# GREENIED INDUSTRY

**CATALOGUE 2016-2017** 

For further information: www.greenledindustry.com Data subject to change Printed in 2016

#### **GREENLED INDUSTRY**

### AN ITALIAN SUCCESS STORY



Has its origins in a research project carried out by the company TSI SrI that develops innovative LED luminaires. The heart of this appliance "beats" in a different way and allows to a well-established lighting system to achieve excellent performances.

The TSI research project has soon turned into a real industrial project, the small research company was taken over by Business Italeaf Spa, the holding company listed on the Nasdaq on the Stockholm exchange that is now holding the majority stake of Terni Energia SpA, a leader in the sector of energy in Italy.

In 2012, from JV, the fusion of TSI and Italeaf gave birth to Greenled SrI that, thanks to the financial resources of Italeaf SpA, received the capital required for the development of its first product. Now, that innovative beating heart is surrounded by further lighting technologies able to guarantee duration and operation in extreme conditions.

In 2013, the company was pushed further by changing its face with new industrial products under the brand Greenled Industry SpA. They can be applied in the most extreme conditions: steelworks and glassworks, thus showing that real performances can even exceed the laboratory ones.

From then on, a series of successes followed one another: thanks to an internationalization process, the company of Italeaf has opened its international sites in London and Hong Kong and maintained its productive factory in the Green Heart of Italy. Greenled Industry, a well-established company on the national and European market, has recently opened a new production plant in Novara, with the development of product lines known as Office, Commercial and Torri Faro.

Thanks to the acquisition of new know-how, continuous research and development of new technologies, today the product range offered by Greenled Industry is able to meet all the lighting needs of industries and the service sector, thus achieving a leading position in the most extreme applications of the LED technology.





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LÙMINO URBAN RELAMPING KIT









SATURN **MERCURY GEMINI IPANEL** 









# THE HISTORY OF THE LED

LED stands for Light Emitting Diode, a semiconductor diode able to generate instantly a light radiation with the passage of electrical charges. After several years of experimentation, the Power LED was developed: a particular type of diode, powered by higher driving currents than a traditional LED (> 700mA), which allows to dissipate in a more efficient way the heat produced by the light source making it especially appropriate for professional applications or high level lighting. This technology and a strong spirit of experimentation gave life to the Greenled Industry products, leaders in the sector in terms of long lifetime and extreme applications.



# HOW TO CHOOSE A LED LUMINAIRE?

#### LUMINOUS EFFICIENCY (Lm/W)

The REAL light output compared to the energy consumed is the first assessment parameter for a luminaire. The plate data are in fact less important than the real consumption measured as a function of the yield of lumens.

### OPERATING TEMPERATURE RANGE

Many LED luminaires stop working in extreme working conditions, such as high or low temperatures. It is in these very conditions that the use of heat-sinks and the driving currents of the power supplies start to make a difference.

### ENERGY CONSUMPTION DURING THE SERVICE LIFE

The real system luminous efficiency, together with the lifetime of the lamp, are the real values that you buy when you choose a LED luminaire. The economic benefit can be easily calculated by multiplying the savings obtained from every hour of power on, compared to the traditional technology, for the useful life of the luminaire itself.

#### WARRANTY

Today, all producers of LED luminaires like to say that their luminaires have a lumen maintenance equal to 50,000 hours. Yet, how many of them can achieve 150,000?

As a matter of fact, this is the main parameter to be taken into account when choosing a new lighting system, otherwise that will only be true theoretically.

### CERTIFICATIONS

**CERTIFICATION UNI EN ISO 9001:2008 "Quality Management Systems"** 

**CEI EN 62471** Photo-biological safety for lamps and lamp systems

CEI EN 55015 Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment and of similar equipment

**CEI EN 61000-3-2** Electromagnetic compatibility (EMC) – Part 3-2 Limits – Limits for harmonic current emissions (input current equipment <=16A per phase)

**CEI EN 61000-3-3** Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limits for voltage variations, voltage fluctuations and of the flicker in low-voltage supply systems for equipment with rated current <= 16A per phase and not subject to conditional connection

**CEI EN 61000-4-2** Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques - Immunity tests with discharges of static electricity

**CEI EN 61000-4-3** Electromagnetic compatibility(EMC) – Part 4-3: Testing and measurement techniques – Test of immunity to electromagnetic fields to electromagnetic radiation

**CEI EN 61000-4-4** Electromagnetic compatibility(EMC) – Part 4 - 4: Testing and measurement techniques – Test of immunity to transients/ fast electrical pulses

**CEI EN 61000-4-5** Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Test of immunity to pulse

**CEI EN 61000-4-6** Electromagnetic compatibility (EMC) Part 4-6: Testing and measurement techniques – Immunity to disturbances conducted, induced by radiofrequency fields

**CEI EN 61000-4-11** Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Tests of immunity to voltage dips, short interruptions and voltage variations

CEI EN 61547 Equipment for general lighting purposes – EMC Immunity prescriptions

CEI EN 60598-1 Lighting equipment - Part 1: General prescriptions and tests

**CEI EN 60598-2-3** Lighting equipment – Part 2-3: Special prescriptions – Road lighting equipment

**CEI EN 60598-2-3/EC** Lighting equipment- Part 2-3: Special prescriptions- Lighting equipment

**CEI EN 62031** LED modules for general lighting purposes – Safety specifications

**CEI EN 61347-2-13** Lamp control gear. Part 2-13: Special prescriptions for electronic supply units supplied by direct or alternating current for LED modules

CEI EN 60529 Degrees of protection provided by enclosures (IP code)

**UNI EN 13032-1:2012** Light and lighting solutions – Measurement and presentation of photometric data of lamps and luminaires – Part 1: Measurement and file format

**Directive 2004/108/CE** DIRECTIVE 2004/108/CE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of February 11th 2004 regarding the approximation of the laws of the Member States, related to the electromagnetic compatibility and repealing directive 89/336/CEE.



### Letter from the President

Dear Customer,

the catalogue you are about to read is not just a conventional technical and institutional catalogue to which you have been quite probably used so far. We have been presenting you our company, our history, a brief overview of the LED world and our quality certifications, which is all quite normal, let me say, or even trivial.

What you are going to see now are instead our FLAGSHIPS, the way we make a difference on the market, the best possible use that we can make and the added value we can bring to our customers and their companies. From this page on, you can understand what buying a Greenled Industry product means, not just any LED ceiling light.

Besides the technical features of our products and services useful to your work described in the following pages, in every technical file of our catalogue, you'll find:

#### **WARRANTIES**



Thanks to the type of components used and to the top design, Greenled Industry can guarantee a duration of its luminaires higher than 3 times compared to the market standard. Besides the product warranty, Greenled Industry is able to guarantee a light efficiency performance higher than 80% with up to 150,000 hours of power on.

#### **ECONOMIC SAVINGS**



Thanks to the Greenled Industry warranties, when you choose one of our products, you are actually buying a GUARAN-TEED SAVE. If you compare the lumen yield of a Greenled ceiling light with a traditional ceiling light, you will see that in order to generate the same amount of light, at least 50% less of energy will be consumed. If you multiply this save by the SERVICE LIFE GUARANTEED of the appliance, you will find out how much saving we are buying with the selection of a Greenled Industry product.

#### REAL LUMEN/WATT RATIO

What is often reported in the catalogues on the market are the plate "data" of the marketed products. Many companies market products coming from Eastern Asia without even checking if these data are real. If you buy a Greenled Industry product, you can be sure that the ratio between the light output and energy consumption is actually the one stated, measured in a laboratory with the right advanced instruments.

#### OPERATIONAL TEMPERATURE RANGE



Before being marketed, all Greenled Industry products must pass a very strict validation stage.

From design to sale, up to 18-24 months can go by, during which our products are tested both in a laboratory and in the most extreme use conditions, where they undergo the strictest tests. The temperature range reported in the catalogue does not result from the laboratory tests but from REAL tests.

### **TECHNOLOGY**

In the Green Heart of Italy, the beating heart of all Greenled Industry luminaires was developed. In our laboratories, advanced technologies have been developed and patented that allow us to beat the main competitors in terms of light output, consumption and duration.

These are our secret ingredients:

#### ITR PERFORMANCE DRIVER

Built-in energy storage for the line "Industrial", designed to be exclusively used for supplying power LEDs. Thanks to the design technology of the double-sided PCS, to the use of electronic components with an extended temperature range and the lack of electrolytic capacitors, the storage guarantees high standards in terms of efficiency and duration, with more than 150.000 hours of operation in extreme environments.

The energy storage module is provided with two independent protections against short circuits and excessive power absorption, such protections prevent from any breakage and guarantee the operation once the errors have been eliminated.

#### **ULTRA STRENGHT SYSTEM**

The innovative design of the systems "Industrial" consists in using a high heat dissipation resin in which all the electrical and electronic components are plunged.

Such a process avoids the need to use glass and allows an efficient heat dissipation guaranteeing at the same time maximum efficiency, duration and strength to shocks and vibrations, as well as total protection against dust and water, by ensuring also the electrical isolation of the equipment.

#### ITRPLED CONTROL SYSTEM

The luminaires can be provided with remote control functions, as well as with the possibility to regulate the luminous flux integrated in the remote control system. If requested by the customer, luminaires can communicate among each other through a new wireless ZigBee technology.

The ZigBee technology is based on radio connection with 2.4 GHz ISM band, thus overcoming all problems related to traditional analog and/or digital cabling; the ZigBee solution allows to reduce installation costs and guarantees higher reliability of the luminaire. The functions implemented in the remote control are:

- 1. **Constant maintenance of the brightness** through the automatic management of the LEDs (recovery of 1% every 12 months);
- 2. **Automatic dimming** of the brightness according to semi-static calendar. The possibility of changing dimming (optional) from remote control and/or a laptop is also provided;
- 3. **Executing commands** (Power on , power off, partialization) sent from remote center;
- 4. **Operational data detection** (Voltage, Current, Temperatures, Worked Hours) to be communicated day by day to the remote center;
- 5. Self-testing and automatic sending of alarms to remote center in case of partial/total malfunction;
- 6. **Total operational autonomy from the remote center**, it can work correctly with the parameters set in the factory also in case of absence of communication (in this case, only telemetry and management of the ON/OFF function as per calendar) are excluded.

### **SERVICES**

Nowadays, a product company cannot only take care of the product, that's why Greenled Industry completes its line with two important services for LED technology:

#### FINANCE CARE SERVICE

Greenled Industry allows you to get profits out of your lighting appliance through financing solutions that combine efficiency-related savings and profits.

Thanks to agreements with the main Bank Institutes and Operating Leasing Companies, Greenled Industry provides its customers with the customized financing solutions able to support the final customer's needs.

In times as the one we are living when liquidity means to a company as much as oxygen to human beings, being able to innovate without resorting to one's own financial resources is the base for an excellent investment.

For this very reason, Greenled Industry has defined two support lines:

#### **Operational leasing**

With this solution, the final customer can have design, supply and installation of the new collection of turn-key lamps without having to worry about the financial resources required. Moreover, thanks to a service of O&M and all-risk insurance, the investment has no technological risks. The initial cost will be divided in constant monthly **customized instalments**, so to be totally covered by the energy savings obtained. Moreover, the fee may be completely deductible for Irap tax purposes and the costs incurred will have no impact on the company's balance sheet.

#### **Third-party financing**

For bigger interventions, customers can avail themselves of primary partner ESCo, allowing to upgrade the lighting plant at no cost. The ESCo will invest directly, by financing the whole intervention thus guaranteeing its own gain on the investment thanks to the energy savings obtained. The savings obtained are calculated and paid back with a guaranteed result by ESCo.

The final customer could benefit from a turn-key solution that includes the supply, design, installation, maintenance and financing of the appliance, all without any risk for its activity. This solution will also give the opportunity to obtain Energy Efficiency Certificates, the so-called White Certificates, trying to further optimize the operation profitability.

#### PROJECT CARE SERVICE

A well-conceived lighting project can contribute enormously to the comfort and quality of the environments and allows to obtain important efficiency results.

Our Design Office, composed of a staff of experts with high multidisciplinary skills is able to design and make appliances that guarantee efficiency, lighting and safety of the environments. Starting from the analysis and the characteristics of the place and objects to be illuminated, we develop a customized product by defining the number, type, power, distribution of the light sources required to achieve the result desired by the customer.

The technical evaluations, developed through the use of the lighting simulation software, specific to the levels of lighting, the luminance and homogeneity of the luminous flux required, help establish the best distance between the light sources, the energy consumption and the luminous efficiency of the appliance. There is also the possibility to implement the system through remote control and dimming of the luminaires based on specific needs. We give you a fast design of the solution to guarantee a top quality result.

### REFERENCES

Greenled Indyustry offers Made in Italy LED lighting solutions that provide superior performance, reliability and durability to illuminate industries and public spaces.

With Greenled Industry solutions our customers dramatically reduce the cost of lighting, increase the quality of the environments and slash their carbon footprint.

For further information please visit our website www.greenledindustry.com

























### WHY GREENLED INDUSTRY?

We offer the most efficient lighting solutions combining a deep understanding of customers needs with our high expertise in lighting projects.

Greenled Industry is one of the few companies able to offer LED lighting solutions for industrial environments with extreme conditions such as foundires, glass works, cement plants, paper works, characterized by high and low temperatures ( $-40^{\circ}\text{C} + 75^{\circ}\text{C}$ ) and high concentration of dust and humidity. In this environments traditional and also LED lighting systems are not able to guarantee the energy and lighting performance.

With our continue innovation focus and high-quality materials, we are able to offer excellent products and superior performance.

Our goal is to improve the lives and well-being of people both in industrial and public environments, ensuring safety and comfort in every space.

#### 6 REASONS TO CHOOSE OUR LED LIGHTING SOLUTIONS

#### 1 ENERGY EFFICIENCY

The best LEDs and drivers to provide maximum luminous flux with minimum power consumption

#### 2 QUALITY

Selected components, made in Italy products ensuring reliability and durability

#### 3 STRENGHT

Robust and resistance lighting fixtures, even in extreme environments

#### 4 INTELLIGENCE

Through intelligent lighting control systems and occupancy sensors you can make the light smartand functional to the specific needs, while reducing further energy and maintenance costs

#### **5** PAYBACK

With our lighting solutions payback time results very fast, reducing TCO (Total Cost of Ownership) of the entire lighting system.

#### 6 FLEXIBILITY & CUSTOMIZATION

Greenled Industry offers a comprehensive range of solutions for industrial and public environments that meet each specific customer need, with the option to customize the luminaires according to the need.







#### **FEATURES**

- > High luminous efficiency
- > Excellent thermal performances
- ➤ Appropriate for industrial contexts with extreme temperatures (-40° C/75°C), humid and dusty conditions (IP67)
- ➤ Reduced decrease of the luminous flux (L/70)> 150.000 h
- ➤ Wide range of photometric symmetrical curves
- > Photo-biological safety group 0 (N.a.)
- ➤ Wide range of models
- > Ceiling, wall or suspended installation

#### **APPLICATIONS**

- > Environments for metal working and transformation
- > Foundries, mills
- > Glassworks
- > Cement plants
- > Farms
- > Plants
- ➤ Warehouses and refrigerating rooms
- > Lighting of open spaces and parking lots



### VOLTA



#### **FEATURES**

ILATORES							
	VL-55	VL-76	VL-102	VL-118	VL-152	VL-178	
Luminous flux 5000K (lm)	7.173	9.563	12.432	14.345	18.649	21.518	
Power Consumption (W)	55	76	102	118	152	178	
Power Factor (cos Fi)			≥0	1.9			
Operating Voltage(V)			AC100	)~240			
LEDs number		<b>24</b> CREE	power led		<b>36</b> CREE power led		
LEDs current (mA)	0750	1.000	1.300	1.500	1.300	1.500	
Photometric curves		FWHM 60° - FWHM 90° - FWHM 30°+106°					
Color Temperature CCT (K)		4000K/5000K / 5700K					
CRI		>75					
LifetimeL70)	150.000h						
Operating temperature		-40°C/+75°C					
Rating	IP67						
Material	Anodized aluminum- Staniless Steel						
Cable Lenght (m)	2						
Installation	Mounting bracket						
Dimension (mm)	200x487x205 325x487x205						
Weight (Kg)	7 11						

#### warranty

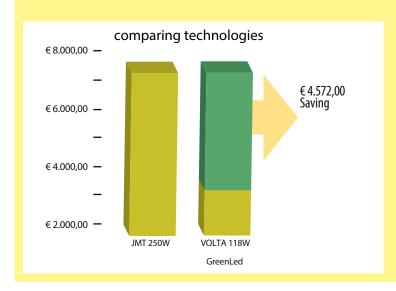
> 10 - YEARS



#### Accessories included

- Mounting bracket
- iTR Performance Driver

#### energy saving



(\*) Potential saving comparing metal halide 250W operating 150.000 hours with energy costs of about 0,18 €/kWh.

#### **CERTIFICATIONS**

CE (Direttiva 2004/108/CE e aggiornamenti)
CEI EN 55015
CEI EN 61000-3-2, CEI EN 61000-3-3, CEI EN 61000-4-2, CEI EN 61000-4- 4, CEI EN 61000-4-5, EN 61000-4-6, EN 61000-4-3, CEI EN 61000-4-11, CEI EN 6547
EN 62471
CEI 60598-1-1, CEI 60598-2-3
CEI 61347-2-13
CEI 62031



















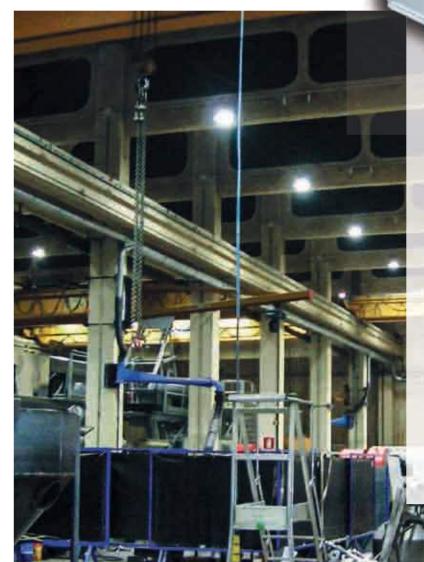








# **MATTEUCCI**



The luminaire Matteucci is the ideal solution for the lighting of industrial productive areas as it guarantees the maximum energy saving with uniform and appropriate illumination levels without shades and with an excellent color rendering, even from high installations. Luminaires reduce dramatically all maintenance costs, as they offer a long life, are robust, have a low rate of fault and resist to shocks and vibrations.

Moreover, luminaires are designed with the innovative feature Ultra Strength System and with no glass which help rapidly clean the equipment, even in areas difficult to reach, thus guaranteeing the correct lighting over the time. The lighting solution Matteucci

contributes to create safer, more efficient and productive work environments thanks to an excellent illumination that makes sure areas are correctly illuminated and comfortable.

#### **FEATURES**

- > High luminous efficiency
- > Excellent thermal performances
- ➤ Appropriate for industrial contexts with extreme temperatures (-40° C/75°C), humid and dusty conditions (IP67)
- > Reduced decrease of the luminous flux (L/70)> 150.000 h
- ➤ Wide range of photometric symmetrical curves
- > Photo-biological safety group 0 (N.a.)
- > Ceiling, wall or suspended installation

#### **APPLICATIONS**

- > Environments for metal working and transformation
- > Foundries, mills
- **➤** Glassworks
- > Cement plants
- > Farms
- > Warehouses and plants
- ➤ Lighting of open spaces and parking lots
- ➤ Roundabouts



## MATTEUCCI



#### **TECHNICAL CHARACTERISTICS**

MATTEUCCI product family	MT-200	MT-238			
Luminous flux at 5000K	24.865	28.690			
(www) Consumption (W)	200	238			
Power Factor (cos Fi)		≥0.9			
Operating voltage (V)		AC100~240			
(aaa) Number of LEDs		48 CREE power led			
Driving current (mA)	1.000	1.500			
(dd) Photometric curves	<b>01</b> : FWHM 60° - 0	<b>02</b> : FWHM 90° - <b>03</b> : FWHM 30°+106°			
(mmmm) CCT (K)	4000 / 5000 / 5700				
Color rendering	>75				
Luminous flux duration (L70)	150.000h				
Working temperature	-40°C/+75°C				
Protection level	IP67				
Material	6063 Anodized Aluminium – Stainless steel				
Standard Cable Length (ml)	2				
(h) Installation type	1: With fixing bracket				
Sizes (mm)	564x487x205mm				
Weight (Kg)	18 kg				

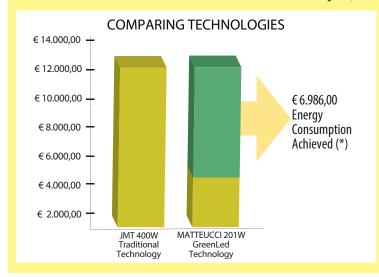
#### **WARRANTY**

> 10 years warranty



#### **ENERGY SAVINGS**

#### SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [150,000 hours]



(\*) Saving potential compared with a 400 W headlamp operating for 150,000 hours, with a constant cost of electricity equal to 0.18 /kWh. The calculation is prudential as it does not include maintenance costs and the wear of the traditional technology.

#### **CERTIFICATIONS**

CE (Directive 2004/108/CE and updates)
CEI EN 55015
CEI EN 61000-3-2, CEI EN 61000-3-3, CEI EN
61000-4-2, CEI EN 61000-4- 4, CEI EN 61000-4-5
EN 61000-4-6
EN 61000-4-3, CEI EN 61000-4-11
CEI EN 61547
EN 62471
CEI 60598-1-1, CEI 60598-2-3
CEI 61347-2-13
CEI 62031





















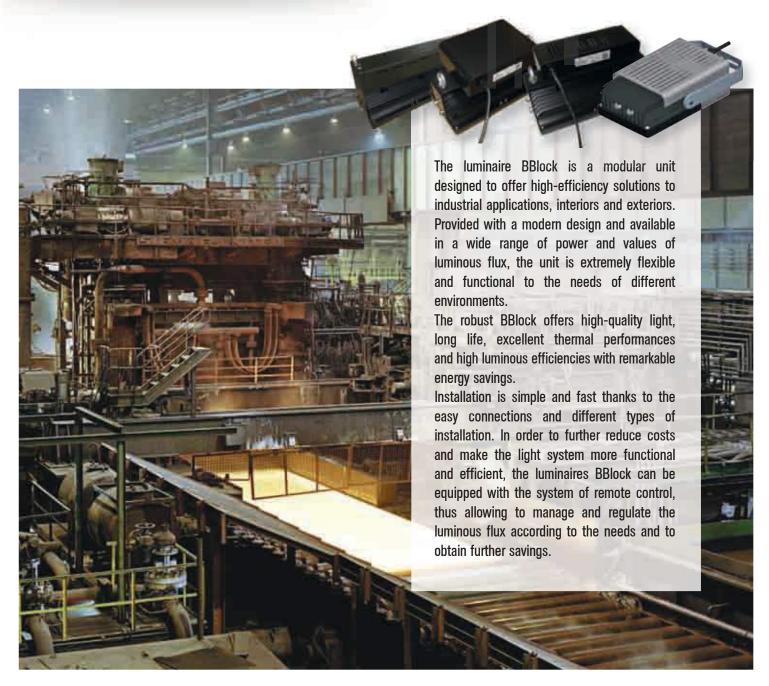








### B BLOCK



#### **FEATURES**

- > IP20 (IP66 on request) and IK08
- > Symmetrical luminous fluxes for the industrial sector Wide
- > range of luminous fluxes
- > High luminous efficiency
- > Energy savings up to 80%
- > Excellent thermal performances
- ➤ Reduced decrease of the luminous flux (L/70)> 100,000 h
- > Photo-biological safety group 0 (N.a.)
- > Available in the models with 1, 2 and 3 modules

#### **APPLICATIONS**

- > Industrial buildings
- ➤ Warehouses and storage rooms
- > Logistic sector
- > Service stations, petrol stations



### B BLOCK



#### **TECHNICAL CHARACTERISTICS**

BBLOCK family product	BB-65	BB-130	BB-195			
Luminous flux at 5000K (lm)	7.570	15.140	22.710			
(www) Consumption (W)	65	130	195			
Power Factor (cos Fi)		≥0.9				
Operating voltage (V)		AC100~240				
(aaa) Number of LEDs	36	72	108			
Driving current (mA)	600					
(dd) Photometric curves	Symmetrical ID					
(mmmm) CCT (K)	4000 / 5000 / 5700					
Color rendering	>70					
Luminous flux duration (L70)	>100.000h					
Working temperature	- 20°C ~ +45°C					
Protection level	IP66					
Material	6063 Anodized Aluminium – Stainless steel					
Standard Cable Length (ml)	2					
(h) Installation type	ceiling - suspension					
Sizes (mm)	311,3x184,3x86,5	357x166x71	496x166x186			
Weight (Kg)	4 kg	6,55 kg	10,5 kg			

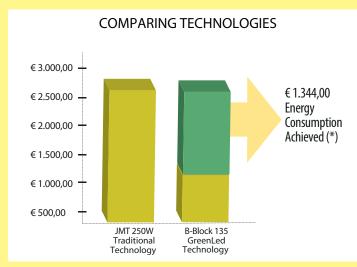
#### **WARRANTY**

> 6 years warranty against manufacturing defects



#### **ENERGY SAVINGS**

SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [50,000 hours]



(\*) Saving potential compared with a 250 W metal halide headlamp operating for 50,000 hours, with a constant cost of electricity equal to 0.18 /kWh. The calculation is prudential as it does not include maintenance costs and the wear of the traditional technology.

#### CERTIFICATIONS

EN 60598-1:2008 A11:2009, EN 60598-2-5:1999, IEC 61347-1:2008 IEC 61347-2-13:2006 IEC 62031:2008 CEI EN 60529 (CEI 70-1) EN 62471:2008 EN 55015:2006 EN 61547:1995





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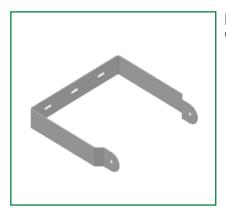




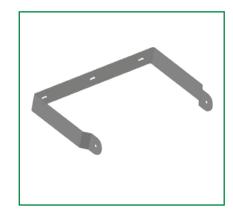


### Industrial

#### **ACCESSORIES INCLUDED**



MOUNTING BRACKET VOLTA



MOUNTING BRACKET MATTEUCCI

#### INTELLIGENT CONTROL SYSTEM - optional

Intelligent lighting control and management systems allow you to set the lighting of the different areas, providing maximum flexibility in different industrial environments.

Thanks to smart lighting control you can optimize energy efficiency, reducing costs without wastes of energy.

#### LIGHT WHERE AND WHEN YOU NEED IT

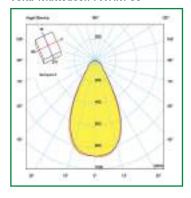
With Greenled Industry smart lighting control systems the environment become more efficient. The luminaires can be equipped with occupancy sensors and the smart lighting control systems. The result? Greater efficiency, high savings and the proper lighting that ensures safety and visual comfort.

For further information, please contact Greenled Industry.

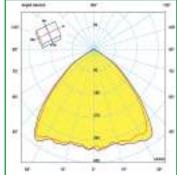


#### PHOTOMETRIC INFORMATION

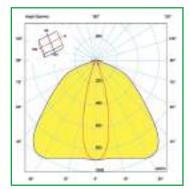
Volta-Matteucci: FWHM 60°



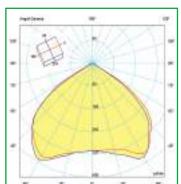
Volta-Matteucci: FWHM 90°



Volta-Matteucci: FWHM 30°+106°



BBlock: SYMMETRICAL ID



#### **ORDER INFORMATION**

The table below provides the useful information to get the order code. Select the type of luminaire power (W), the optical configuration and the color temperature desired. In case of options, please indicate the type.

SERIE S	POWER	OPTICAL	сст	OPTION
VL Volta  MT Matteucci	-55 55W -76 76W -102 102W -118 118W -152 152W -178 178W	-01 FWHM 60° -02 FWHM 90° -03 FWHM 30°+106°	- <b>40</b> 4000K - <b>50</b> 5000K - <b>57</b> 5700K	-T Remote control
	<b>-236</b> 236W			
BB B Block	- <b>65</b> 65W - <b>130</b> 130W - <b>195</b> 195W	-06 SIMMETRYCAL ID		





### **SPARTA**



#### **FEATURES**

- > IP66 and IK08
- ➤ Wide range of symmetrical luminous fluxes (industrial sector) and asymmetrical luminous fluxes (road sector)
- > Wide range of luminous fluxes
- > High Luminous efficiency
- > Excellent thermal performances
- > Reduced decrease of the luminous flux (L/ 70)> 100.000 h
- > Photo-biological safety Group 0 (No)
- > Installation on a light tower (height up to 40m)

#### **APPLICATIONS**

- > Industrial buildings
- > Large areas lighting
- > Parking areas
- > Light Tower
- > Roundabouts
- > Motorway links



## SPARTA



#### **FEATURES**

	SP-65	SP-130	SP-260	SP-390	SP-505		
Luminous flux 5000K (lm)	7.450	14.900	29.790	44.680	59.580		
Power Consumption (W)	65	130	260	390	505		
Power Factor (cos Fi)			≥0.9				
Operating Voltage (V)			AC100~240				
LEDs number	36	72	144	216	288		
LEDs current (mA)		600					
Photometric curves	06: Symmetrical ID 07: Asymmetrical AU - 08: Asymmetrica IPM						
Color Temerature CCT (K)	<b>40:</b> 4000K/ <b>50:</b> 5000K/ <b>57:</b> 5700K						
CRI	>70						
Lifetime (L70)	>100.000h						
Operating Temperature	-30°C/+45°C						
Rating	IP66						
Material	Cover: ABS+PMMA -anodized aluminum						
Cable Lenght (m)	1						
Installation	Mounting bracket						
Dimension (mm)	472x363x322	567x363x322	723x363x322	723x363x322	723x363x322		
Weight (Kg)	18	22	24	24	24		

#### **WARRANTY**

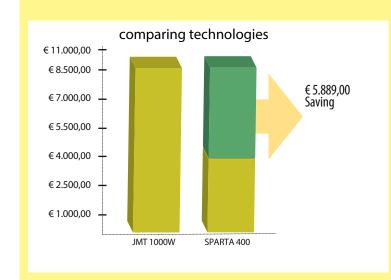
➤ 6 -YEARS



#### **Accessories Included**

- Mounting bracket
- INVENTRONICS driver

#### energy saving



(\*) Potential saving comparing metal halide 1000W operating for 50.000 hours, with energy costs of 0,18€/kWh

#### **CERTIFICATIONS**

EN 60598-1:2008 EN 60598-2-3:2012 IEC 61347-2-13:2006 IEC 62031:2012 IEC 61547:2009 IEC 61000-3-2:2009 IEC 61000-3-3:2013 EN 62471:2006 EN 55015:2013

























# **Tower Light**

#### **ACCESSORIES INCLUDED**



SPARTA S
MOUNTING BRACKET



SPARTA M
MOUNTING BRACKET



SPARTA L MOUNTING BRACKET

#### INTELLIGENT CONTROL SYSTEM - optional

Intelligent lighting control and management systems allow you to set the lighting of the different areas, providing maximum flexibility in different outdoor environments.

#### LIGHT WHERE AND WHEN YOU NEED IT

With Greenled Industry smart lighting control systems the environment become more efficient.

The luminaires can be equipped with smart lighting control systems.

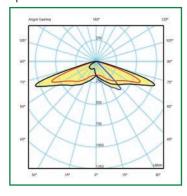
What is the result? Greater efficiency, high savings and the proper lighting that ensures safety and visual comfort.

For further information, please contact Greenled Industry.

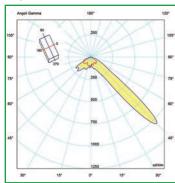


#### PHOTOMETRIC DATA

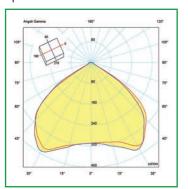
Sparta: AU



Sparta: PM



Sparta: ID



#### ORDER INFORMATION

The table below provides the useful information to get the order code. Select the type of luminaire power (W), the optical configuration and the color temperature desired. In case of options, please indicate the type.

SERIES	POWER	OPTIC	ССТ	OPTION
<b>SP</b> Sparta	-65 65W -130 130W -260 260W -390 390W -505 505W	-06 ID -07 AU -08 PM	- <b>40</b> 4000K - <b>50</b> 5000K - <b>57</b> 5700K	- <b>T</b> Remote Control

More optics are available on request.







# LUMINO



The Lùmino series is one of the best solution that meets the need of most modern Smart Cities with mininum investment.

Unique design, high perfomance, reliable, Lùmino ensures the proper distribution of luminance, according to the requirements set by the standards. The high luminous efficiency guaranteed over the time and the reduced need of maintenance interventions, allow the Lùmino fixture to maximize the energy saving and the return on investment. A wide range of power and optic options, Lùmino is a versatile solution perfectly suitable to any street and outdoor application.

With Lùmino we can make our cities more livable, sustainable and efficient, increasing visibility and safety for citizens.

#### **FEATURES**

- > Modern design
- > High energy efficiency
- > IP66
- > High resistance (IK08)
- ➤ Energy saving over 50% than traditional technologies
- > Wide optic options to accommodate a wide range of applications.
- > Quick and easy installation and maintenance
- ➤ Long lifetime, with over 60.000 hours of high quality luminous flux.

#### **APPLICATIONS**

- > Street and urban road
- > Highway, Crossroad
- > Parking, Large area



# LÙMINO



#### **FEATURES**

	LM-35	LM-50	LM-65	LM-80	LM-100	LM-135	LM-165	LM-200
Luminous flux 4000K (lm)	3.503	5.650	7.006	7.006	10.509	14.012	17.515	21.018
Power consumption (W)	31	50	62	80	93	124	155	186
Power Factor (cos Fi)				≥(	1.9			
Operating Voltage (V)				AC22	0~240			
Number of LEDs	14		28			56	70	84
(ff) Photometric curves		1M, 2M, 3M, 5S						
(kk) CCT (K)		<b>30:</b> 3000K / <b>40:</b> 4000K / <b>50:</b> 5000K / <b>57:</b> 5700K						
Color rendering		>70						
Lifetime (L70)		> 60.000h						
Operating Temperature		-40°C/+50°C						
Protection Level		IP66						
Material		die-cast aluminum, anodized aluminum						
Standard cable lenght (m)		1						
Installation		Pole connection						
Dimensions (mm)	431x316x136		504x316x136		577x316x136	650x316x136	723x316x136	796x316x13
Weight (Kg)	5,3		6,1		7,3	8,2	9,0	9,9

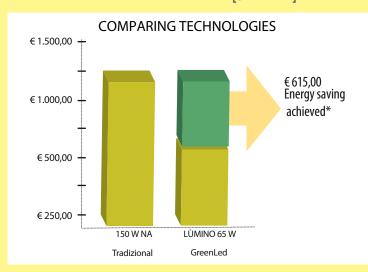
#### **WARRANTY**

> 6-years



#### **ENERGY SAVINGS**

SAVING DURING THE PRODUCT LIFETIME [50.000 ore]



(\*) Potential saving compared with a 150W metal halide lamp operating for 50.000 h with a cost of electricity of 0.18 €/kWh

#### **CERTIFICATIONS**

EN 55015:2013
EN 61000-3-2:2006 +A1:2009 + A2:2009
EN 61000-3-3:2013
EN 60598-2-1:1989
EN 61547:2009
EN 60598-1:2008 +A11:2009
EN 61347-2-13:2006
EN 61347-1:2008 +A1:2011
EN 62031:2008
EN 62493:2010



IP66











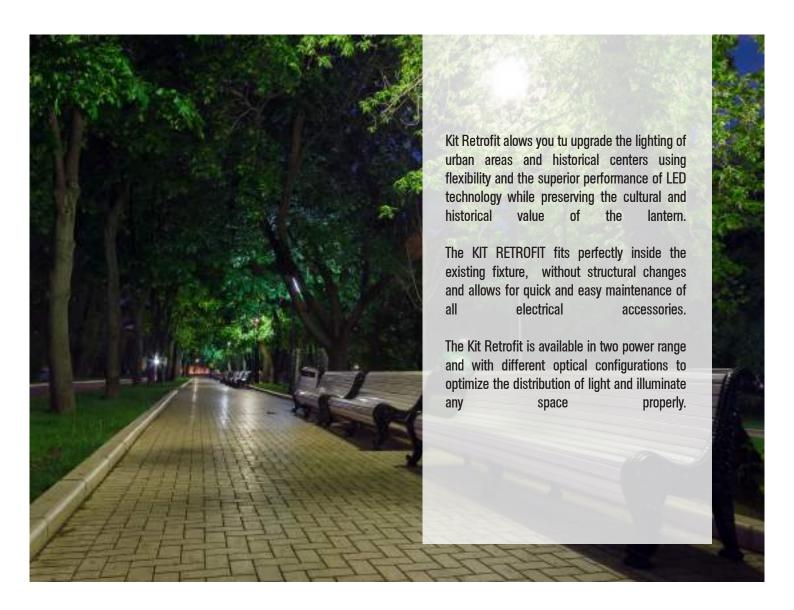








# URBAN RELAMPING KIT



#### **FEATURES**

High flexibility
High energy efficiency
IP66
Instant on with 100% of luminous flux
Long lifetime, with over 60.000 hours of
high quality luminous flux
Riduction of maintenance costs
Quick and easy installation

#### **APPLICATIONS**

Urban and residential areas Historical centers



### URBAN RELAMPING KIT

#### **FEATURES**

	KR-35	KR-50	KR-65			
Luminous flux 4000K (lm)	3.710	5.550	6.882			
Power Consumption (W)	31	50	62			
Power Factor (cos Fi)		≥0.9				
Operating Voltage (V)		AC220~240				
Number of LEDs	14	28				
(ff) Photometric Curves	1M, 2M, 3M, 5S					
(kk) CCT (K)	<b>30:</b> 3000K / <b>40:</b> 4000K / <b>50:</b> 5000K / <b>57:</b> 5700K					
Color rendering	>70					
Lifetime (L70)	> 60.000h					
Operating Temperature	-40°C/+50°C					
Protection Level	IP66					
Material	Fe 360 galvanized metal sheet. White powder coated RAL 9003					
Standard cable lenghts (m)						
Installation						
Dimensions (mm)	337x337x62 337x337x100,5					

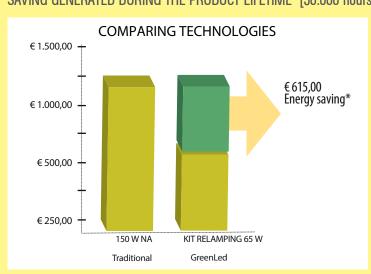
#### WARRANTY

> 6 years



#### **ENERGY SAVINGS**

SAVING GENERATED DURING THE PRODUCT LIFETIME [50.000 hours]



(\*) Potential saving compared with a metal halide lamp operating for 50,000 hours, with a constant cost of electricity of 0.18€/kWh

#### **CERTIFICATIONS**

EN 55015:2013
EN 61000-3-2:2006 +A1:2009 + A2:2009
EN 61000-3-3:2013
EN 60598-2-1:1989
EN 61547:2009
EN 60598-1:2008 +A11:2009
EN 61347-2-13:2006
EN 61347-1:2008 +A1:2011
EN 62031:2008
EN 62493:2010























## Street & Urban

#### MAIN CHARACTERISTICS LÙMINO



Innovative pole fitter design not only achieve the horizontal and vertical installation features, also has 0-15° adjustable function for each installation direction.

Resonable heat sink design, not only keep ventilation but also avoid laceration.

Gaps between each module are increased heat dissipation speed and solved the problem of dust deposition.

#### INTELLIGENT CONTROL SYSTEM - optional

Intelligent lighting control and management systems allow you to set the lighting of the different areas, providing maximum flexibility in different outdoor and urban environments.

#### LIGHT WHERE AND WHEN YOU NEED IT

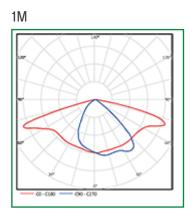
With Greenled Industry smart lighting control systems the environment become more efficient. The luminaires can be equipped with smart lighting control systems.

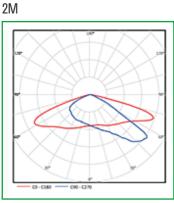
WHat is the result? Greater efficiency, high savings and the proper lighting that ensures safety and visual comfort.

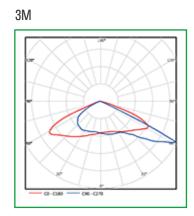
For further information, please contact Greenled Industry.

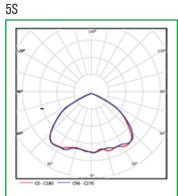


## PHOTOMETRIC INFORMATION









## ORDER INFORMATION

The table below provides guidelines for encoding item numbers when ordering Lùmino fixtures. Select a fixture power, optic and CCT, using character codes in bold when ordering. In case of optional, select the type.

SERIES	POW	ER	OPTICAL	(	ССТ	OPTION
LM Lùmino KR Kit Relamping	-35 -50	31W 50W	-1M -2M	-30 -40	3000K 4000K	-T Remote control
	-65 -80	62W 80W	-3M	-50	5000K	-D Stand Alone*
<b>LM</b> Lùmino	-100 -135	93W 124W	-5\$	-57	5700K	
·	-165 -200	155W 186W				

<sup>\*</sup> Option available for Lùmino serie









## **MERCURY**



## **FEATURES**

- ➤ IP65 and IK10
- > Beam angle 130°
- > Luminous efficiency up to 100 lm/W
- > Excellent light diffusion and aesthetic qualities
- > Excellent thermal performances
- > Reduced decrease of the luminous flux (L/ 70)> 60.000 h
- ➤ Self-extinguishing degree "V2" and UV resistance
- > Available in the models MR12 with 40W/50W and MR15 with 50W/65W
- > Ceiling or suspended installation
- > Recessed or pendant execution

## **APPLICATIONS**

- > Covered car parks
- > Piers and docks
- > Bus stations
- > Schools
- > Railway stations
- > Farms
- > Sports facilities
- > Logistic sector
- > Plants



PL

## MERCURY

#### **TECHNICAL CHARACTERISTICS**

-						1		
MF	R12-40	MR	12-50	2-50 MR15-50 M		MR1	ЛR15-65	
White	Trasparent	White	Trasparent	WHite	Trasparent	White	Trasparent	
3.240	3.920	4.050	4.900	4.050	4.900	5.265	6.370	
4	40	!	50	50		65		
	≥0.9							
	AC100~277							
2	216	252		252		324		
	symmetrical 130°. Transparent diffuser, White diffuser							
	3000 / 4200 / 6000							
	>80							
	> 60.000h							
	-20°C/+45°C							
	IP65							
	Policarbonato (classe V2 resistente UV)							
	ceiling, suspended							
1123x103x93 1423x103x93								
3,2								
	White 3.240	MR12-40  White Trasparent 3.240 3.920 40  216	MR12-40 MR  White Trasparent White  3.240 3.920 4.050  40  216 2  symm  1123x103x93	MR12-40         MR12-50           White         Trasparent         White         Trasparent           3.240         3.920         4.050         4.900           40         50         ≥0.5           AC100         216         252           symmetrical 130°. Transpar           3000 / 42         ≥6           > 60         -20°C/           IP         Policarbonato (classe Vaciling, suspendent)           1123x103x93         1123x103x93	MR12-40         MR12-50         MR           White         Trasparent         White         Trasparent         WHite           3.240         3.920         4.050         4.900         4.050           40         50         ∠0.9         AC100~277         ∠216         252         √0.000	MR12-40         MR12-50         MR15-50           White         Trasparent         White         Trasparent         WHite         Trasparent           3.240         3.920         4.050         4.900         4.050         4.900           40         50 <td< td=""><td>MR12-40         MR12-50         MR15-50         MR1           White         Trasparent         White         Trasparent         White           3.240         3.920         4.050         4.900         4.050         4.900         5.265           40         50&lt;</td></td<>	MR12-40         MR12-50         MR15-50         MR1           White         Trasparent         White         Trasparent         White           3.240         3.920         4.050         4.900         4.050         4.900         5.265           40         50<	

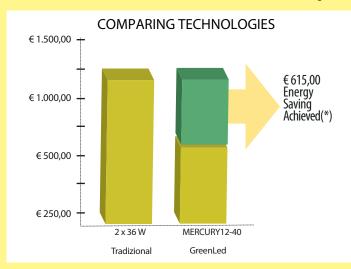
### **WARRANTY**

➤ 3 years warranty against manufacturing defects



## **ENERGY SAVINGS**

### SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [50,000 hours]



(\*) Saving potential compared with a metal halide headlamp operating for 50,000 hours, with a constant cost of electricity equal to 0.18 /kWh.

The calculation is prudential as it does not include maintenance costs and the use of the

traditional technology.

#### **CERTIFICATIONS**

EN 55015:2013
EN 61000-3-2:2006 +A1:2009 + A2:2009
EN 61000-3-3:2013
EN 60598-2-1:1989
EN 61547:2009
EN 60598-1:2008 +A11:2009
EN 61347-2-13:2006
EN 61347-1:2008 +A1:2011
EN 62031:2008
EN 62493:2010























## **GEMINI**



## **FEATURES**

- ➤ Modern design
- > Diffuser system
- > High energy efficiency
- > IP65
- > High resistance (IK09)
- > Energy saving over 50% than traditional
- ➤ Long lifetime, over 60.000 hours of luminous flux

## RECOMMENDED APPLICATIONS

- ➤ Shoping center, Supermarket
- > Transition areas
- > Warehouses
- > Parking garages
- > Airport, Subways



## GEMINI



#### **TECHNICAL CHARACTERISTICS**

			1		1				1	
Product	GI	M06	GM	12-20	GM12-36		GM15-25		GM15-42	
Diffuser Type	White	Trasparent	White	Trasparent	White	Trasparent	White	Trasparent	White	Trasparent
Luminous flux at 5700K (Im)	1.785	2.182	1.785	2.182	3.203	3.928	2.205	2.728	3.675	4.583
Consumption (W)		20	- :	20	:	36		25		42
Power Factor (cos Fi)		≥0.9								
Operating Voltage (V)		AC100~277								
Numbers of LEDs		60	1	20	120 150		50	150		
Photometric curves		symmetrical 170°. Transparent and white diffuser								
CCT (K)		3000 / 4000 / 5700								
Color rendering		>80								
Duration Luminous flux(L70)		>60.000h								
Operating Temperature		-20°C/+45°C								
Protection Level		IP65								
Materials		Polycarbonate (class V2 UV resistance)								
Installation		ceiling, suspended								
Dimensions (mm)	600:	x80x56		1200	)x80x56	x56 1500x80x56				
Weight (Kg)	0	, 7	1, 2			1,5				
			+							

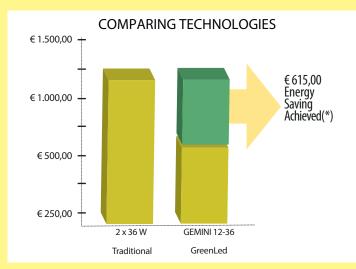
### **WARRANTY**

➤ 3 years warranty against manufacturing defects



## **ENERGY SAVING**

ENERGY SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [50,000 hours]



(\*) Saving potential compared with a metal halide headlamp operating for 50,000 hours, with a constant cost of electricity equal to 0.18 /kWh.

The calculation is prudential as it does not include maintenance costs and the use of the traditional

#### **CERTIFICATIONS**

EN 55015:2013 EN 61000-3-2:2006 +A1:2009 + A2:2009 EN 61000-3-3:2013 EN 60598-2-1:1989 EN 61547:2009 EN 60598-1:2008 +A11:2009 EN 61347-2-13:2006 EN 61347-1:2008 +A1:2011 EN 62031:2008 EN 6293:2010















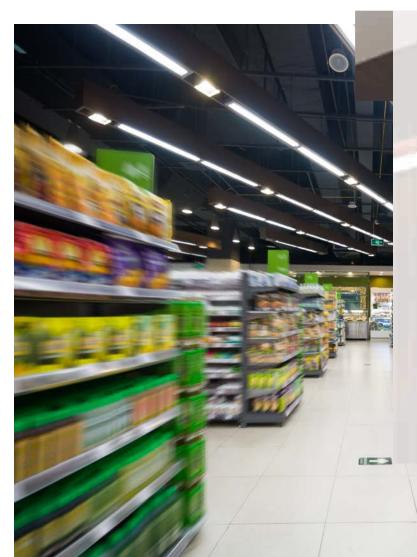








# SATURN



The luminaire Saturn is the ideal solution for general lighting purposes of interiors and offers high energy performances while guaranteeing appropriate lighting levels and an excellent color rendering able to improve the visual perception and allowing to enhance the objects in the environments.

Thanks to its elegant look and its easy installation, Saturn is extremely flexible and functional for different applications. This high-efficiency LED solution ensures the maximum energy saving as well as excellent illuminance uniformity everywhere.

Ideal for those customers who want to save energy and create efficient and comfortable environments, the luminaire can be equipped with luminous flux control systems and motion sensors that allow to regulate light according to the needs, while ensuring further savings.

## **FEATURES**

- > IP20, versatile system for several applications in closed spaces
- > High luminous efficiency (85lm/W)
- > Excellent Illuminance Uniformity
- > Easy ceiling or suspended installation
- ➤ Reduced decrease of the luminous flux (L/ 70)> 60.000 h 60%
- > of energy saving

## **APPLICATIONS**

- > Malls
- > Large-scale retails
- > Common areas
- > Schools
- > Logistic sector
- > Offices



## SATURN

#### **TECHNICAL CHARACTERISTICS**

Product Family	c7 40	ST-50				
	ST-40	31-30				
Luminous flux at 4000K (lm)	3.600	4.500				
(www) Consumption (W)	40	50				
Power Factor (cos Fi)		≥0.9				
Operating voltage (V)	A C1	00~240				
(aaa) Number of LEDs	240	288				
(dd) Photometric curves	Symmetrical 120°, White diffuser					
(mmmm) CCT (K)	3000/4000/5700					
Color rendering	>80					
Luminous flux duration (L70)	60.000h					
Working temperature	-20°C/+45°C					
Protection level	IP20					
Material	Aluminium - PMMA					
Standard Cable Length (ml)	2					
(h) Installation type	Ceiling Suspended					
Sizes (mm)	1200x160x68,5 1500x160x68,5					
Weight (Kg)	4,2	5,2				

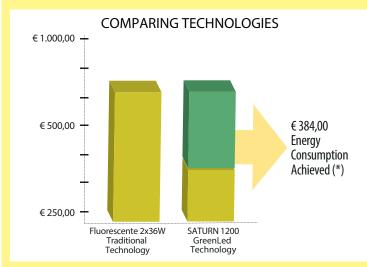
## **WARRANTY**

> 3 years warranty against manufacturing defects



## **ENERGY SAVINGS**

### SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [50,000 hours]



(\*) Saving potential compared with fluorescent lamp 2x36W operating for 50,000 hours, with a constant cost of electricity equal to 0.18 /kWh. The calculation is prudential as it does not include maintenance costs and the wear of the traditional technology.

### **CERTIFICATIONS**

EN 62493:2010 EN 55015:2006 + A1:2007 + A2:2009 EN 61000-3-2-:2006 + A1:2009 + A2:2009 EN 61000-3-3:2008 EN 61547:2009























## **IPANEL**



## **FEATURES**

- > Technology, design and high quality
- > Ultra-slim laser light guide panel
- ➤ High luminous efficiency, higher than 70 lm/W
- ➤ Protection degree IP52
- > Glare control for BAP (VDU writing)
  - $L < 200 \text{ cd/sqm A } 60^{\circ}$
- > Energy saving higher than 40% compared to fluorescent lamps T5
- > Eco-friendly materials
- > Solutions for multiple installation solutions (wall, ceiling, pendant, false ceiling, etc.)

## **APPLICATIONS**

- > Malls
- > Large-scale retails
- > Common areas
- > Schools
- ➤ Logistic sector
- ➤ Offices



## **iPANEL**

#### **TECHNICAL CHARACTERISTICS**

Product code	PN03	PN06	PN12				
Luminous flux at 4000K (lm)	1.700	3.500	3.500				
(www) Consumption (W)	22	42	42				
Power Factor (cos Fi)		≥0.93					
Operating voltage (V)		AC220~240					
(aaa) Number of LEDs	112	210	224				
(dd) Photometric curves	Symmetrical 112°						
(mmmm) CCT (K)	3000/4000/5000						
Color rendering	>80						
Luminous flux duration (L70)	60.000h						
Working temperature	-20°C/+40°C						
Protection level	IP52						
Material	Aluminium Frame – PMMA Screen						
Standard Cable Length (ml)	2						
(h) Installation type	Ceiling - Suspended - Recessed						
Sizes (mm)	600x300x10,4	600x600x10,4 1200x300x					
Weight (Kg)	2	4 4					

DRIVER is not included

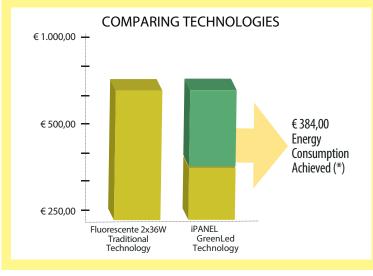
## **WARRANTY**

> 3 years warranty against manufacturing defects



## **ENERGY SAVINGS**

### SAVING GENERATED DURING THE PRODUCT SERVICE LIFE [50,000 hours]



(\*) Saving potential compared with fluorescent lamp 4x18W operating for 50,000 hours, with a constant cost of electricity equal to 0.18 /kWh. The calculation is prudential as it does not include maintenance costs and the wear of the traditional technology.

#### **CERTIFICATIONS**

EN 55015:2013

EN 61547:2209

EN 61000-3-2:2006 + A1:2009 + A2:2009

EN 61000-3-3:2013

EN 60598-2-1:1989

EN 60598-1:2008 + A11:2009

EN 61347-2-13:2006

EN 61347-1:2008 + A1:2011

EN 62031:2008

EN 62493:2010

























# Commercial & Office

### **ACCESSORIES**

#### **MERCURY**

Suspended mounting kit **Cod. A-000299** 

#### **GEMINI**

Suspended mounting kit **Cod. A-000663** 

#### **SATURN**

Suspended mounting kit Cod. A-000735

#### **iPANEL | PN03**

Box for ceiling mounting

Wall mounting kit

Suspended mounting kit

Recessed mounting kit

Cod. A-000722

Ceiling mounting kit

Cod. A-000723

Ceiling mounting kit

Cod. A-000724

Driver MEANWELL LPV-35-24

Cod. A-000795

#### **iPANEL | PN06**

Box for ceiling mounting
Wall mounting kit
Cod. A-000725
Suspended mounting kit
Cod. A-000727
Recessed mounting kit
Cod. A-000728
Ceiling mounting kit
Cod. A-000729
Driver MEANWELL LPV-60-24
Cod. A-000750

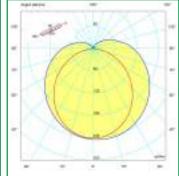
### **iPANEL | PN12**

Box for ceiling mounting
Wall mounting kit
Cod. A-000731
Suspended mounting kit
Recessed mounting kit
Cod. A-000733
Ceiling mounting kit
Driver MEANWELL LPV-60-24
Cod. A-000750

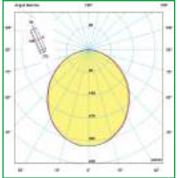
## PHOTOMETRIC DATA

Mercury

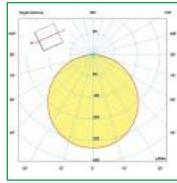




Saturn



**iPANEL** 



## ORDER INFORMATION

The table below provides guidelines for encoding item numbers when ordering fixtures. Select a fixture power, optic and CCT, using character codes in bold when ordering. In case of optional, select the type.

	SERIES	POV	VER	OPTICAL	ССТ	OPTIONAL
MR12	Mercury 1200mm	-40 -50	40W 50W	-11 Trasparent Diffuser	- <b>30</b> 3000K - <b>42</b> 4200K	-R dimmable 0-10V -X emergency
MR15	Mercury 1500mm	-50 -65	50W 65W	-10 White Diffuser	- <b>60</b> 6000K	-M occupancy sensors
GM06	Gemini 600mm	-20	20W			
GM12	Gemini 1200mm	-20 -36	20W 36W	-11 Trasparent Diffuser -10 White Diffuser	-30 3000K -40 4000K -57 5700K	-W1 waterproof connector -W2 two WP connector
GM15	Gemini 1500mm	-25 -42	25W 42W			
ST	Saturn	-40 -50	40W 50W	-10 White Diffuser	- <b>30</b> 3000K - <b>40</b> 4000K - <b>57</b> 5700K	
PN03	iPanel 300x600mm	-22	22W		- <b>30</b> 3000K	
PN06 PN12	iPanel 600x600mm iPanel 300x1200mm	-42	42W	-12 SYMMETRICAL 112°	- <b>40</b> 4000K - <b>50</b> 5000K	

## WARRANTY FOR LAMPS GREENLED INDUSTRY S.P.A.

This limited warranty is provided by the company **GREENLED Industry SpA** (hereafter referred to as "GREENLED" or "Seller") to the original Buyer of the LED luminaire defined in the invoice issued by the Seller in case of a purchase of the Product.

**GREENLED** makes sure that the Product, if delivered new and in its original packaging, will not have any material and manufacturing defect for a period of THREE (3) years for series MERCURY, GEMINI, SATURN, iPANEL; a period of SIX (6) years for series BBLOCK, SPARTA, LUMINO, URBAN RELAMPING KIT; a period of TEN (10) years for series VOLTA, MATTEUCCI, DA VINCI. The period starts from the purchase date.

The Product is to be considered as defective when:

-The luminous flux is reduced by less than 70% compared to the one declared on the product label during the warranty period starting from the date in the invoice -and/or

-ls not free from design, material and manufacturing defects.

It is the Seller's responsibility and discretion to establish if the Product is defective based on the Product general performance.

In case of absence of light from one of the LED units, this will not represent a defect of the Product if the number of not working components results in a decrease in the nominal light flux equal at least to 10% of the one stated.

This warranty is not valid if the Product is used for purposes other than those for which it was made.

This warranty is applied to professional LED lamps made by **GREENLED** sold in Europe, Middle East and Africa starting from June 2013.

#### **Applicability of this warranty**

- ullet For a year of warranty, we mean a year of operation of 8,760 hours and a room temperature of 25  $^{\circ}$ C .
- The Buyer will be entitled to ask for warranty conditions other than those reported in the previous point and they will be granted after assessing the specific application conditions.
- · For the purposes of the application of the warranty, the Buyer could not refer to other information or documents.

This warranty covers exclusively the product used according to the following use conditions that must be fulfilled simultaneously for the purposes of the warranty:

- the Product operating temperature is compliant with the one in the technical data of each product;
- the relative humidity in the plant is not higher than the IP classification of the Product;
- Products are not subject to a value higher than 50,000 cycles (power on/off);
- Products must work within a voltage range of 230 V +/- 10%.

### This summary includes but is not limited to the terms and conditions of the warranty.

- This warranty is valid only for the Products sold inside the EMEA area (Europe, Middle East and Africa). In other countries, different terms and conditions may be applied.
- This warranty is valid only if the Products have been sold directly by a Sales Department of GREENLED.
- The customer must have the document of delivery of the Product.
- . This warranty is valid only if the Products have been correctly installed and used according to the instructions of the manufacturer.
- The operating modes must be registered and available for any inspection by the **GREENLED** representative.
- . Upon request, the GREENLED representatives must have access to the defective Product, system or application for a non-compliance check.
- The manufacturing costs for installing and uninstalling the Products are not covered by this warranty.

The warranty will be valid from the delivery date and/or the production lot reported on each Product and within the six months following the delivery.

In compliance with the provisions established in the Terms and Conditions of the warranty attached to this document, the Buyer receives the warranty for the applicable period.

#### **WARRANTY TERMS AND CONDITIONS**

#### 1. Limited Warranty

The warranty, as described in this document, will be applied exclusively to the luminaires branded **GREENLED** sold by **GREENLED** in Europe, Middle East and Africa, (hereafter the "Product"). This warranty is applicable exclusively to the party buying the product directly from **GREENLED** (hereafter the: 'Buyer'). **GREENLED** makes sure that each Product is free from material and manufacturing defects.

This warranty will be valid for the period mentioned in the warranty applicable to the products as reported in the sales agreement. In case of Product failure according to this warranty, **GREENLED** will, in its sole discretion, replace or repair the defective product in compliance with the terms and conditions of the applicable limited warranty as established below.

#### 2. Terms and conditions

• The **GREENLED** warranty is applied exclusively to the Buyer. If a Product covered by this warranty is returned by the Buyer in compliance with what provided and established in the section 3 and within the applicable warranty term and if, after examination, **GREENLED** will define that such a Product was not compliant with this warranty, at its sole discretion, **GREENLED** will repair or replace the Product or the defective part or will reimburse the sales price to the Buyer of the Product. Repairing or replacing the Product or the defective part will not include any removal or reinstallation activity, costs or charges, including but not limited to any costs and charges of expedition or manufacturing of the Product. In order to repair or replace the Product, as provided by this warranty, **GREENLED** reserves the right to use new, reconditioned, refurbished, repaired or transformed products. These products and components will be treated, in terms of functions and performances, as original products and components, according to what established by **GREENLED** in its sole discretion and covered by the warranty for the whole original warranty period.

- If **GREENLED** decides to replace the Product, but is not able to do it because it came out of production or is no longer available, **GREENLED** may reimburse the Buyer or replace the Product with a similar one (that could present slight differences in the design and specifications of the Product).
- No agent, distributor or dealer is authorized to change, modify or extend the terms of the limited warranty on behalf of GREENLED, in any matter.
- This limited warranty is applied exclusively if the Product has been correctly cabled, installed and used within the electrical values, the operating range and environmental conditions defined in the specifications, in the applicable guidelines, in the IEC standards or in any other document provided with the Product. If a Product is defective or non working based on the Product specifications, the Buyer must communicate it to **GREENLED** by writing.
- **GREENLED** will facilitate the technical solution of the problems. The products (or Product components) from third parties sold by **GREENLED** are not covered by this warranty, without prejudice to what established in section 5.
- This warranty does not apply to defects or non compliance resulting from any cause of force majeure or any other abuse, misuse, abnormal use or use violating any other standard, code or applicable use instructions including, but not limited to those contained in the safety standards, or the most recent relevant and/or electrical standards for the specific country/countries.
- This warranty will be invalid if the Product is repaired or changed, by any person not duly authorized by writing by **GREENLED**. **GREENLED** reserves the right to definitively decide about the validity of any warranty claim.
- . Upon request by GREENLED, non-compliant or defective products will become property of GREENLED as soon as they are replaced.

#### 3. Calls on warranty

All the warranty periods mentioned are subject to the access to the defective Product or system in order to check for the non compliance by a representative of **GREENLED**. Calls on warranty must be reported and sent to **GREENLED** (Strada dello Stabilimento n.1 Nera Montoro – Narni ) within 30 days of detecting the defect, by specifying the following information (additional information can be requested):

- Damaged products; for system warranties, specify also other components;
- Installation date and invoice date;
- · Detailed description of the problem and number;
- Application, hours of operation and commutation cycles;
- If a call on a warranty is not justified, **GREENLED** may charge the Buyer with the costs for the Products returned that are not defective or not compliant, together with the related management, check and transportation costs.

#### 4. Lack of implicit warranties or other warranties

- This limited warranty and the solutions included therein are the only warranties offered by **GREENLED** with relation to the Products, to replace and exclude any other warranty, whether explicit or implicit, to the extent permitted by law, including without limitation warranties of merchantability or fitness for a particular purpose: without prejudice to the case of fraud or gross negligence by **GREENLED**, all other warranties are therefore not applicable.
- These terms and conditions establish the maximum liability of **GREENLED**, its obligations towards the Buyer as well as the only remedy available to the Buyer in case of defective or non compliant Products provided by **GREENLED**, remedy to be meant as including and replacing any other form of warranty or liability, also by way of derogation from law standards, to the extent permitted by law, and excludes any other liability (whether contractual or non contractual) of **GREENLED** due to defects, non compliance or lack of quality, even if **GREENLED** has been informed or is aware of such defects.

#### 5. Limitations and conditions

- This is a limited warranty and excludes, among other items, the installation, any access means to products (scaffolding, hoisting equipment, etc.), and special damages, whether incidental and consequential (such as the loss of economic profits/loss of profit, damage to property or other extended costs previously not mentioned), and is further defined by the limitations and conditions provided by the warranty and included in the terms and conditions.
- Upon request, the GREENLED representatives must access the defective Product, system or application in order to check any lack of compliance.
- **GREENLED** cannot be held liable for the conditions of electricity, including power picks, over/under-voltage and systems of control of the ripple current that go beyond the limits specified of the products and beyond those defined by the specific power standards (i.e. compliance of the standard CEI EN 50160).
- With relation to the products sold to the Buyer by **GREENLED** that are not branded **GREENLED**, **GREENLED** does not offer any type of warranties, whether explicit or implicit, including without limitation any warranties of merchantability or fitness to a specific purpose, but will put at the Buyer's disposal upon request, exclusively to the maximum extent allowed by law and relevant agreements, the manufacturer's warranties of the Product.
- In no case, **GREENLED** shall be deemed as liable for any damages, whether they are accidental, compensatory, consequential, indirect, special or any other type of damage. The overall responsibility of **GREENLED** for a defective Product could not exceed, in any case, the amount paid by the Buyer for the above-mentioned defective Product
- **GREENLED** reserves the right to modify this warranty over the time. Any change of this warranty shall be applied to all orders concluded with **GREENLED** starting from the date of validity of the modified warranty.

## NOTES

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**GREENLED Industry S.p.A.** 

Strada dello Stabilimento, n. 1 05035 - Nera Montoro – Narni (TR)

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