

# SOLAR LED STREET LIGHTING

## *Super Nova+ Range*

Wireless Remote Monitoring and Control  
Easy Installation, long Service life, cost effective

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

- Looks like a normal street light with a specially designed light envelope
- Uses free electricity from the sun so environmentally-friendly and pollution-free
- Battery bank charge controller, LED driver, communication interface all in a single removable cartridge
- Lightweight – from 40Kg to 100Kg depending on model
- Easy to install and safe to use
- Computer-controlled EMS
- No costly or complicated pipe-laying or underground wiring required
- No cabling required
- Battery Integrated under the solar Panel.
- Solar panel 25 year service life
- Special chemistry lithium - ion battery designed for 5 year service life in elevated temperatures
- Remote wireless connectivity
- No costly maintenance required
- Stylish and integrated design
- Suitable for 12 to 20 meter height poles
- Robust and weather-tolerant



### 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 over 80,000 hours, the self-contained units are not only lightweight (less than 40kg for Super Nova+ 1) but require no special tools or heavy lifting equipment to install. In fact they literally take just 90 minutes to install!

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 lighting solution offers many advantages:

- Solar lighting can save the owners large amounts of money by eliminating trenching, wiring and electricity costs and also 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 eliminate regular maintenance visits.
- 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.



Specifications	Super Nova 1+	Super Nova 2+	Super Nova 3+	Super Nova 4+
Maximum Light Output ((Lumens) Phase 1	13,800	20,600	27,600	41,200
Total Light Output ((Lumen Hours) @90% DoD	109,836	164,916	219,834	329,670
Battery - Type	Lithium			
Battery Capacity (Wh)	678	1,018	1,357	2,035
Battery - Service Life	7 Years at 70% DoD and at 45° ambient			
Light Source - Type	High Efficiency LED, 4000K Colour Temperature			
LED Power (Maximum)	160W	240W	320W	480W
Light Head Lifetime	80,000 to LM80 specifications			
LED Efficiency	180 lumens / Watt			
Optical Efficiency	>93%			
Solar Panel (W)	170W	260W	340W	520W
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 – 14 m	14 – 16 m	16 – 18 m	18 – 20 m
Pole Spacing	5 times Pole height for T2 Optics (IENSA Type II)			
Light level	18 Lux Average, 35 Lux Maximum, 10 Lux Minimum			
Dimensions (L x W) cm (Provisional)	125 x 97	145 x 97	2 x 125 x 97	2 x 145 x 97
Weight (Kg) (Provisional)	40	60	80	100
Operating Temperature	-20°C to +60°C			
Protection Rating	IP67			
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III			