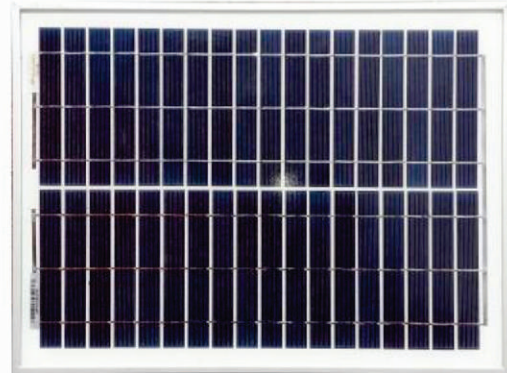


## **ZERO AP4/20**

Introducing a unique solar-powered, 4-light LED system providing 10 continuous hours of lighting and cellphone charging.

- Key components designed and manufactured in South Africa, the **ZERO AP4/20** is a self-contained, maintenance free system housed in a durable casing.
- Local production guarantees after-sales peace of mind and parts availability.
- Easy plug and play installation and no need for expert and costly installations.



The **AP4/20** is designed specifically for informal housing where the installation of electrical infrastructure is not possible, is impractical or is cost prohibitive.

### *Integration of Communities*

In order for a solar program rollout to be successful, consultation with stakeholders and those impacted is paramount. Our approach is to liaise with community leaders and relevant authorities to facilitate, introduce and educate end-users on the merits and correct use of our systems. To date, community opinion has been extremely well received.

**ZERO** will train members of the relevant communities who are selected by community leaders in the following processes of the **AP4/20**:

- Roll out and installation
- Instruction of operation to end-user
- End-user's sign off
- After-sales support

<b>Z E R O AP4/20 package includes</b>	<b>Built in Safety Protection Features</b>
1 x 20W solar panel (25 year life expectancy)	Reverse polarity solar panel with 65mm hail damage rating
1 x 9Amp hour battery (5 hour charge time in full sun - no load)	Short-circuit solar panel protection
4 x 3W LED bulbs at 230 lumens, 120° (55 000 hours rating)	Automatic low voltage cut off to prevent battery damage
4 x 5m insulated cables with fittings and on/off switches	Automated Night time reverse-current leakage protection
1 x AP4/20 controller with 12v cellphone charger (universal)	Internal controller software to minimise sulphating, extending battery life and performance
End User Instruction Manual - with pictorials	Sensing circuitry to prevent overcharging of battery

## Operational Expectancy

Standard four light system provides 10 hours of lighting. Battery lifespan under correct operating conditions, 3 to 5 years.

## System Specifications

Nominal System Voltage: 12V  
Maximum Solar Input Voltage: 22V  
Rated Solar Input: 1080mA  
Maximum Charge Voltage Limit: 18.5V  
Open Circuit Voltage: 22.14V  
Short Circuit Current: 1.16A  
Solar Panel Cable - double insulated cab tire with DC plug rated at 10 amps  
LED Light Cable - double insulated cab tire with DC plug rated at 10 amps  
Leads Conductor Material: Copper  
Battery Operating Range (cycle use): 14.4V - 15V  
Battery Charging Set points: 13.8V - 14.2V  
Regulation Voltage: 14V at 25C  
Float Voltage: 13.5V  
Temperature Compensation -30mV/C to 30mV/C

**Z E R O** solar lighting systems are adaptable to suit customer requirements, offering an array of different battery and solar panel sizes. This enables the addition of extra lights and 12 volt appliances and will also allow for extended daytime use of lights and cellphone charging.

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