

# IZYLUM



Designer : Indio da Costa



## A time-saving, versatile and high-performing road and urban solution

Based on Schröder's experience and proven track record with road and urban LED lighting, the IZYLUM luminaire benefits from numerous innovations to provide the best experience for all stakeholders in public lighting: cities looking for a fast return on investment with an environmentally friendly, easy-to-operate lighting solution, contractors wanting to save time and avoid mistakes during installation, and citizens requiring safe and comfortable environments.

This connected-ready range of luminaires not only offers a realistic platform for smart cities; its compact, lightweight, optimised design minimises the carbon footprint at every stage of the product lifecycle. IZYLUM stands out as the best in class for a circular economy.



IP 66/67	IK 09	
		CE
UK CA		PLUS x 02 x
UL 1598 CSA C22.2 No. 250.0	005 certification	



## Concept

IZYLUM is a robust yet compact luminaire, designed with a focus on ease of installation and maintenance, enabling customers to extend its lifetime with future upgrades. Composed of two separate parts made of high-pressure die-casted aluminium, the body is sealed with tempered flat glass, offering a high degree of tightness and resistance to shocks.

Available in five sizes, IZYLUM provides a well-dimensioned, efficient lighting solution ranging from various low-height applications such as parks, bicycle paths or residential streets to main roads, boulevards and motorways.

The IZYLUM range takes advantage of the latest photometric innovations. It uses the LensoFlex®4 photometric engines, which have been developed around the ideas of performance, compactness, versatility and standardisation.

To simplify installation and maintenance operations, IZYLUM introduces patented technologies such as the IzyFix universal fixation system enabling post-top or side-entry mounting.

The luminaire offers tool-free access to the gear compartment. The bottom cover opens downwards and is retained by a hinge. Closing of the luminaire is confirmed with a clear, loud clicking noise, audible even in a noisy urban environment.

Supplied pre-wired (optional), IZYLUM is available with an IzyFix universal fixation system adapted to post-top and side-entry mounting on any spigot (Ø32mm, Ø42-48mm, Ø60mm and Ø76mm). The IzyFix system enables switching from one position to another at any time, without removing the luminaire from the pole. This unique feature eases installation and offers complete versatility regarding pole and bracket configurations.

The IzyFix system enables tilting within a 130° range and fully complies with IEC and ANSI 3G vibration standards.



IZYLUM integrates highly efficient photometrical platform.



The IzyFix universal fixation system with switching from a post-top to a side-entry position facilitates ordering and installing luminaires.

## TYPES OF APPLICATION

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

## KEY ADVANTAGES

- Maximised savings in energy and maintenance costs
- 5 sizes to provide the most accurate solution for numerous road and urban applications
- Tool-free access with a clear, perceptible click upon closing
- On-site adjustment from post-top to side-entry without disconnecting the luminaire from the pole thanks to IzyFix
- Wide range of operating temperatures
- Zhaga-D4i certified
- Connected-ready
- Solar-powered variants
- LensoFlex®4 versatile solutions for high-end photometries maximising comfort and safety



IZYLUM is compatible with the Circle Light Application, a straightforward, quick and cost-effective tool to interact with the luminaire, capture its data and manage settings.



IZYLUM is connected-ready and can operate with various sensors and control systems.



## LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

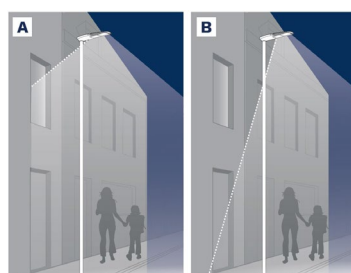
LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.



## Back Light control

As an option, the LensoFlex®2 and LensoFlex®4 modules can be equipped with a Back Light control system.

This additional feature minimises light spill from the back of the luminaire to avoid intrusive light towards buildings.



A. Without Back Light control | B. With Back Light control



## Embellishment plate

This accessory not only provides a more aesthetic solution as it covers the wires supplying the PCBA's with power, it also increases the lumen output thanks to its extra bright surface that reflects light out of the optical unit. Depending on the configuration, the embellishment plate can increase the lumen output by 2 to 3%.



## Diamond cooling blocks

IZYLUM 5 features newly developed cooling blocks on the upper side of the optical compartment. Their diamond shape has been carefully designed to minimise dust and water accumulation while providing optimal thermal management to maintain performance over time.

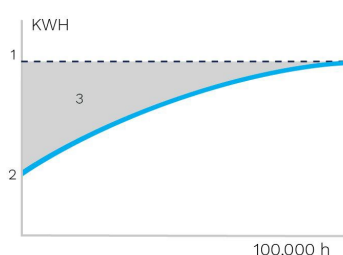




### Constant Light Output (CLO)

This system compensates for the depreciation of luminous flux to avoid excess lighting at the beginning of the installation's service life. Luminous depreciation over time must be taken into account to ensure a predefined lighting level during the luminaire's useful life.

Without a CLO feature, this simply means increasing the initial power upon installation in order to make up for luminous depreciation. By precisely controlling the luminous flux, the energy needed to reach the required level can be maintained throughout the luminaire's life.



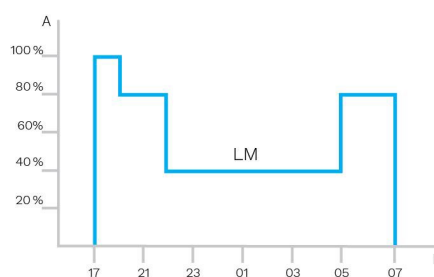
1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings



### 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



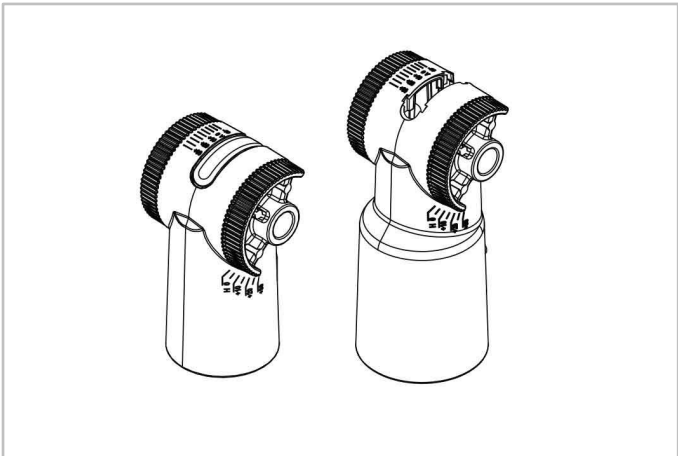
### PIR sensor: motion detection

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.



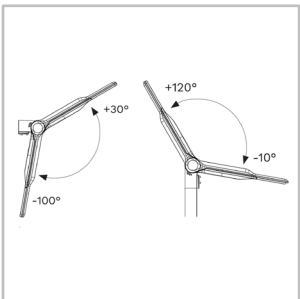
The Schröder IzyFix patented high-pressure die-casted aluminium universal fixation system is an integral part of the luminaire mounted in the factory. The IzyFix system aims to fit needs worldwide by meeting IEC and ANSI 3G testing requirements. It is intended to simplify life for customers and installers in the process of purchasing and installing luminaires for various applications.



## From post-top to side-entry in one movement

The innovative design allows changing from a side-entry to a post-top position – even with luminaires ordered with factory pre-cabling – without any switching work on the fixation or disconnection from the pole. Therefore the type of mounting (horizontal or vertical) does not have to be considered when ordering. This unique feature also eases installation. After setting the correct position, an accessory is provided to cover the resulting space and ensure further protection of the luminaire.

## Best-in-class tilting range



The IzyFix universal fixation system enables a best-in-class range of mounting angle of 130°\*, to ensure maximum lighting performance for all kinds of road scenarios and offer the possibility of installing the luminaire in extreme situations as well. With a setting mark on the body and angles on the spigot, adjusting is carried out in 5° increments by loosening two screws. The wide tilting range enables more comfortable access to the gear

compartment during field maintenance.

\*Depending on the size and shape of the luminaire, the inclination angle may be reduced. For more accurate information, always consult the installation sheets.

## Variation for all poles



Due to the many different applications used worldwide, Schröder has created a range of fixation systems and reducers to satisfy all needs that might come up on the market.

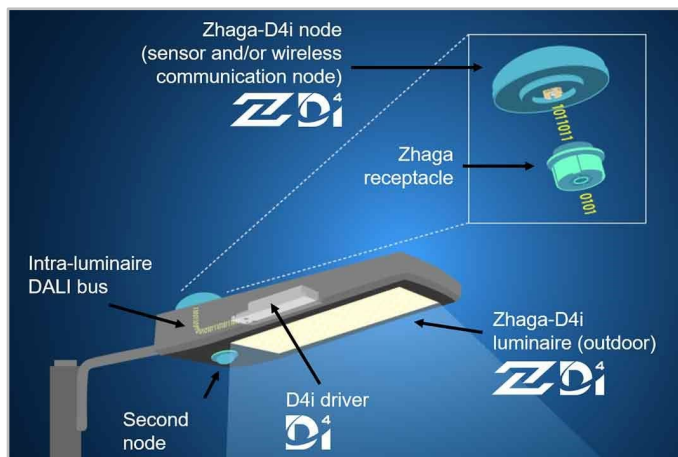
	IzyFix Ø60mm	IzyFix Ø76mm
Ø32mm spigot	✓ (with reducer)	✓ (with reducer)
Ø42-48mm spigot	✓	✓ (with reducer)
Ø60mm spigot	✓	✓
Ø76mm spigot	✗	✓

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.



**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

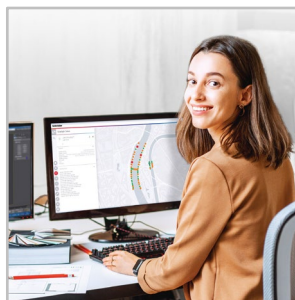
## A plug-and-play solution



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

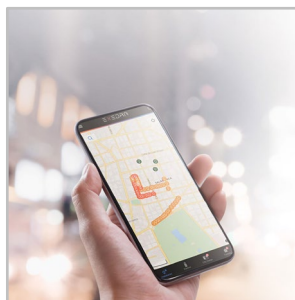
Data is gold. Schröder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

## 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.

Schröder EKINOX powered by Sunna Design is an eco-friendly solar lighting solution that combines renewable energy production with Schröder's renowned photometries, achieving optimal lighting levels while reducing carbon emissions and preserving the environment. This stand-alone solution consists of three solar kits (with two battery capacity options) paired with dedicated Schröder luminaires that are equipped with 20 to 80 high-power LEDs.



## Smart lighting package



Schröder EKINOX powered by Sunna Design revolutionises the deployment of renewable energy lighting solutions with its innovative design. It features frameless solar panels, advanced battery technology, intelligent in-built electronics, and luminaires equipped with LensoFlex®4 photometric engines to fully optimise solar lighting. With three customisable package options available, this solution sets a new standard for ease and efficiency.

SE1	SE2	SE4
20 LEDs	20 or 40 LEDs	40 or 80 LEDs
1,800lm	3,500/3,700lm	7,100/7,500lm
Up to 180lm/W	Up to 180lm/W	Up to 180lm/W

## Straightforward implementation

Schröder EKINOX powered by Sunna Design simplifies on-site deployment and ensures optimal performance with its user-friendly design. The SE solar kits feature post-top mounting for Ø60mm (SE1 and SE2) or Ø76mm (SE4) spigots. With the help of its partners, Schröder provides comprehensive solutions that include reinforced poles and brackets that are compliant with EN40 calculation standards and have CE marking.

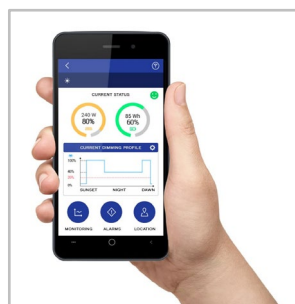
## Separate tilt settings



eliminating the risk of installation errors, and ensuring easy and efficient installation.

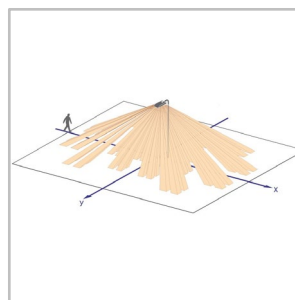
Optimising solar energy harvesting and light distribution on a site require different settings. This can only be achieved when the solar panel and luminaire are separate. Schröder EKINOX allows for this flexibility within its design, as the solar panels can be tilted to the optimal angle, ranging from 0 to 50° (depending on the selected SE kit). The connection between the solar panels and luminaire is made using a cable with coded connectors,

## Specific dimming profiles



The energy capacity of a solar-powered luminaire is limited and should be managed carefully. To ensure that the right panel and battery size is chosen for the specific local requirements, such as light levels, autonomy days, and traffic density, several pre-configured profiles are available at the time of ordering. The chosen dimming scenario can also be modified on-site by Schröder's local customer service team to meet the specific needs of the site.

## Motion detection feature



As an additional feature, the luminaire can be equipped with a motion sensor (PIR) to enhance safety and user experience. The dimming scenario can be overridden by motion detection (vehicles, bicycles, or pedestrians) resulting in the light level rising to 100% for a brief period, maximising visibility and ensuring safety for users.

## Smart management to prevent blackouts

Managing energy use intelligently is crucial as the level of charge in the battery when the luminaire is turned on can vary depending on the energy accumulated throughout the day. The on-board electronics in Schröder EKINOX intelligently divide the night into three parts, and adjust the light level accordingly, to prevent blackout situations and ensure seamless operation.



## 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
UL certified	Yes
ROHS compliant	Yes
Zhaga-D4i certified	Yes
BE 005 certified	Yes
UKCA marking	Yes
Testing standard	EN 60598-1 EN 60598-2-3 IEC TR 62778 EN 62262 LM 79-08 (all measurements in ISO17025 accredited laboratory) LM 80 (all measurements in ISO17025 accredited laboratory)

## HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP66/IP67
Impact resistance	IK 09
Vibration test	Compliant with ANSI C 136-31 standard, 3G load and modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment

· Any other RAL or AKZO colour upon request

## OPERATING CONDITIONS

Operating temperature range (Ta)	-40°C up to +55°C / -40°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	Class 1 US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz 347V – 50-60Hz
Surge protection options (kV)	6 8 10
Electromagnetic compatibility (EMC)	EN 55015:2013/A1:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61547:2009, EN 62493:2015
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Zhaga (optional) NEMA 7-pin (optional)
Associated control system(s)	Schröder EXEDRA
Sensor	PIR (optional)

## OPTICAL INFORMATION

LED colour temperature	2200K (WW 722) 2700K (WW 727) 3000K (WW 730) 3000K (WW 830) 4000K (NW 740) 5700K (CW 757)
Colour rendering index (CRI)	>70 (WW 722) >70 (WW 727) >70 (WW 730) >80 (WW 830) >70 (NW 740) >70 (CW 757)
ULOR	0%
ULR	0%

· 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 (high-power LEDs)
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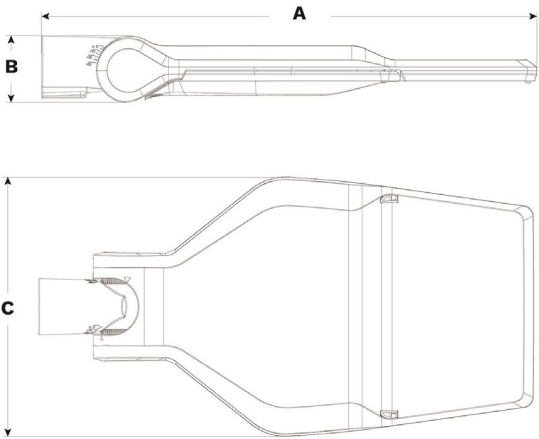
· Lifetime may be different according to the size/configurations. Please consult us.

DIMENSIONS AND MOUNTING

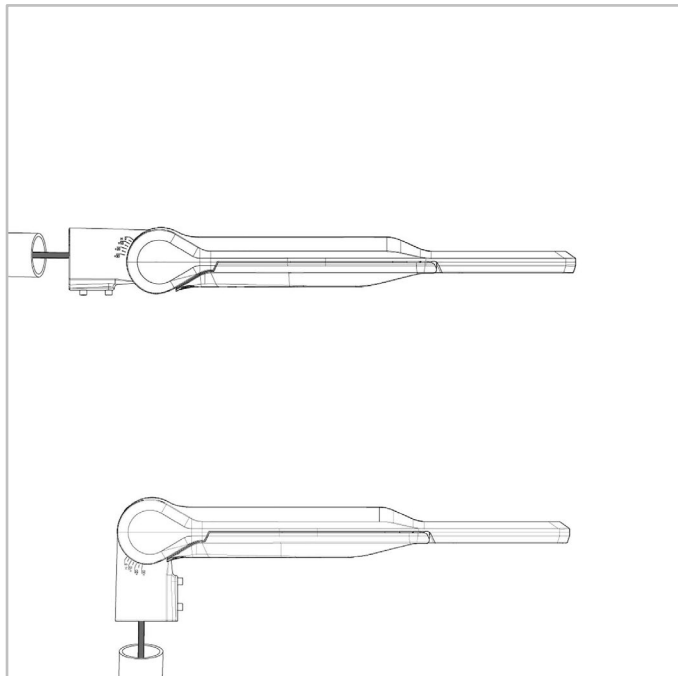
AxBxC (mm   inch)	IZYLUM 1 : 587x94x294   23.1x3.7x11.6
	IZYLUM 2 : 604x94x352   23.8x3.7x13.9
	IZYLUM 3 : 715x94x368   28.1x3.7x14.5
	IZYLUM 4 : 873x94x390   34.4x3.7x15.4
	IZYLUM 5 : 873x94x390   34.4x3.7x15.4
Weight (kg   lbs)	IZYLUM 1 : 4.9-5.9   10.8-13.0
	IZYLUM 2 : 6.3-7.3   13.9-16.1
	IZYLUM 3 : 7.0-8.3   15.4-18.3
	IZYLUM 4 : 9.9-12.1   21.8-26.6
	IZYLUM 5 : 10.3-12.6   22.7-27.7
Aerodynamic resistance (CxS)	IZYLUM 1 : 0.03
	IZYLUM 2 : 0.03
	IZYLUM 3 : 0.03
	IZYLUM 4 : 0.03
	IZYLUM 5 : 0.03
Mounting possibilities	Side-entry slip-over – Ø32mm
	Side-entry slip-over – Ø42mm
	Side-entry slip-over – Ø48mm
	Side-entry slip-over – Ø60mm
	Side-entry penetrating – Ø60mm
	Post-top slip-over – Ø32mm
	Post-top slip-over – Ø42mm
	Post-top slip-over – Ø48mm
	Post-top slip-over – Ø60mm
	Post-top slip-over – Ø76mm
	Post-top penetrating – Ø60mm

· Dimensions given for IZYLUM with Ø60mm spigot (side-entry mounting)

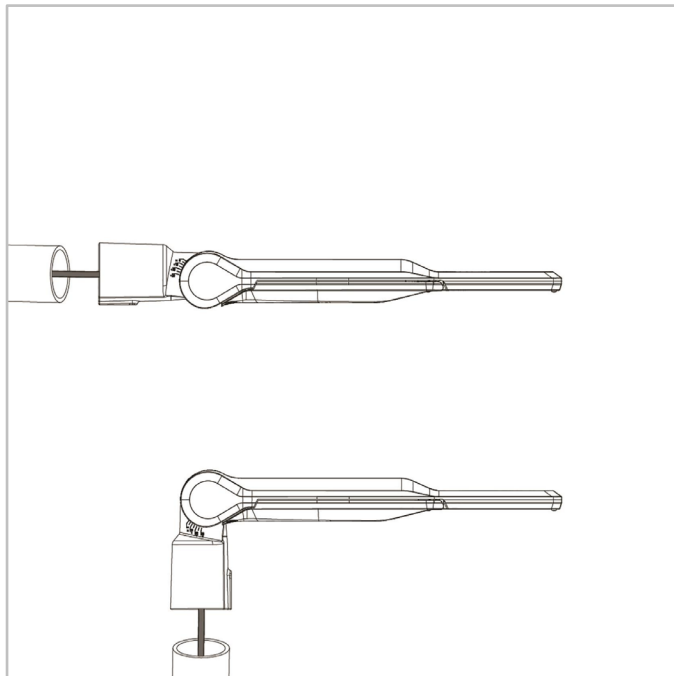
· Size and weight may be different according to the configuration. Please consult us for more information.



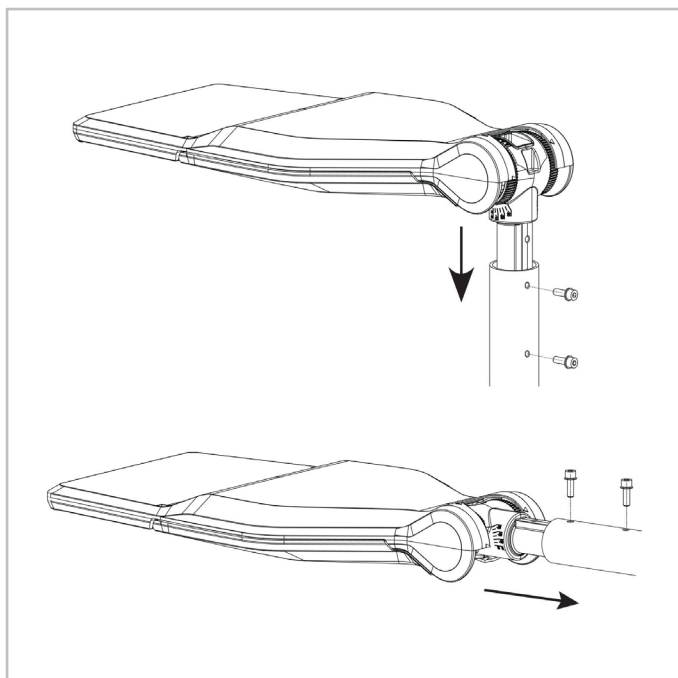
IZYLUM | Slip-over mounting for Ø32-60mm spigot - 2xM10 screws

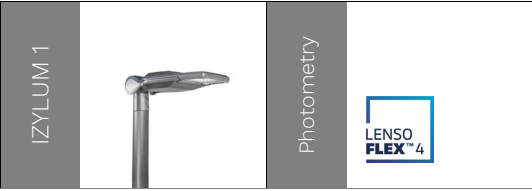


IZYLUM | Slip-over mounting for Ø32-76mm spigot - 2xM10 screws



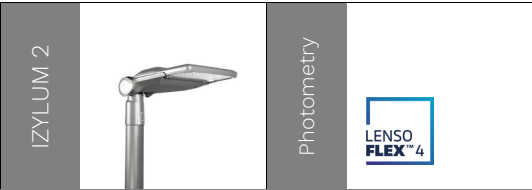
IZYLUM | Penetrating fixation for Ø60mm spigot - 2xM8 screws





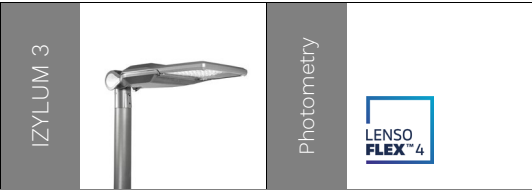
Luminaire output flux (lm)												Power consumption (W)		Luminaire efficacy (lm/W)	
Warm White 722		Warm White 727		Warm White 730		Warm White 830		Neutral White 740		Cool White 757					
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
10	700	3400	700	3500	800	3800	700	3600	800	4100	800	4000	7	34	150
20	1400	6800	1500	7100	1600	7700	1500	7300	1700	8200	1700	8000	13	66	165
25	1900	7000	2000	7300	2200	8000	2100	7500	2400	8700	2300	8200	15	64	174

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



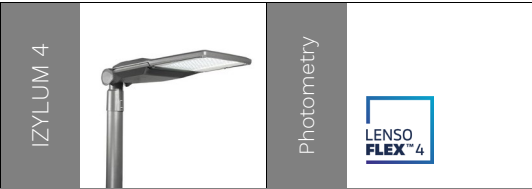
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Warm White 722		Warm White 727		Warm White 730		Warm White 830		Neutral White 740		Cool White 757					
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
30	2100	9300	2200	9700	2400	10600	2300	10000	2600	11200	2500	11000	19	82	175
40	2800	12400	3000	12900	3300	14200	3100	13300	3500	15000	3400	14600	24	109	179

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



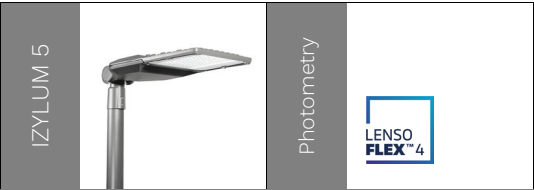
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Warm White 722		Warm White 727		Warm White 730		Warm White 830		Neutral White 740		Cool White 757					
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
40	2900	10500	3000	11000	3300	12000	3100	11300	3500	12700	3400	12400	24	86	179
50	3600	13000	3800	13500	4200	14800	3900	13900	4400	15700	4300	15300	30	108	182
60	4400	15600	4600	16300	5000	17800	4700	16700	5300	18900	5200	18400	35	128	184
70	5100	17500	5300	18300	5800	20000	5500	18800	6200	21200	6000	20600	41	142	184
80	5800	19800	6100	20600	6700	22600	6300	21200	7100	23900	6900	23300	46	162	183

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



Luminaire output flux (lm)													Power consumption (W)		Luminaire efficacy (lm/W)
Warm White 722		Warm White 727		Warm White 730		Warm White 830		Neutral White 740		Cool White 757					
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
70	5100	15800	5400	16500	5900	18000	5500	17000	6200	19100	6100	18600	41	127	184
80	5900	18100	6100	18800	6700	20600	6300	19400	7100	21900	6900	21300	46	144	186
100	7400	22600	7700	23600	8400	25800	7900	24300	8900	27300	8700	26600	58	182	186
120	8800	27100	9200	28300	10100	31000	9500	29100	10700	32800	10400	32000	71	218	183

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



Luminaire output flux (lm)												Power consumption (W)		Luminaire efficacy (lm/W)	
Warm White 722		Warm White 727		Warm White 730		Warm White 830		Neutral White 740		Cool White 757					
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
70	5200	19300	5400	20100	5900	22000	5600	20700	6300	23300	6100	22700	41	162	185
80	5900	20100	6200	21000	6800	23000	6400	21600	7200	24300	7000	23700	46	162	186
100	7400	27600	7700	28800	8500	31500	8000	29600	9000	33400	8800	32500	58	234	187
120	8900	33100	9300	34500	10200	37800	9600	35500	10800	40000	10500	39000	71	280	184

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



