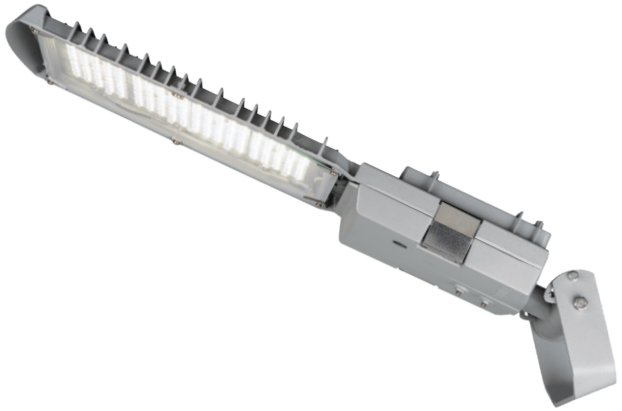
BEKA Schréder

Experts in lightability™

LEDFLOOD

High-performance LED floodlight



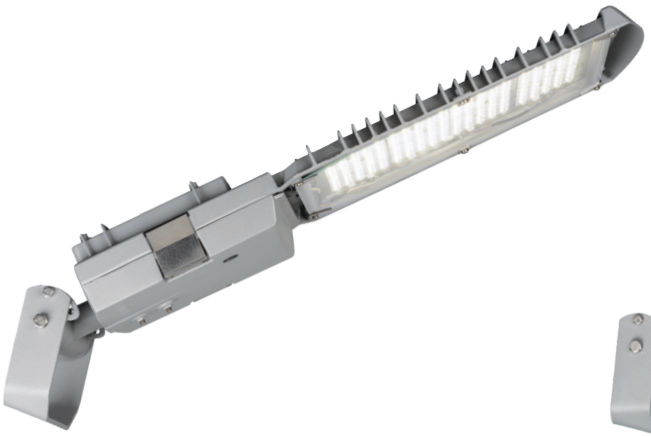
EXEDRA | TERRA | LENSO FLEX® 4 | BLAST FLEX™ 4

LEDFLOOD

IP 66

Up to IK 10

Up to 20kV



LEDFLOOD-MAXI

LEDFLOOD-MIDI

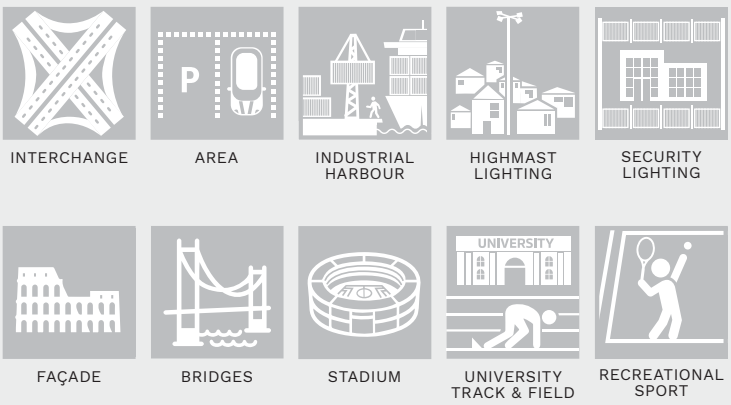
SA Pat. 2012/07685

Versatile floodlighting solution

The LEDFLOOD luminaire range has been designed for area lighting applications, ranging from car parks to large areas, whilst offering energy savings, low maintenance requirements and precise light control.

Our various photometric optical solutions (LensoFlex® and BlastFlex™) allow for multiple light distributions to ensure that the specific requirements of each application are met. In addition, the option for varying the number of LEDs of the floodlight allows for a precise adaptation of the application to be lit, thereby ensuring optimal lighting levels and energy savings.

The marine grade, high-pressure die-cast aluminium housing makes the LEDFLOOD suitable for installation in harsh environments. Furthermore, this complete floodlight solution offers a fast return on investment.



INTERCHANGE | AREA | INDUSTRIAL HARBOUR | HIGHMAST LIGHTING | SECURITY LIGHTING

FAÇADE | BRIDGES | STADIUM | UNIVERSITY TRACK & FIELD | RECREATIONAL SPORT

Key advantages

- Designed and manufactured in South Africa
- Designed to operate LED light sources of up to 265W/43,584lm 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)
- Easy to install
- No lamp or component replacements for more than 10 years
- Designed for easy technology upgrade (FutureProof)
- Marine grade, high-pressure die-cast aluminium housing
- Designed to replace conventional HID and CFL streetlight and floodlight luminaires (up to 600W HPS) with energy savings up to 70%
- Three-compartment housing, ensures reliable ingress protection
- Automatic disconnection of power when opened
- Surge protection 10kV/10kA
- Circular economy 4-star rating
- 5-year warranty (Terms and conditions apply)

Characteristics

GENERAL INFORMATION	
Recommended installation height	Up to 40m
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
Weight (kg)	MIDI: 10.5
	MAXI: 16.5
Aerodynamic resistance (CxS) (m^2)	MIDI: 0.11
	MAXI: 0.18

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: IK 09
	High-impact polycarbonate: IK 10
Access for maintenance	Easy access to the gear compartment by means of a hinging mechanism

For options and accessories, please turn to page 12.

ELECTRICAL INFORMATION	
Electrical class	EU class I or II
Nominal voltage	198-264V – 50Hz
Power factor	> 95% at full load
Surge protection	10kV
	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 ITERRA
	Schréder EXEDRA remote management
	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)
Standard optic	5366

OPERATING CONDITIONS	
Operating temperature range (Ta)	-35°C up to +50°C (*)

(*) Depending on the luminaire inclination and driving current. For more details, please contact us.

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

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 the number of replacements required and also provides environmental benefits.

Schréder ITERRA

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

Schréder ITERRA offers site managers a robust, cost-effective and FutureProof platform to run their infrastructure with the utmost flexibility for adapting the lighting to any scenario or event while maximising energy savings and providing the best experience for players, fans and the neighbourhood.

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 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.

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

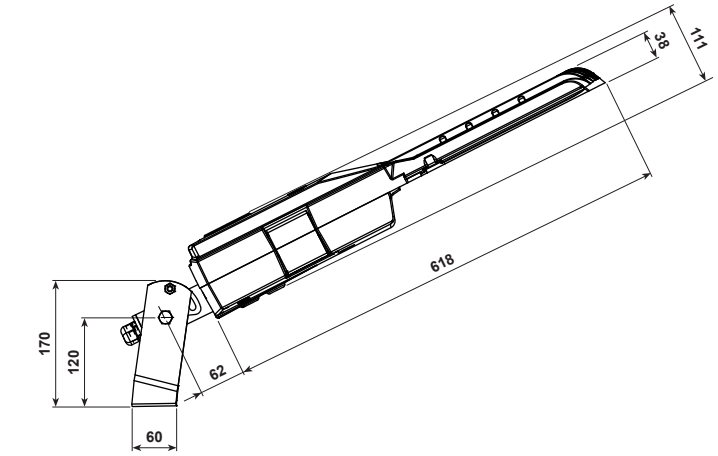
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

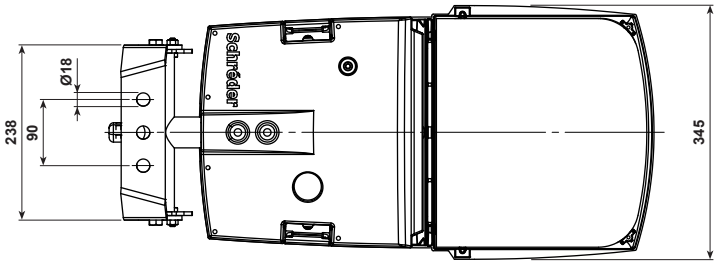
Protected on every side

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.

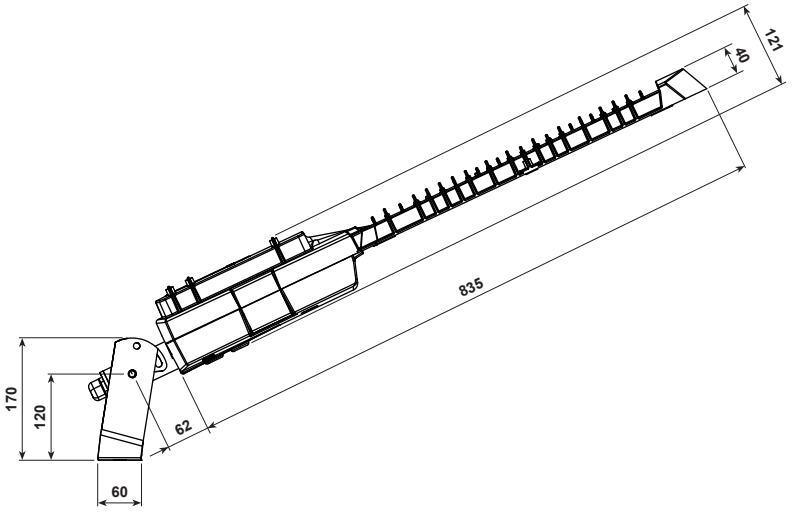
Dimensions in mm

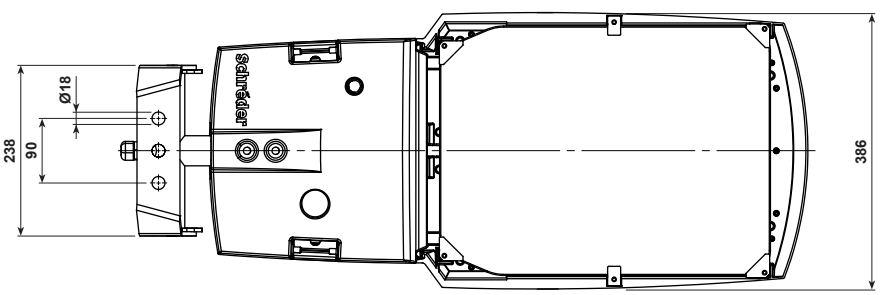
LEDFLOOD-MIDI





LEDFLOOD-MAXI





Performance

Luminaire	Number of LEDs	Driver Current (mA)	Line Current (A)	Nominal flux (lm) (*)	Power consumption (W)	Nominal efficacy (lm/W)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Photometry (**)
				Typical	Typical	Typical	Typical	Typical	
MIDI	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	LENSO FLEX® 4
	60	500	0.40	15066	93	163	13258	143	
	60	600	0.48	17622	111	158	15507	139	BLAST FLEX™ 4
	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	
MAXI	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	LENSO FLEX® 4
	120	700	1.12	40355	257	157	35512	138	
	140	500	0.91	35154	209	168	30936	148	
	140	600	1.11	41117	254	162	36183	142	BLAST FLEX™ 4
	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.

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.

BlastFlex™4

Using collimators made of high-transmission PMMA, the BlastFlex™4 photometric engine offers the highest efficiency for directional beams dedicated to specific applications in architectural and sports lighting. The ability to control the light with the highest accuracy reduces light spill in the surroundings, improves uniformity on the area to be lit and contributes to optimal use of the energy consumed.

Key Features

The luminaire consists of an LED engine, power supply and spigot compartment. This allows the easy installation of the LED engine by means of a hinging action onto a spigot base casting.

Optional:
A tamper-proof screw ensures controlled access by means of a special coded tool

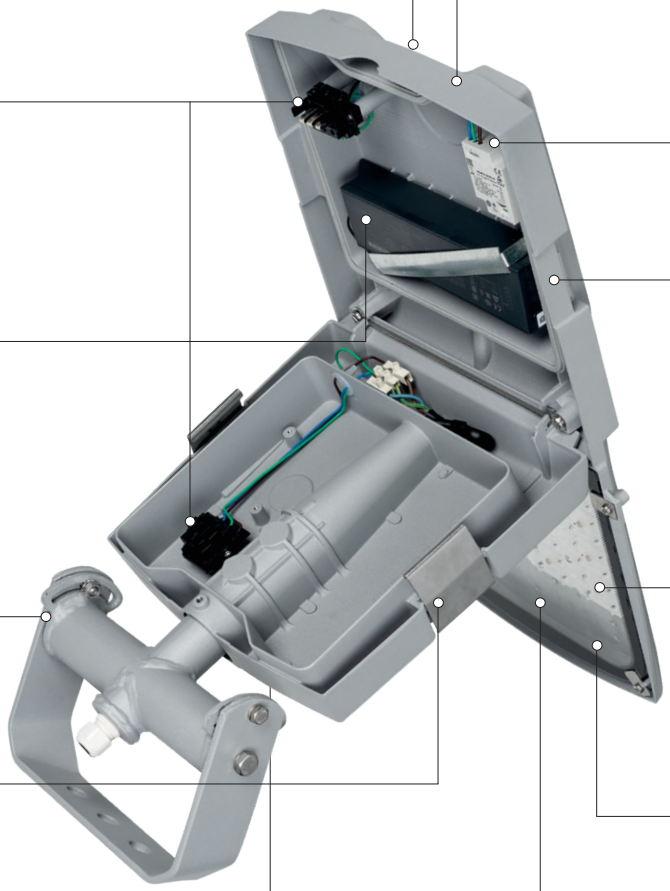
The power supply is automatically disengaged when opening the luminaire.

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%.

Galvanised mild steel stirrup for easy on-site adjustment

Secured by stainless steel latches and access screw

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



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

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

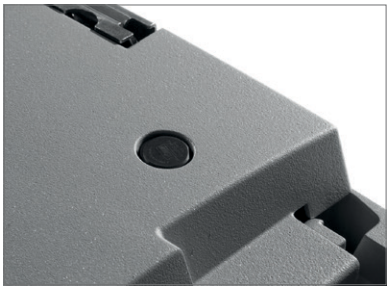
The luminaire housing is manufactured of marine-grade aluminium.

Electronic temperature monitoring prevents overheating of LEDs and power supply.

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

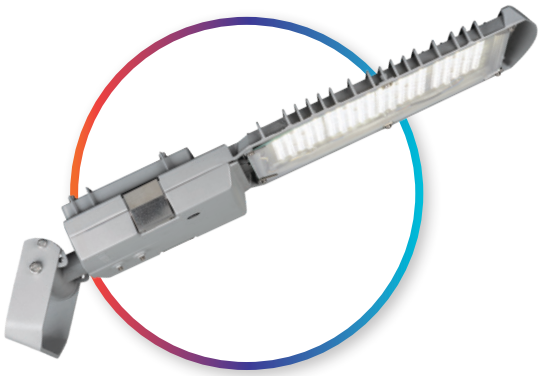
The protector is manufactured from high-impact clear flat glass or polycarbonate.

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.



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

Case Study: Highmast installation 400W HID replacement

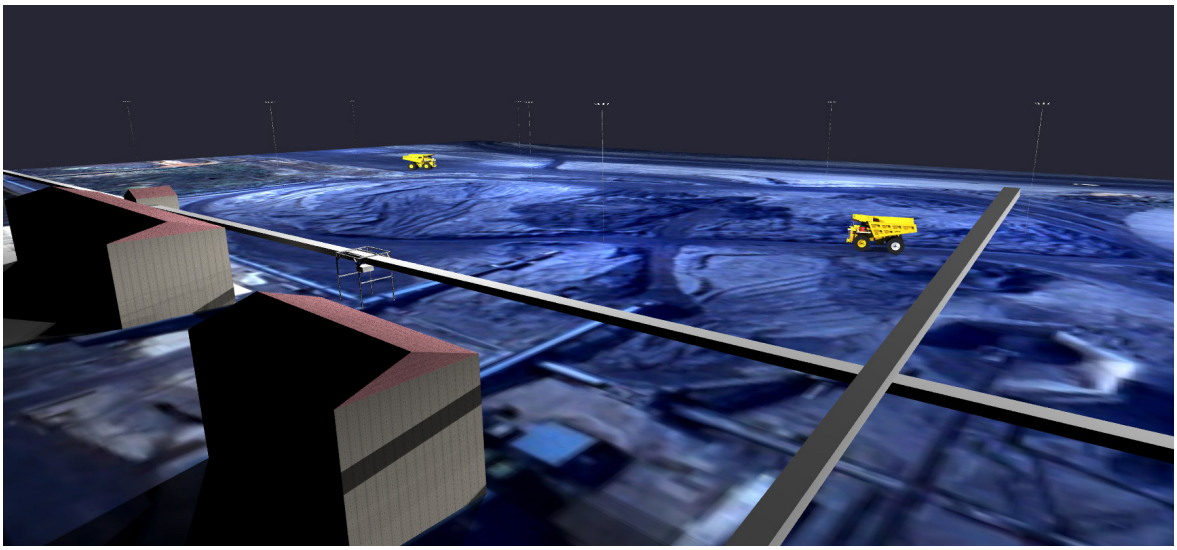


Specifications

Number of units per highmast: 9
Pole height: 30m

Comparing a 400W HID to a LEDFLOOD-MAXI highmast installation in a coal mine

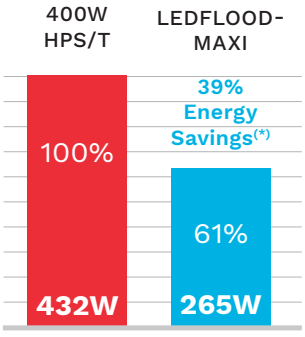
The LEDFLOOD-MAXI provides a 39% energy saving compared to a 400W high-intensity discharge luminaire, whilst fully meeting the application light level requirements.



	Luminaire fitted with 400W High-Pressure Sodium Lamp	LEDFLOOD-MAXI 160 LED
Luminaire power consumption	432W	265W
Maintenance factor	0.75	0.8
Eh_{ave}	18.95lux	18.83lux
E_{min}	5.8lux	5.8lux
Total power consumption (W)	38 880W	23 850W
Total cost of ownership (TCO) over 10 years based on R1.83/kWh	R3 580 620	R2 683 345

Detail on lighting design comparison available on request.

Energy Savings

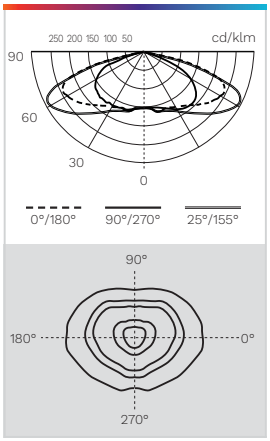


(*)Optic 5356, optimised design based on specifications

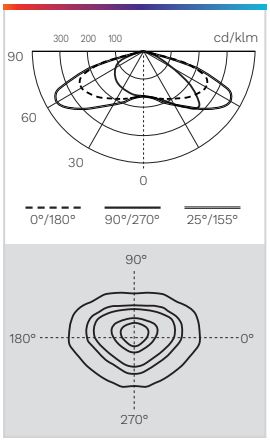
Light Distributions

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

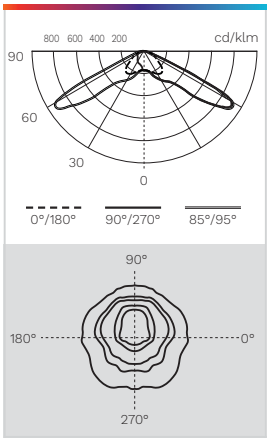
LENSO FLEX® 4 5304 optic



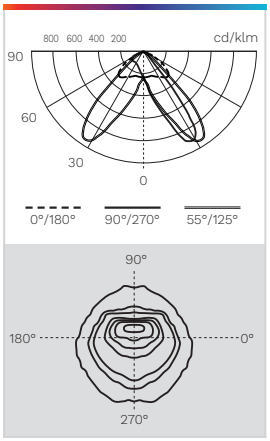
LENSO FLEX® 4 5304-W optic



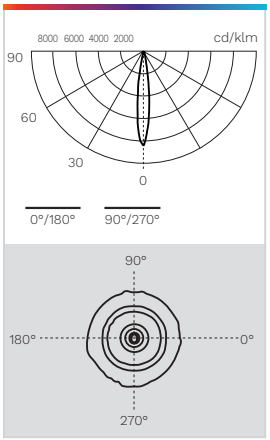
LENSO FLEX® 4 5355 optic



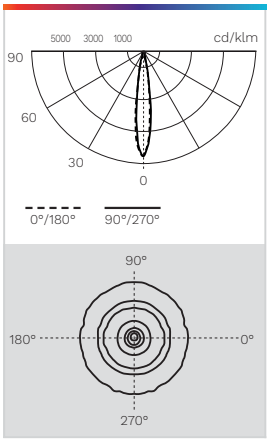
LENSO FLEX® 4 5356 optic



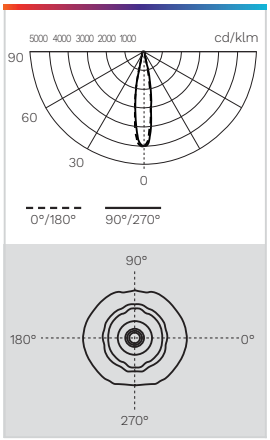
BLAST FLEX™ 4 5357 optic



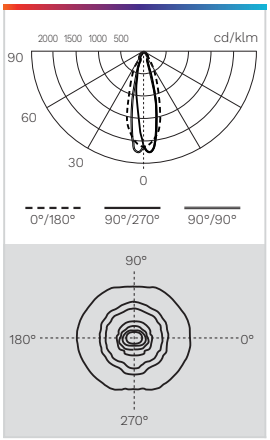
BLAST FLEX™ 4 5357-W optic



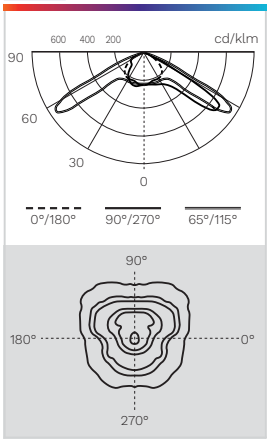
BLAST FLEX™ 4 5358 optic



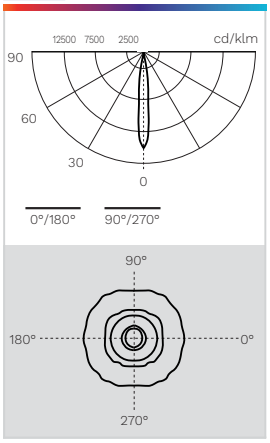
BLAST FLEX™ 4 5359 optic



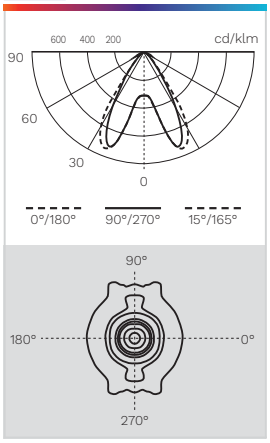
LENSO FLEX® 4 5366 optic



LENSO FLEX® 4 5405 optic

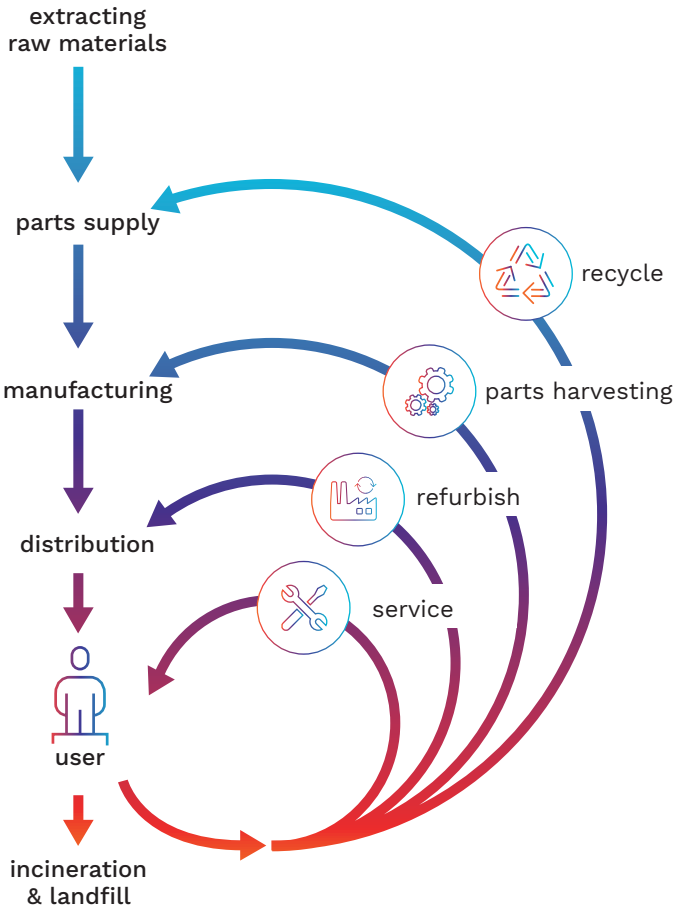


LENSO FLEX® 4 5407 optic



CIRCLELIGHT

Circularity concept



LEDFLOOD

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
- 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

Construction Details

The luminaire consists of an LED engine, power supply and spigot compartment. This allows the easy installation of the LED engine by means of a hinging action onto a spigot base casting. It is secured by stainless steel latches and an access screw. The LED engine, consisting of the LED light source and the power supply, can be easily replaced or upgraded.

Both compartments are rated IP 66.

Electronic temperature monitoring prevents overheating of LEDs and power supply, positioned directly next to LEDs (ThermiX®).

The power supply is automatically disengaged when opening the luminaire. The luminaire housing is manufactured of marine grade aluminium. The power factor is rated at ≥0,95.

Ordering Information

Example:

LEDFLOODMA160265N5366A1G NR

ID	LED	Watt	LED Colour	Optic[1]	Colour	Surge Protection	Protector	Switching/ Dimming Control
LEDFLOODMD	50	55	**N** Neutral white (4000K)	5304	**A** Aluminium finish (unpainted)	**1** 10kV	**G** Glass clear	**DL** Downward facing daylight switch
	50	78	**W** Warm white (3000K)	5304-W[2]	**S** Pearl Light Grey (RAL 9022), Textured finish	**2** 20kV	**P** Polycarbonate	**N3** NEMA 3-Pin Socket Only
	50	111	**C** Cool white (5700K)	5355	**B** Black (RAL 9017), Textured finish			**N7** NEMA 7-Pin Socket Only
	60	65		5356	**W** White (RAL 9016), Textured finish			**NR** NEMA complete with Royce Thomson DLS
	60	93		5357	**O** Painted Other (RAL / Finish [Brilliant/Matt])			**NS** NEMA complete with Spectrum DLS
	60	111		5357-W				**3D** NEMA 3-Pin complete with dummy link
	60	131		5358				**7D** NEMA 7-Pin complete with dummy link
	80	84		5359				**3I** NEMA 3-Pin complete with plug-in 20kV surge protection
	80	122		5366				**7I** NEMA 7-Pin complete with plug-in 20kV surge protection
	80	147		5405				**CM** Schréder EXEDRA CM
				5407				**TO** DIM (Optidim)
LEDFLOODMA	100	151						
	100	217						
	120	179						
	120	257						
	140	209						
	140	254						
	160	239						
	160	265						

[1] Custom combinations of lenses/optics to suit the project are available on request
[2] Only applicable to 80 LED, 120 LED and 160 LED versions

Custom Options

Switching/Dimming Control	Integrated Schréder ITERRA
Nominal voltage	90-305V - 50Hz
Mounting	Stainless steel stirrup
Vandal-resistant	Vandal-resistant version, preventing unauthorised access to the luminaire by means of a special coded access screw
Theft-proof	Theft-proof version, preventing removal of the luminaire on a ø42mm spigot (this requires a pre-drilled spigot)
Tool theft-proof	Tool to open access screw for vandal-resistant and theft-proof version

BEKA Schréder

Experts in lightability™

SABS ISO 9001

www.beka-schreder.co.za

Designed and manufactured by BEKA Schréder (Pty) Ltd

LOCALLY manufactured

2023-07