URBIO



Robust. Modern. Efficient.

MESINA

LUMINAIRE

Advanced Level: Control. Monitoring. Innovation.

MODULES | M - L - XL

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ABOUT URBIO



URBIO, a Romanian technology company, is shaping the **future of smart infrastructure** through its Lighting AI ecosystem - a comprehensive **smart-city** platform that seamlessly connects IoT hardware, intelligent lighting, environmental sensors, and cloud-based software into one unified network.

Designed to **empower** municipalities and operators, Lighting AI enables real-time monitoring and management of public lighting and infrastructure, providing **AI-driven** insights for optimized performance.

By centralizing operations within a single digital interface, it drives greater efficiency, reduces energy consumption, and promotes long-term urban **sustainability**.

ABOUT MESINA

MESINA represents URBIO's vision of intelligent, sustainable, and durable lighting for modern cities.
Designed for decades of operation, it combines superior optical efficiency, robust construction, and seamless digital connectivity, a true smart-ready luminaire family.



- **Symbol** of reliability, precision, and sustainability
- **M / L / XL** for any type of street, park, or industrial zone
- **"Plug-and-Play"** connectivity with **Smart City platforms** and **Lighting AI**
- **Built to adapt**, for today's cities and tomorrow's needs.

Lighting has always been an important aspect for every community.
In full progress of the digital era, cities and villages are becoming smart cities and smart villages. Mesina contributes to this phenomenon through solutions at the highest level of performance possible today for control, monitoring and efficiency of energy consumption.
Thus, today's results increasingly improve the quality of life in the community and support the effort to reduce greenhouse gases to create a better, sustainable future for generations to come.

MESINA



VISION TO PRECISION

MESINA is more than a luminaire, it's the embodiment of URBIO's pursuit of purposeful innovation.
Every line, angle, and component reflects years of engineering expertise and design thinking aimed at redefining how cities experience light

Design Philosophy
Balanced form and function

Enduring Value
Built from recyclable, corrosion-resistant aluminum and engineered for decades of performance

Smart DNA
Native connectivity through Zhaga, NEMA, and Lighting AI



THE URBIO ECOSYSTEM

Smart lighting within an intelligent network

Lighting AI

Cloud platform for remote control, monitoring, predictive maintenance

NEOS Gateway

Communication hub (LoRa, PLC, 4G)

KAMSENS

Multifunctional sensor (traffic, noise, weather)

Lighting Intelligence

AI algorithms for adaptive brightness and energy optimization





Real BENEFITS

Smarter. Greener. Simpler.

Performance	Sustainability	Ease & Integration
High optical efficiency up to 193 lm/W[1]	Optional solar (24/12 V DC) configuration	Tool-free opening and plug-in modules
Excellent thermal management without striations	Reduced CO_2 emissions via smart dimming	Built-in level bubble + Angle Indexer
L90B10 @ 100,000 hours 5-year warranty	Long lifecycle → less waste	Smart-ready via NEMA 7-pin / Zhaga Book 18 interfaces
Wide power range (5-180W)		Compatible with Lighting AI, DALI, LoRa, PLC
Modular M / L / XL options		



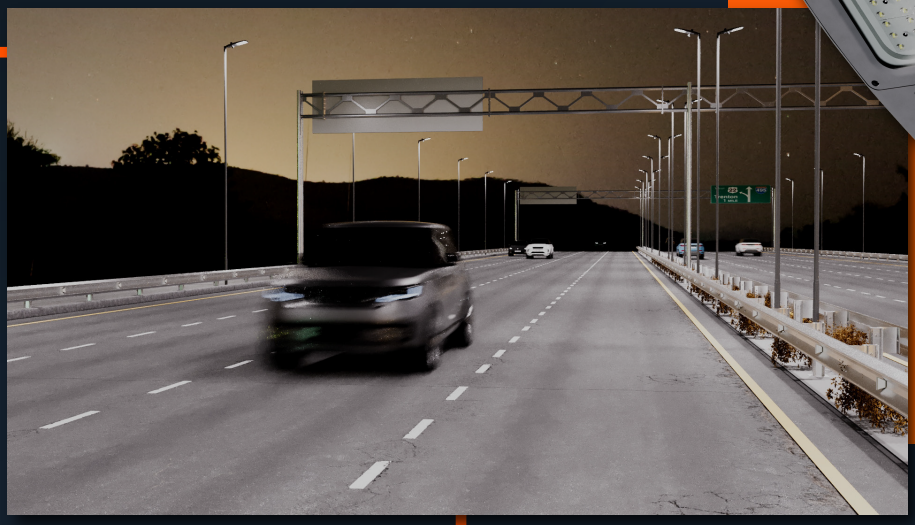
MESINA APPLICATIONS

One luminaire family. Infinite possibilities.

MESINA XL

Highways & Motorways

High-power version (MESINA XL) for uniform, glare-free lighting and high speed visibility





MESINA L

Urban Streets & Boulevards

MESINA L with adaptive dimming for pedestrian safety and energy savings





MESINA M

Parks & Green Areas

Low-power MESINA M integrated with PIR and KAMSENS sensors for eco-efficiency





MESINA

Adaptive Lighting

Color-temperature adaptive lighting for comfort and security

4000 K



5000 K



3000 K





SMART CONTROL & CONNECTIVITY

Controlled centrally in **Lighting AI** platform

Each MESINA luminaire connects via **NEMA 7-pin** or **Zhaga Book 18** port

Communicates through **LoRa**, **PLC**, or **4G** network

FEATURES
LIGHTING AI

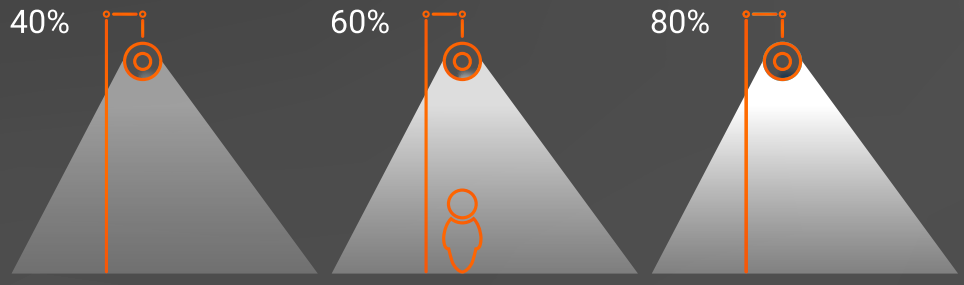
- On/off scheduling & dynamic scenarios
- Self-diagnosis & alerts (temperature, voltage, faults)
- Real-time monitoring of status and energy
- Predictive maintenance based on AI patterns
- Live map view for all lighting points
- Data export & consumption reports



SENSOR INTEGRATION

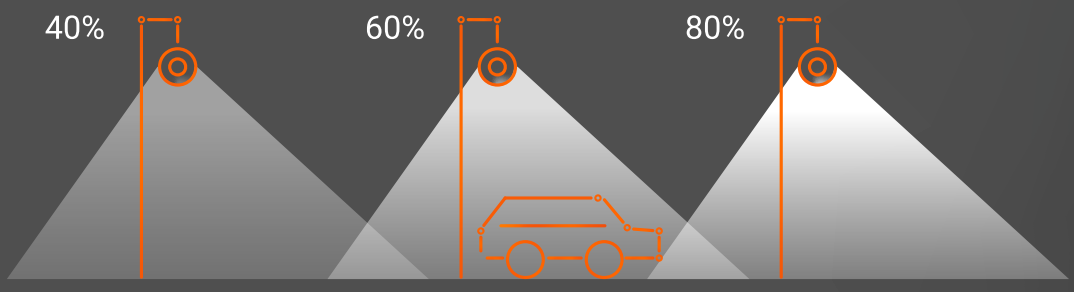
PIR Sensors (Passive Infrared)

- Detect pedestrian presence
- Trigger localized dimming and brightness increase
- Reduce energy consumption when no motion is detected



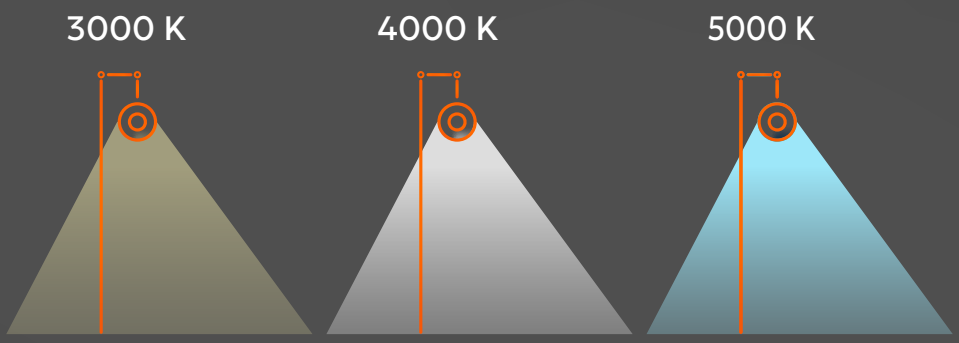
Radar Sensors

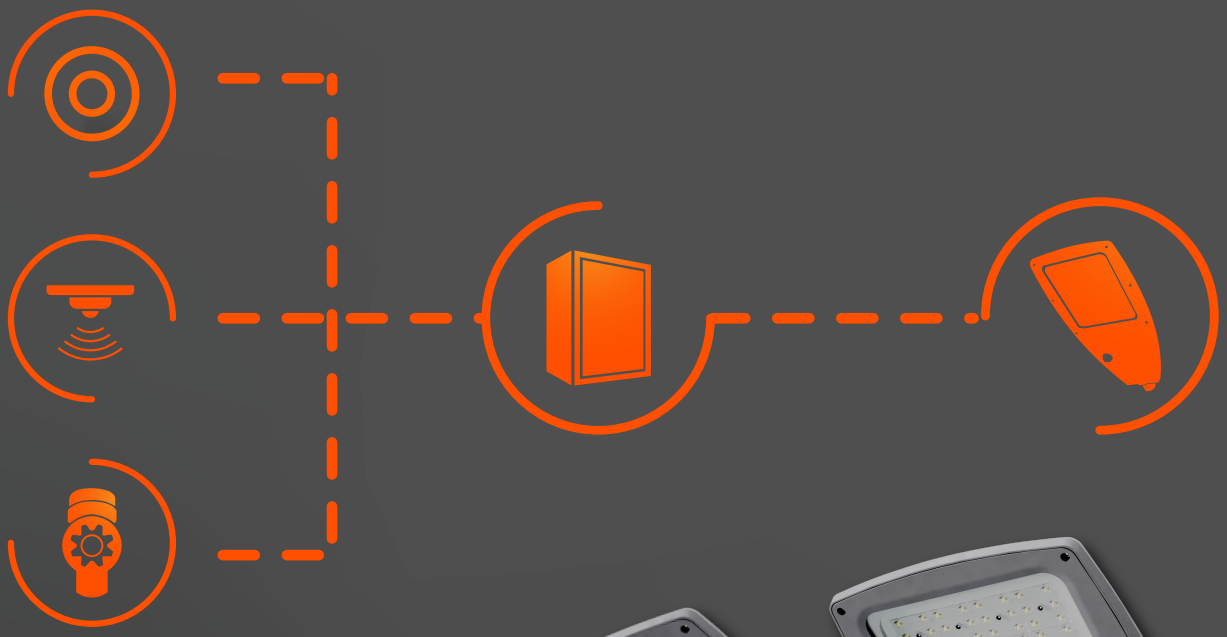
- Detect moving vehicles or bicycles at longer ranges
- Enable progressive light activation ahead of traffic



KAMSENS Multifunctional Sensor

- Detects motion, noise, light, fog, rain, snow
- Sends data to Lighting AI for real-time adjustment
- Adjusts color temperature (3000 K → 5700 K) for visibility
- Enhances road safety and reduces energy waste







TECHNICAL SPECIFICATIONS

General

Parameter	Value
Lifetime	L90B10 @ 100,000 h
Warranty	5 years
Sizes	M / L / XL

Optical

Feature	M	L	XL
LED type	5050 series	5050 series	5050 series
LEDs qty	24/36	48/72	80/120
Color Temp	2700 K; 3000 K; 4000 K; 5000K [2]		
CRI	≥ 70; ≥ 80 [1]		
Luminaire efficiency	165 - 193 lm/W [1]		
Lens	PMMA / PC		
Distribution angle	138°		



(1) All photometric data in this brochure - luminous flux and luminaire efficacy - refer to CRI 70 configurations. Photometric data for CRI 80 on request.
(2) Applies up to 150 W. Above 150 W (MESINA XL): Class I, IP66, ambient temperature –40 °C to +50 °C, CCT 3000 K / 4000 K / 5700 K.

Electrical

Parameter	Value
Power	5 – 180 W ± 1 %
Voltage	220 - 240 VAC
Power factor	≥ 0.95
Frequency	50/60 Hz
SPD	10 kV / 20 kV optional
CLO & lifetime alert	Yes
Insulation Class	Class I / Class II

Mechanical

Parameter	Value
Housing	Die-cast aluminum
Finish	Electrostatic powder coating
Ingress Protection	IP66 / IP67[(2)]
Impact Resistance	IK09 / IK10
Weight	3.6 / 6.5 / 8.0 kg

Connectivity

Interface	Standard
Smart Socket	NEMA 7-pin / Zhaga Book 18
Communication	LoRa / PLC / 4G
Control Protocol	DALI / D4i / Lighting AI
Sensors	PIR / Radar / KAMSENS

MESINA

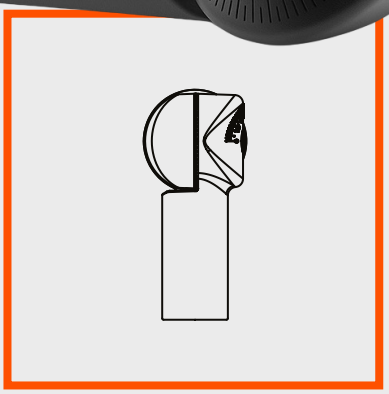
ANGLE INDEXER & MOUNTING

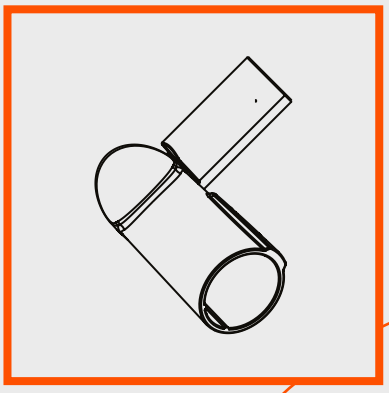


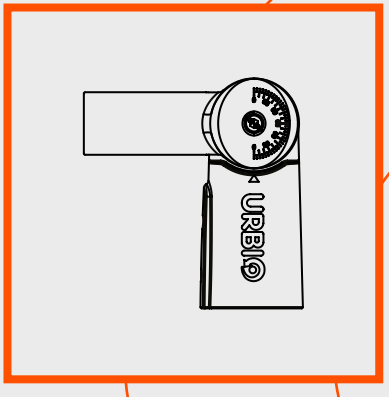
Precision made simple

- Adjustable tilt: –90° to +90°, with graduated markings every 5°
- Universal die-cast mount for poles Ø 60–32 mm
- Safe and quick installation even in tough conditions

Best tilt angle available: 180°



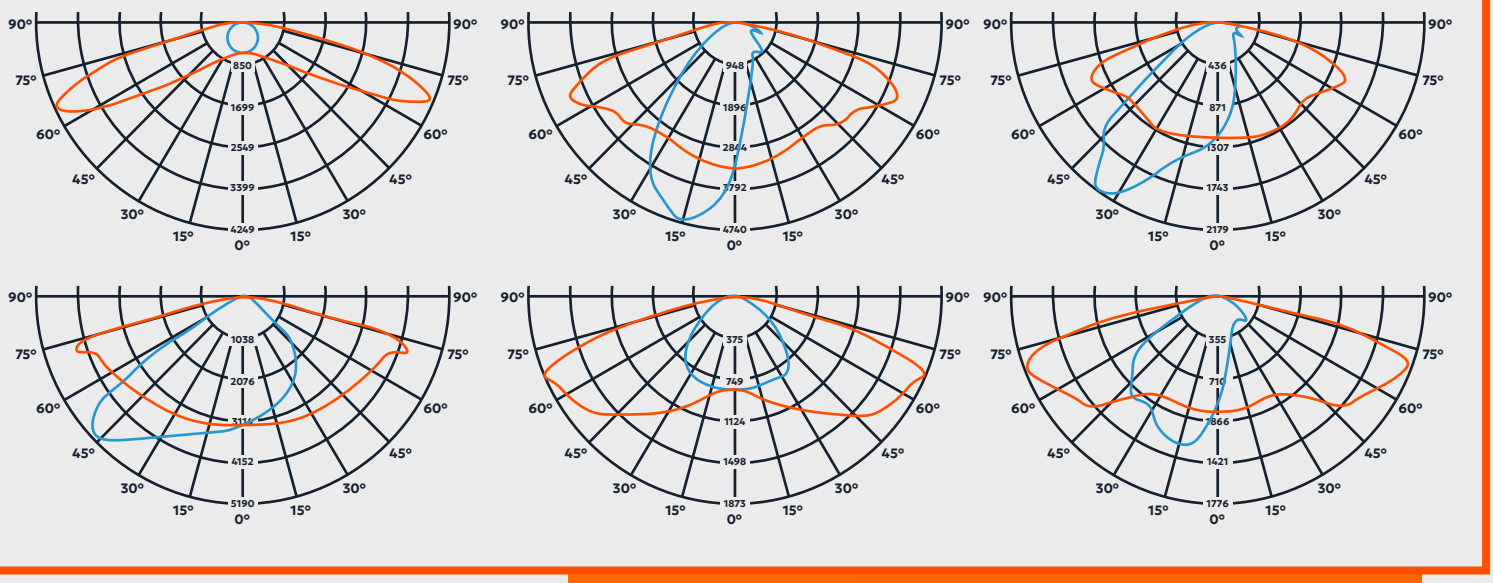




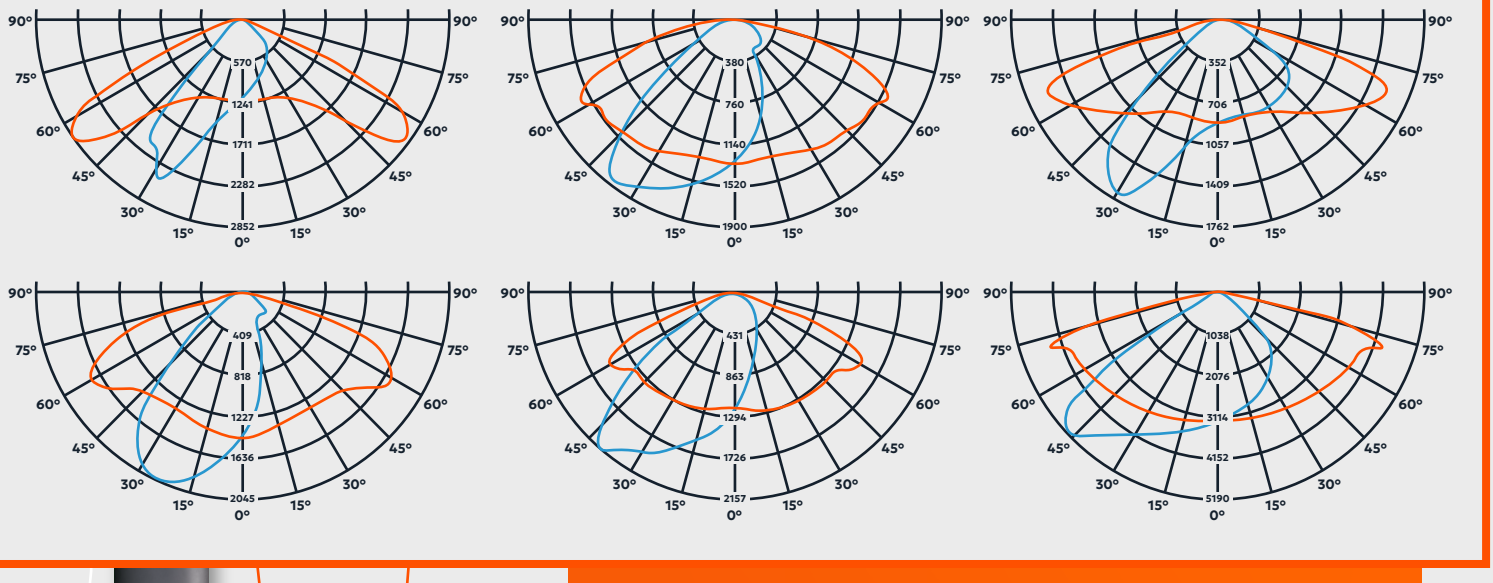




PHOTOMETRIC DISTRUBTIONS







RENEWABLE ENERGY COMPATIBILITY

Energy independent. Sustainable by nature.

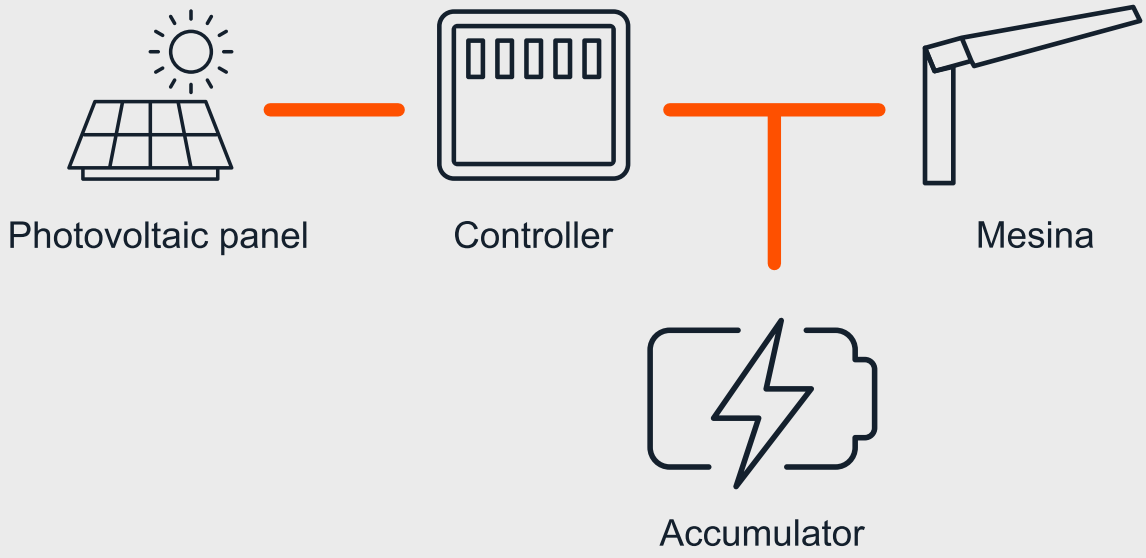


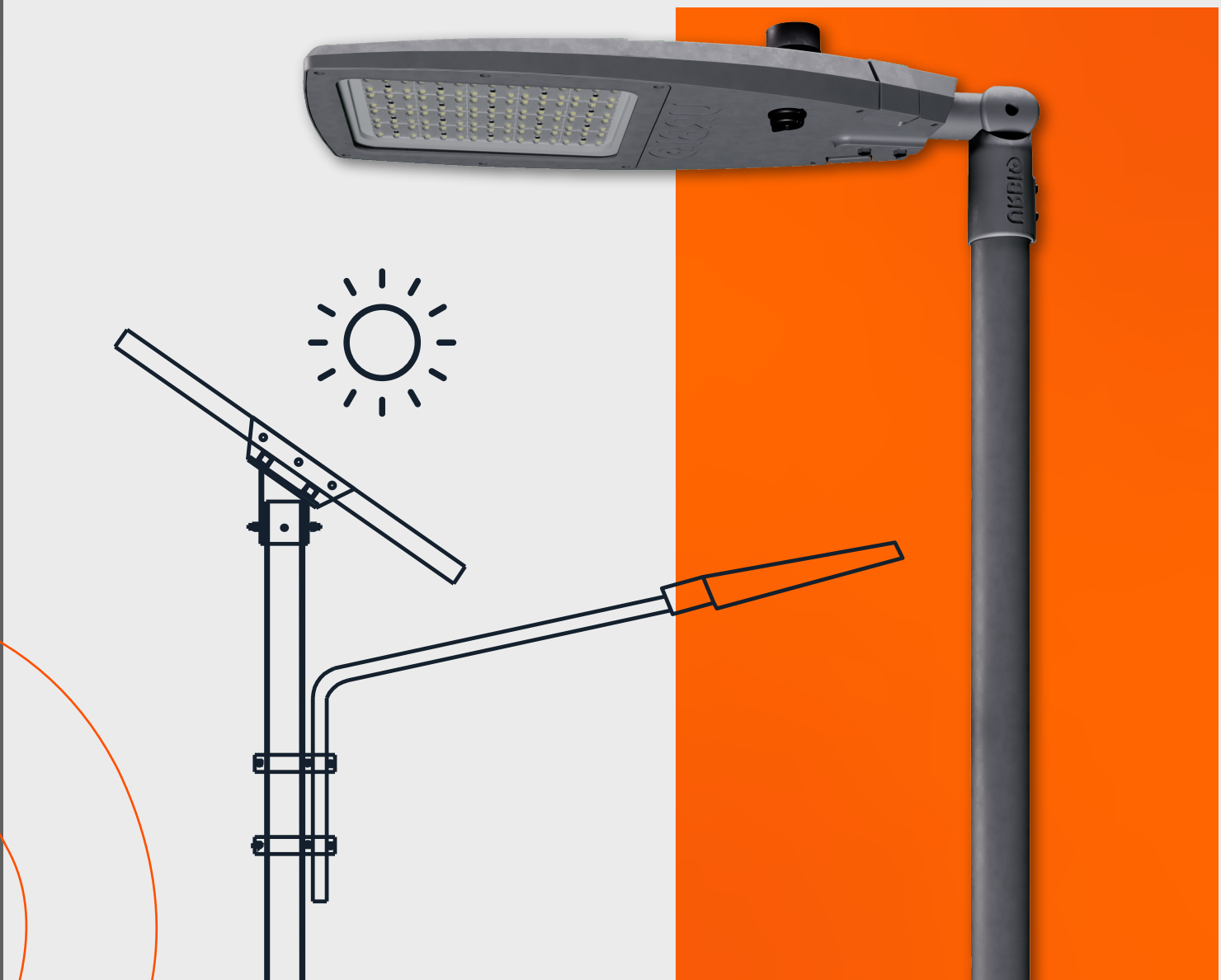
Designed to harness clean and sustainable energy, this system ensures continuous operation even in remote locations. Its compatibility with photovoltaic panels and inverter options allows for flexible installation and reduced environmental impact, making it ideal for off-grid or eco-friendly applications.

- Solar operation via 24/12 V DC input or inverter
- Ideal for remote or off-grid areas

Sustainable Power System:

The system guarantees reliable performance through renewable energy integration, minimizing the need for traditional power sources. Its efficient design maximizes energy storage and usage, providing long-lasting autonomy and consistent functionality in isolated or energy-limited environments.





CERTIFICATIONS & COMPLIANCE

Engineered for European Excellence

Product Compliance	Safety & Protection	Corporate Standards	Eco-Design
CE	IP66 / IP67	ISO 9001	100 % Recyclable Materials
ENEC	IK09/ IK10	ISO 14001	Eco-efficient Production
ENEC +	SPD 10–20 kV	ISO 45001	Low Carbon Manufacturing
RoHS	Class I /Class II		
REACH			
WEEE			
DALI/D4i			
NEMA			
Zhaga			
LoRa			
PLC			

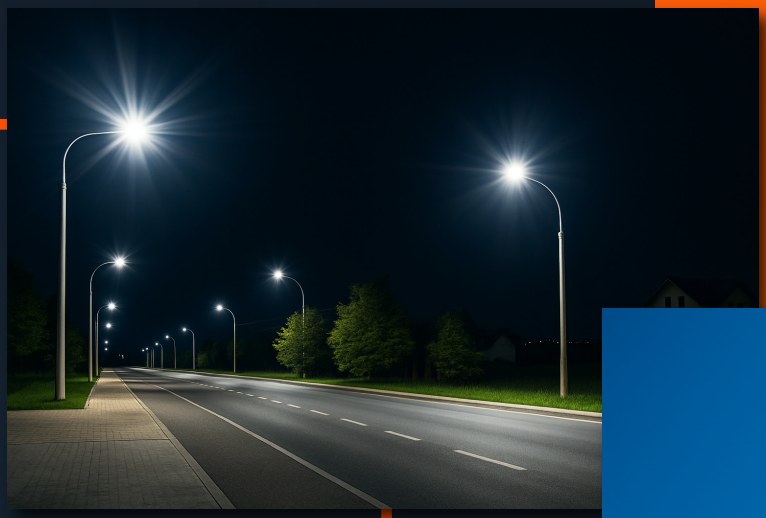


PROVEN PROJECTS

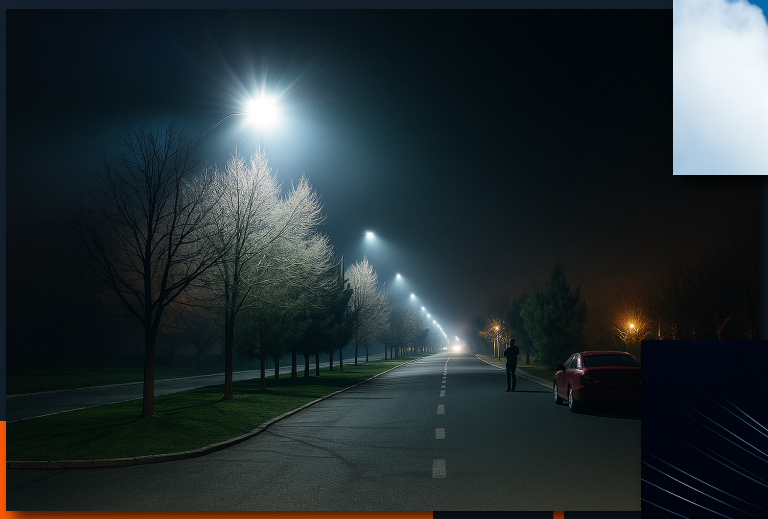
Validated performance in the field

+200

Over 200 installations nationwide
in urban and rural projects









CERTIFICATIONS & STANDARDS IN DETAIL

1 • Core Electrical & Safety Certifications

Certification	Standard	What It Ensures
CE	EU Low Voltage Directive 2014/35/EU + EMC 2014/30/EU + Ecodesign 2009/125/EC	Product complies with EU safety, electromagnetic compatibility, and energy efficiency directives
ENEC	ENEC Mark (EN IEC 60598-1 / EN 60598-2-3)	Independent European certification for luminaires, confirming compliance with harmonized safety standards
ENEC+	ENEC+ Mark (EPRS 003:2025-04 / EN IEC 62722-2-1)	Independent European certification of the declared photometric performance — luminous flux and luminaire efficacy
RoHS	Directive 2011/65/EU	Restriction of hazardous substances (lead, mercury, cadmium, etc.)
REACH	Regulation (EC) No 1907/2006	No harmful chemicals beyond accepted thresholds

2 • Environmental & Protection Ratings

Mark	Standard	Description
IP66 / IP67	EN 60529	Full protection against dust ingress and water immersion
IK09 / IK10	EN IEC 62262	Impact resistance, protection against 20 J mechanical impact
Class I / Class II	EN 61140	Protective earth connection (Class I) or double insulation (Class II) for electrical safety
SPD 10 kV / 20 kV	EN 61643-11	Surge protection device rating (electrical transient immunity)

3 • Optical & Photometric Standards

Certification / Reference	Standard	What It Covers
Photometric Data	EN 13032-1 / LM-79	Standardized testing of luminous flux, intensity distribution, and efficiency
Color Rendering Index (CRI)	EN 12464-2	Light quality in road and outdoor lighting applications
Glare and Uniformity	EN 13201-2 / EN 13201-3	Ensures compliance with road lighting classes (ME, CE, S, etc.)

4 • Environmental & Quality Management

Certification	Standard	Purpose
ISO 9001	Quality Management System	Guarantees product consistency and traceability
ISO 14001	Environmental Management	Ensures controlled environmental impact and sustainable production
ISO 45001	Occupational Health & Safety	Demonstrates responsibility toward workers and operational safety

5 • Sustainability & Lifecycle Indicators

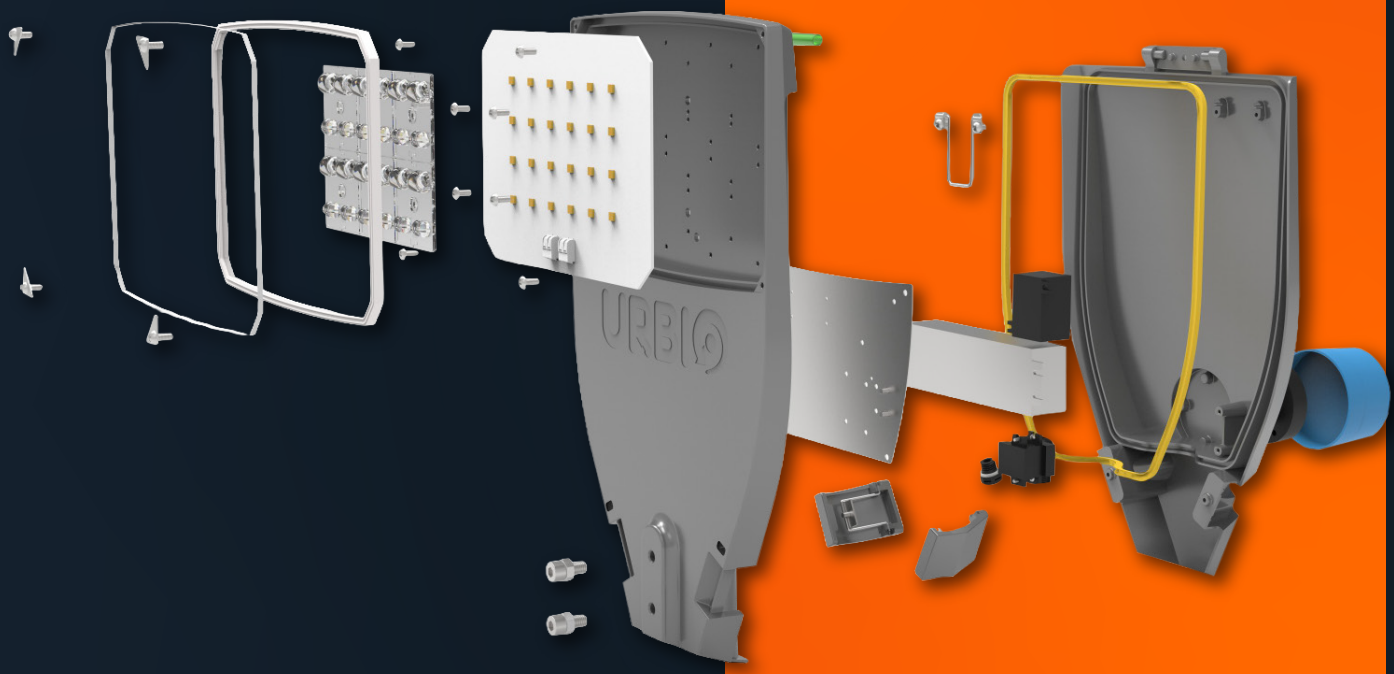
Element	Description
100% recyclable aluminum body	Emphasize circular design
Eco-Design / Life Cycle Optimized	Minimized environmental footprint across production and usage
WEEE	EU Waste Electrical & Electronic Equipment Directive compliance

RECOMMENDED CERTIFICATIONS & STANDARDS SECTION

6 • Control & Connectivity Standards (Smart Lighting Compatibility)

Interface	Standard	Benefit
NEMA / Zhaga socket ready	ANSI C136.41 / Zhaga Book 18 Ed. 4.0	Compatibility with telemanagement systems (e.g., Lighting AI)
DALI / D4i driver ready	IEC 62386	Digital dimming and control communication standard
LoRa / PLC compatible	IEEE 802.15.4g / ISO 14908	Wireless / powerline control readiness

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