

# AXIA 3 EVO



## Innovative lightweight lighting solution with excellent performance

Derived from proven experience with the renowned AXIA luminaires, AXIA 3 EVO completes the range with an innovative, lightweight urban luminaire dedicated to lighting residential areas.

The first of its kind, AXIA 3 EVO was developed on the basis of the specific needs of residential spaces where well-being and security are crucial criteria.

Combining various technical innovations with a minimalist design, AXIA 3 EVO offers an effective lighting solution, providing people with a pleasant and secure environment.

AXIA 3 EVO stands out by providing a compact luminaire fitted with advanced technologies, helping towns and cities generate significant energy savings and reduce their ecological footprint.



## Concept

AXIA 3 EVO is a lightweight luminaire, designed with a focus on compactness and innovation. The luminaire body is composed of high-pressure die-cast aluminium. The cover is available in aluminium or in polypropylene, thus meeting various customer or environmental needs. Thanks to its reduced weight, this road luminaire is easy to handle during installation and reduces effort if fitted to existing poles.

This street luminaire is equipped with the ProFlex photometric engines, providing the highest efficiency thanks to their ability to maximise lumen output and to provide very extensive light distribution. AXIA 3 EVO can also be equipped with louvres to direct the light flux in the desired direction, and to prevent light pollution and intrusion in inhabited areas.

AXIA 3 EVO is a connected-ready luminaire available with various connectivity options, providing cities with the capacity to effectively manage their lighting installation and generate significant energy and cost savings. The communication node can be optionally associated with various sensors, maximising the lighting installation management by creating light adapted to the exact needs of the moment.

AXIA 3 EVO is available with an integrated universal fixation part adapted for post-top and side-entry mounting on various spigots (Ø32mm with adapter, Ø42-60mm, and Ø60-76mm).

The inclination angle can be adjusted on site for both post-top (-5°/+15°) and side-entry (-10°/+10°) configurations to optimise lighting and control light pollution.

As an option, AXIA 3 EVO has a toolless opening system to facilitate any on-site activity. A safety cable prevents the cover from any risk of falling during maintenance.

This innovative luminaire offers towns and cities the ideal solution for improving lighting levels, increasing safety, generating savings and reducing their ecological footprint.



AXIA 3 EVO is a light and compact luminaire that considerably eases installation and thus improves poles longevity.



AXIA 3 EVO has a universal fixation part for spigots ranging from Ø32 to Ø76mm. It can be adjusted on site in 2.5° increments to provide precise lighting and optimise photometry.

## TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS

## KEY ADVANTAGES

- Maximised savings in energy and maintenance costs
- ProFlex photometric engines offering high efficiency lighting, comfort and safety
- Adjustable inclination for optimised photometry and uniformity
- Connected-ready for your future Smart city requirements
- Zhaga-D4i certified
- Compact, lightweight and easy to install
- Different finishes and color choices



AXIA 3 EVO is available with various finishes to suit a wide range of customer and environmental requirements.



AXIA 3 EVO is connected-ready and can operate with various sensors and control options.



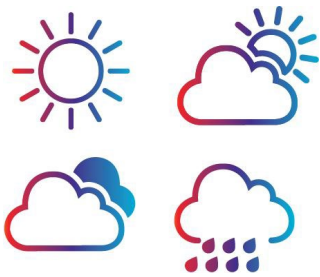
The ProFlex photometric engine integrates the lenses into a polycarbonate protector. This integration increases the output and reduces the reflection inside the optical unit. The polycarbonate used for the ProFlex photometric engine offers essential characteristics such as high optical clarity for a superior light transmission, better impact resistance compared to glass and a long life span with UV-stabilisation treatment. The ProFlex concept enables a compact design with a thin optical compartment. It provides extensive light distributions so that the spacing between the luminaires can be increased.





## Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.



## PIR sensor: motion detection

In places with little nocturnal activity, lighting can be dimmed to a minimum most of the time. By using passive infrared (PIR) sensors, the level of light can be raised as soon as a pedestrian or a slow vehicle is detected in the area.

Each luminaire level can be configured individually with several parameters such as minimum and maximum light output, delay period and ON/OFF duration time. PIR sensors can be used in an autonomous or interoperable network.



Schröder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.



## Standardisation for interoperable ecosystems

Schröder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schröder EXEDRA system relies on shared and open technologies. Schröder EXEDRA also relies on Microsoft Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

## Breaking the silos

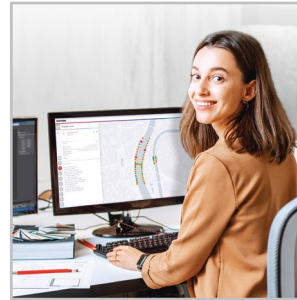
With EXEDRA, Schröder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schröder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

## A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface. OWLET IV luminaire controllers, optimised for Schröder EXEDRA, operate Schröder's luminaires and luminaires from third parties. They use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation.

## Tailored experience



Schröder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

## A powerful tool for efficiency, rationalisation and decision making

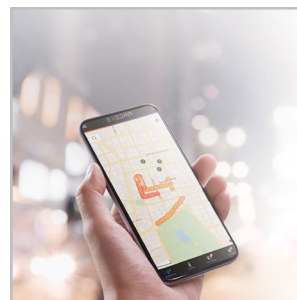
Data is gold. Schröder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

## Protected on every side



Schröder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schröder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

## Mobile App: any time, any place, connect to your street lighting



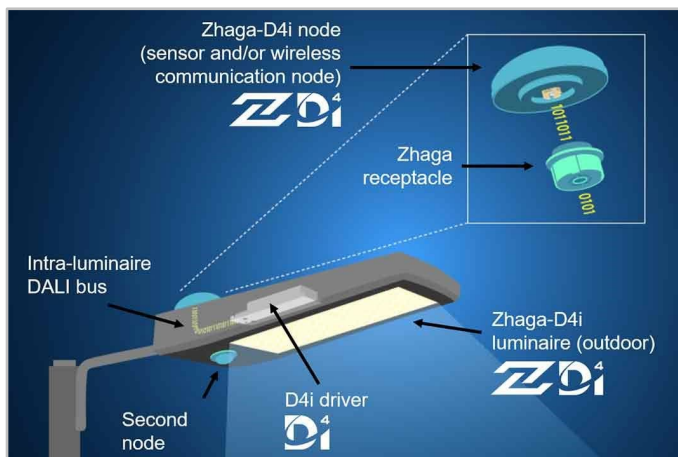
The Schröder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.

## 2 sockets: top and bottom



The Zhaga socket is small and suited to applications where aesthetics is essential. The architecture of Zhaga-D4i also foresees the possibility of putting two sockets on one luminaire, allowing for instance, the combination of a detection sensor and a control node. This also has the added value of standardising certain detection sensor communications with the D4i protocol.



## Standardisation for interoperable ecosystems



As a founding member of the Zhaga consortium, Schröder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire.

According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

## Certification program

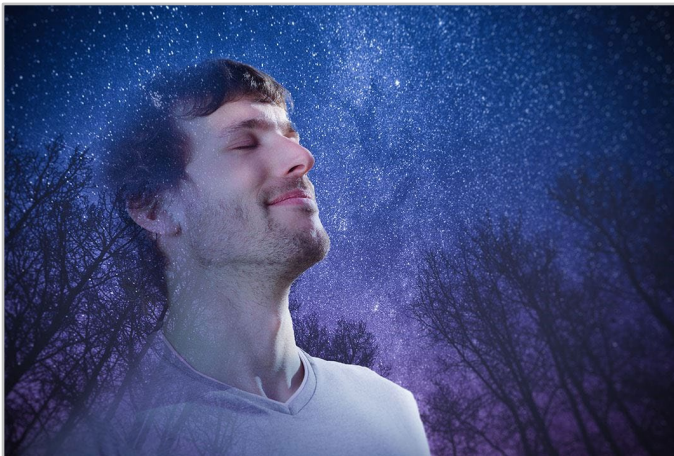
The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.

## Cost-effective solution

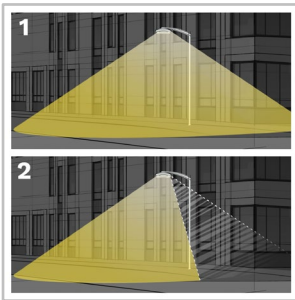
A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.



With the PureNight concept, Schröder offers the ultimate solution for restoring the night sky without switching off cities, while maintaining safety and well-being for people and preserving wildlife. The PureNight concept guarantees that your Schröder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.



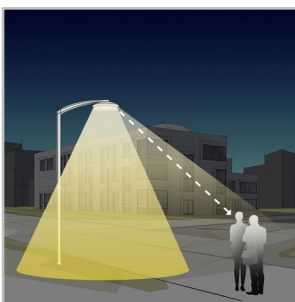
### Direct the light only where it is wanted and needed



1. Without backlight  
2. With backlight

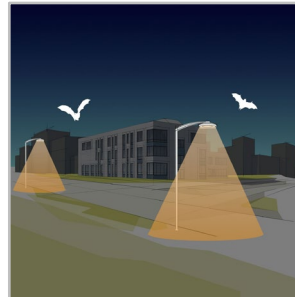
Schröder is renowned for its expertise in photometry. Our optics direct light only where it is wanted and needed. However, light trespass behind the luminaire might be a key concern when it comes to protecting a sensitive wildlife habitat or avoiding intrusive lighting towards buildings. Our fully integrated backlight solutions easily address this potential risk.

### Offer maximum visual comfort to people



Because of the lower installation height compared to road lighting, visual comfort is an essential aspect of urban lighting. Schröder designs lenses and accessories to minimise any type of glare (distracting, discomforting, disabling glare and blinding glare). Our design offices harness a range of possibilities to find the best solutions for each project and ensure that we provide a gentle light that delivers the best night-time experience.

### Protect wildlife



If not well designed, artificial lighting can badly affect wildlife. Blue light and excessive intensity can have a damaging effect on all types of life. Blue light radiation has the ability to suppress the production of melatonin, the hormone that contributes to the regulation of the circadian rhythm. It can also alter the behavioural patterns of animals including bats and moths, as it can change their movements towards or away from light sources. Schröder favours warm white LEDs with minimal blue light, combined with advanced control systems including sensors. This enables permanent adaptation of the lighting to the real needs of the moment, minimising disturbance to the fauna and flora.

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### Choose a Dark Sky certified luminaire



The International Dark-Sky Association (IDA) is the recognised authority on light pollution. It provides leadership, tools and resources to industries and companies willing to reduce light pollution. The IDA's Fixture Seal of Approval programme certifies outdoor lighting fixtures as being Dark Sky Friendly. All products approved by this programme must comply with the following criteria:

- The light sources shall have a maximum correlated colour temperature of 3000K;
- Uplight allowance limited to 0.5% of total output, or 50 lumens, with no more than 10 lumens in the 90-100 degree UL zone;
- The luminaires must have a dimming capability to 10% of full rating;
- The luminaires must be equipped with a fixed mounting option;
- The luminaires must have Safety Certification by an independent laboratory.

This approved Schröder range of luminaires complies with these requirements.

## GENERAL INFORMATION

Recommended installation height	4m to 12m   13' to 39'
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
CE mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
Dark Sky friendly lighting (IDA certification)	Yes
Zhaga-D4i certified	Yes
UKCA marking	Yes

## HOUSING AND FINISH

Housing	Aluminium Polypropylene
Optic	Polycarbonate
Protector	Polycarbonate (with integrated lenses)
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09
Access for maintenance	Tool-less access to gear compartment (option)

## OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22°F up to 131°F with wind effect
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· Depending on the luminaire configuration. For more details, please contact us.

## ELECTRICAL INFORMATION

Electrical class	I, II
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schröder EXEDRA
Sensor	PIR (optional)

## OPTICAL INFORMATION

LED colour temperature	2700K (Warm White WW 727) 3000K (Warm White WW 730) 4000K (Neutral White NW 740)
Colour rendering index (CRI)	>70 (Warm White WW 727) >70 (Warm White WW 730) >70 (Neutral White NW 740)
ULOR	0%
ULR	0%

- Meets IDA Dark Sky requirements when fitted with LEDs of 3000K or less.
- ULOR may be different according to the configuration. Please consult us.
- ULR may be different according to the configuration. Please consult us.

## LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L95
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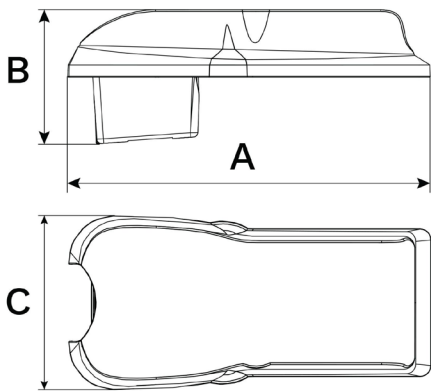
· Lifetime may be different according to the size/configurations. Please consult us.



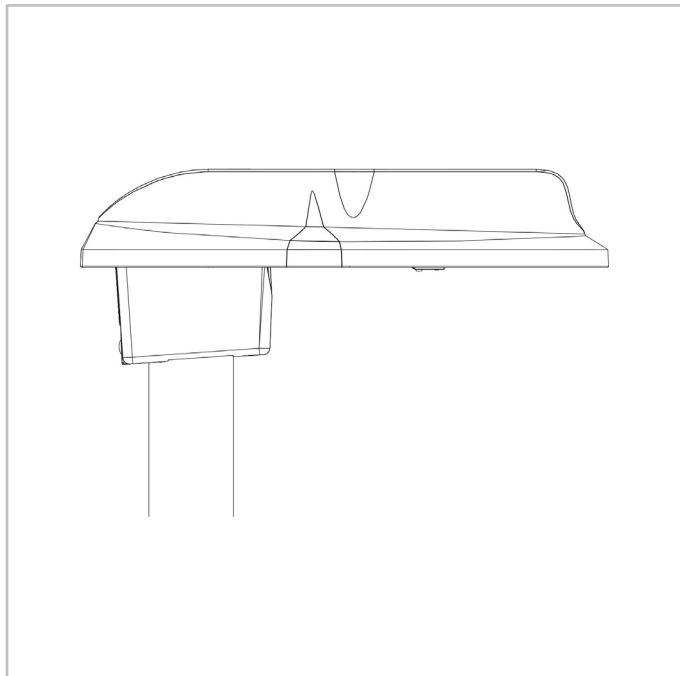
## DIMENSIONS AND MOUNTING

AxBxC (mm   inch)	343x143x187   13.5x5.6x7.4
Weight (kg   lbs)	2.6-3.6   5.7-7.9
Aerodynamic resistance (CxS)	0.03
Mounting possibilities	Side-entry slip-over – Ø32mm Side-entry slip-over – Ø42mm Side-entry slip-over – Ø60mm Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm

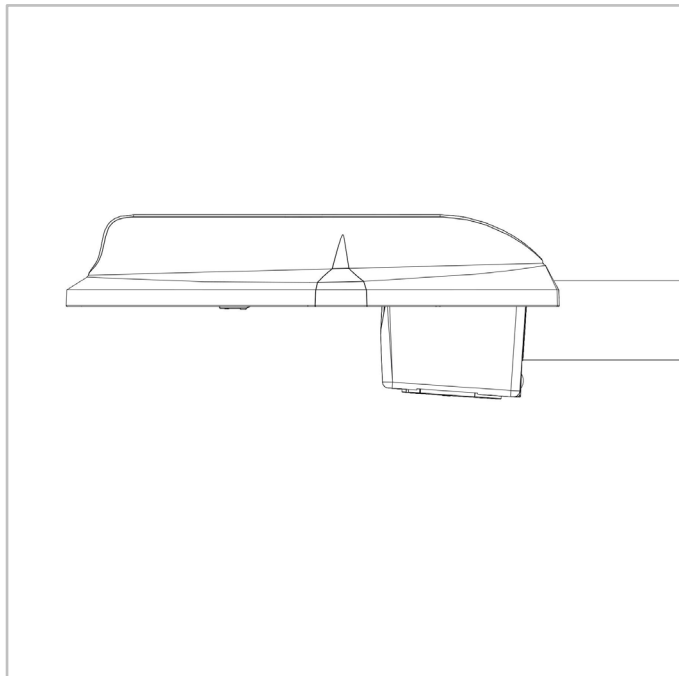
· For more information about mounting possibilities, please consult the installation sheet.



AXIA 3 EVO | Post-top mounting for Ø60-76mm spigot



AXIA 3 EVO | Side-entry mounting for Ø32 (with accessory) or Ø42-60mm spigot





Number of LEDs	Luminaire output flux (lm)						Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 727		Warm White WW 730		Neutral White NW 740		Min	Max	Up to
	Min	Max	Min	Max	Min	Max			
8	600	2800	600	2800	800	3300	6	27	152
16	1300	5600	1300	5700	1600	6600	11	54	158

Tolerance on LED flux is  $\pm 7\%$  and on total luminaire power  $\pm 5\%$

