

# SOLAR LED STREET LIGHTING

## *Kamr XHL-G3*

### Automatic Robotic Solar Panel Cleaning System Wireless Remote Monitoring

#### Multiple Benefits of Silicon CPV Solar Powered Street Lights:

- Automatic Robotic Solar Panel Cleaning System cleans dust from the panel every day.
- Uses free electricity from the sun so environmentally-friendly and pollution-free
- Easily Replaceable Battery bank housed in a strong aluminum removable cartridge
- Lightweight – each unit is less than 25kg
- Easy to install and safe to use
- Computer-controlled EMS
- No costly or complicated pipe-laying or underground wiring required
- No cabling required
- One unit so no separate battery
- Solar panel 25-year service life
- Special chemistry lithium - ion battery designed for greater than 5-year service life in elevated temperatures
- Remote wireless connectivity
- Stylish and integrated design
- Suitable for 10 to 12-meter height poles
- Robust and weather-tolerant



#### **No Power Bills, No Grid Connection GSM or Internet based Remote management**

Our vision is simple – to develop and manufacture advanced Solar LED Street Lighting systems that will greatly reduce the cost of generating clean electricity from the sun's energy.

Silicon CPV's solar powered street lights are the most economic, reliable and versatile means of providing street lighting.

With a high efficiency long-life light source of up to 550,000 hours, the self-contained units are not only lightweight (less than 18kg per unit) but require no special tools or heavy lifting equipment to install. In fact, they literally take just five minutes to install!

Built-in Automatic Robotic cleaning arm wipes the dust off the solar panel every day keeping the Solar panel at optimum efficiency.

The economic advantage of solar lighting is very clear – deploying a solar light requires no timely and often costly overhead or underground electrical wiring. Further, not having to provide additional electricity from the grid for lighting avoids the incredible expense of power plants and electrical distribution equipment.

The self-contained unit simply converts sunlight during the daytime into electricity and stores it into the battery. After sunset, the solar panel will detect a drop in ambient light and the system will automatically turn on the light. The LED light source complete with integrated lens ensures that all light produced is directed along the road exactly where required.

## Silicon CPVs street Lights offer many advantages:

- Solar lighting can save large amounts of money by eliminating trenching, wiring, electricity cost and ensures that there are few or no landscaping issues.
- Compared to traditional grid-tied lighting, the solar LED lights do not require timers and their LED fixtures do not need regular maintenance visits. In more remote places, solar lights are also a way to help prevent theft.
- Solar lights are good for the environment. Using only the limitless clean energy from the sun, they have the benefit of using less material and labour to install, further reducing the carbon footprint.



**Call us today on  
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and speak with one of our  
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Specifications	X4HL-G3	X3HL-G3	X2HL-G3
Maximum Light Output ((Lumens) Phase 1	20,700	17,500	15,500
Total Light Output ((Lumen Hours) @90% DoD	228,600	228,600	171,360
Battery - Type	Lithium - ion		
Battery Capacity (Wh)	1,270	1,270	952
Battery - Service Life	5 Years at 100% DoD and at 45° ambient		
Light Source - Type	High Efficiency LED, 5000K Colour Temperature		
Number of LEDs	320	240	240
Light Head Lifetime	80,000 to LM80 specifications		
LED Efficiency	200 lumens / Watt		
Optical Efficiency	>93%		
Solar Panel (W)	220W	180W	160W
Solar Cells	Very High Efficiency – Proprietary Solar Cells (Greater than 20%)		
Solar Panel - Service Life	25 Years		
Controller	Microprocessor based Energy Management and Wireless Communications		
Wireless Network	Proprietary Wireless Network allows Remote Management and Control of Lights using Internet or GSM. One gateway per 200 lights and all the gateways report to a central control room.		
Light Control	Intelligent Adaptive Light level control based on energy received or a predefined light level option is user selectable		
Light Hours	Programmable trigger levels from “Dusk to Dawn”		
Optics	8 different light profiles available for each light		
Recommended Pole Height	12 m	11 m	10 m
Pole Spacing	5 times Pole height for T2 Optics (IENSA Type II)		
Light level (Lux)	20	20	20
Dimensions (L x W) cm (Provisional)	2200 x 350	2200 x 350	2200 x 350
Weight (Kg) (Provisional)	25kg	25kg	25kg
Operating Temperature	-20°C to +60°C		
Protection Rating	IP66		
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III		