure, control or monitor the sIControl lights. To keep the overview, the user is supported by the user-friendly Windows software. This makes complicated configurations easy and intuitive. To protect the system from unauthorized access, all transmitted data is encrypted. In addition, the network can be protected with a pin code.



Software functions

- Read the current light condition
- Reading and setting the luminaire operating mode including graphical dimming stages
- Free groups of street lights
- Show and position the street lights on a map
- Read, set or save configuration of one street light or a whole group
- Read the energy needs alternatively of a street light or a whole group and much more

Video surveillance system

Safe city - Smart city

with Camera and Audio surveillance

All-in-One lighting and surveillance system with Video Analytic Department offers the full package of engineering and software competence from planning to realization. We are a single source partner for the complete supply chain.

Using new street lighting infrastructure to provide

- Adequate LED lighting
- CCTV surveillance
- Video security / analytics
- Customized solutions

Fields of application

- Traffic control
- Speed detection
- License plate recognition
- CCTV cameras
- Access control
- Crime prevention
- Crime detection

UV resistant

Waterproof

ONLY AT LUMENOVA

WORLDWIDE NUMBER 1

IP67

Ar

Filled with argon gas

Prevents from condensation and permanently enables high video quality.

Special camera cover

- no dust
- no condensation
- longlife video quality

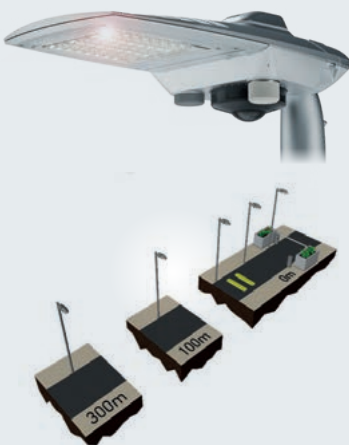
Hermetically sealed cover

Camera with different specifications at your request.

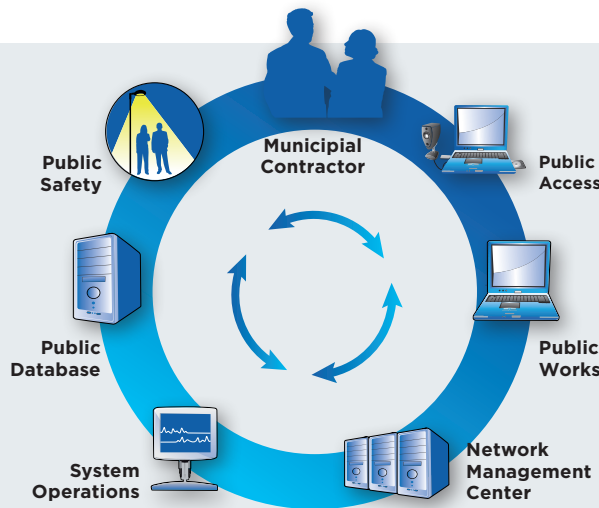
For extreme climatic conditions



No condensation



STREETLIGHT



COMMUNICATION



INFORMATION

VIDEO SURVEILLANCE PROJECT PLANNING & ENGINEERING

- project planning including light-points
- areas of surveillance
- specific requirements

SMART WALL for control centers

- provides a complete and instant overview of the installation
- full integration with video
- management system and map function (e.g. Google)

VIDEO ANALYTICS

- areal security
- privacy protection
- counting
- license plate recognition
- face detection

CCTV security and analytics

Anonym^{vis}

Protects everything for you.
Even your privacy.



- Anonym^{vis} encrypts your video images in real time where it makes sense.
- The video surveillance recognizes all security-relevant events, people, however, are pixelated.
- Thus the consistent protection of private sphere can be assured.
- The original images are as previously saved in the video management system. Access is granted only to a limited group of people.
- Pixelated video data cannot be reconstructed without the original data and is hence safe from misuse.
- The software also allows only partial pixelation of a frame.

Areal^{vis}

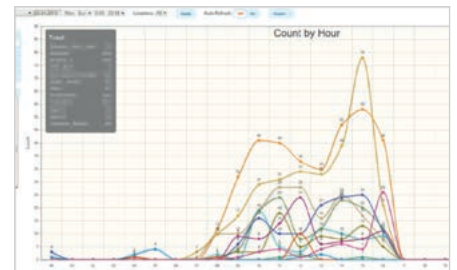
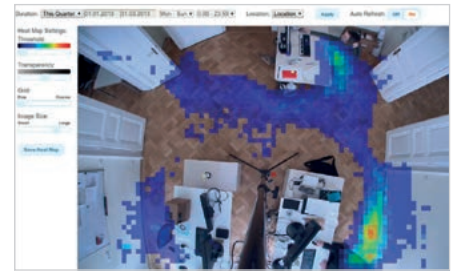
Your safety in eyeshot.
Also around the corner.



- High level person detection for perimeter protection.
- Designed for outdoors and all weather conditions.
- Simplified scene configuration by using just 3 parameters.
- Uses a 3D scene model and machine learning for precise object classification.
- Seamless integration into VMS systems.
- Detection accuracy allows direct alarm forwarding to security centers.
- Computer vision algorithms, based on several years of joint research with leading European research institutes.

Count^{vis}

Knowing what matters.
You can count on it.



- Automatic visual analytics.
- People counting for top- and side view.
- Statistics in real time.
- Filter your data regarding time and location.
- Export data for post-processing.
- No restrictions in defining counting areas.
- Check each count event in the VMS alarm list if needed.
- Dedicated algorithms for various camera positions.
- Computer vision algorithms based on several years of joint projects with leading European research institutes.

First-class outdoor LED luminaires

CCL luminaires

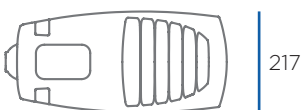
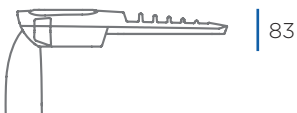
Resembling the light waves, these beautifully designed luminaires follow the principles of nature. Aluminum alloy is used for exterior housing of the luminaires which results in outstanding form and complements the present-day modern surroundings. Available in three sizes (CCL180, CCL100 and CCL035), to provide the ideal solutions for each project.

Perfecting the extraordinary lighting and providing durability and high-performance of the luminaires are the quality built-in light engines made for extreme weather conditions. To ensure luminaires answer to individual requirements the design allows future add-ons, such as surveillance devices, antennas, sensors, radars and others. All the features are enclosed in this efficient luminaire with easy access ready for routine checks or installations.



CCL035

452

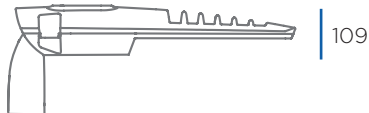


4.5

Pole size up to 60 mm

CCL100

603

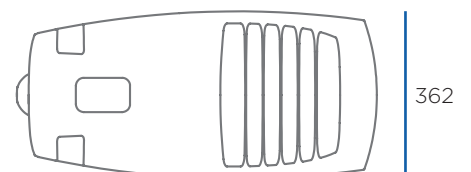
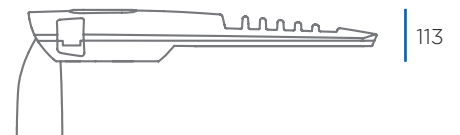


7.5

Pole size up to 60 mm

CCL180

753



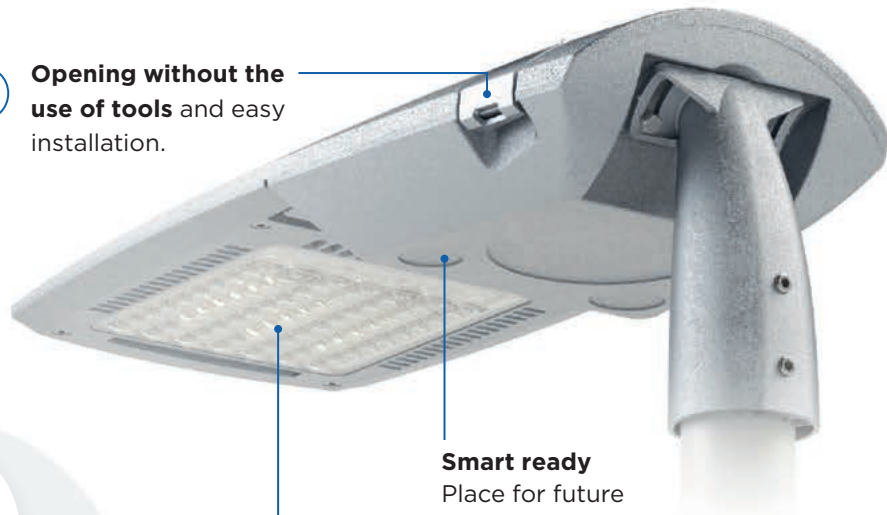
10.5

Pole size up to 76 mm

CCL outdoor LED luminaires



Opening without the use of tools and easy installation.



Smart ready

Place for future add-ons - surveillance devices, antennas, sensors, radars, etc.

UV-resistant plastic with outstanding outdoor properties.

1

Enables easy access for on-site maintenance or it can be removed from the fixtures to repair elsewhere.

2



Waterproof



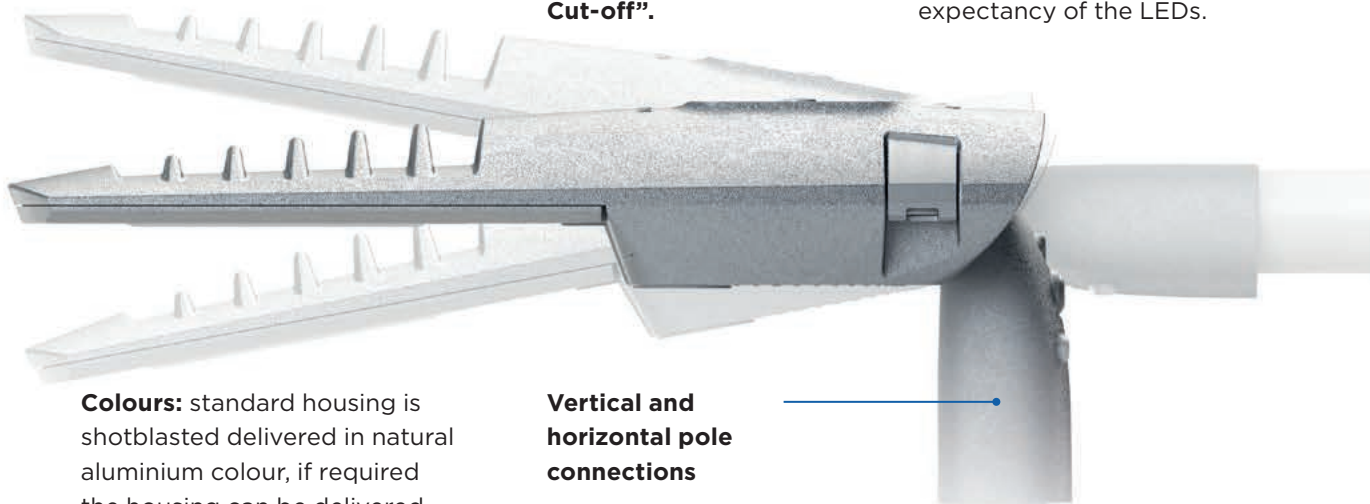
Aluminium alloy casting rust-free and excellent heat conductance.

Cooling fins for surface extension at critical warmth points are also increasing housing stiffness (ambient temp. -50 to 55°C).

Adjustable mounting angle: in 5° steps between 0° and ± 20° adjustable.

The housing enables the achievement of conditions of the **“Dark Sky”** or **“Full Cut-off”**.

Excellent warmth management contributes significantly to the increase of the life expectancy of the LEDs.



Colours: standard housing is shotblasted delivered in natural aluminium colour, if required the housing can be delivered in different powder coating colours.

Vertical and horizontal pole connections

CCL035

CCL100

CCL180

COMMON SPECIFICATIONS

Application	Exterior public lighting, main and secondary roads, cycling and hiking trails	Exterior public lighting, main and secondary roads, cycling and hiking trails	Exterior public lighting, main and secondary roads, cycling and hiking trails
Light classes	ME5, ME6, S3-S6	ME5, ME6, S3-S6	ME5, ME6, S3-S6
Suggested mounting height	4-6 m	6-8m and 8-10m**	10-12 and 12-14m**

PHOTOMETRY

Number of LEDs	12	35	63
Luminous flux	up to 4900 lm	up to 14000 lm	up to 25200 lm
Efficiency	up to 140 lm/W	up to 140 lm/W	up to 140 lm/W
Color temperature	4000K (optional 3000K and 5000K)	4000K (optional 3000K and 5000K)	4000K (optional 3000K and 5000K)
CRI	≥ 75	≥ 75	≥ 75
Optic	Acrylic UV resistant lenses	Acrylic UV resistant lenses	Acrylic UV resistant lenses
Light distribution	Asymmetrically	Asymmetrically	Asymmetrically
ULOR	at inclination 0° equals 0%	at inclination 0° equals 0%	at inclination 0° equals 0%

TECHNICAL PROPERTIES

System power	up to 35 W	up to 100 W	up to 180 W
Power supply	Constant Current	Constant Current	Constant Current
Burden on individual LED	max. 3 W	max. 3 W	max. 3 W
Overvoltage protection	20kV	20kV	20kV
Surge protection	10kA	10kA	10kA
Dimming	Stepless dimming 0-100%*	Stepless dimming 0-100%*	Stepless dimming 0-100%*
Lifetime	over 100 000 h	over 100 000 h	over 100 000 h
Energy class	A+	A+	A+

CERTIFICATES AND STANDARDS

IP	67***	67***	67***
IK	08	08	08

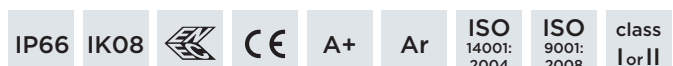
* SmartBox option (ClassicBox with 4 levels of dimming available.)

** with optional optics

*** Light module, complete luminaire 66

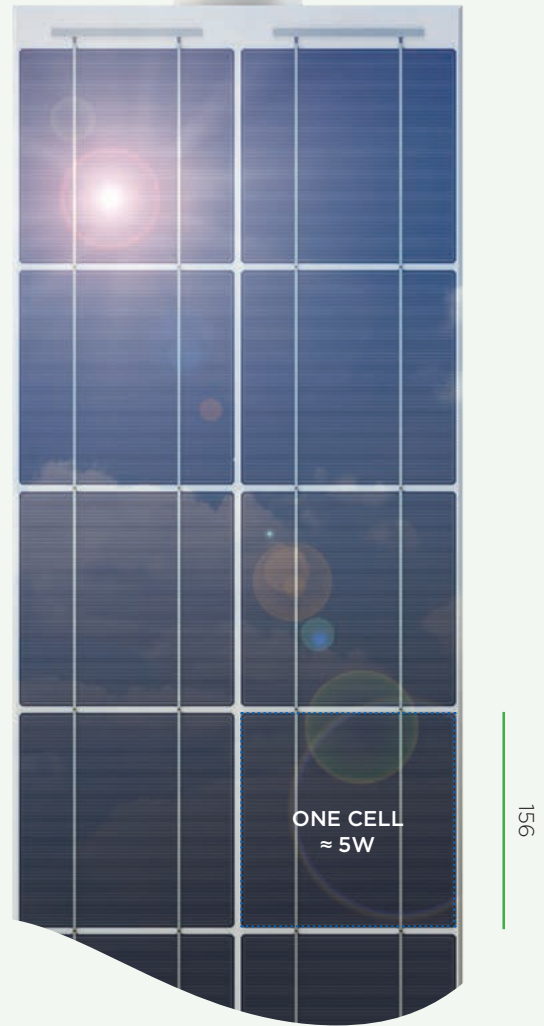
STANDARD REQUIREMENTS

CE characterization / EMV guide lines / Photobiologic reliability (Riskclass 1)



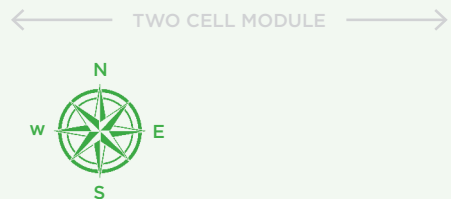
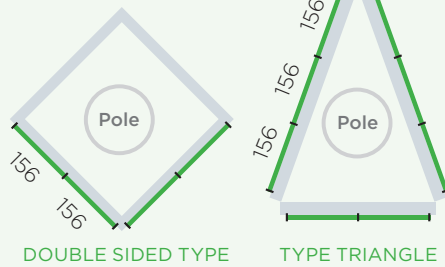
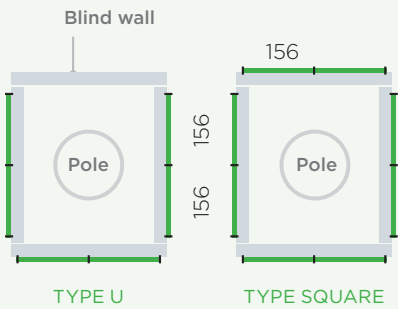
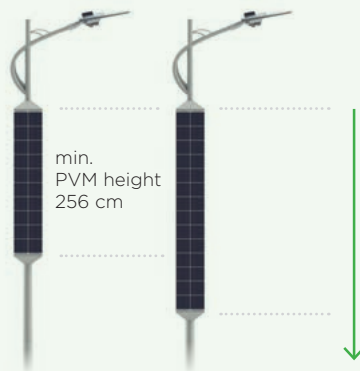
All-in-one Solar Street Lighting System

All-in-one Solar Street Lighting System from LUMENOVA is the most flexible and reliable solar system on the market. It will capture the energy from the Sun, store it in a battery, convert it to light and provide additional services (access to the Internet, video surveillance, environment monitoring and more) as well.



PHOTOVOLTAIC MODULE

Modular design for incredible flexibility (300Wp - 800Wp).



A UNIQUE SMART SOLAR TECHNOLOGY

- System for optimal energy storage for longer lifetime of batteries.
- MPPT solar charge controller for optimal battery charging.
- Remote monitoring and communication.
- Multi-phase night schedule combined with radar sensor for completely adaptive lighting and no blackouts.



INTELLIGENT - POWERFUL - SUSTAINABLE



LED LIGHT UNIT

High-performance, energy efficient LED light unit. Worldwide Nr. 1 All-in-one, gas filled, modular system for unique resistance to extreme climatic conditions.

SPECIALLY DESIGNED to smoothly slip water and dust down.

SELF-CLEANING GLASS

High-efficiency crystalline cells.

MODULAR CONCEPT

of vertically mounted PV modules installed in a special frame.

VERTICALLY MOUNTED

PV modules for easy cleaning and highest stability.

POLE & CROSSPIECE

Total height between 5 and 12 meters for a wide range of different lighting situations.



DESIGNED FOR SUSTAINABILITY

New features could be added to the system now or any time in the future. Hardware and software could be easily upgraded or replaced.



BATTERIES

Wide range of Li-ion and NiMH batteries to store energy anytime & anywhere. Our solar lighting experts will find the most suitable solution for each concrete situation.



MODULAR CONCEPT OF BATTERIES

LAMP POWER

			35W	50W	75W
Autonomous days	10hr per day LED light consumption (Wh/day)		350	500	750
	System losses, controller and standard accessories - 20% (Wh)		70	100	100
	Total consumption of system (Wh/day)		420	600	900
Battery capacity requirements (Wh)			1180	1680	2500
2 days	Variants	PV Orientation	PV generation (worst month)	Battery capacity (Wh)	
	U2=2x170W	SW, SE	660Wh/day	3x512Wh=1530Wh	✓ ✗ ✗
	U3=3x170W	S, E, W	1050Wh/day	4x512Wh= 2050Wh	✓ ✓ ✗
	S4=4x170W	S, E, W, N	1250Wh/day	5x512Wh=2560Wh	✓ ✓ ✓
Battery capacity requirements (Wh)			760	1080	1620
1 day	Variants	PV Orientation	PV generation (worst month)	Battery capacity (Wh)	
	U2=2x170W	SW, SE	660Wh/day	2x512Wh=1020Wh	✓ ✗ ✗
	U3=3x170W	S, E, W	1050Wh/day	3x512Wh=1530Wh	✓ ✓ ✗
	S4=4x170W	S, E, W, N	1250Wh/day	4x512Wh=2040Wh	✓ ✓ ✓

Maximum Power Point Tracker / 10 hr per day autonomy / Also for luminaires with higher power. Proportional with increasing of PV panels.

Athina

Athina combines customized value added services with an embedded invisible CCTV system (audio and video) to provide “safety and security ” via the outdoor lighting infrastructure offering the perfect combination of LIGHT (LED), COMMUNICATION (public access and works, system operations, public safety, public database, network management center, etc.) and high tech INFORMATION (control room).

Advantages:

- Embedded invisible IP Camera
- Optimized LED lightning
- CCTV security and analytics



SPECIFICATION OVERVIEW

Main supply	230 V / 50 Hz
High voltage peak protection	10 KV
LED dimming interface	1-10 V
RF comms lighting	868 MHz self healing mesh
RF comms CCTV	RF 1.9 -5.9 GHz
Ambient temperature ta	-25° C / 40° C
Polar extreme version pta	-55° C / 40° C
Tropical extreme version tta	-25° C / 55° C
Load switching	2 Relais 10 A
Redundancy	Light Sensor



Cylindrical L2020

Decorative top mounted luminaire with timeless and elegant design, on request with camera, that it is hardly visible. Light module is filled with inert gas Argon which prevents the oxidation and discoloration of the LED. Control unit as well as camera and LED module can be independently replaced. With SmartBox, you can remotely operate with all control options in the real time.



TECHNICAL PROPERTIES

System power white light module	up to 40W
Power supply	Constant current
Overvoltage protection	20kV
Surge protection	10kA
Dimming	Smart box stepless 0-100%, Classic box 4 levels of dimming
Lifetime	L80/B10, lifetime 100,000h

PHOTOMETRY

Luminous flux	up to 4400 lm
Efficiency	up to 110 lm/W
Color temperature	2500 - 4000 K
CRI	≥ 75
Optic	Acrylic UV resistant lenses
Light distribution	Asymmetrical/Symmetrical

Application: for illumination residential streets, squares, bicycle and pedestrian areas
Suggested mounting height: 4 - 6 m

IP66 CE
 Ar CLASSIC BOX SMART BOX

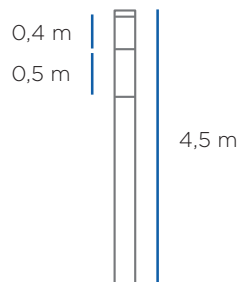
Decorative illuminating column

Column 200 luminaire

Ideal illumination for pedestrian areas, pathways and squares. Sleek design, yet technically sophisticated structure and mounting, that can resist strong forces of wind. R.G.B.W. version has additional light module which can produce any RGB color which emphasizes landscape architecture and thus creates a magical atmosphere all year around.

Application

For illumination residential streets, pedestrian areas, pathways and squares.

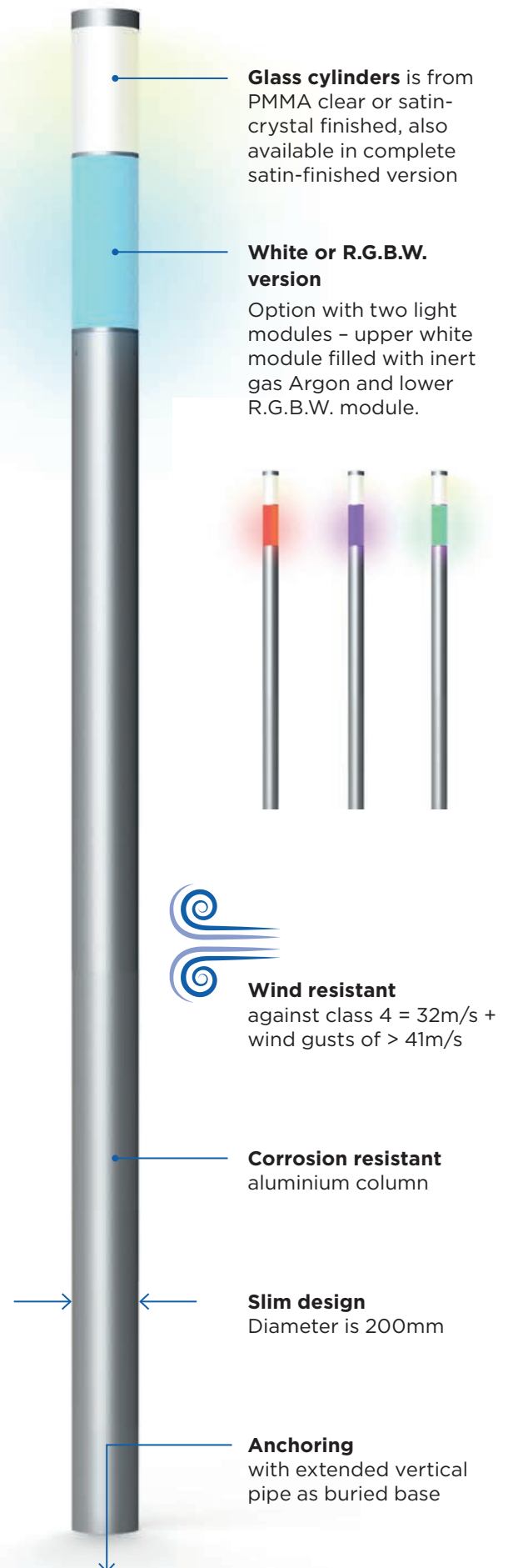


TECHNICAL PROPERTIES

System power white light module	up to 40W
System power R.G.B.W. light module	up to 10W
Power supply	Constant current
Overvoltage protection	20 kV
Surge protection	10 kA
Ingress protection white light module	IP66
Dimming	Smart box stepless 0-100%, Classic box 4 levels of dimming
Lifetime	L80/B10, lifetime 100,000h

PHOTOMETRY

Luminous flux	up to 4400 lm
Efficiency	up to 110 lm/W
Colour temperature	2500 - 4000 K
CRI	≥ 75
Optic	Acrylic UV resistant lenses
Light distribution	Asymmetrical / Symmetrical



Outdoor catenary LED luminaires

CCH

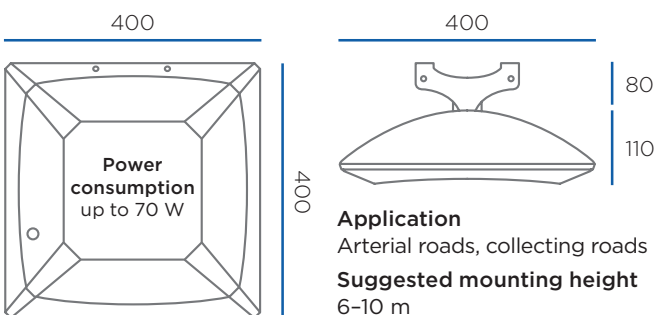


This durable and high performance LED luminaire is a great street lighting solution made for central suspension with stainless steel cable attachments. With built-in IR for motion detection this luminaire enhances city safety and supports energy savings.

Aluminium alloy housing is chemically pre-treated and painted with powder coating that enhances the durability and allows for individual colour choice. Design enables future add-ons of sensors, antennas etc. and its one-sided opening grants easy access.

PHOTOMETRY

Number of LEDs	up to 36
Lifetime	> 100 000 h
Colour temperature	4000 K (optional 3000 K and 5000 K)
Lighting current	max. 8800 lm
Colour rendering index CRI	≥ 75
Optic	Acrylic UV resistant lenses
Light distribution	asymmetrical or symmetrical



STANDARD REQUIREMENTS

CE characterization / EMV guide lines / Photobiologic reliability (Riskclass 1)

Decorative facade LED element

Qbiss One



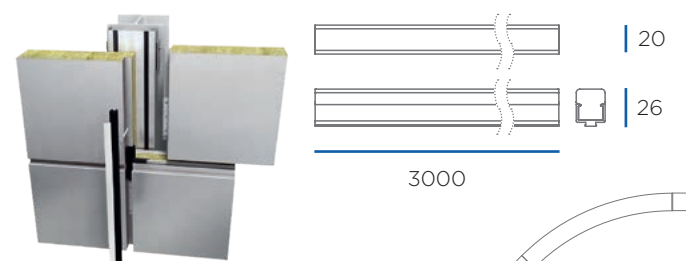
Qbiss One Lighting solution is a pre-fabricated element with integrated LED lights. Low-energy, efficient and long lasting the LED lights are available in a wide spectrum of colours and hues for the greatest number of applications. Modular and integrated Qbiss One elements for seamless integration and esthetics. The LED lights can be installed in both horizontal and vertical joints for creative as well as functional possibilities. Qbiss One Lighting is the result of collaboration of Trimo and Lumenova.

PHOTOMETRY

Lifetime	> 100 000 h
Colour temperature	white 4000 K (optional 3000 K and 5000 K); other colours available

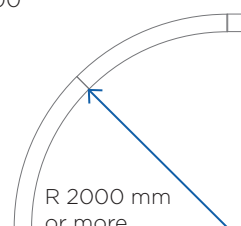
ELECTRONIC

Power consumption	2-3 W/m'
Energy efficiency class	A+
Operational voltage	24-27 VDC



STANDARD REQUIREMENTS

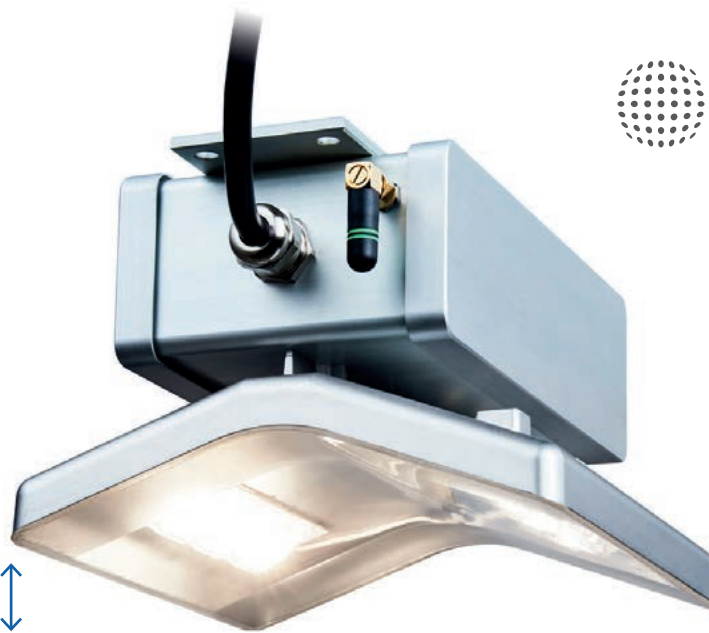
CE characterization / EMV guide lines / Photobiologic reliability (Riskclass 2)



Garage LED luminaires

CCG

For illumination of surfaces with a low installation height. Suggested mounting height: 2.5-5 m.



Efficiency
up to 83 lm/W

LED lifetime
> 100.000 hours

Filled with
argon

← Uniform illumination and wide light distribution. →

State-of-the-art design combined with state-of-the-art LED technology characterizes the product “CCG”. This is the ideal solution for the lighting of indoor and outdoor areas with low construction height, such as underground garages, car parks, etc. The “CCG Smart” is designed for the efficient lighting of parking areas, wherever there is an increased need for security.

The additional, special filling of the light housing with inert gas (argon) prevents condensation inside, and therefore a longer life of the LEDs can be guaranteed. The SLC core chip is integrated into the “CCG” light. This allows the user to read out the energy data and to dim 0-100%. The wireless data transmission provides the convenience of a simple operation for various application settings and presets. The “CCG Smart” is also available with optional motion sensors.



Application

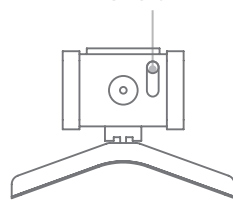
Underground parking, parking garage, porch roofs, logistic centers, warehouses and factory workshops

Housing with integrated power supply unit and SLC-core chip



163

Smart link



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TECHNICAL PROPERTIES

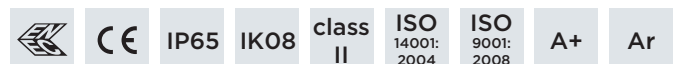
System power	35W at max. lighting current
Power supply	90-290 VAC; 47-63Hz
Burden on individual LED	max. 5.8 W
Reduction possibility	Continuous dimming 0-100%
Overvoltage protection	up to 3.75 kV, optional up to 10 kV
Connecting cable	Type H07 with 4 wires, L= 250
Lifetime	> 100.000h
Energy class	A+

MECHANICAL PROPERTIES

Housing	Aluminum alloy, with a cover out of PMMA, hermetically sealed, filled with argon
Protection class	IP 65
Mechanical durability IK	08

PHOTOMETRY

Number of LEDs	6
Luminous flux	up to 2900 lm
Efficiency	up to 83 lm/W
Colour temperature	4000 K (optional 3000 K and 5000 K)
CRI	≥ 75
Optic	6 lenses
Light distribution	asymmetrically
Photobiological safety	Class 2



Measuring the stability of masts

LumaVibe

The measuring process shows reproducibly and without damage the stability of masts due to the respective load and positional security. All loads, particular attachments, material and integration of the mast are taken into account.

This happens individually according to the material-dependent requirements, e.g. according to VDE 0210 (requirements for overhead lines) and DIN EN 1991-1-4 (wind loads) tamper-proof and document-proof.

The static properties are determined from the recordings of the maximum vibrations and then the head point shift due to external influences and additional mast loads are calculated and evaluated. The actual system properties are taken into account and the respective damage is derived.

The measuring method for checking the stability of masts is a reproducible and damage-free testing and measuring method that essentially obtains a wide range of information from the vibration measurements and thus makes a scientifically reliable statement about its stability and predicted service life. Specifically, this is done by integrating the measuring device into the luminaire.

The monitoring of the masts base of an accredited procedure that has been tried and tested over many years and has been validated many times. The accelerometer integrated in the luminaire is designed as a sleeper and is woken up at certain frequencies triggered by the wind in order to measure the stability



LumaVibe I for installation in the luminaire

LumaVibe II for installation on the luminaire

Vibration measurements

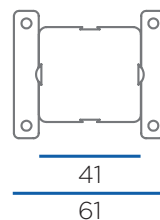
LUMAVIBE PROTECTING YOU WITH WARNINGS BEFORE THE POLE WILL BE BROKEN

Stability detection

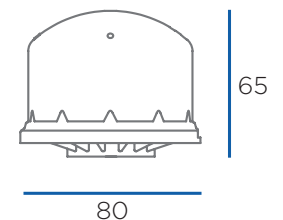
at the time of the excitation. As long as the results are within the normal range, no measurement data will be transmitted to the operator or agent.

If the frequency deviates in such a way that it has to assume that the system is not secure, a message is sent to the operator either in the form of an email or via a visual traffic light (green-yellow-red).

LumaVibe I



LumaVibe II



PREVENTS DAMAGE

REDUCING COSTS

INCREASING SAFETY

AND CONSEQUENTLY SAVING LIVES

THE ADVANTAGES

1. The traffic safety obligation is fulfilled at all times.
2. The operator can selectively visit the damaged masts and repair or replace them.
3. The operator has a daily overview of the status of his network and the corresponding effort that he must make to ensure the functionality of his network.
4. The operator saves personnel who previously had to start up and check the mast systems. He also saves storage- / investment-costs for materials and equipment.
5. The operator can summarize the process with Smart City modules and call up all data for this mast and the luminaire via a global app.
6. Depending on the number of masts to be measured, the costs for this system will be cheaper in a kind of flat rate than the current costs for network maintenance.

Ambient sensing for smart cities

Lumenova Sense

Lumenova Sense is sensing platform to measure ambient quality indicators in a simple and scalable way. Cities worldwide are concerned about air quality, noise levels, congestion and its impact on both health and quality of life. We enable both governmental and private stakeholders to measure and benchmark the environment they live in.



SENSING AS A SERVICE

We offer a fully managed IOT cloud service allowing you to monitor, benchmark and analyse a wide range pollutants, sounds and particles in real time. It is pre-integrated to our custom built rugged sensor modules as well allows easy interface to existing ones. We focus on extracting insights, providing realtime alerts and recognising patters.

A WORLD CLASS IOT PLATFORM

Lumenova Sense is built on a modern cloud enabled Internet of things platform offering rich features and versatile data models. Lumenova Sense utilises the full power of cloud computing and offers a highly scalable solution to crunch extremely large data sets.

THE LUMENOVA SENSE ARCHITECTURE

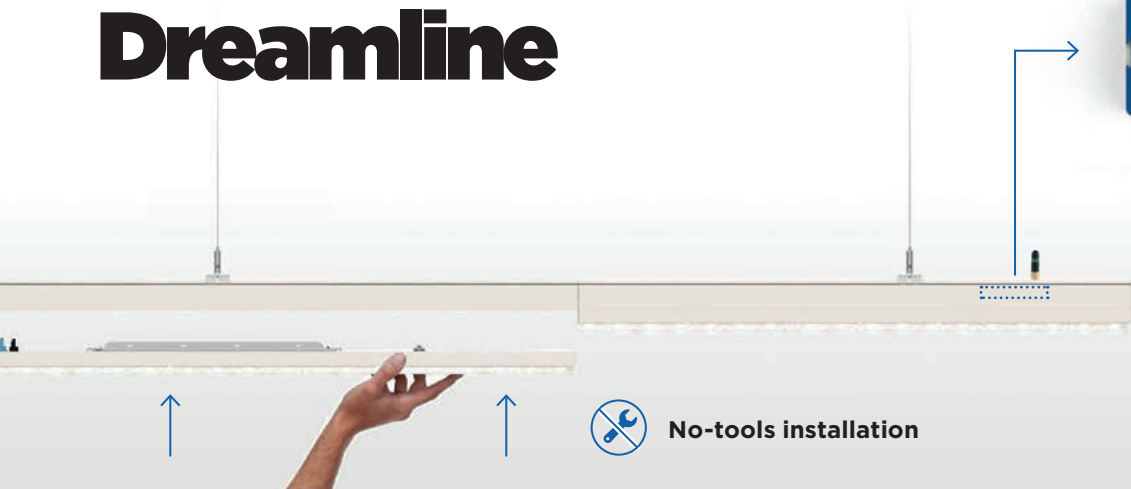
Our system is design to integrate a range of industrial gas sensors like NO₂, NO, CO, CO₂, SO₂ etc along with PM1, PM2.5 and PM10 particle which are connected via our extensible hardware gateway. Our data model is highly scalable and offers an IP based control, monitoring and calibration system.

AN ADVANCED ANALYTICS MODEL

Lumenova Sense offers a sophisticated front end - web based tool for you to measure, compare and analyse the data. We offer both real time analytics - to connect to alarms and remote triggers as well as historic analytics to look for patterns and tendencies.

Category	Lumenova Sense
Accuracy	PPB
Target parameters	NOx, CO, SO ₂ , PM1, PM2.5, PM10
Power consumption	With battery backup
Enclosure	Small, self-contained and mounted on a pole
Portability	Easy to move around and change location - 10 min setup
GPS	Available and useful to monitor location automatically if deployed mobile
Operational expertise	Any electrician can install it in 10 minutes. Once installed, the device is ready to work
Software infrastructure	Ready to use cloud software. Open API and data connectivity
Maintenance	Hard maintenance required once a year. Continuous fault detection can be employed for verifying data quality.
Software integration	Pre integrated via GSM network (3G)

Dreamline

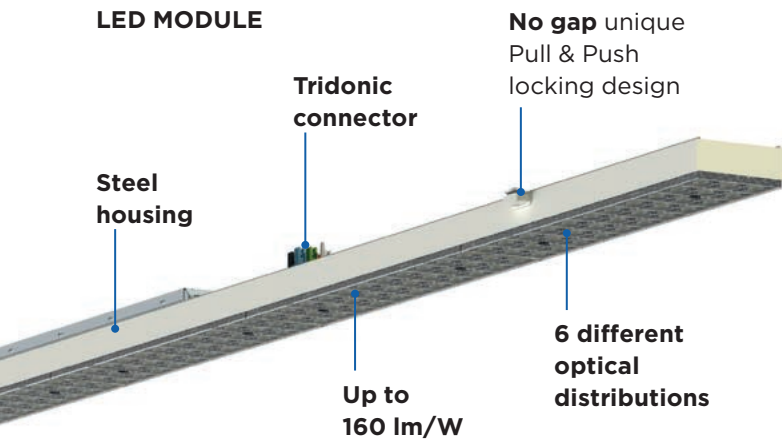


Make the luminaire **SMART** and improve its functionality with the SmartBox. Use SmartBox and antenna with Dreamline lighting, or integrate it in your existing luminaire.

DREAMLINE is an innovative LED lighting system for trunking, which provides optimized lighting application solutions for the hypermarket, shopping mall, chain-store and supermarket industry, as well as for warehouse, education and industrial applications.

The system comprises of **trunking rails, modules** and **accessories**. The trunking comes in pre-wired sections that provide power and control signals to the lighting modules. Modules are split into 2 types: modules for lighting and modules for other functions. The system also incorporates live-feeds and end-stops, various suspension and surface mounting kits, as well as L,T&X node connectors for multi-directional connection.

LED MODULE



TRUNKING RAIL

DREAMLINE requires minimal wiring joints compared to the installation of individual luminaires. This can drastically reduce labour costs and efforts. Mounting rails are available in 1.2m, 1.5m, 2.4m or 3.0m length to be selected according to spatial and configuration requirements.

TECHNICAL PROPERTIES

Model	With difusser	With lenses
Length	1437 mm	1437 mm
Material	Steel	Steel
Product Size (L*W*H)	1437x65x27 mm	1437x65x27 mm
Power	max. 73 W	max. 75 W
Voltage	100-220 VAC 50/60 HZ	100-220 VAC 50/60 HZ
Efficacy	up to 160 lm/W	up to 160 lm/W
PF	> 0.95	> 0.95
CRI	> 80	> 80
Colour temperature	3000-6000K	3000-6000K
Weight	2.2 kg	2.2 kg

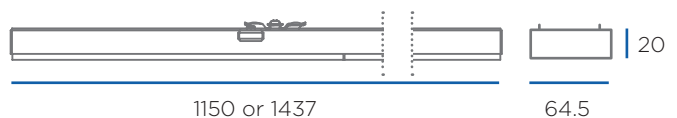
Up to 200 m total distance



INTERCHANGEABLE LUMINAIRE



ACCESSORIES



Worldwide Nr. 1 retrofit LED luminaire

Ecclesia Lux



The ECCLESIA LUX retrofit bulb is a special development for high ceiling buildings, originally designed for churches and cathedrals aiming to illuminate inside their sacral buildings. It can convert existing lighting systems with improved technology and keep historic antique fixtures unchanged at the same time. Small but powerful unit, it will deliver up to 5.000 lumen and will give light designers or individual users a great variety of design options.

The ECCLESIA LUX will keep buildings magnificent, significantly cut energy usage, reduce costs and at the same time increase the light output. With much longer lifetime in compare to traditional lights, no maintenance will be needed for years.



Nr. 1 retrofit bulb



LED illumination

> 100.000h

Lifetime



No glare and UV



Much lower maintenance costs



High savings on energy costs, CO₂ emissions reduction

TECHNICAL PROPERTIES

Power	50 W (Supply voltage AC 230 V)
Number of LEDs	104
Colour temperature	4000K
CRI	≥ 80
Luminous flux	5000 lm
System efficacy	100 lm/W
Beam angle	120°
Power factor	0.94
Dimensions	189.3 x 152.6 x 152.6 mm

1.9

class II

A+

CE

Ambient luminaires

Ocean & Lake



Innovative design of reflective LED lights Ocean and Lake embodies our design philosophy – reflective light. It is an ambient showpiece that feels right at home, in a living room, next to a bed or in professional areas like an office or a hotel. Controlling made easy with touch gestures and charging possible with power cord or rechargeable batteries option.



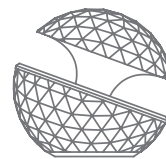
Control the light with touch gestures

Its light can be dimmed, intensified, switched on or off with fun hand gestures or taps.



Two options available: charging with power cord or rechargeable batteries option (7h autonomy).

Ocean
polygonal surface



Lake
smooth surface



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Premium packaging



Custom options





member of VIP-VIRANT group®
Lumenova®
new ideas for light

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