

# SOLAR LED STREET LIGHTING

## *BADR G2 Range*

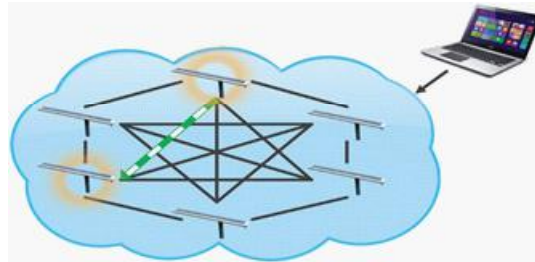
**Corrosion Resistant** Fibreglass filled body  
designed for coastal areas

### 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
- Lightweight – less than 19kg
- 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 5 year service life in elevated temperatures
- Remote wireless connectivity
- No costly maintenance required
- Stylish and integrated design
- Suitable for 7 to 10 meter height poles
- Robust and weather-tolerant
- Traffic accidents and pedestrian injuries decline as visibility increases



### 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.

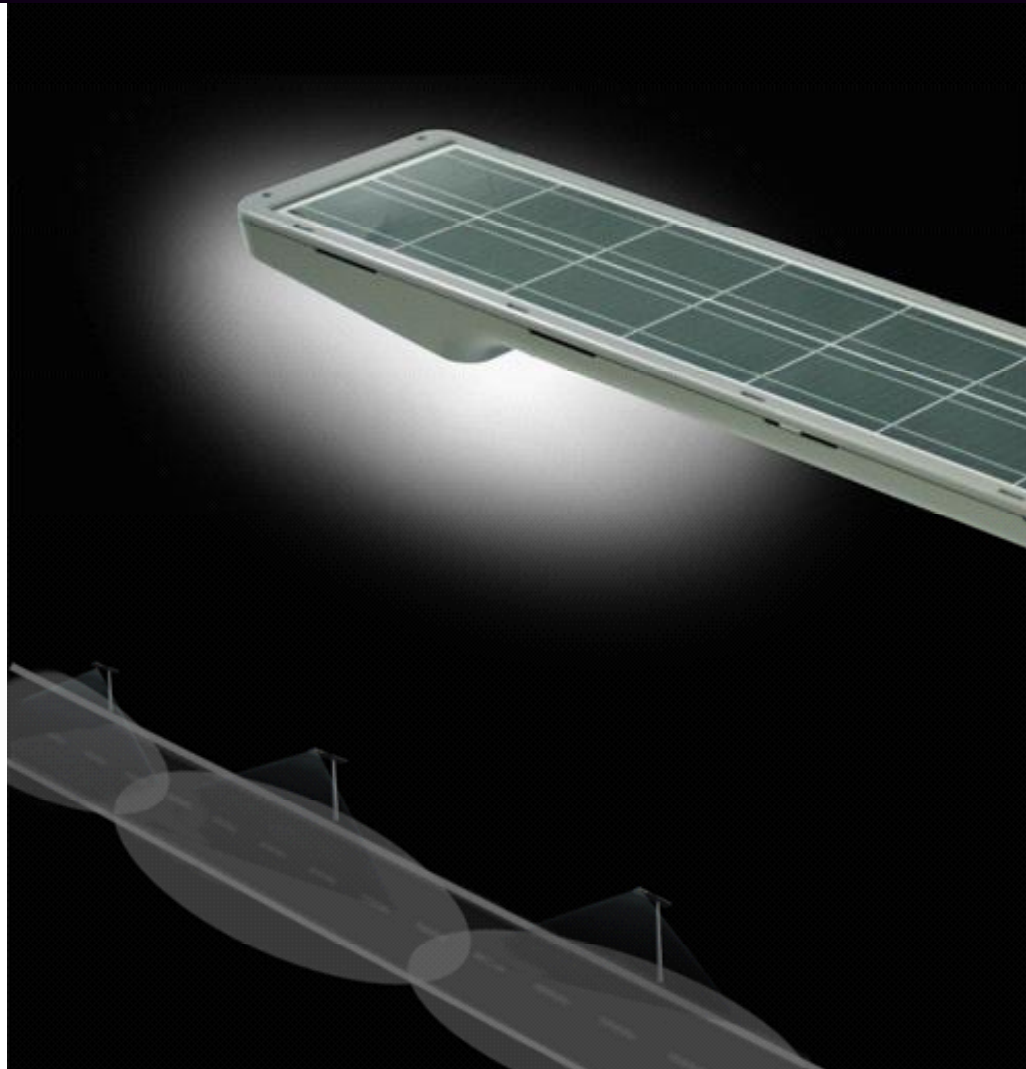
With a high efficiency long-life light source of over 60,000 hours, the self-contained units are not only lightweight (less than 19kg per unit) but require no special tools or heavy lifting equipment to install. In fact they literally take just five minutes to install!

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 Solar street light solution offers Many advantages:

- Corrosion Resistant Rugged Fibreglass filled case designed for Coastal Areas
- 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. 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



Specifications	Badr 1L+G2	Badr1+ G2	Badr2+ G2
Maximum Light Output Phase 1 (Lumens)	7,800	6,500	5,200
Battery - Type	68,760	51,516	41,148
Capacity (Ah)	Lithium		
Battery - Service Life	382	318	254
Light Source - Type	5 Years at 80% DoD and at 45°C ambient		
Number of LEDs	High Efficiency LED, 5000K Colour Temperature		
LED Power (Maximum)	96W	64W	64W
Light Head Lifetime	20 Years to LM80 specification		
LED Efficiency	>93%		
Optical Efficiency	Fibreglass filled Injection Molded ABS+PC UV Resistant		
Main Body	90	70	60
Solar Panel (W)	1445 by 272		
Solar Cells	Very High Efficiency – Proprietary Solar Cells		
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, 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	9 - 10 meters	8 - 9 meters	7 - 8 meters
Pole Spacing	5 times Pole height for T2 Optics (IENSA Type II )		
Light Envelope (m <sup>2</sup> ) for T2 optics	400 (10m Pole)	360 (9m Pole)	320 (8m Pole)
Average Light level	20 Lux		
Maximum Light Level	35 Lux		
Minimum Light Level	10 Lux		
Dimensions (L x W x H) cm (excluding pole)	180 x 23 x 7 (Dimensions exclude pole adaptor)		
Weight (Kg)	18kg	16kg	14kg
Operating Temperature	-20°C TO +60°C		
Protection Rating	IP68		
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III		