Kirium One

**Excellent performance.
Exceptional value.**

Kirium One. All-in-one lighting.

Offering exceptional performance, easy maintenance and a low total cost of ownership, Kirium One is a highly efficient lighting solution designed with contractors in mind, and optimised for road and footpath lighting applications.

Developed to support operators as they work to lower energy consumption and cut carbon emissions, Kirium One has been designed to offer comfort and safety without overlighting, all while lowering running costs and delivering substantial long-term savings.

Key advantages

- Highly efficient solution delivering up to 179 lm/W to support substantial long-term savings
- Extremely reliable luminaire with an outstanding service life of over 100,000 hours
- Available with 12 or 24 LED light engines and flexible drive currents for tailored performance
- 11 dedicated IP rated optics, optimised for energy savings and precise lighting control
- Easy to install using optional Universal Entry, allows for quick switching on site
- Hassle-free installation and maintenance thanks to toolless access from below
- Futureproofed design using industry-standard platforms and a range of connectivity options
- Zhaga D4i certified luminaire able to accommodate compatible control devices

Applications

- Roads
- Residential areas
- Car parks
- Footpaths & cycle routes

Futureproofed lighting

By offering a wide range of connectivity options and using Zhaga compatible components, we've ensured Kirium One can perform consistently over it's 100,000 hour lifetime, whatever the future may bring.

Dedicated optics

With 11 dedicated optics optimised for street lighting applications, Kirium One 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 One 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.

Circular by design

Designed with circularity in mind, Kirium One is constructed using durable materials for increased longevity, while mechanical fixings and replaceable components reduce waste and maximise service life.

Easy to maintain

Control gear is easy to access from below without the need for tools using quick-release clips, while the optional electrical auto-disconnect feature ensures maintenance can be conducted safely.
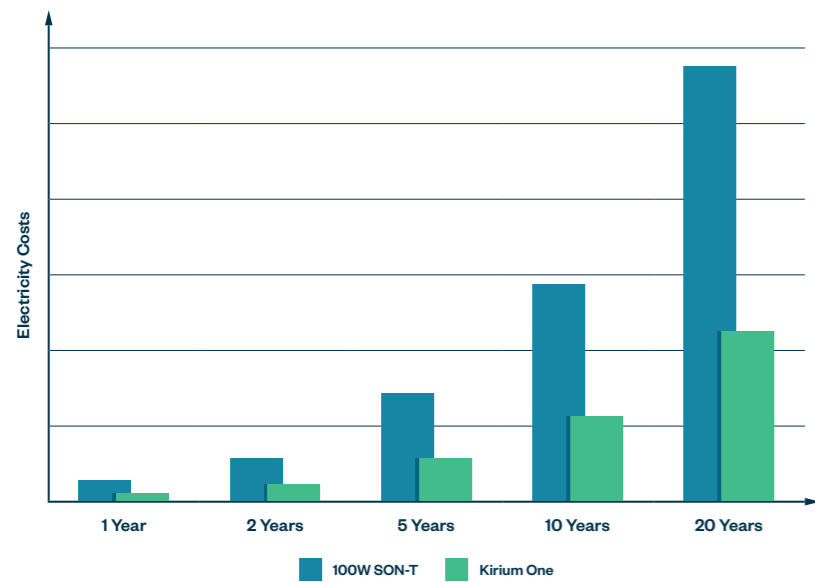
A cost-effective solution

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 One 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

Electricity Costs

| 1 Year | 2 Years | 5 Years | 10 Years | 20 Years |

■ 100W SON-T   ■ Kirium One

62%
ENERGY SAVED

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.[1]

Net zero targets

Lighting is responsible for nearly 5% of global CO_2 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.[2]

Return on investment

With a low upfront cost and substantial energy savings potential over Kirium One'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.[1]

[1] Based on typical energy usage of a Kirium One 24 LED run at 650mA versus a 100W SON-T lamp with an average 4100 burning hours per year
[2] Source: The Climate Group

Design features

Kirium One is a feature-packed, professional lighting solution designed to support a range of applications now, and in the future.

Auto-Disconnect Option
Automatically disconnects the power supply when the luminaire cover is opened, providing added safety during maintenance

Thermally Optimised
An innovative finless design and CoolZone™ technology provide a thermal barrier between the driver and LED chamber extending the luminaire's operational lifetime

Smart City Ready
Compatible with the latest lighting control technologies via optional top and bottom sockets, delivering additional energy savings

Exceptional Performance
Choose between 12 or 24 Zhaga compatible LED light modules to deliver up to 11,425lm, with luminaire efficacy up to 179lm/W

Flexible Mounting
Dedicated post top [Ø60 - 76mm] and side entry [Ø34 - 42mm] options, plus our Universal Entry solution for ultimate versatility on-site

Durable Construction
Manufactured from die-cast LM6 aluminium with a polyester powder coat or marine-grade finish for maximum protection

Secure by Design
Hinged electronics cover features a mechanical tether and can be secured using optional tamper-proof screws for added protection

Easy Installation
Hassle-free installation thanks to Universal Entry. Quickly switch between post top and side entry mountings on-site

Dedicated Optics
Kirium One is offered with 11 highly efficient optics for precise beam control, supporting a range of street lighting applications

Futureproofed Solution
Utilises Zhaga industry-standard components and circular economy principles to ensure the luminaire is easy to maintain and upgrade throughout its service life

Breather Valve
An anti-condensation valve regulates internal pressure and prevents moisture build-up

Adjustable Tilt
A wide range of tilt adjustment in 2.5° steps allowing for fine-tuning during installation

Choice of Cover Material
To provide additional savings, Kirium One can be specified with an aluminium or polycarbonate lower electronics cover

SupportTag
QR-based system to simplify the luminaire maintenance process, ensures issues are resolved quickly by our dedicated support team

Dark Sky Friendly
Kirium One has a 0% ULOR (Upward Light Output Ratio) to combat light pollution and minimise sky glow

Toolless Entry
Quick-release spring clips provide access to internal components from below, ensuring the luminaire is easy to install and maintain

Onsite flexibility

We understand that the ability to make last minute changes and adjustments on-site is crucial for a successful installation programme. This is why we have developed Kirium One to be our most versatile street light to date.

Kirium One can be supplied pre-wired, making the optional Universal Entry a game changer in the ability to have on-site switching from side entry to post top entry without the need to disconnect the flex. Kirium One also has quick and easy tilting functionality enabling delicate on-site adjustments to the luminaire.

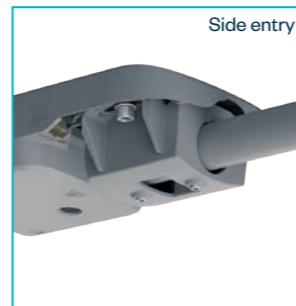## Multiple mounting options

Post top

Side entry

Universal entry
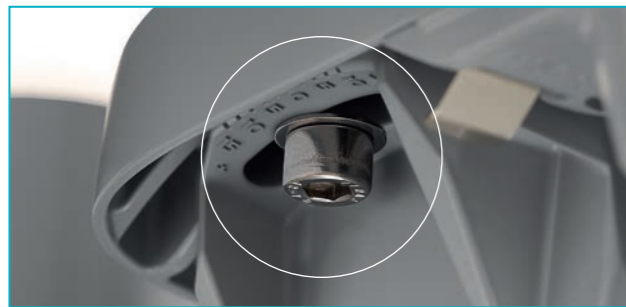Easily adapts to any column or bracket mounting on-site offering maximum flexibility during installation

Dedicated entry
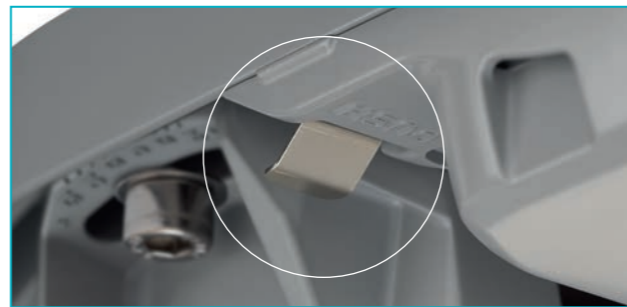For schemes where the mounting method is known, dedicated entry options can help lower capital costs

Easy to install and maintain

Adjustable tilt
Quickly adjust inclination angle in 2.5° step increments to ensure a level lighting plane regardless of ground elevation
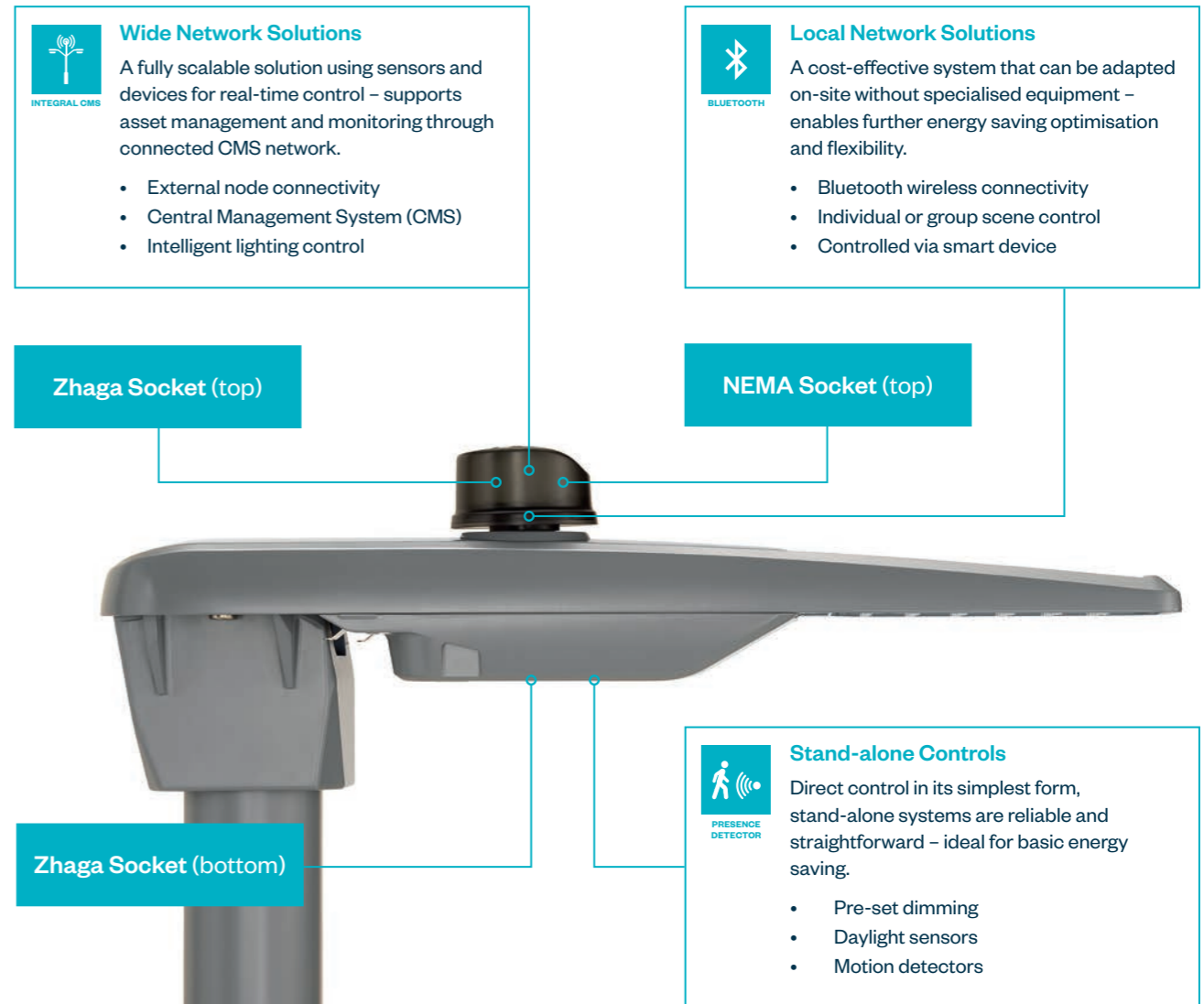
Toolless access
Quick-release spring clips provide easy access to control gear and wiring from below to simplify installation and maintenance

Take control of your lighting

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

Zhaga-D4i Certified

Wide Network Solutions

INTEGRAL CMS

A fully scalable solution using sensors and devices for real-time control – supports asset management and monitoring through connected CMS network.

- External node connectivity
- Central Management System (CMS)
- Intelligent lighting control

Local Network Solutions

BLUETOOTH

A cost-effective system that can be adapted on-site without specialised equipment – enables further energy saving optimisation and flexibility.

- Bluetooth wireless connectivity
- Individual or group scene control
- Controlled via smart device

Zhaga Socket (top)

NEMA Socket (top)

Zhaga Socket (bottom)

Stand-alone Controls

PRESENCE DETECTOR

Direct control in its simplest form, stand-alone systems are reliable and straightforward – ideal for basic energy saving.

- Pre-set dimming
- Daylight sensors
- Motion detectors

Kirium One lumen packages and wattages matrix

No of LEDs		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
12	lm	1,105	1,381	1,705	2,022	2,330	2,631	2,923	3,206	3,480	3,746	4,002	4,249	4,486	4,714	4,931	5,138	5,335	5,521
	W	8	10	11	13	14	16	18	20	21	23	25	27	29	31	33	35	37	39
24	lm	2,285	2,858	3,529	4,184	4,823	5,444	6,048	6,635	7,203	7,752	8,282	8,793	9,284	9,755	10,205	10,634	11,041	11,426
	W	14	17	20	24	27	31	35	38	42	46	50	54	57	61	65	69	73	77

Calculations based on 4000K with A2 optic and no Light Output Reduction (LOR) factor applied

Kirium One standards conformity list

EU Directives	
2006 / 95 / EC	Low voltage
2004 / 108 / EC	Electromagnetic compatibility
2011 / 65 / EC	RoHS - Restriction of hazardous substances
2006 / 25 / EC	Artificial optical radiation

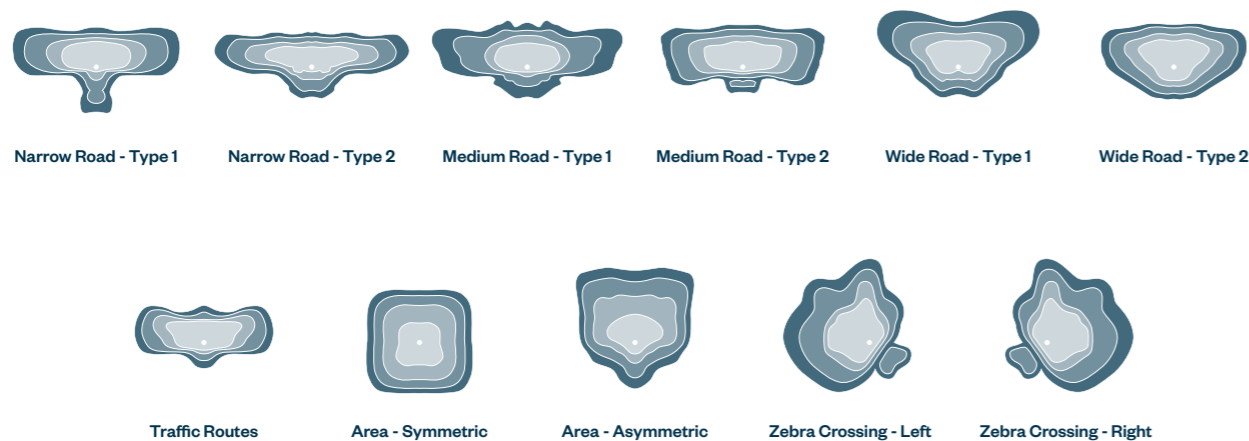| Harmonised European Normative Standards	
EN 60598-1 : 2015	Luminaires - general requirements and tests
EN 60598-23 : 2003 + A1:2011	Luminaires - particular requirements. Luminaires for road and street lighting
BS EN 62717 : 2017 + A2:2019	LED modules for general lighting. Performance requirements
EN 62722-2-1 : 2016	Luminaire performance - particular requirements for LED luminaires
EN 62031 : 2008 + A2:2015	LED modules for general lighting: safety specification
EN 62471 : 2008	Photobiological safety of lamps and lamp systems
EN 55015 : 2013 + A1:2015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547 : 2009	EMC immunity requirements: specification for equipment for general light purposes
EN 61000-3-2 : 2006 + A2:2009	EMC I limits for harmonic current emissions (equipment input current 16 A per phase)
EN61000-3-3 : 201	EMC limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

CCT details

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

Luminaire dimensions
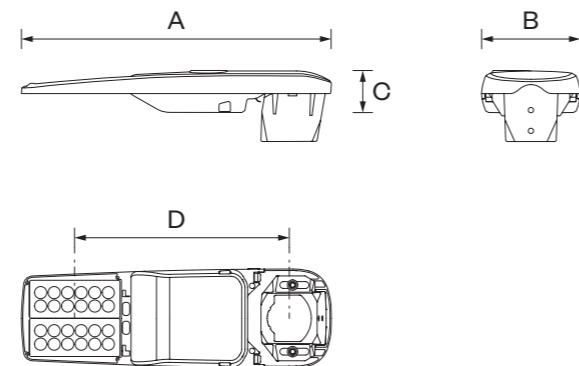
	Dimensions (mm)				Weight (kg)	Windage (m²)
	A	B	C	D		
Kirium One	589	188	80	410	4.2	0.026

Kirium One optics

Narrow Road - Type 1 | Narrow Road - Type 2 | Medium Road - Type 1 | Medium Road - Type 2 | Wide Road - Type 1 | Wide Road - Type 2

Traffic Routes | Area - Symmetric | Area - Asymmetric | Zebra Crossing - Left | Zebra Crossing - Right

Product codes

	Code	Example
Family		
Kirium One	KO	KO
Light Engine		
12 LED	12	
24 LED	24	24
Housing		
Full die-cast aluminium	A	
Die-cast aluminium with polycarbonate lower cover	H	A
Mounting		
Universal entry (post top Ø60-76mm / side entry Ø34-60mm) preset for post top	A	
Universal entry (post top Ø60-76mm / side entry Ø34-60mm) preset for side entry	B	A
Dedicated entry (Ø60 - 76mm direct post top)	D	
Dedicated entry (Ø34 - 42mm side entry)	S	
Colour Temperature		
2700K	27	
3000K	30	30
4000K	40	
Light Output		
Drive currents from 200mA to 1050mA are available in 50mA increments. Insert drive current value (eg 250mA = 0250)	200 / 250 / 300 350 / 400 / 450 500 / 550 / 600 650 / 700 / 750 800 / 850 / 900 950 / 1000 / 1050	700
Light Distribution		
Narrow Road - Type 1	NR1	
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	MR1
Traffic Routes	TR	
Area - Symmetric	SA	
Area - Asymmetric	AA	
Zebra Crossing - Left	ZL	
Zebra Crossing - Right	ZR	
Colour Finish		
RAL 7046 Mid grey	CF	
RAL 7035 Light grey	29	
RAL 9005 Black	10	CF
Other RAL colour [on request]	RAL [specify]	
Paint Finish		
Polyester powder coat	PP	
Marine-grade coating	MG	PP
Connectivity & Control		
No connectivity or control	N	
Miniature photocell 20 lux (1:0.5)	U20	
Miniature photocell 20 lux (1:0.5) [top] with 4-pin Zhaga Book 18 socket [bottom]	U20Z	
Miniature photocell 35 lux (1:0.5)	U35	
Miniature photocell 35 lux (1:0.5) [top] with 4-pin Zhaga Book 18 socket [bottom]	U35Z	
6-pin NEMA socket	B1	
7-pin NEMA socket	D2	
7-pin NEMA socket [top] with 4-pin Zhaga Book 18 socket [bottom]	D2Z	U20
4-pin Zhaga Book 18 socket [top]	Z4	
4-pin Zhaga Book 18 socket [bottom]	Z4A	
4-pin Zhaga Book 18 socket [top and bottom]	Z4B	
Knife Switch (optional)		
Knife switch (electrical disconnection block)	KS	-
Tamper-Proof Screws (optional)		
Tamper-proof screws on toolless entry points	TP	-

Example Code: KO 24 A A 30 700 MR1 CF PP U20

Kirium® One

IP **66** | IK **08** | UKCA | CE | ⏚ * | EK **12** † | ZD4i

Key Features

Highly efficient luminaire available in two LED configurations and optimised to support a wide range of road lighting applications

Offered with 11 dedicated optical distributions to ensure light is placed only where its needed for improved comfort and safety

Quick to install using optional Universal Entry which allows for easy switching between post top and side entry on-site, with cable fitted

Easy and safe to maintain from below with toolless access to the control gear and an electrical auto-disconnect option available

Futureproofed design using standardised components and a range of connectivity options in top and bottom locations

Zhaga D4i certified luminaire able to accommodate compatible control devices

Total Luminaire Lumens

12 LEDs: 1,105 - 5,520 lm

24 LEDs: 2,285 - 11,425 lm

Mounting Height

Suitable for mounting up to 8m

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)

Zebra Crossing (Left / Right)

Lifetime

> 100,000 hours L90 B10

Colour Temperature

2700K

3000K

4000K

Colour Rendering Index

70Ra

Luminaire Efficacy

Up to 179lm/W

Drive Current

200mA - 1050mA (in 50mA increments)

Mounting

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

Direct post: Ø60 - 76mm

Side entry: Ø34 - 42mm

Inclination (direct post): -10° -to +15° in 2.5° increments

Inclination (side entry): -15° -to +10° in 2.5° 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 (standard): High-pressure Die-cast aluminium (LM6)

Body (hybrid): Die-cast aluminium (LM6) with polycarbonate cover

Optics: PMMA

Seals: Silicone

Finish: Polyester powder coat / Marine-grade coating

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: -40°C to +40°C

Surge protection: 10kV

* Class II on request   † ENEC certification pending

MADE IN BRITAIN

AUG-2023-F