

# LEDLUME

LED solution for an optimised investment

SA PAT. 2012/07685



LEDLUME 1



LEDLUME 2



LEDLUME 3



LEDLUME 4



CONTROL



CIRCLE LIGHT



# Key advantages

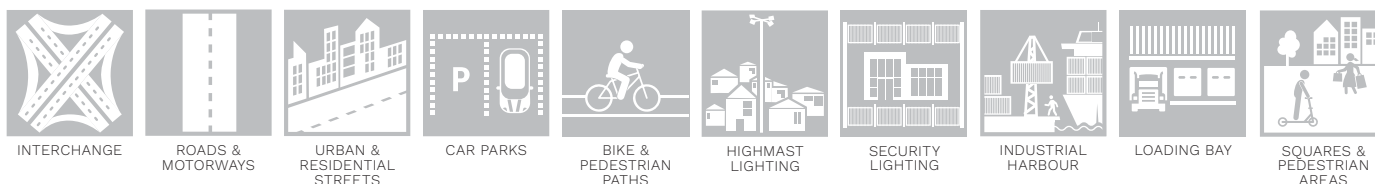
- Designed and manufactured in South Africa (SADC Class S > 87% local manufacture)
- Designed to operate LED light sources of up to 287W in an ambient temperature (T<sub>a</sub>) environment of up to 25 °C, without reducing the useful lifetime of 100 000 hours, at a lumen depreciation of not more than 5% (L95B10)
- New generation of LensoFlex<sup>®</sup>4 and HiFlex<sup>™</sup> photometric engines, 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

Testing standard	SANS 475, SANS 60598, SANS 62262			
Housing	Marine grade high-pressure die-cast aluminium (EN 1706 AC-44300)			
Protector	High-impact clear glass		High-impact polycarbonate (optional)	
Housing finish	Unpainted aluminium			
Aerodynamic resistance (CxS)	1: 0.1m <sup>2</sup>	2: 0.13m <sup>2</sup>	3: 0.19m <sup>2</sup>	4: 0.22m <sup>2</sup>
Standard mounting	Slip-over side-entry Ø42mm			
Spigot length	≥ 100mm			
Nominal voltage	198-264V – 50Hz			
Surge protection	10kV / 10kA		20kV / 20kA (optional)	
Operating temperature range (T <sub>a</sub> )	-35°C up to +40°C			

LEDLUME	1	2	3	4
Wattage (up to)	93W	106W	198W	287W
Nominal flux (up to)	15,053lm	19,637lm	35,400lm	52,914lm
Luminaire output flux (up to)	13,247lm	17,281lm	31,152lm	46,564lm
Luminaire efficacy (up to)	163lm/W	169lm/W	171lm/W	169lm/W
Colour temperature	4000K (Neutral white 740); 3000K (Warm white 730); 5700K (Cool white 757) CRI ≥70			
Lifetime of the LEDs @T <sub>q</sub> 25°C	100,000h - up to L95B10			
Lifetime of the Driver @T <sub>q</sub> 25°C	Up to 100,000h ≤10% failure rate			



# Case Study: 150W HPS Comparison



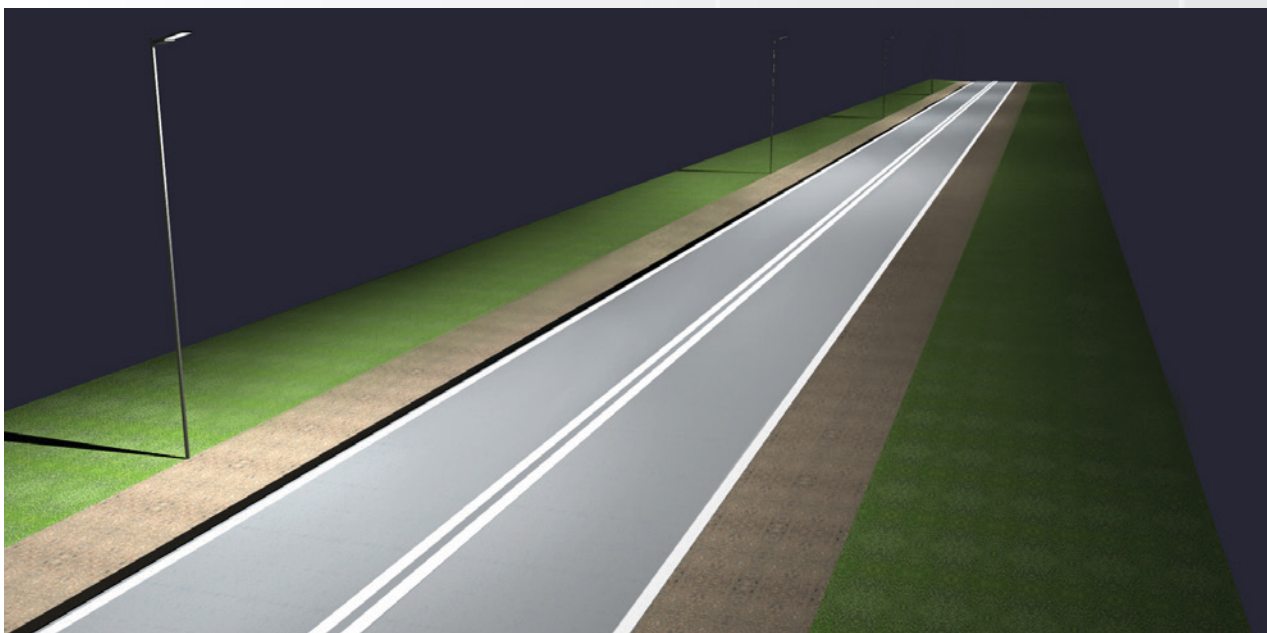
## Specifications

**Road:** B1 classified road + 2m setback  
**Luminaire spacing:** 47m  
**Road width:** 7m + 2\*2m sidewalks  
**Height:** 7m

## Comparing a 150W HPS to a LEDLUME 1 streetlight installation

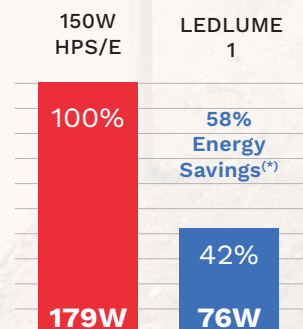
The LEDLUME 1 provides a 76% energy saving compared to a 150W high-pressure sodium luminaire, while fully meeting the road light level requirements.

Furthermore, a much better colour rendering index is provided, thereby enhancing the safety and visibility of pedestrians and road users.



	Luminaire fitted with 150W High-Pressure Sodium Lamp	LEDLUME 1 24 LED
Luminaire power consumption	179W	76W
Spacing between luminaires	27m	47m
Average illuminance sidewalk left	17lx	15.7lx
Minimum sidewalk left	6.1lx	2.5lx
Average illuminance lanes	12.4lx	12.5lx
Minimum illuminance lanes	6.2lx	2.7lx
Average illuminance sidewalk right	5lx	5lx
Minimum sidewalk right	3.7lx	1.9lx
Power consumption per km	6623W	1596W
Percentage saving per km		76%

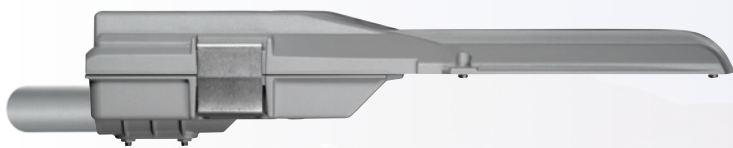
## Energy Savings



(\*) Optic 5424, optimised design based on specifications. Additional savings can be generated by integrating Schröder EXEDRA smart control systems.

Please note: Detail on lighting design comparison available on request.

# Case Study: 400W HPS Comparison



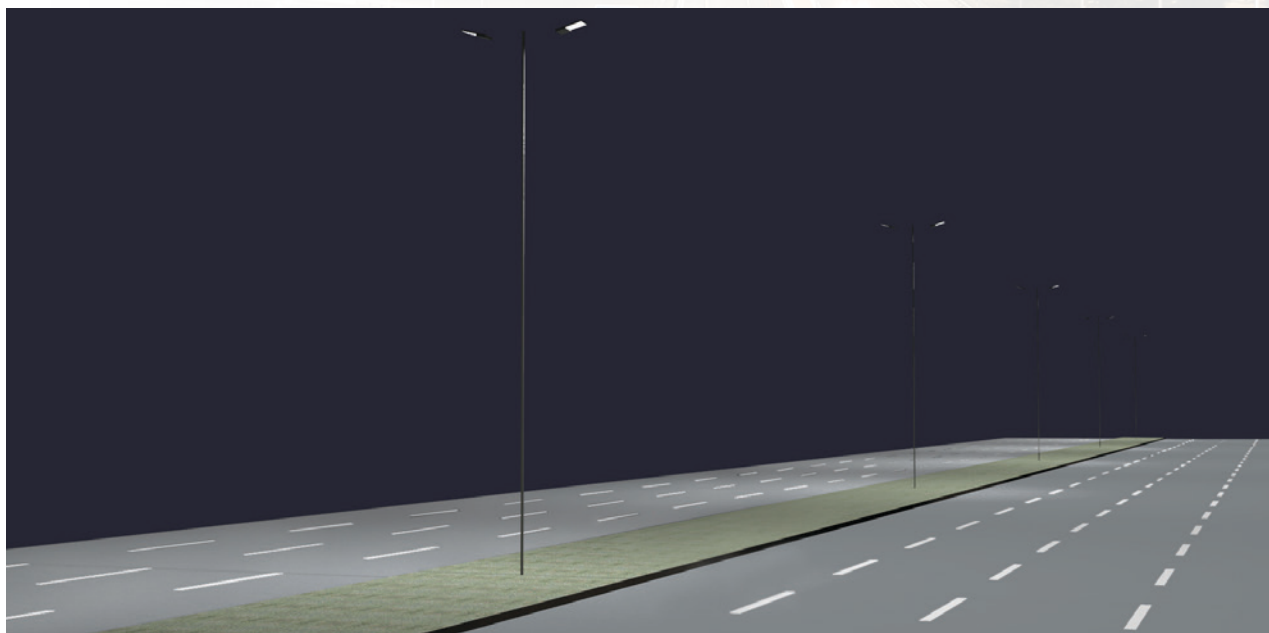
## Specifications

**Road:** A2 classified road + 2.5m setback  
**Luminaire spacing:** 44m  
**Road width:** 33m (4 x 3.5m lanes either side of 5m median)  
**Height:** 12m

## Comparing a 400W HPS to a LEDLUME 3 streetlight installation

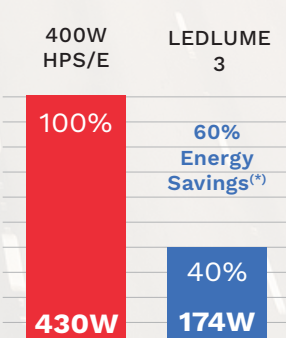
The LEDLUME 3 provides a 52% energy saving compared to a 400W high-pressure sodium luminaire, while fully meeting the road light level requirements.

Furthermore, a much better colour rendering index is provided, thereby enhancing the safety and visibility of pedestrians and road users.



	A2 Requirements (with median 600)	Luminaire fitted with 400W High-Pressure Sodium Lamp	LEDLUME 3 96 LED
Luminaire power consumption	-	430W x 2	174W x 2
Spacing between luminaires	-	27m	44m
Average luminance	At least 1.0 cd/m <sup>2</sup>	2.15 cd/m <sup>2</sup>	1.09 cd/m <sup>2</sup>
Global uniformity - U <sub>0</sub>	40%	40%	40%
Longitudinal uniformity - U <sub>l</sub>	60%	93%	73%
Glare - TI	Less than 20%	7.7%	5.2%
Power consumption per km	-	31820W	15312W
Percentage saving per km			52%

## Energy Savings



(\*) Optic 5428, optimised design based on specifications. Additional savings can be generated by integrating Schröder EXEDRA smart control systems.

Please note: Detail on lighting design comparison available on request.

# BEKA Schröder

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