Schréder
Experts in lightability™

ROAD

IZYLUM SE

HI FLEX™ 1&2 HI FLEX™ 2

IP 66 IK 10

Cost-effective high efficiency road lighting solution

Being at the core of urban and road infrastructure, lighting plays a crucial role in cities' lives. From this perspective, we firmly believe lighting should be both cost-effective and high-performance.

Based on our proven road LED lighting experience, we have developed IZYLUM SE, a budget-friendly yet exceptionally efficient road lighting solution. This luminaire has been designed with a focus on compactness, cost-efficiency and superior performance. IZYLUM SE is a robust lighting solution optimised to operate in hot, demanding environments while providing consistent efficacy over time and offering unmatched value. Experience the best in performance with a quick return on investment, with the IZYLUM SE LED lighting solution.

URBAN & RESIDENTIAL STREETS | BRIDGES | BIKE & PEDESTRIAN PATHS | RAILWAY STATIONS & METROS | CAR PARKS | SQUARES & PEDESTRIAN AREAS | ROADS & MOTORWAYS

Concept

IZYLUM SE features a compact, efficient concept specifically designed to deliver exceptional, enduring performance, even in demanding conditions - including extreme heat environments.

The luminaire housing and cover are made of die-cast aluminium, while the lower part is made of silk-printed glass. The area housing the LED engines is fitted with cooling fins to optimise heat dissipation and ensure high photometric performance over time.

IZYLUM SE is a robust luminaire offering high water-tightness and mechanical levels, making it a lighting solution perfectly suited to outdoor environments.

Available in two sizes, it relies on the HiFlex photometric platform to offer precise, energy-efficient lighting solutions while maximising savings and providing a quick return on investment. The LED technology in IZYLUM SE has been optimised to provide high lumen performance throughout an extended lifetime, while consuming minimal power. The technology is a perfect blend of energy efficiency and durability. It not only ensures substantial energy savings but also significantly extends the lifespan of the luminaire, while continuing to deliver impressive photometric output.

IZYLUM SE offers two connectivity options. It can optionally be equipped with NEMA or Zhaga sockets, enabling this road luminaire to easily integrate with various connected lighting systems.

The luminaire features slip-over side-entry fixation designed for Ø40- Ø60mm spigots. For added convenience during installation and maintenance, the luminaire offers tool-free access to the gear compartment.

IZYLUM SE is a compact, energy-efficient road luminaire offering superior performance throughout its lifetime.

The cooling fins optimise heat dissipation for the best efficiency, even in hot, demanding environments.

Its improved LED technology provides long-lasting photometric performance while increasing the luminaire's lifetime.

For added convenience during installation, the luminaire features tool-free opening.

TYPES OF APPLICATION

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

KEY ADVANTAGES

- Excellent thermal management for extreme climates
- High efficiency with low operating costs
- Robust and recyclable materials
- HiFlex photometric engine designed for optimised energy efficiency
- Connected-ready
- Tool-free access for easy maintenance
- Designed for long-lasting performance
- Two sizes to provide the best solution
- PureNight: dark-sky and low-glare lighting distributions

IZYLUM SE | IZYLUM SE 2

IZYLUM SE | IZYLUM SE 3

HI FLEX™ HiFlex™

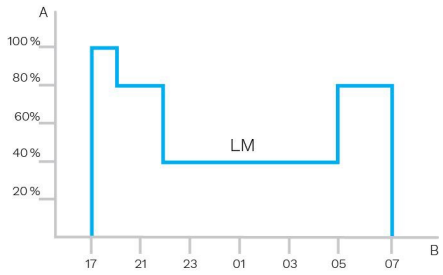
The HiFlex platform is expertly designed to optimise energy efficiency. Its photometric engines feature high-power LEDs that deliver exceptional performance while consuming minimal energy, resulting in unmatched efficacy (lm/W).

Ideal for projects that require a streamlined approach to maximising lighting efficacy and achieving swift ROI, HiFlex is available in two versions: HiFlex 1, boasting 24 LEDs and HiFlex 2, equipped with 36 LEDs. Both variants are designed with the priorities of compactness, cost-effectiveness and high performance in mind.

Custom dimming profile

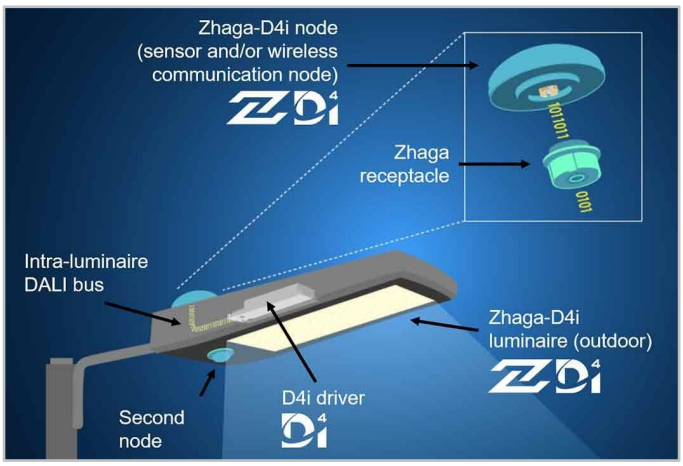
Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



A. Dimming level | B. Time

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.



Standardisation for interoperable ecosystems

Member of Zhaga

As a founding member of the Zhaga consortium, Schréder 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.

Schréder 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

Schréder 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 Schréder EXEDRA system relies on shared and open technologies. Schréder 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

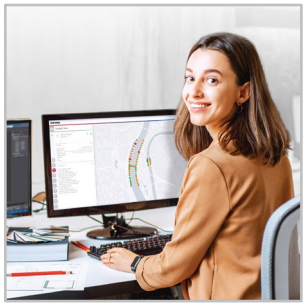
With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- 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 Schréder EXEDRA, operate Schréder'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



Schréder 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

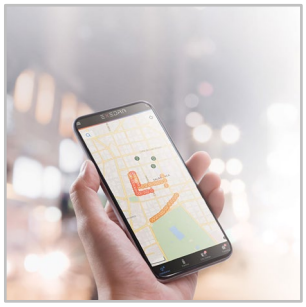
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

ISO 27001
BUREAU VERITAS
Certification

Schréder 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 Schréder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

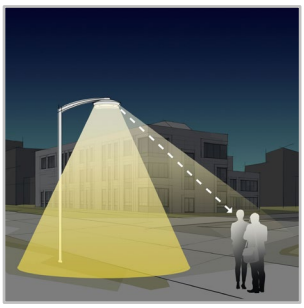
Mobile App: any time, any place, connect to your street lighting



The Schréder 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.

With the PureNight concept, Schréder 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 Schréder lighting solution satisfies environmental laws and requirements. Well-designed LED lighting has the potential to improve the environment in all respects.

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. Schréder 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. Schréder 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.

Choose a Dark Sky Approved 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 Schréder range of luminaires complies with these requirements.

GENERAL INFORMATION

Recommended installation height	4m to 15m | 13' to 49'
Circle Light label	Score ≥90 - The product fully meets circular economy requirements
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
DarkSky Approved	Yes
Zhaga-D4i certified	Yes
Testing standard	EN 60598-1 EN 60598-2-1 EN 62262

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	RAL 7040 window grey
Tightness level	IP 66
Impact resistance	IK 10
Vibration test	Compliant with ANSI C 136-31 standard, 3G load Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22°F up to 131°F with wind effect

· *Depending on the luminaire configuration. For more details, please contact us.*

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
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)	DALI-2, 1-10V
Control options	Custom dimming profile, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schréder EXEDRA

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White WW 722) 2700K (Warm White WW 727) 3000K (Warm White WW 730) 4000K (Neutral White NW 740)
Colour rendering index (CRI)	>70 (Warm White WW 722) >70 (Warm White WW 727) >70 (Warm White WW 730) >70 (Neutral White NW 740)
ULOR	0%
ULR	0%

· *DarkSky Approved 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

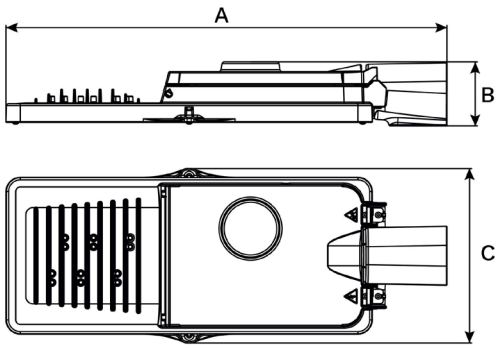
All configurations	100,000h - L95

· *Lifetime may be different according to the size/configurations. Please consult us.*

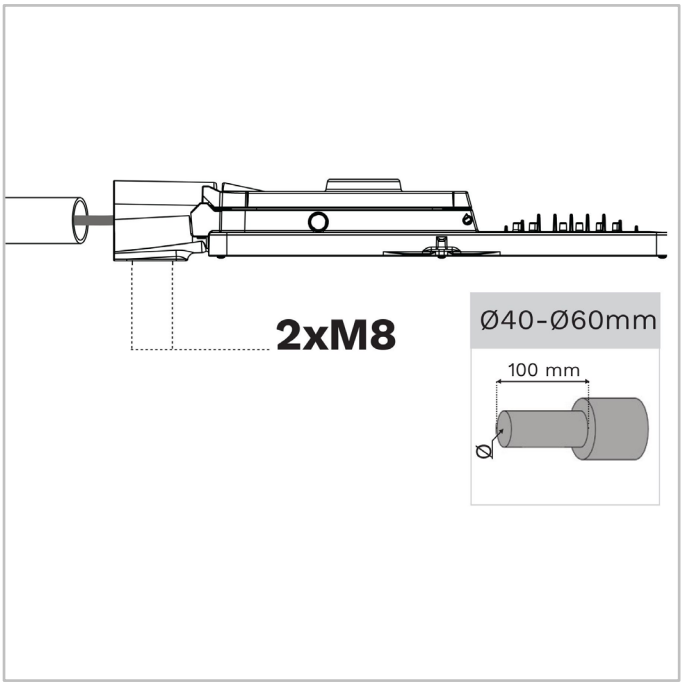
DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	IZYLUM SE 2 : 620x90x245 | 24.4x3.5x9.6 IZYLUM SE 3 : 584x92x370 | 23.0x3.6x14.6
Weight (kg | lbs)	IZYLUM SE 2 : 4.8-6.1 | 10.6-13.4 IZYLUM SE 3 : 6.9-8.3 | 15.2-18.3
Aerodynamic resistance (CxS)	IZYLUM SE 2 : 0.06 IZYLUM SE 3 : 0.05
Mounting possibilities	Side-entry slip-over – Ø40mm Side-entry slip-over – Ø60mm

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



IZYLUM SE | Slip-over side-entry fixation for Ø40-Ø60mm spigots - 2xM8 screws



IZYLUM SE 2

Photometry

HI FLEX™ 2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
36	1700	9400	1900	10600	2000	11100	2200	11900	15	78	166
72	3400	18600	3900	21000	4000	21900	4400	23500	29	154	171

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM SE 2

Photometry

HI FLEX™ 182

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
24	1200	6100	1300	6900	1400	7200	1500	7700	11	54	159
36	1700	9400	1900	10600	2000	11100	2200	11900	15	78	166
48	3500	11600	3900	13100	4100	13600	4400	14600	29	98	165
72	3400	18600	3900	21000	4000	21900	4400	23500	29	154	171

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM SE 3

Photometry

HI FLEX™ 2

	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
72	3500	18900	4000	21400	4200	22200	4500	23900	29	156	176
96	4700	21600	5400	24300	5600	25300	6000	27300	39	173	172
108	5300	22200	6000	25100	6300	26100	6700	28100	43	170	179
144	7200	23100	8100	26100	8400	27100	9100	29200	58	173	176

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

IZYLUM SE 3

Photometry

HI FLEX™ 1&2

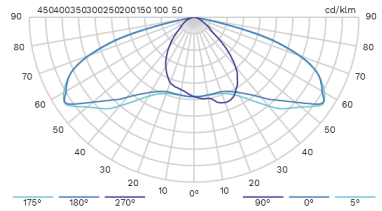
	Luminaire output flux (lm)								Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 722		Warm White WW 727		Warm White WW 730		Neutral White NW 740				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
72	3500	18900	4000	21400	4200	22200	4500	23900	29	156	176
96	4700	21600	5400	24300	5600	25300	6000	27300	39	173	172
108	5300	22200	6000	25100	6300	26100	6700	28100	43	170	179
144	7200	23100	8100	26100	8400	27100	9100	29200	58	173	176

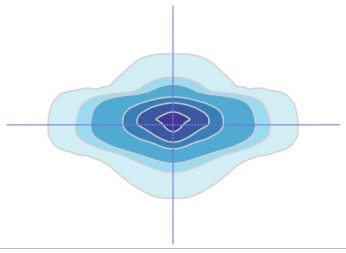
Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

Hiflex1&2

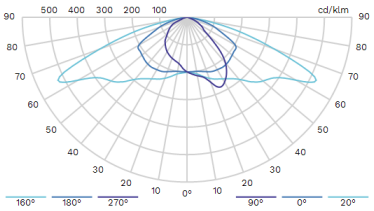
HI FLEX™ 1&2

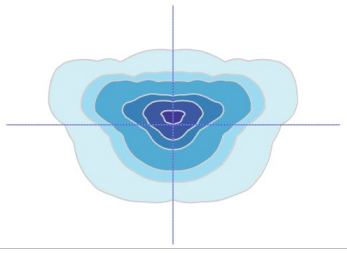
5424 Narrow



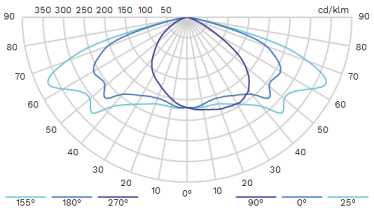


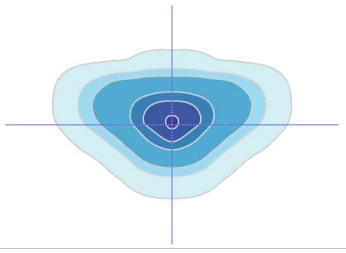
5426 Medium



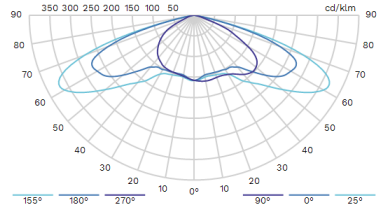


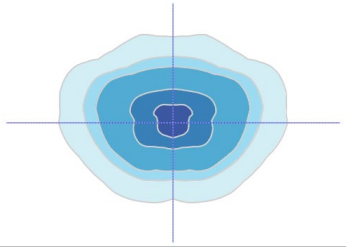
5428 Medium





5425 Wide





5427 Extra-Wide