

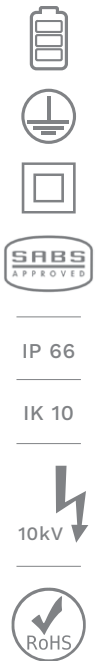
VERTICE

Versatile LED post top luminaire range



LOCALLY
manufactured

VERTICE



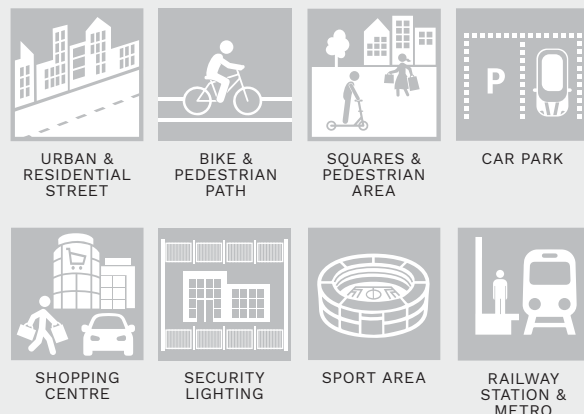
Classic, efficient, functional

The classic yet modern look of the VERTICE is designed around the efficient light distribution, with effective illumination for various urban areas.

This luminaire provides all the benefits of LED technology, such as sustainable energy reduction and improved visual comfort. The VERTICE is designed for easy installation, with virtually no maintenance required and a full 5-year warranty.

The versatility of the VERTICE is in a class of its own as it not only offers a variety of light distributions, but also four different LED engine configurations, providing an aesthetic look and feel to suit your application. Furthermore, Schröder EXEDRA and Schröder ITERRA control options with external surge protection are available.

The optional battery back-up version is the perfect solution for loadshedding. It provides four hours of back up lighting, and utilizes a fast-charging inverter, hence it charges up in time for the next loadshedding cycle.



Key advantages

- Designed and manufactured in South Africa
- Four LED engine configurations to cover a wide range of applications
- Cost-effective and efficient lighting solution for a quick return on investment
- ThermiX®: resists high temperatures (Ta 35°C)
- Surge protection 10kV
- Optional control solutions: photocell or Schröder EXEDRA control systems for autonomous and interoperable networks
- Low glare
- Pleasant visual appearance
- Circular economy 3-star rating
- 5-year warranty ^(*)

^(*) Terms and conditions apply

Characteristics

GENERAL INFORMATION

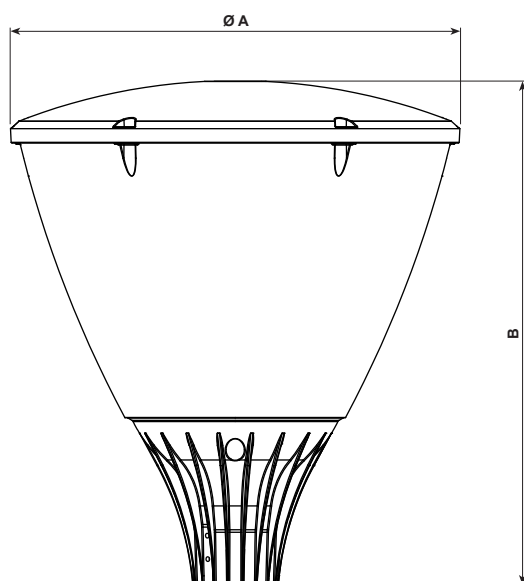
Recommended installation height	3m to 8m
Driver included	Yes
ROHS compliant	Yes
Testing standard	SANS 475, SANS 60598, SANS 62262

HOUSING AND FINISH

Housing	Top cover - UV-stabilised, calcium-filled Polypropylene Spigot - Marine grade high-pressure die-cast aluminium (EN 1706 AC-44300)
Protector	Polycarbonate
Housing finish	Black (RAL 9017), Textured finish
Tightness level	IP 66
Impact resistance	IK 10

DIMENSIONS AND MOUNTING

ØA (mm)	Ø477
B (mm)	537
Weight (kg)	Up to 4.6
Aerodynamic resistance (CxS) (m²)	0.12
Standard mounting (mm)	Bottom-entry Ø76 Bottom-entry Ø60 (optional)
Spigot length (mm)	≥ 80



ELECTRICAL INFORMATION

Electrical class	EU class I or II
Nominal voltage	198-264V – 50Hz
Power factor	> 95% at full load
Surge protection	10kV / 10kA
Electromagnetic compatibility (EMC)	SANS 55015:2013/A1:2015, SANS 61000-3-2:2014, SANS 61000-3-3:2013, SANS 61547:2009, SANS 62493:2015

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)	≤ 1% ^(*)

^(*) On optic version only

OPERATING CONDITIONS

Operating temperature range (Ta)	-20°C up to +35°C
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LIFETIME OF THE LEDS @ TQ 25°C

For all versions	60,000h - L70B10
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LIFETIME OF THE DRIVER @ TQ 25°C

For all versions	100,000h ≤10% failure rate
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For options and accessories, please turn to page 12.

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.



Schröder ITERRA

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

Schröder 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, Schröder 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.





Schröder EXEDRA

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.

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.



Performance




				Nominal flux (lm) ^(*)	Power consumption (W)	Nominal efficacy (lm/W)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Photometry
Luminaire	Number of LEDs	Driver Current (mA)	Line Current (A)	Typical	Typical	Typical	Typical	Typical	
VERTICE-R	84	350	0.06	2565	14	183	2001	143	4010
	84	500	0.09	3545	21	169	2765	132	
	84	900	0.17	5921	38	156	4618	122	
VERTICE-R Battery back-up version	84	350	0.06	2565 / 700 ^(**)	14	183	2001	143	4010
	84	500	0.09	3545 / 700 ^(**)	21	169	2765	132	

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

^(*) 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.

^(**) Reduced output during battery back-up mode. Battery back-up of 4 hours.



				Nominal flux (lm) ^(*)	Power consumption (W)	Nominal efficacy (lm/W)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Photometry ^(***)
Luminaire	Number of LEDs	Driver Current (mA)	Line Current (A)	Typical	Typical	Typical	Typical	Typical	
VERTICE-S	40	500	0.1	4127	24	172	3219	134	
	40	600	0.13	4832	30	161	3769	126	
	40	750	0.17	5882	38	155	4588	121	

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

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^(**) Reduced output during battery back-up mode. Battery back-up of 4 hours.

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



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	
VERTICE-L	36	350	0.08	2916	19	153	1166	61	4020
	72	700	0.17	5832	38	153	2333	61	

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

^(*) 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.



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	
VERTICE-O	84	900	0.17	5921	38	156	2368	62	4030

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

^(*) 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.

Construction Details

This post top luminaire provides a modern minimalist design using state-of-the-art LED technology.

It consists of a corrosion-resistant marine grade high-pressure die-cast aluminium (EN 1706 AC-44300) base, a top cover made of calcium-filled Polypropylene and a polycarbonate protector.

The luminaire has four LED engine configurations and accessories to suit every application resulting in a high-efficient glare-free light distribution.

The complete luminaire is sealed to IP 66.

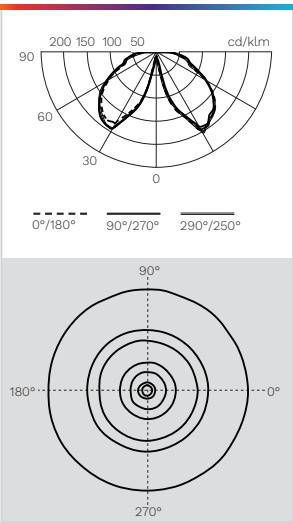
Electronic temperature monitoring prevents overheating of LEDs and power supply (ThermiX®).

The luminaire is power factor corrected to ≥ 0.95 .

Light Distributions

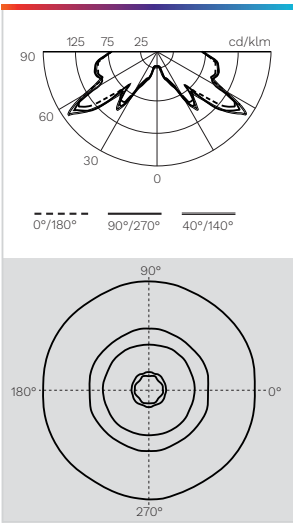
VERTICE-R

4010 optic



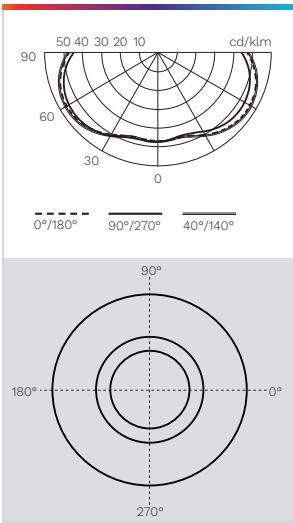
VERTICE-L

4020 optic



VERTICE-O

4030 optic

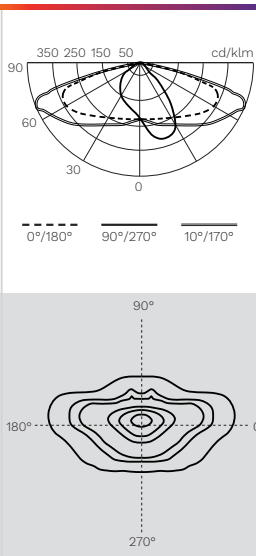


VERTICE-S

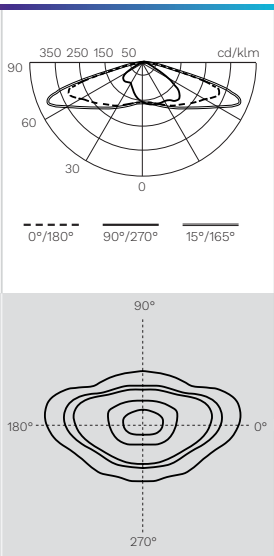
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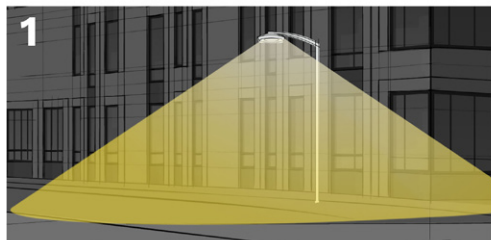
5312 optic



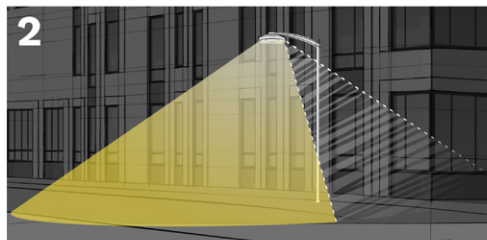
5313 optic



Direct the light only where it is wanted and needed with our backlight solutions



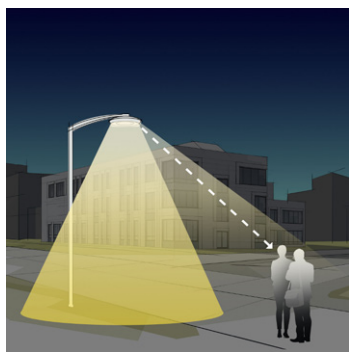
1. Without backlight



2. With backlight

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

Offer maximum visual comfort with the glare limiter



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 applications department harnesses 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.

Key Features



Four LED engine configurations to cover a wide range of applications



Various NEMA-based control variants are available (daylight switch, plug-in surge protection device, Owllet ready, and Schröder EXEDRA or Schröder ITERRA control solutions)



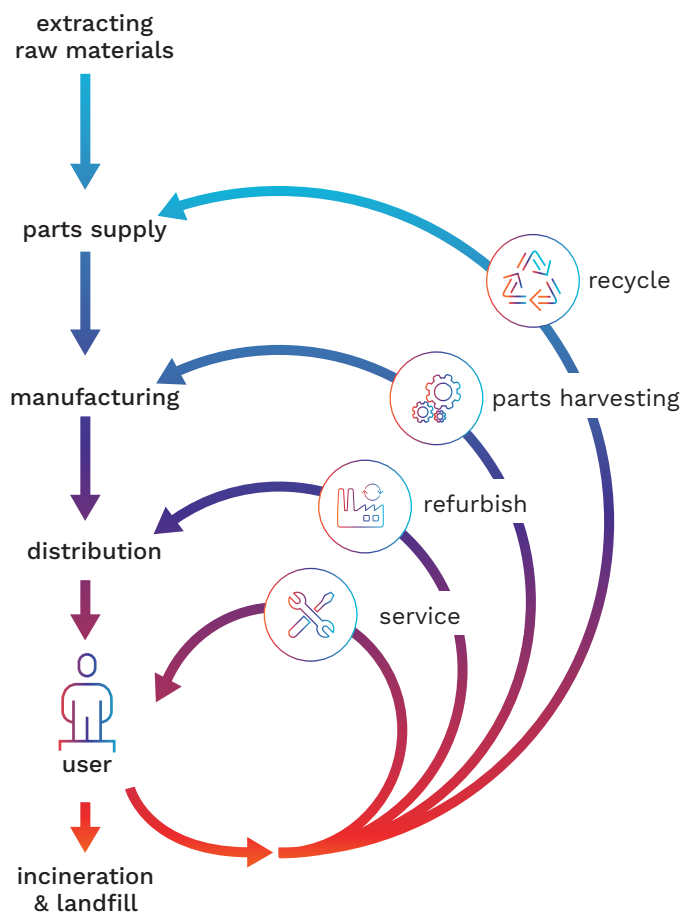
Prismatic diffuser for low glare symmetrical applications



Non-discolouring UV-stabilised acrylic anti-glare louvres and polycarbonate protector



Circularity concept



VERTICE

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 Schröder 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:

-  Equipped with a completely replaceable LED engine
-  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:

VERTICE-R 21 N 4010 P BL NR BB

ID	Watt	LED Colour	Optic	Protector	Colour Options	Switching/ Dimming Control	Other Options
VERTICE-R	14	N Neutral White (4000K)	4010	P Polycarbonate	BL Black (RAL9017), Textured finish BG Telegrey 4 (RAL 7047), Textured finish MG Mid Brunswick Green (RAL 6005), Textured finish	DL Daylight switch (downward facing) N3 NEMA 3-Pin socket only N7 NEMA 7-Pin socket only (Schröder EXEDRA ready) NR NEMA complete with Royce Thomson DLS NS NEMA complete with Spectrum DLS 3D NEMA 3-Pin complete with dummy link 7D NEMA 7-Pin complete with dummy link CM Schröder EXEDRA CM PI NEMA 7-Pin complete with plug-in 20kV surge protection	BB⁽²⁾ Battery back-up version (4 hours)
	21						
	38						
VERTICE-S	24	N Neutral White (4000K)	5312 ⁽¹⁾	P Polycarbonate			-
	30		5313 ⁽¹⁾				
	38						
VERTICE-L	19	N Neutral White (4000K)	4020	P Polycarbonate			-
	38						
VERTICE-O	38	N Neutral White (4000K)	4030	P Polycarbonate			-

⁽¹⁾ Custom combinations of lenses/optics to suit the project are available on request.

⁽²⁾ Available only for 14W & 21W versions

Custom Options

Correlated colour temperature	3000K (Warm white 730)
	5700K (Cool white 757)
Switching/Dimming Control	Integrated Schröder ITERRA
Optic	Bi-directional optics (VERTICE-S version only)
	Backlight control
	Glare limiter
Colour options	Painted other
Spigot	Ø60mm bottom entry

BEKA Schröder

Experts in lightability™

SABS
ISO 9001



www.beka-schreder.co.za

Designed and manufactured by BEKA Schröder (Pty) Ltd



LOCALLY
manufactured

2023-10

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