

# Kirium Eco

Quality needn't cost the earth





# Quality needn't cost the earth

Need a highly efficient, cost-effective street lighting solution which is Smart City ready and Dark-Sky friendly? Think Kirium Eco.

With market leading luminaire efficiency of up to 185 lm/W, Kirium Eco is our most competitive range of LED street lights to date. Available in two sizes, Kirium Eco features dedicated optics optimised for P, C and M lighting class applications.

## Key advantages

- Available with 36 or 48 LED light engines and flexible drive currents for tailored performance
- Lumen outputs of up to 22,500lm with 9 optical solutions - perfect for a variety of applications
- Highly efficient LEDs (up to 185lm/W), providing low total cost of ownership
- Choice of smart control options - delivering further energy savings and enabling asset management
- Easy to install using optional Universal Entry, allows for quick switching on site
- Dark Sky friendly with warmer colour temperatures as standard

## Applications

-  Traffic Routes
-  Residential
-  Car parks
-  Housing developments





# Kirium Eco range

Kirium Eco is a low cost lighting solution that helps specifiers deliver the right light at the right time. Its modern, angular design and advanced features make it ideal for a range of urban applications, including the illumination of roadways and residential streets. Kirium Eco is offered in two sizes and flexible drive currents to deliver tailored performance.



## Kirium Eco Max

<b>Lumen Range</b>	5,150 - 16,900 lm
<b>Power Range</b>	29 - 112 W
<b>LED Quantity</b>	36
<b>Mounting Height</b>	8 - 10 m
<b>Typical Applications</b>	Residential / Car Parks



## Kirium Eco Ultra

<b>Lumen Range</b>	6,700 - 22,500 lm
<b>Power Range</b>	38 - 150 W
<b>LED Quantity</b>	48
<b>Mounting Height</b>	8 - 12 m
<b>Typical Applications</b>	Car Parks / Traffic Routes



### Cost-effective lighting

With class-leading efficiency of up to 185lm/W, the Kirium Eco offers substantial energy savings potential over its 100,000 hour lifetime, representing considerable value for money.



### Dedicated optics

With 9 dedicated optics optimised for street lighting applications, Kirium Eco can deliver targeted illumination only where needed, while also achieving wide column spacings and excellent uniformity.



### Built to last

Constructed from high quality materials, Kirium Eco has an IP66 rating and features an anti-condensation valve to prevent moisture build-up, helping to protect against the elements—come rain or shine.



### Smart City ready

To manage energy usage, Kirium Eco can be specified with a range of CMS nodes, via Zhaga or NEMA sockets for additional connectivity and control, helping to deliver further energy savings.



### Easy to install

With its Universal Entry that allows for quick on-site switching between post top and side entry mountings, Kirium Eco is easy to install, saving time and lowering installation costs.



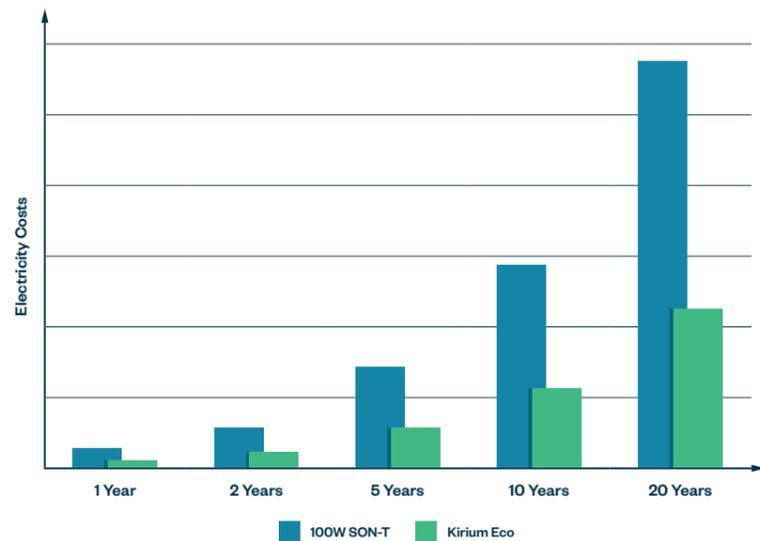


## A cost-effective solution

Compared to traditional light sources, LED technology offers immediate savings on energy consumption while also helping to reduce carbon emissions and support Net Zero targets.

When combined with lower maintenance costs and lamp replacement needs, Kirium Eco provides significant savings on energy costs over its 100,000 hour lifetime, offering a quick return on investment and a low total cost of ownership.

Low cost of ownership



### Large energy savings

Switching to LED technology can substantially lower energy usage, with typical annual savings of around 62%, which equates to approximately 77W per luminaire.



### Net zero targets

Lighting is responsible for nearly 5% of global CO<sub>2</sub> emissions, with public lighting accounting for around 20-40% of a municipality's energy bill. Converting to energy efficient LED street lighting can significantly lower carbon emissions and help Local Authorities work towards achieving their Net Zero targets.



### Return on investment

With a low upfront cost and substantial energy savings potential over Kirium Eco's 100,000 hour lifetime, switching to LED offers a great Return on Investment with potential payback within a 1-2 year period. Factor in reduced maintenance costs, and the opportunity for long-term savings increases even further.

## Design features

### Connected Spaces Ready

Miniature / NEMA photocell  
Factory set dimming  
Zhaga Book 18 connectivity  
Internal / external CMS  
urban control® ready

### Anti-Condensation Valve

Further protects the enclosure by preventing internal condensation build up as a result of rapid ambient temperature fluctuations

### Adjustable Tilt

Side entry: -15° to +10°  
Post top: -5° to +15°

### Construction

Manufactured from die-cast LM6 aluminium with a polyester powder coat finish for maximum protection



### Easy Installation

Adaptable from post top to side entry mounting on-site, even with pre-fitted cable tail

Post top: Ø60-76mm  
Side entry: Ø34-60mm

### Dedicated Optics

- Pathways
- Narrow Roads
- Medium Roads
- Wide Roads
- Asymmetrical Areas
- Symmetrical Areas
- Traffic Routes

### Warmer Colour Temperatures



### Dark Sky Friendly

To combat sky glow and light pollution, Kirium Eco features a 0% Upward Light Output Ratio



### Support Tag

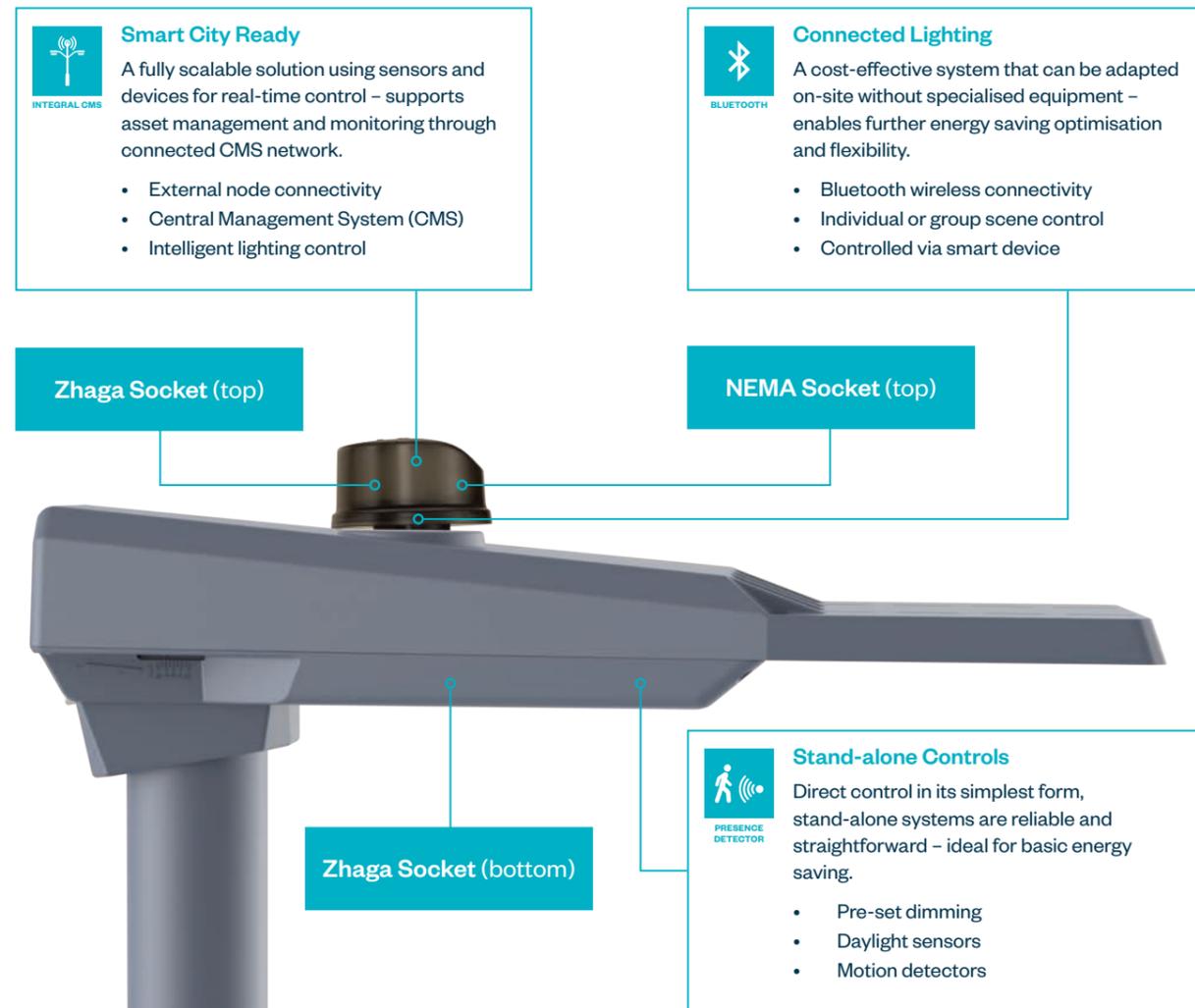
A QR-based system designed to streamline the luminaire maintenance process. Ensures issues are dealt with quickly by our dedicated support team



# Connectivity & control

Lighting controls help save energy, extend luminaire life and provide light only when it's needed, ensuring that areas are lit at the right times while also helping to protect our natural environment.

Kirium Eco can be controlled in a variety of ways, from simple to advanced — and is compatible with all the leading CMS providers. In addition, Kirium Eco can be specified with both NEMA and Zhaga sockets mounted in top and bottom locations, helping to future-proof the luminaire.



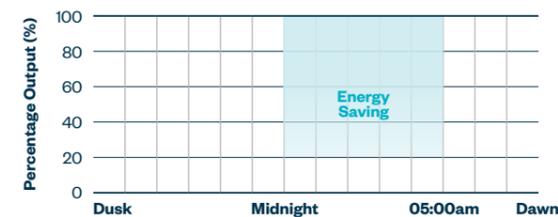
# Control options

Lighting control systems offer many benefits, from increased flexibility to helping lower energy consumption. Kirium Eco can be specified with multiple control options to suit the individual needs of your scheme.

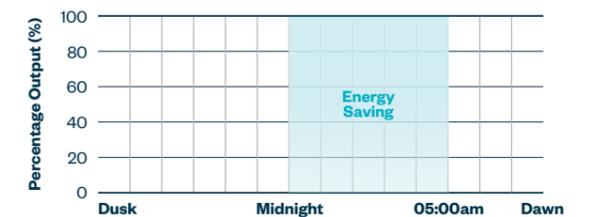
## Photocells and part night dimming

For a basic control option, pair Kirium Eco with a miniature photocell for dusk-to-dawn lighting. To trim burning hours, we recommend a 20lux photocell to limit 'on time'. To achieve greater energy savings, without the capital expenditure of a full CMS system, consider dimming your lanterns for part of the night. We can pre-program the driver to any regime for tailored energy savings.

Part Night Dim



Part Night Switch



## Sensors

Kirium Eco can accommodate a variety of sensors on the underside of the luminaire. Motion sensors can be used to provide increased energy savings by dimming when no movement is detected.

Alternatively, environmental detectors such as pollution or road temperature sensors can be integrated to report data as part of a Connected Spaces installation.

## CMS / Connected Spaces integration

To allow our customers the greatest flexibility, we remain CMS agnostic and have supplied luminaires with all the current CMS and Connected Spaces platforms on the market.

With Kirium Eco, we can fit internal nodes for all major systems minimising the visual impact on the lanterns aesthetic (an external aerial is still required). The following is a small selection of the control technologies we have installed in our lanterns:





# Technical specification

## Kirium Eco lumen packages and wattages matrix

Drive Current (mA)		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
Kirium Eco Max	lm	5149	6013	6827	7783	8681	9526	10325	11081	11800	12616	13385	13993	14684	15338	15854	16440	16903
	W	29	33	37	42	47	52	57	62	67	73	79	84	90	96	101	107	112
	lm/W	178	182	185	185	185	183	181	179	176	173	169	167	163	160	157	154	151
Kirium Eco Ultra	lm	6698	7997	9213	10356	11434	12622	13740	14798	15799	16749	17776	18628	19550	20421	21142	21923	22567
	W	38	44	50	56	62	69	76	83	90	97	105	112	120	128	135	143	150
	lm/W	176	182	184	185	184	183	181	178	176	173	169	166	163	160	157	153	150

Calculations based on 4000K with no LOR applied

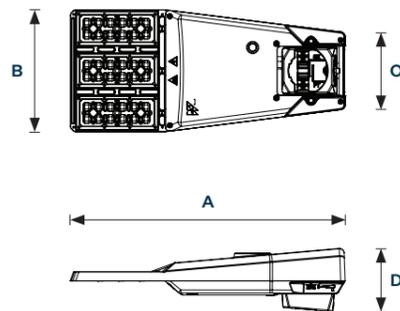
## Luminaire dimensions

	Dimensions (mm)				Weight (kg)	Windage (m²)
	A	B	C	D		
Kirium Eco Max	588	261	180	139	6.0	0.041
Kirium Eco Ultra	588	336	180	139	7.3	0.041

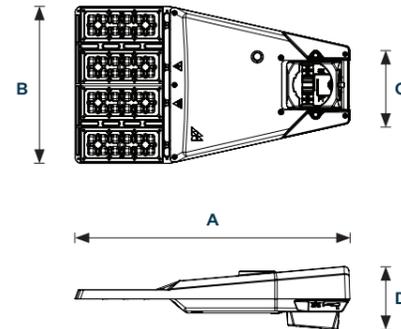
## CCT details

	Light output reduction factor	S/P Ratio
4000K	1.00	1.5
3000K	0.91	1.4
2700K	0.86	1.3

### Kirium Eco Max



### Kirium Eco Ultra



## Kirium Eco optics



## Product codes

	Code	Example
<b>Model</b>		
Kirium Eco Max	KEX	KEX
Kirium Eco Ultra	KEU	
<b>Housing Material</b>		
Full die-cast aluminium	AL	AL
<b>Colour Temperature</b>		
2200K	22	30
2700K	27	
3000K	30	
4000K	40	
<b>Distribution</b>		
Narrow Road - Type 1	NR1	NR2
Narrow Road - Type 2	NR2	
Medium Road - Type 1	MR1	
Medium Road - Type 2	MR2	
Wide Road - Type 1	WR1	
Wide Road - Type 2	WR2	
Traffic Routes	TR	
Asymmetric Area	AA	
Symmetric Area	SA	
<b>Drive Current</b>		
Drive currents from 250mA to 1,050mA are available in 50mA increments Insert drive current value in 4-digit format (e.g. 250mA = 0250)	0250 / 0300 / 0350 0400 / 0450 / 0500 0550 / 0600 / 0650 0700 / 0750 / 0800 0850 / 0900 / 0950 1000 / 1050	0750
<b>Electrical class</b>		
Class I [standard option]	I	I
Class II	II	
<b>Product colours</b>		
RAL 7046 Mid Grey	CF	CF
RAL 7035 Light Grey	29	
RAL 9005 Black	10	
Other RAL colour [on request]	RAL [specify]	
<b>Pre-Programmed Dimming (optional)</b>		
Pre-programmed dimming profile (please specify on order)	DIM [Specify]	-
<b>Integrated Control (optional)</b>		
Miniature Photocell 20 lux (1:1)	U20	U35
Miniature Photocell 35 lux (1:0.5)	U35	
Miniature Photocell 70 lux (1:0.5)	U70	
Integral CMS - Urban Control (with puck antenna)	IUC	
Integral CMS - Telensa (with monopole antenna)	ITE	
Integral CMS - Mayflower (with stub antenna)	IMA	
<b>External Connectivity - Top (optional)</b>		
3-pin NEMA socket	E	-
5-pin NEMA socket	C3	
7-pin NEMA socket	D2	
4-pin Zhaga Book 18 socket	Z4	
<b>External Connectivity - Bottom (optional)</b>		
4-pin Zhaga Book 18 socket (available when fitted with a NEMA or Zhaga Book 18 socket on top)	Z4B	-

Example Code: KEX AL 30 NR2 0750 I CF U35

## Key Features

Our most competitive street lighting solution with a low total cost of ownership over its lifetime

Long-lasting solution (100,000hr lifetime L90) with highly efficient LEDs up to 185lm/W

Adaptable mounting block allows on-site switching from side entry to post top, with cable fitted with quick and easy tilt adjustment

Extensive optical solutions for roads, footpaths and zebra crossings with warmer colour temperatures available as standard

Integrated anti-condensation valve to prevent moisture build up inside the housing and protect the IP66 rating

## Total Luminaire Lumens

**Kirium Eco Max (36 LEDs):** 5,150 – 16,900 lm

**Kirium Eco Ultra (48 LEDs):** 6,700 – 22,500 lm

## Mounting Height

**Kirium Eco Max:** up to 10m

**Kirium Eco Ultra:** up to 12m

## Optical Control

Narrow Road (Type 1 / Type 2)

Medium Road (Type 1 / Type 2)

Wide Road (Type 1 / Type 2)

Traffic Routes

Area (Symmetric / Asymmetric)

## Lifetime

> 100,000 hours L90 B10

## Colour Temperature

2200K

2700K

3000K

4000K

## Colour Rendering Index

70Ra

## Luminaire Efficacy

Up to 185lm/W

## Drive Current

250mA - 1050mA (in 50mA increments)

## Mounting

**Universal entry:** Ø60 - 76mm (PT) / Ø34 - 42mm (SE)

**Inclination (post top):** -5° -to +15° in 5 increments

**Inclination (side entry):** -15° -to +10° in 5° increments

## Control

**CLO:** Constant Light Output enabled - for energy savings and dependable light throughout the lifetime of the luminaire

**Switch:** On/off through conventional miniature or NEMA photocell

**Dim:** Factory set pre-programmed dimming profiles

**CMS:** Compatible with all available CMS systems

**Smart City Ready:** Supports Smart City equipment and Zhaga compliant connectors

## Colours

RAL 9005 Black (smooth finish)

RAL 7046 Mid grey (smooth finish)

RAL 7035 Light grey (smooth finish)

(Other RAL colours available on request)

## Materials

**Body:** High-pressure Die-cast aluminium (LM6)

**Optics:** PMMA

**Seals:** Silicone

**Finish:** Polyester powder coat

## Accessories

Optional obtrusive light shield(s) available and can be fitted after installation without opening the luminaire

## Installation & Maintenance

Available with various cable tail options prefitted

Includes SupportTag® for easy luminaire maintenance

Operational temperature range: -20°C to +40°C

Surge protection: 10kV

\* Class II on request

