

SOLAR LED STREET LIGHTING

Kamr X-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 6 to 10 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 the 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



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Specifications	XL-G3	X1-G3	X2-G3	X3-G3
Maximum Light Output ((Lumens) Phase 1	12,100	9,500	6,900	4,300
Total Light Output ((Lumen Hours) @90% DoD	117,612	92,268	67,122	41,976
Battery - Type	Lithium - ion			
Battery Capacity (Wh)	594	466	339	212
Battery - Service Life	7 Years at 70% DoD and at 45° ambient			
Light Source - Type	High Efficiency LED, 5000K Colour Temperature			
Number of LEDs	160	128	96	64
Light Head Lifetime	80,000 to LM80 specifications			
LED Efficiency	220 lumens / Watt, Colour Temperature 5000K			
Optical Efficiency	>93%			
Solar Panel (W)	130W	105W	75W	50W
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 100 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	10 m	9 m	8 m	7 m
Pole Spacing	5 times Pole height for T2 Optics (IESNA Type II)			
Average Light level (Lux) with T2 Optics	26	25	24	21
Dimensions (L x W) cm (Provisional)	2250 x 350	1850 x 350	1450 x 350	1050 x 350
Weight (Kg) (Provisional)	25kg	22kg	18kg	14kg
Operating Temperature	-20°C to +60°C			
Protection Rating	IP67			
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III			