BEKA Schréder

Experts in lightability™

LEDLUME® XP

LED solution for an optimised investment

EXEDRA | iTERRA | LENSO FLEX® 4

LOCALLY manufactured

LEDLUME XP

IP 66

Up to IK 10

Up to 20kV

LEDLUME XP 1

LEDLUME XP 2

LEDLUME XP 3

LEDLUME XP 4

SA Pat. 2012/07685

A profitable investment

The LEDLUME XP offers optimised photometrical performance with a minimum total cost of ownership. It provides customers with the ideal tool to generate energy savings, improve lighting levels and reduce maintenance costs. The great variety of high-performance optics optimises the photometric distribution for each specific application to achieve minimum energy consumption.

The LEDLUME XP range takes advantage of the latest photometric innovations. It uses the new LensoFlex®4 photometric engine, which has been developed around the ideas of performance, compactness, versatility and standardisation.

The LEDLUME XP offers flexible combinations of LED modules, a choice of currents and dimming options to further maximise energy savings and provide the most cost-effective solution.

Key advantages

- Designed and manufactured in South Africa (SADC Class S > 87% local manufacture)
- Designed to operate LED light sources of up to 265W in an ambient temperature (Tq) environment of up to 25˚C, without reducing the useful lifetime of 100 000 hours, at a lumen depreciation of not more than 5% (L95B10)
- New generation of LensoFlex®4 photometric engine, providing maximum spacings for compliance with SANS 10098 road lighting classification, while maintaining comfort and safety
- Marine grade, high-pressure die-cast aluminium housing
- Maximised savings in energy (more than 70% possible) and maintenance costs
- Designed for easy technology upgrade (FutureProof)
- Easy to install
- Unsurpassed light uniformity
- Surge protection 10kV/10kA
- Circular economy 4-star rating
- 5-year warranty (*)

(*) Terms and conditions apply

Characteristics

GENERAL INFORMATION	
Recommended installation height	4m to 30m
FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
Driver included	Yes
ROHS compliant	Yes
Testing standard	SANS 475, SANS 60598, SANS 62262

HOUSING AND FINISH	
Housing	Marine grade high-pressure die-cast aluminium (EN 1706 AC-44300)
Optic	Acrylic PMMA
Protector	High-impact clear glass
	High-impact polycarbonate (optional)
Housing finish	Unpainted aluminium
Tightness level	IP 66
Impact resistance	High-impact clear glass: Up to IK 09
	High-impact polycarbonate: IK 10
Access for maintenance	Easy access to the gear compartment by means of a hinging mechanism

DIMENSIONS AND MOUNTING	
AxBxC (mm)	XP 1: 244x444x104
	XP 2: 244x535x107
	XP 3: 345x618x111
	XP 4: 386x835x120
Weight (kg)	XP 1: 4
	XP 2: 4.5
	XP 3: 9
	XP 4: 13
Aerodynamic resistance (CxS) (m^2)	XP 1: 0.046
	XP 2: 0.057
	XP 3: 0.072
	XP 4: 0.088
Standard mounting (mm)	Slip-over side-entry Ø42
Spigot length (mm)	≥ 125

ELECTRICAL INFORMATION	
Electrical class	EU class I or II
Nominal voltage	198-264V – 50Hz
Power factor	> 95% at full load
Surge protection	10kV / 10kA
	20kV / 20kA (optional)
Electromagnetic compatibility (EMC)	SANS 55015:2013/A1:2015, SANS 61000-3-2:2014, SANS 61000-3-3:2013, SANS 61547:2009, SANS 62493:2015
Control options	Schréder EXEDRA remote management
	Schréder ITERRA
	Optidim
	Internal daylight switch
	Incorporated NEMA socket assembly – 3-pin
	Incorporated NEMA socket assembly – 7-pin, Schréder EXEDRA ready or compatible with standard daylight switch

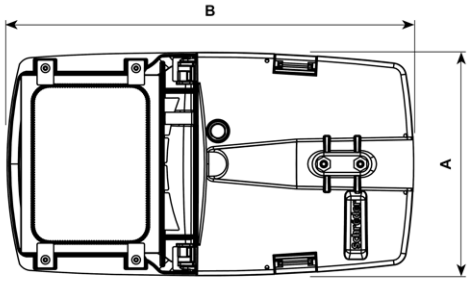
OPTICAL INFORMATION	
LED colour temperature	4000K (Neutral white 740)
	3000K (Warm white 730) (optional)
	5700K (Cool white 757) (optional)
Colour rendering index (CRI)	≥ 70 (Neutral white 740)
	≥ 70 (Warm white 730) (optional)
	≥ 70 (Cool white 757) (optional)
Upward Light Output Ratio (ULOR)	0%
Standard optic	5305

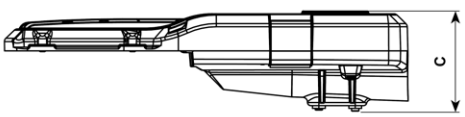
OPERATING CONDITIONS	
Operating temperature range (Ta)	-35°C up to +40°C

LIFETIME OF THE LEDS @ TQ 25°C	
For all versions	100,000h - L95B10

LIFETIME OF THE DRIVER @ TQ 25°C	
For all versions	100,000h ≤10% failure rate

For options and accessories, please turn to page 10.





Switching/dimming control

5 good reasons to **smartify your lighting**

1 Optimising energy efficiency

Reduce your electricity bills and minimise your carbon footprint. Use control features and sensors to define when your lights are turned on, off or dimmed.

- **Scheduled lighting** based on working shifts and human activity.
- **Light sensors** to harvest natural light and only compensate with artificial lighting if necessary.
- **Motion sensors** to trigger lighting through detection of people entering an area.

2 Getting the right light

Take advantage of a lighting control system to precisely adjust the light intensity, colour temperature and scenario according to the actual needs.

3 Maximising safety and productivity

Help your employees perform at their best with human-centred lighting. Lighting plays an essential role in the daily life of your business. Not only does it create the atmosphere of a place, it also contributes to the mental well-being, sleep, safety and work efficiency of your staff.

4 Making technology convenient

Remotely control all parameters of your lighting. Check the status at a glance, monitor energy consumption and adjust your scenarios anytime, anywhere.

5 Increasing the life span of luminaires

Dimming and light-on-demand features limit energy usage for each luminaire and allow them to last longer.

This reduces he number of replacements required and also provides environmental benefits.

Schréder ITERRA

Schréder ITERRA provides a complete user- and installer-friendly wireless control solution for various lighting applications.

Schréder ITERRA offers site managers a robust, cost-effective and future-proof platform to run their infrastructure with the utmost flexibility for adapting the lighting to any scenario or activity while maximising energy savings and providing the best experience for employees, visitors and managers.

A mobile App based system, Schréder ITERRA is very easy to operate. It comes with a visual interface that users can quickly personalise to the layout and settings of their lighting installation.

Download on the App Store GET IT ON Google Play

Schréder EXEDRA

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 barriers

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.

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

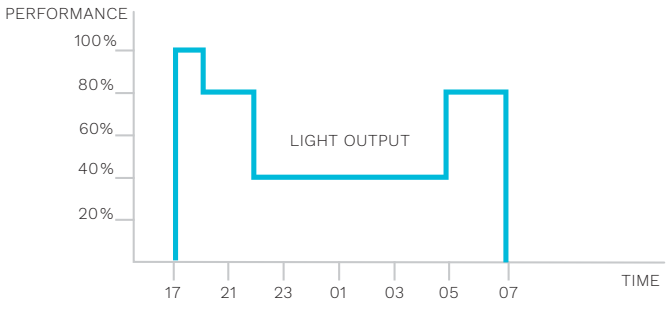
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

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.

Optidim

Intelligent luminaire drivers can be programmed in the factory with complex dimming profiles. Up to 5 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.



Daylight switch

Our solutions can be managed by photoelectric sensors that switch on the luminaires exactly when natural light becomes insufficient (cloudy day, night fall...) so as to provide safety and comfort in the public space.

Performance

				Nominal flux (lm) (*)	Power consumption (W)	Nominal efficacy (lm/W)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Photometry (**)
Luminaire	Number of LEDs	Current (mA)	Line Current (A)	Typical	Typical	Typical	Typical	Typical	
LEDLUME XP 1	10	350	0.05	1905	12	159	1676	140	
	10	500	0.07	2576	17	153	2267	135	
	10	700	0.1	3395	23	145	2988	127	
	10	1000	0.15	4501	35	130	3961	114	
	20	350	0.1	3810	23	169	3352	148	LENSO FLEX® 4
	20	500	0.14	5109	32	159	4496	140	
	20	700	0.2	6790	45	151	5975	133	
	20	850	0.23	7864	54	145	6920	128	
	20	1000	0.3	9002	69	130	7922	115	
LEDLUME XP 2	30	350	0.14	5714	33	173	5029	152	
	30	500	0.2	7729	47	164	6801	144	
	30	700	0.29	10281	66	156	9047	137	
	30	1000	0.42	13650	96	142	12012	125	LENSO FLEX® 4
	40	350	0.19	7560	43	176	6653	155	
	40	500	0.27	10131	61	166	8915	146	
	40	700	0.38	13452	88	154	11837	135	
	40	800	0.44	14969	100	149	13173	131	
LEDLUME XP 3	50	350	0.24	9226	55	169	8119	149	
	50	500	0.34	12555	78	161	11048	142	
	50	700	0.48	16814	111	152	14797	134	
	60	350	0.28	11071	65	171	9742	150	
	60	500	0.40	15066	93	163	13258	143	LENSO FLEX® 4
	60	600	0.48	17622	111	158	15507	139	
	60	700	0.57	20177	131	154	17756	135	
	80	350	0.37	14761	84	175	12990	154	
	80	500	0.53	20088	122	165	17678	145	
	80	600	0.64	23496	147	160	20676	141	
LEDLUME XP 4	100	500	0.66	25110	151	166	22097	146	
	100	700	0.94	33629	217	155	29593	137	
	120	500	0.78	30132	179	168	26516	148	
	120	700	1.12	40355	257	157	35512	138	LENSO FLEX® 4
	140	500	0.91	35154	209	168	30936	148	
	140	600	1.11	41117	254	162	36183	142	
	160	500	1.04	40176	239	168	35355	148	
	160	550	1.15	43584	265	165	38354	145	

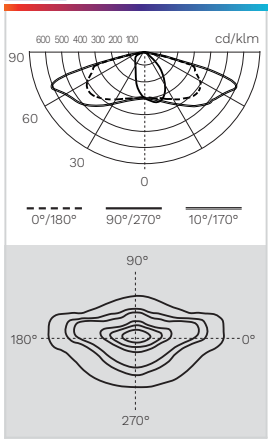
Tolerance on LED flux is ± 7% and on total luminaire power ± 5%

(*) The nominal flux is an indicative LED flux @ Ts 85°C based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire. The type of LED used is subject to change due to the ongoing rapid progress taking place in LED technology.

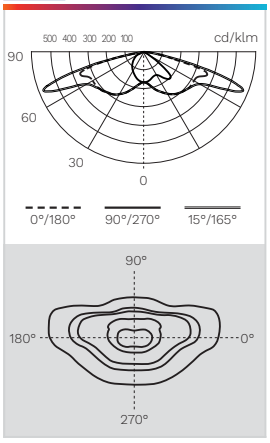
(**) Custom combinations of lenses/optics to suit the project are available on request.

Light Distributions

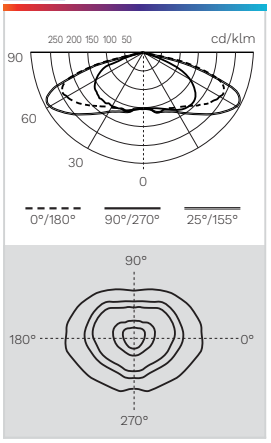
LENSO FLEX® 4 5301 optic



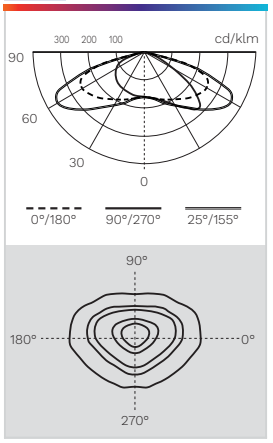
LENSO FLEX® 4 5305 optic



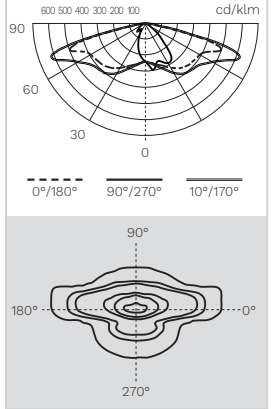
LENSO FLEX® 4 5304 optic



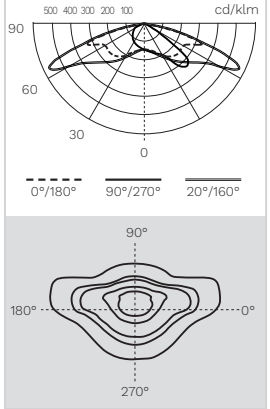
LENSO FLEX® 4 5304-W optic



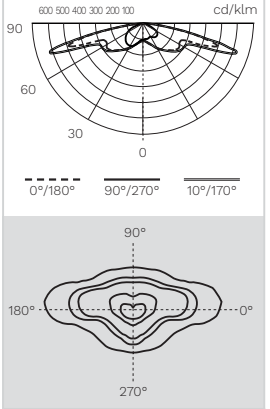
LENSO FLEX® 4 5306 optic



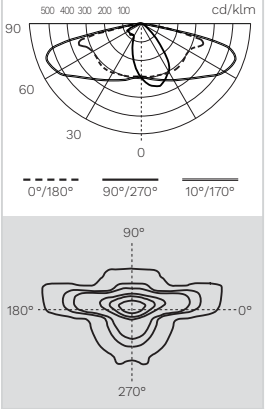
LENSO FLEX® 4 5307 optic



LENSO FLEX® 4 5345 optic



LENSO FLEX® 4 5399 optic



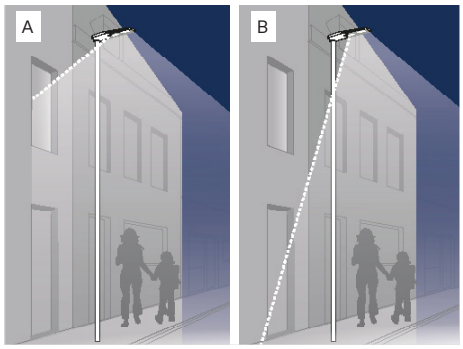
Custom combinations of lenses/optics to suit the project are available on request.

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.

Back Light control (optional)

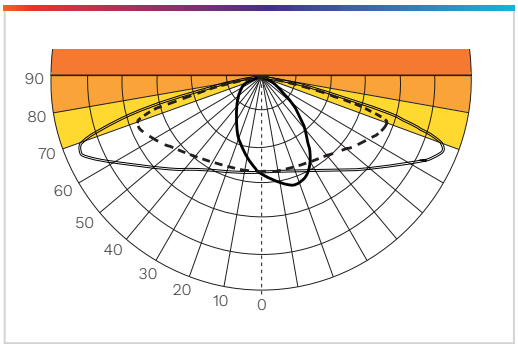
The LensoFlex®4 modules can be equipped with a Back Light control louvre. This additional feature minimises spill light towards the back of the luminaire to avoid intrusive light towards surrounding buildings.



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

Anti-glare louvre (optional)

For high visual comfort, the anti-glare louvre enables a significant glare reduction in case of low glare requirements. It is designed to cut the light at high angles to still provide very efficient lighting while maintaining exceptional visual comfort.



Anti-glare louvre cuts off light above 70°

Key Features

The luminaire design is based on a three-compartment concept, consisting of an LED engine, power supply and spigot compartment. This allows for easy installation without the risk of jeopardizing the IP integrity of the luminaire. Furthermore, the hinging concept allows the easy replacement of the LED engine in case of future upgrades or maintenance.

Surge protection:
10kV/10kA
Optional: 20kV/20kA

The power supply is automatically disengaged when opening the luminaire.

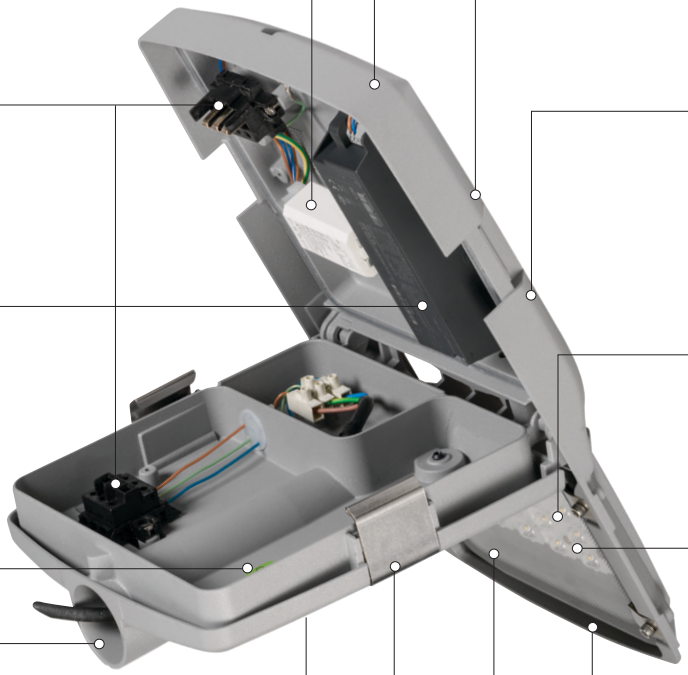
The electronic power supply is suitable for operation with a 198-264V 50Hz single phase system. (DC versions are available). The power factor is rated at ≥0,95. The efficiency is rated 89%.

Levelling device

Side entry
ø42mm * 125mm

Special use of stainless steel inserts to prevent galvanic corrosion between stainless steel and aluminium, allowing future removal of the luminaire from the spigot

Secured by stainless steel latches and access screw



The LED engine, consisting of the LED light source and the power supply, can be easily replaced or upgraded.

The luminaire housing is manufactured of marine-grade aluminium.

Electronic temperature monitoring prevents overheating of LEDs and power supply.

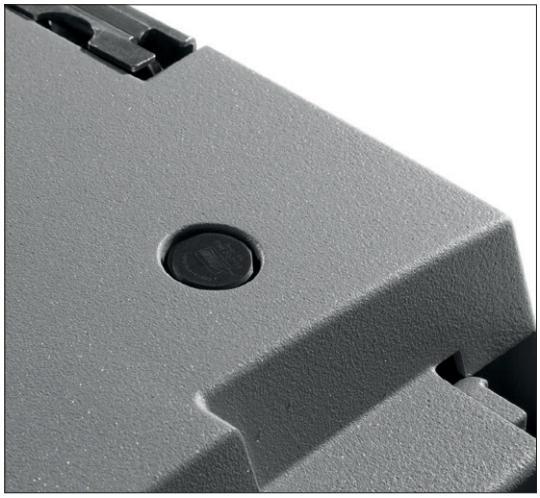
Each LED is equipped with a lens to provide the desired light distribution.

The protector is manufactured from high-impact clear flat glass or polycarbonate.

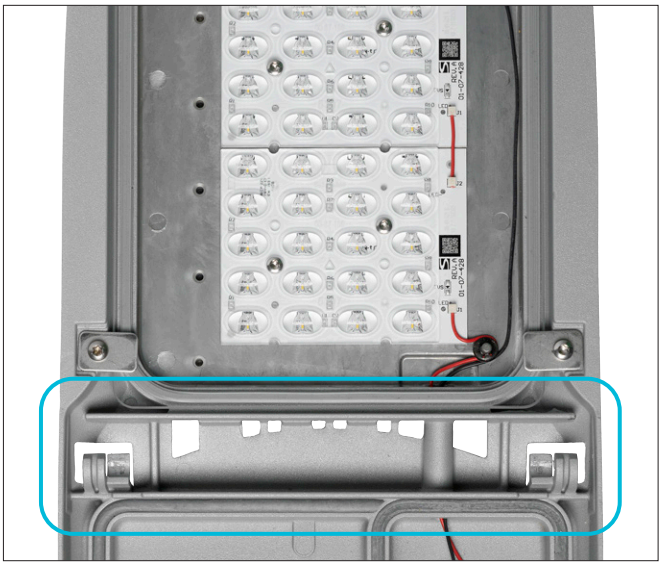
To maximize the reliability of the LEDs, the photometrical engine is completely sealed to IP 66. This ensures that the photometric performance is maintained over time.

NEMA 7-Pin complete with plug-in surge protection for easy replacement

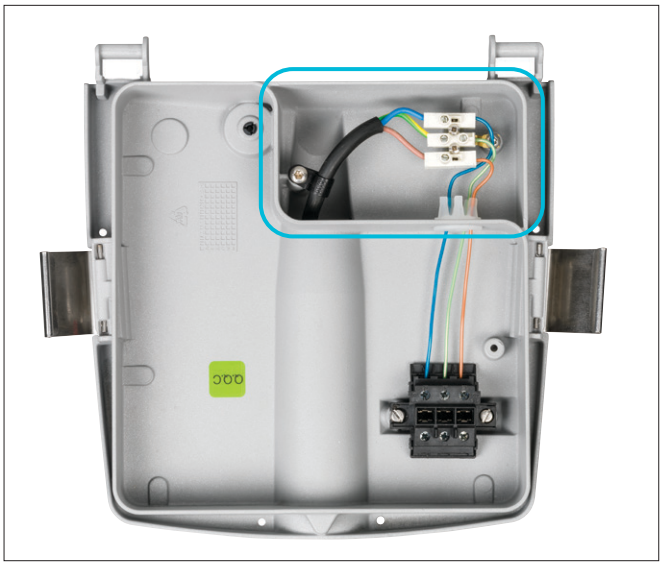
Optional levelling spigot adaptors:
Bottom entry Ø76mm or Side entry Ø42-48mm spigots



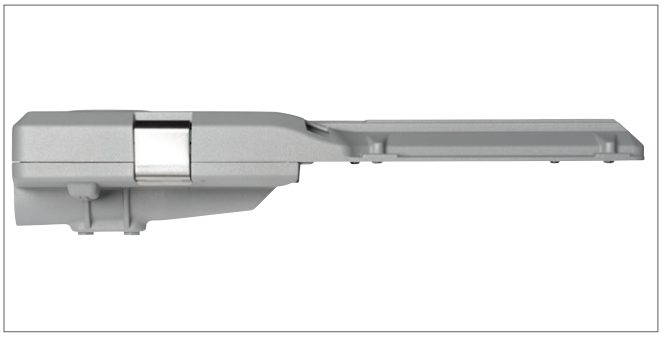
Integrated vent (breather) for rapid pressure equalisation and reduction of condensation

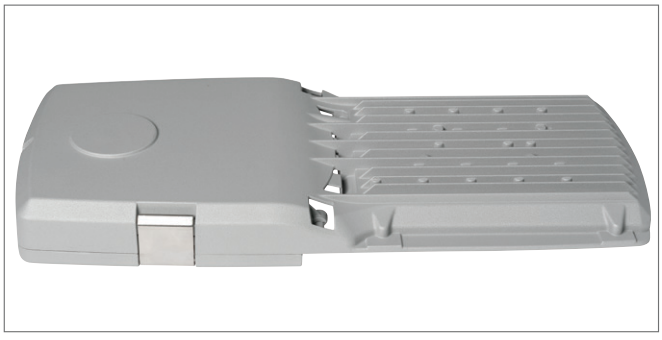


Thermal separation between gear and optical compartment, ensuring maximum lifetime of electronic components (excludes LEDLUME XP 4)



Separate connector compartment, preventing the risk of jeopardizing the IP integrity of the luminaire during installation

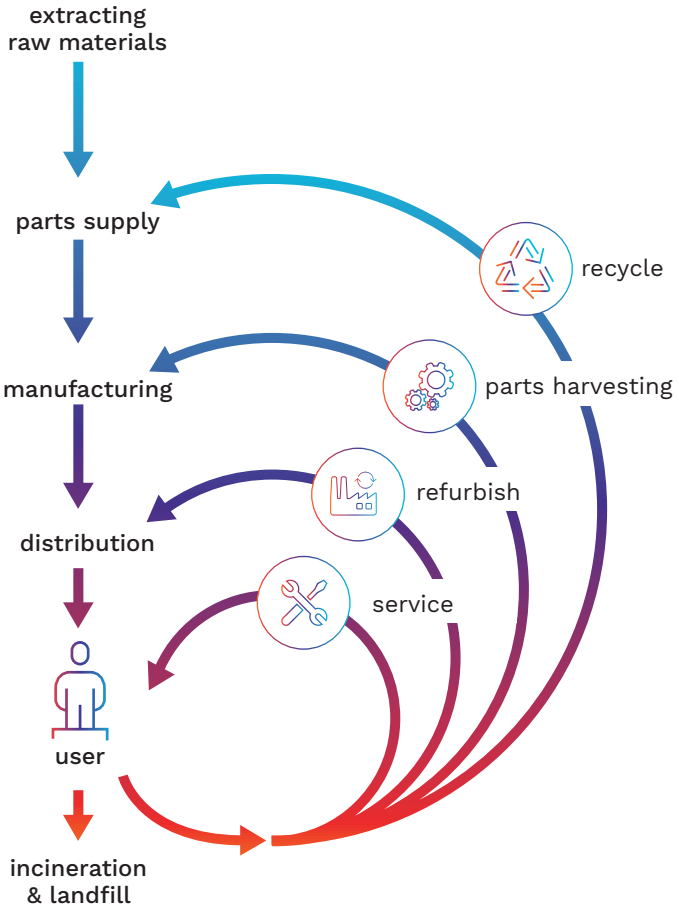




Slim, aesthetical design with very low fin height to prevent any dirt or debris accumulation between the fins, maximising thermal dissipation during luminaire lifetime

CIRCLELIGHT

Circularity concept



LEDLUME XP

Circularity focuses on reducing the environmental burden by valorising the flow of all materials.

It is mainly defined in opposition to the traditional linear economy: take, make and dispose. In a circular economy, products are part of a value network where they will be used for as long as possible.

Then, depending on their characteristics, they can be reused, refurbished, upgraded or recycled.

BEKA Schréder takes circular economy into account, right from the offset. Before we start to design our products, we incorporate it into their DNA.

After a careful analysis of the potential circularity of our luminaires, we decided to introduce a “circular lighting” product label. This label acts as a circular indicator for our customers.

It clearly designates products that are optimised for circular economy through 12 objective criteria.

Circular highlights:

- Tool-free opening of the gear compartment for easy maintenance
- Equipped with a completely replaceable LED engine
- Less than 9 steps to completely disassemble the luminaire
- Materials with a high rate of recyclability

Star rating:

It was designed to be cost-efficient

It was built to last but not with circular economy requirements

It was developed to meet most of circular economy requirements

It was developed to fully meet circular economy requirements

Ordering Information

Example:

LEDLUME XP2 4088N5301A1GNSTODTL

ID	LED	Watt	LED Colour	Optic[1]	Colour options	Surge Protection	Protector	Switching/dimming control	Temperature control	Custom options / accessories
LEDLUME XP1	10	12	**N** Neutral White (4000K)	5301	**A** Aluminium finish (unpainted)	**1** 10kV	**G** Glass	**N3** NEMA 3-Pin Socket Only	**DTL** Internal temperature control	**Nominal Voltage** 90-305V - 50Hz
	10	17		5304						
	10	23		5304-W[2]						**Mounting** Bottom entry Ø76mm or side entry Ø42-48mm levelling spigot adaptors
	10	35	**W** Warm white (3000K)	5305						
	20	23		5306						
	20	32		5307						
	20	45	**C** Cool white (5700K)	5345						
	20	54		5399						
	20	69								
LEDLUME XP2	30	33			**S** Pearl Light Grey (RAL 9022), Textured finish	**2** 20kV	**P** Polycarbonate	**N7** NEMA 7-Pin Socket Only	**NTC** External temperature control	**Back Light control** Back Light control accessory
	30	47								
	30	66						**NR** NEMA complete with Royce Thomson DLS		**Anti-glare louvre** Anti-glare louvre accessory
	30	96								
	40	43						**NS** NEMA complete with Spectrum DLS		
	40	61								
	40	88						**3D** NEMA 3-Pin complete with dummy link		
	40	100								
LEDLUME XP3	50	55			**B** Black (RAL9017), Textured finish			**7D** NEMA 7-Pin complete with dummy link		
	50	78								
	50	111						**3I** NEMA 3-Pin complete with plug-in 20kV surge protection		
	60	65								
	60	93								
	60	111						**7I** NEMA 7-Pin complete with plug-in 20kV surge protection		
	60	131								
	80	84						**CM** Schréder EXEDRA CM		
	80	122								
	80	147						**TO** DIM (Optidim)		
LEDLUME XP4	100	151			**W** White (RAL9003), Textured finish					
	100	217								
	120	179								
	120	257								
	140	209								
	140	254								
	160	239								
	160	265								
					O Painted Other (RAL / Finish [Brilliant/ Matt])					

[1] For further assistance please contact our Applications Department. Custom combinations of lenses/optics to suit the project are available on request.
[2] Only applicable to 40 LED, 80 LED, 120 LED and 160 LED versions.

Custom Options

Switching/Dimming Control	Integrated Schréder ITERRA

BEKA Schréder

Experts in lightability™

SABS ISO 9001

www.beka-schreder.co.za

Designed and manufactured by BEKA Schréder (Pty) Ltd

LOCALLY manufactured

2023-11