



SELF-SUSTAINING SOLAR LED STREET LIGHTING



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# INTRODUCTION

We offer clean solar energy whilst at the same time reducing your Country's carbon footprint. Solar Eco Systems Africa develops, manufactures and distributes self-sustaining solar LED street lights.

Based on many years of experience in the field of energy-efficient businesses we have acquired a high competence in this area. The implementation of major projects in the construction sector has led to a deep understanding of the requirements for power grid independent street lights.

We combine unique design with the latest technology of photovoltaics and LED. Our state-of-the-art products are engineered, developed and certified in Germany. Key materials are sourced from suppliers in Germany and the United States. Our GMP certified manufacturing/assembly plant is based in Morocco.

With this brochure we would like to show you the benefits of our latest generation of solar powered and energy-efficient LED solar powered street lighting and our other exciting solar powered poles.

“self-sustaining solar  
LED street lights”



# POWER POLES

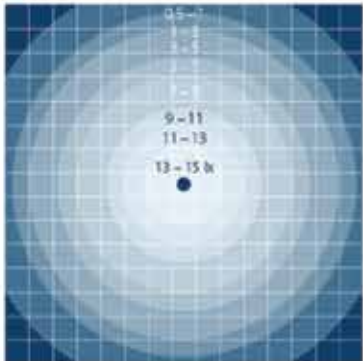
## SOLAR PEDESTRIAN LIGHT POLE

Ideal for boardwalks, pedestrian lanes, parks and communal areas

The Solar Pedestrian Light Pole is a stand-alone solar light conceived for outdoor residential and municipal lighting. Equipped with advanced modern LED and photovoltaic technology. This solar light pole provides uniform light distribution ideal for squares, promenades and parking areas.

Due to its unique energy management system, it ensures high performance and reliability in all weather conditions and in the most challenging solar radiance environments with a unique design.

### Light Distribution



15m

15m

**Light Distribution:** Circular light distribution  
**Light Pot Height:** 5m 36 Led / 4 620 lm

Illuminance at full operation 36 LEDs / 3,600 lm at full operation path-width: 5m			
Distance (m)	Area (sqm)	Eav (lx)	Emin (lx)
10	80	18	5.3
12	120	15	3.9
15	180	11	2.5
17	230	7.9	2.1
20	320	6.2	1.2
22	380	4.6	0.8
25	490	3.9	0.5

Eav (lx): Average illuminance  
Emin (lx): Minimum illuminance

Illuminance in operation depending on local site conditions (average daylight available) and customer-specific lighting times.



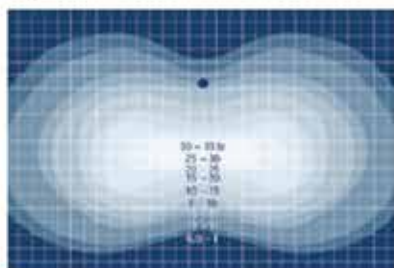
## SOLAR STREET LIGHT POLE

### Outdoor residential and municipal street lighting

The Solar Street Light is a stand-alone solar light conceived for outdoor residential and municipal lighting like promenades. Equipped with advanced LED and photovoltaic technology, The solar street light provides uniform light distribution ideal for bicycle paths and pavements.

Due to its unique energy management system, the solar street light ensures high performance and reliability in all weather conditions and in the most challenging solar radiance environments with an outstanding unique design.

#### Light Distribution



30m

20m

Illuminance at full operation 36 LEDs / 3,600 lm at full operation path-width: 5m			
Distance (m)	Area (sqm)	Eav (lx)	Emin (lx)
10	80	15	5,3
12	120	11	3,9
15	180	7,9	2,5
17	230	6,2	2,1
20	320	4,6	1,2
22	390	3,9	0,8
25	490	3	0,5

Eav (lx): Average Illuminance  
Emin (lx): Minimum Illuminance

Illuminance in operation depending on local site conditions (average daylight available) and customer-specific lighting times.

Light Distribution: Lengthwise aligned

Light Pot Height: 6,26m 72 Led / 6313 lm



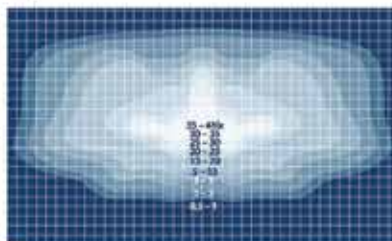
## SOLAR HIGHWAY LIGHT POLE

Outdoor residential and municipal street and highway lighting

The Solar Highway Street Light is a stand-alone solar light conceived for outdoor residential and municipal lighting. Equipped with advanced LED and photovoltaic technology, The solar highway light provides uniform light distribution ideal for street and roadway applications.

Due to its unique energy management system, the solar highway street light ensures high performance and reliability in all weather conditions and in the most challenging solar radiance environments.

### Light Distribution



45m

25m

Illuminance at full operation: 36 LEDs / 3,600 lm at full operation path-width: 5m			
Distance (m)	Area (sqm)	Eav (lx)	Emin (lx)
10	80	15	5.3
12	120	11	3.9
15	180	7.9	2.5
17	230	6.2	2.1
20	320	4.6	1.2
22	380	3.9	0.8
25	490	3	0.5




Eav (lx): Average illuminance  
Emin (lx): Minimum illuminance

Illuminance in operation depending on local site conditions (average daylight available) and customer-specific lighting times.

Light Distribution: Lengthwise aligned

Light Pot Height: 7,65m 144 Led / 12 626 lm



			
<b>SYSTEM</b>			
Installation height	6.25 m	6.80 m	8 m
Light spot height	4.00 m	6.26 m	7.65 m
Diameter of light pole	180 mm (base point)	180 mm	180 mm
Light pole	steel, hot-dip galvanized, paint-coated	steel, hot-dip galvanized, paint-coated	steel, hot-dip galvanized, paint-coated
Light pole colour	RAL 9006 white aluminium (standard) (standard)	RAL 9006 white aluminium (standard) (standard)	RAL 9006 white aluminium (standard) (standard)
Light head colour	NA	RAL 9005 deep black (standard)	RAL 9005 deep black (standard)
Installation	steel plate bolted to concrete base with 4 bolts	steel plate bolted to concrete base with 4 bolts	steel plate bolted to concrete base with 4 bolts
Weight	125 kg <sup>1)</sup>	160 kg <sup>1)</sup>	255 kg <sup>1)</sup>
<b>POWER LED</b>			
Illuminant	42 integrated high-efficiency-LEDs Pixel-Fail-Over-Hopping-System	72 high-efficiency-LEDs Pixel-Fail-Over-Hopping-System	144 high-efficiency-LEDs Pixel-Fail-Over-Hopping-System
Max. power	42 Watt	57 Watt	2 x 57 Watt
Max. luminous flux	4,620 lumen	6313 lumen	12626 lumen
Typ. illuminance	up to 20 lx	up to 30 lx	up to 42 lx
Light distribution	circular	length wise aligned	length wise aligned
Energy conversion efficiency	92 %	92 %	92 %
LED - light temperature	cool-white, 6,500 Kelvin, CRI > 80 (standard) neutral-white, 4,100 Kelvin (optional); warm-white, 3,100 Kelvin (optional)	cool-white, 6,500 Kelvin, CRI > 80 (standard) neutral-white, 4,100 Kelvin (optional); warm-white, 3,100 Kelvin (optional)	cool-white, 6,500 Kelvin, CRI > 80 (standard) neutral-white, 4,100 Kelvin (optional); warm-white, 3,100 Kelvin (optional)
Typ. service life (part load)	> 75.000 hrs / heures	> 75.000 hrs / heures	> 75.000 hrs
Illumination area	typ. 100 - 250 m <sup>2</sup>	typ. 250 - 468 m <sup>2</sup>	typ. 400 - 600 m <sup>2</sup>
<b>POWER TUBE</b>			
Height PV-module	2.20 m	2.20 m	2 x 2.20 m
Diameter PV-module	180 mm	180 mm	180mm
PV-Technology	mono crystalline silicon solar cells	mono crystalline silicon solar cells siliciums	mono crystalline silicon solar cells
Number of PV-cells	64 pcs	64 pcs	128 pcs
Nominal power output	218 Wp	218 Wp	436 Wp
<b>POWER CONTROL</b>			
Programmable microcontroller	remote control	remote control	remote control / télécommande
Dynamic light profile	consumer-specific	consumer-specific	consumer-specific
Motion detector	optional	optional	optional
Capacity of battery	12V/72 Ah pole mounted	12V/72 Ah pole mounted	12V/72 Ah pole mounted
Technology of battery	AMG technology (lead-acid)	AMG technology (lead-acid)	AMG technology (lead-acid)
<b>STANDARDS COMPLIANCE</b>			
Illumination	according to EN13201	according to EN13201	according to EN13201
Degree of protection PV-module	IK06	IK06	IK06
Certification light pole	EN 40-5, EN 40-3-1, ISO 1461 <sup>1)</sup>	EN 40-5, EN 40-3-1, ISO 1461 <sup>1)</sup>	EN 40-5, EN 40-3-1, ISO 1461 <sup>1)</sup>
Certification electronics	IP65	IP65	IP65
EMV	EN 55015, EN 61547	EN 55015, EN 61547	EN 55015, EN 61547
PV-standard	EN 61215 (adapted)	EN 61215 (adapted)	EN 61215 (adapted)
Temperature range	-20°C bis + 55°C (pole-mounted)	-20°C bis + 55°C (pole-mounted)	-20°C bis + 55°C (pole-mounted)
CE-certification	Yes	Yes	Yes

<sup>1)</sup> Variations through automated production and materials used.

Technical details may change due to ongoing development improvements



**FOR MORE INFORMATION PLEASE CONTACT**

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