

SUSTAINABILITY & EFFICIENCY IN ARCHITECTURAL LIGHTING

UAE GUIDELINES & BEST PRACTICES

In a world where aesthetics, functionality, and sustainability must seamlessly coexist, **architectural lighting plays a vital role** in shaping modern and responsible urban spaces. In the United Arab Emirates - a region defined by rapid **architectural development** and a **strong commitment to innovation** the demand for efficient, long-lasting, and environmentally conscious lighting solutions is steadily rising.

This brochure is designed to **support architects, lighting designers, and specifiers** in understanding the latest environmental regulations and energy efficiency **standards adopted in the UAE**.

Through best practices, application case studies, and technical insights, we offer an integrated approach that combines European design expertise with the UAE's sustainable vision.

As a **European manufacturer** with extensive experience in **high-quality lighting systems**, we are committed to contributing to a brighter, more responsible future-shaping spaces that reflect beauty, innovation, and environmental awareness.

OVERVIEW



In an era where innovation meets responsibility, lighting is no longer just about illumination- it's about intelligent, sustainable design that enhances spaces while preserving our planet. At the forefront of this evolution is our company, dedicated to delivering cutting-edge lighting solutions that align with the UAE's bold vision for smart cities, iconic architecture, and environmentally responsible development.

Our approach embraces the full lifecycle of lighting- beginning with **ethically sourced raw materials**, progressing through **energy-efficient production**, and extending to **modular, long-lasting systems** designed for **easy maintenance** and **responsible end-of-life disposal**. From conception to completion, every stage is engineered for minimal environmental impact and maximum performance.

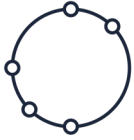
We integrate **high-efficiency LED** technologies with **smart lighting controls** powered by IoT, sensors, and adaptive management systems, offering unmatched energy savings and operational precision. Our designs harmonize with architectural forms and environmental contexts, offering flexibility, aesthetic excellence, and seamless integration.

Certified to meet global and regional green building standards we empower architects, lighting designers, and specifiers to bring visionary projects to life with solutions that are as sustainable as they are spectacular.

Let's build a brighter, greener future - one light at a time.

WHAT WE OFFER





ENERGY - EFFICIENT PRODUCTION

As part of our commitment to a more sustainable future, we follow an **energy-efficient production** model. This means using advanced technologies and optimized processes to minimize energy consumption, reduce CO² emissions, and

limit waste. Each lamp is crafted with care for the environment, without compromising on quality, design, or durability. Choosing our lamps means making a conscious choice to help protect the planet.



MODULAR LONG LASTING SYSTEM

We design compact lamps with a reduced number of joints to ensure **durability** and **consistent performance over time**. We use only reliable, high-quality materials, carefully selected to withstand wear and

maintain their appearance. The modularity allows for easy component replacement, reducing waste and simplifying repairs. A smart approach, built to last.



SUSTAINABLE DESIGN

Our approach to **sustainable design** combines innovation with environmental responsibility at every stage of the production process. We use high-efficiency LED technology to reduce energy consumption and design luminaires with optimized **thermal dissipation** to ensure

long-lasting performance. In our **top pole luminaires** the "cut-off" design minimizes light pollution, respecting the surrounding environment. Every design choice is made to balance functionality, aesthetics, and sustainability.



EASY MAINTENANCE

Our lamps are designed to ensure **quick and easy maintenance** reducing downtime and operational costs. Accessible structures, modular components, and intuitive opening systems allow for smooth operations- from cleaning to part replacement. We use **high-quality drivers** to ensure long-term

reliability and adopt **high IP and IK ratings** offering strong protection against dust, water, and impacts. A functional design that simplifies management while delivering long-lasting performance and durability.



RESPONSIBLE END OF LIFE DISPOSAL

We are committed to responsibly managing the end of life of our lamps. Materials are selected to be easily recyclable and disposable, minimizing environmental impact. We provide clear guidelines for

proper disposal and promote the recovery of components, contributing to a more sustainable circular economy.

BEST PRACTICES

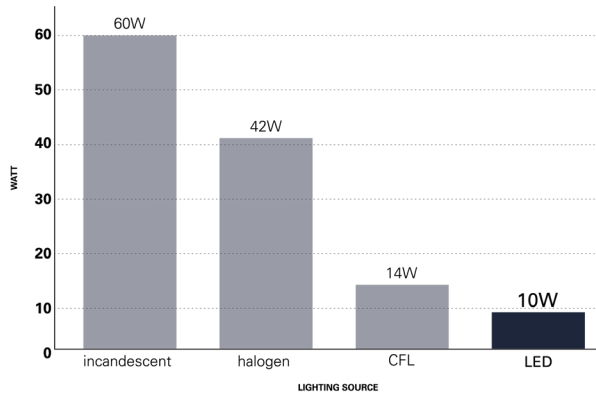
for delivering Sustainable and
Energy-Efficient Lighting Projects in the UAE



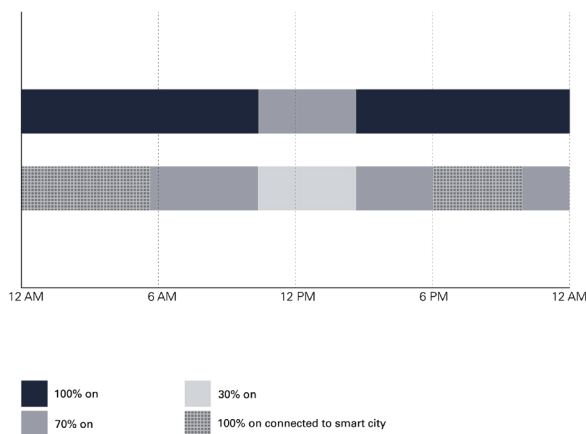


Designing **lighting solutions in the UAE** today means aligning innovation with sustainability-responding to the region's ambitious urban development while meeting stringent energy efficiency goals. To achieve this balance, leading projects adopt a series of best practices that ensure long-term performance, reduced environmental impact, and compliance with local and international green building standards.

By following these best practices, stakeholders across the lighting value chain-architects, lighting designers, and specifiers - can deliver projects that are not only energy efficient but also culturally resonant, environmentally conscious, and future-ready.

ENERGY CONSUMPTION by LIGHTING SOURCE (for ca 800 lumens)

24h LIGHT CIRCLE classical source
 VS
24h LIGHT CIRCLE connected to Smart City source



1. Prioritize High-Efficiency LED Technologies

Modern projects rely on advanced LED systems that deliver high luminous efficacy, exceptional durability, and significantly reduced energy consumption. Selecting fixtures with proven thermal management and low maintenance requirements ensures long operational life in the region's demanding climate.

2. Integrate Smart Lighting Control Systems

Dynamic control through sensors, timers, and IoT-enabled platforms allows lighting to adapt in real time to occupancy, daylight availability, and usage patterns. This results in significant energy savings while enhancing user comfort and operational efficiency.

3. Design for Flexibility and Modularity

Sustainable lighting is not only about energy- it's also about adaptability. Modular lighting systems allow for phased implementation, easy upgrades, and minimal disruption to the built environment. This aligns with the UAE's fast-paced urban development and evolving infrastructure.

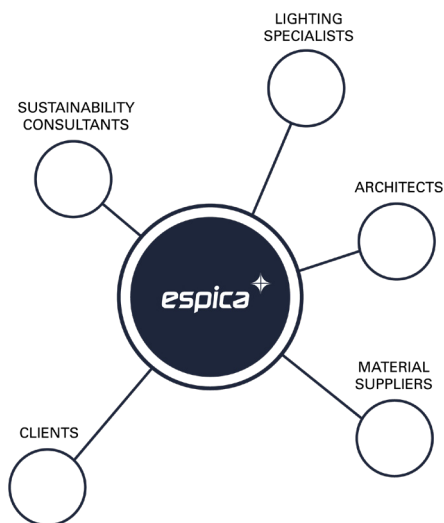
4. Use Environmentally Responsible Materials

From extraction to end-of-life, sustainable projects carefully select materials with a low environmental footprint. This includes recyclable components, minimal use of hazardous substances, and packaging designed for reduced waste.



5. Align with Green Building Certifications

Projects in the UAE benefit from aligning lighting design with certification frameworks like LEED, Estidama Pearl Rating System, and Al Sa'fat. These guidelines ensure comprehensive sustainability- from energy efficiency to light pollution control- while supporting project credibility and regulatory compliance.



6. Collaborate Early in the Design Process

Involving lighting specialists, architects, and sustainability consultants from the initial stages enables integrated solutions that blend seamlessly into the architectural vision while optimizing environmental performance.

7. Embrace Lifecycle Thinking

A sustainable lighting strategy considers the full product lifecycle: from responsible sourcing and efficient manufacturing to long-term operation and end-of-life recycling or reuse. This circular approach is essential for minimizing ecological impact and aligning with the UAE's commitment to sustainable development.

OUR PRODUCTS OUR TECHNOLOGIES



As part of our commitment to a more sustainable future, we develop lighting solutions that combine efficiency, innovation, and environmental responsibility. Our product ranges integrate intelligent design with advanced technologies to reduce energy consumption and emissions. From **dimmiability** and **smart system connectivity** to **complete cut-off** for optimal light pollution control, each product is engineered to deliver high performance with minimal impact.

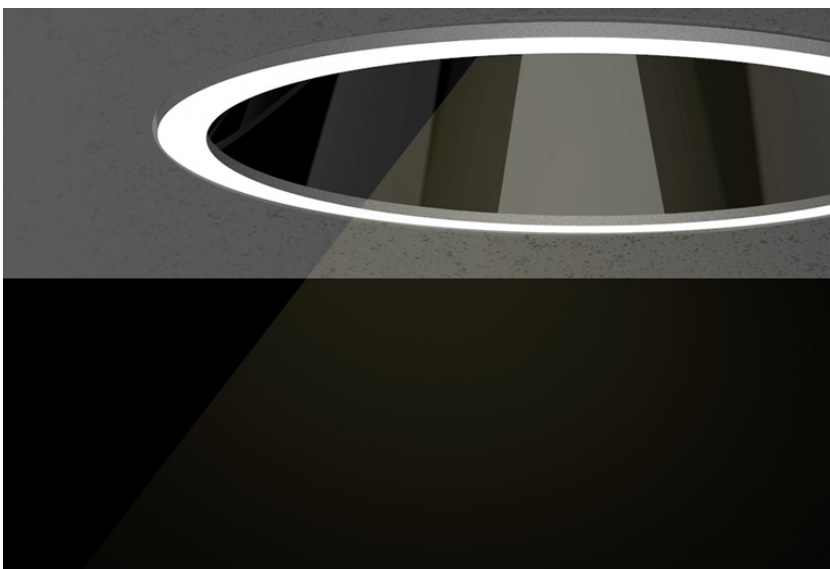
Lighting designed for tomorrow, with no compromises.



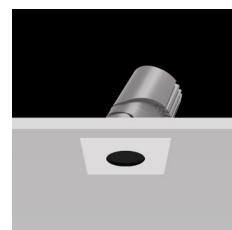
CARINA PREMIUM



ATRIA / GATRIA



DOWNLIGHTS



The complete range of products for your urban lighting projects. **Carina Premium** is a studied mix of design, visual comfort and maximum flexibility of use. Thanks to its adjustable inclination joint it can be installed both at the top of the pole on supports with a diameter from 33mm up to 60mm and on a lateral arm. The uniform and **glare-free light distribution** is combined with **excellent luminous efficacy and lifetime performance**, making Carina Premium the best solution for urban lighting. Thanks to its functionality and great lighting performance, Carina Premium is the

ideal product family for any type of outdoor installation, both on **streets** and **walkways** as well as **squares** and **large areas**.

The Carina range features an essential and timeless design, colour temperatures from 3000K up to 6500K and a high luminous efficacy. Available in different finishes, equipped with an extensive range of optical solutions and designed for **integration with smart city systems**, Carina Premium is the perfect product to satisfy the requests of any lighting designer.

Atria and **Gatria** are a post-top entirely designed with LED technology. Enhanced by a stylish design with advanced **heat dissipating system**, these top pole luminaires are the perfect partner for outdoor lighting. Thanks to their particular shape, the products guarantee a **complete cut-off**, very low power consumption and **high luminous efficiency**.

They are available in colour temperatures from 3000K up to 6500K. Plus, thanks to their mechanical characteristics and the fact that they doesn't use mercury material in the structure, these products expresses a constant power consumption and light output in a wide range of supply voltage, resulting an **environmentally friendly product**.

The complete range of products designed for all interior projects. Beyond its elegant design, precise light control, and excellent UGR values, our downlights stands out for their **dimmmable properties** that allow seamless **adjustment of light intensity**, ensuring both comfort and **significant energy savings**. Their compact and highly

modular design, featuring a single LED module with multiple mounting rings, makes them especially versatile for hospitality. Our downlights are the perfect choice for residential, retail, and hotel applications, combining style, functionality, and energy efficiency.



Espica Lighting

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