

# SOLARAN

Shaping the future of Solar Energy



w.e.f January 2023





# About Halonix

Halonix Technologies Pvt Ltd is amongst India' fastest growing electrical company. It caters to both retail and institutional buyers with its innovative, economical and smart-tech offerings across Lighting, Fans and Smart/IOT Products. The company has been a forerunner in the development of energy-efficient lighting solutions in various segments like PSU's, Government, Railways, Airports, NHAIs, Manufacturing Industries, IT/ITES, Corporates, Hospitality and Healthcare. With the credo of Make in India and Made for India, Halonix's success has been built on its unparalleled ability to develop, validate and deploy solutions that are relevant and suitable for Indian conditions. Because of its relentless key focus on innovation across the product range, the brand is widely accepted by end customers & business influencers like architects & electrical consultants throughout India.

Halonix is one of the few companies in India with a fully accredited NABL self-certified laboratory and state-of-the-art R&D laboratory within its manufacturing plant, allowing its dedicated R&D and design teams to push the envelope and develop cutting-edge products tailor -made for Indian consumers. The company has state-of-the-art manufacturing facilities and has been accredited with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certifications. It is also the first company to set up a pan-India dedicated service network for lighting to cater to the need of retail and institutional segments. Its wide distribution network comprising of over 800 dealers & distributors and 20 depots ensures that its products are made available across the length and breadth of a country.

Spearheading the technological revolution, Halonix is one of the top 5 brands in the lighting industry. Halonix has continuously driven relevant technological innovations such as DJ Speaker bulb, Air Purifier Ionizer bulb, Plug & Play Fire Alarm, Smart Wi-Fi Plug, Motion sensor bulb, multi- wattages in one product solutions, RF wireless based Smart Lighting, Bluetooth based solution, Architectural Lighting, Façade Lighting to its product portfolio with an in-house product design and development team.

Halonix has also launched innovative products in the Fans segment by combining innovation and user-centric design to create greater value for its customers. Some path breaking innovations include Morpheus - India's first retractable blade chandelier fan, Halo - a novel design IOT fan, Cuboid - a low ceiling lighting and fan solution and Smart IOT Fan Kit amongst others.

Halonix has launched a range of wifi security cameras under its sub- brand Halonix Shield, amongst its security camera products is India' first totally wireless security camera with in- built battery that lasts upto 30 days.



Pan-India After Sales Service & Support



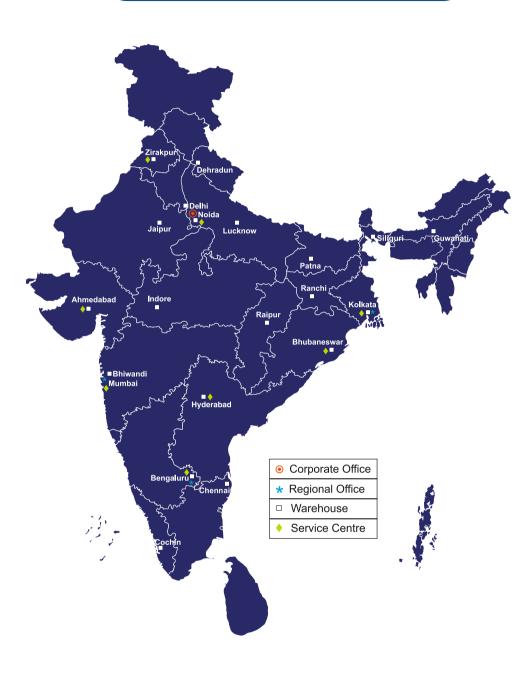
Excellent Performance With Best Quality Leds



NABL Accredited Lab At Manufacturing Plant



## Pan India Presence



# **Our Network**

Corporate Office : Noida

Regional Offices : Bengaluru, Kolkata, Mumbai

Warehouses : (North) Delhi, Dehradun, Jaipur, Lucknow, Noida, Zirakpur

(East) Bhubaneswar, Guwahati, Siliguri, Kolkata, Patna, Ranchi

(South) Bengaluru, Cochin, Chennai, Hyderabad,

(West) Ahmedabad, Bhiwandi, Indore, Raipur,



# HALONIX SOLAR POWER SOLUTION

Most of the energy comes from non-renewable sources. It is not imperative to switch to renewable sources. As solar continues to become a mainstream source of energy, we at Halonix are shaping the future of solar energy by focusing on providing end-to-end solar power solution with the latest technologies in stressing lighting, solar home lighting systems, roof top power plants and solar water pump system.

Customised Solar Solution

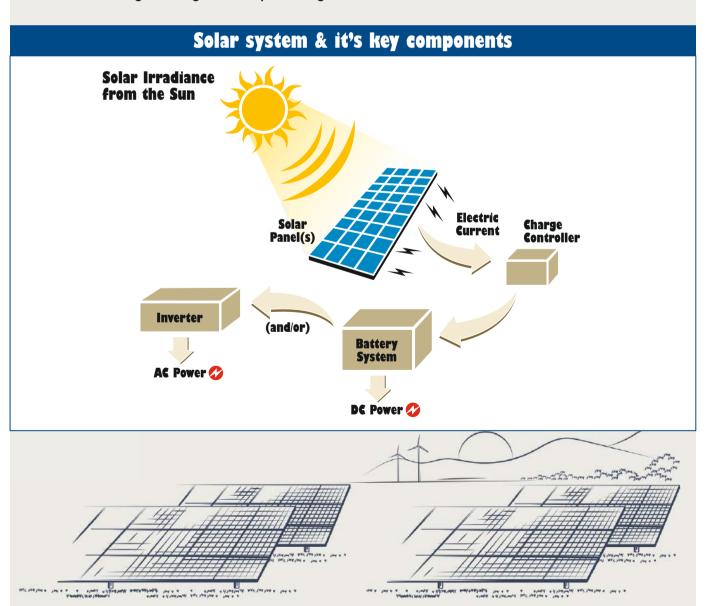
Best-in-class Technology On-site Service Support





# **Our Strength**

- Make in India, Made for India. Energising future with green solar energy since more than decade.
- Halonix has been accredited with ISO 9001, ISO 14001, and OHSAS 18001 certification.
- India's 1st lighting brand to get Bureau of Indian Standards (BIS) certification for our range in LED street lights.
- A highly dedicated R&D team is responsible to innovate new products as well as manage the quality of the products.
- All India service network & a team of qualified service engineers.
- MNRE approved channel partner, offering high quality solar products.
- Dedicated team to provide complete EPC Solar Power Solutions.
- In-house Government NABL accredited testing facility.
- In-house engineering team for providing end to end customised solar solutions.







# All in One Solar Street Light

All-in-one solar LED street light is a modern age one piece street light made of Aluminium extrusion duly powder coated, comprises of high efficiency Monocrystalline PV Panel, Lithium Battery, controller, LEDs, sensor and smart technology integrated altogether within one fitting become ready to install over pole and does not required any internal and external wiring at the time of installation, just install and switch ON to start its functioning. Inbuilt PIR motion sensor operation allow saving of battery capacity and enable product to run for longer duration. Because of ready to install product it's easy to use and maintained.







AIO Series-02A

**AIO Series-09** 

AIO Series-09A





AIO Series-09B

AIO Series-12



#### **TECHNICAL SPECIFICATIONS**

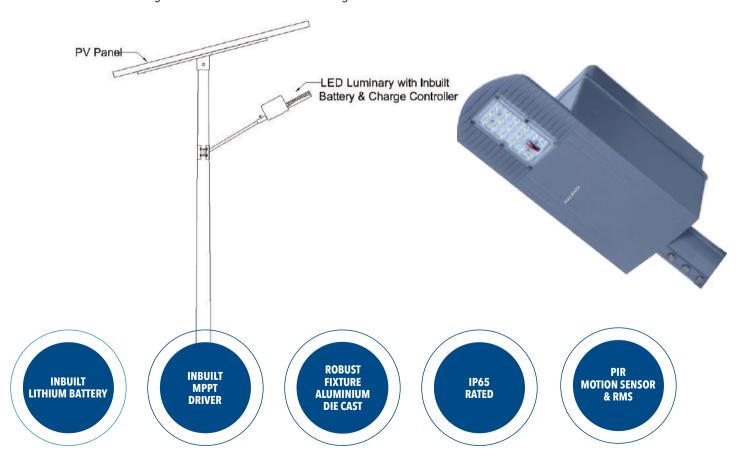
| Sr. No. | Product series<br>Parameters     | AIO Series-02A  | AIO Series-09  | AIO Series-09A  | AIO Series-09B  | AIO Series-12   |
|---------|----------------------------------|---|--|---|---|---|
| 1       | Wattage (W)                      | 12W/20W/24W   | 20W/30W/40W/<br>50W/60W  | 20W,25W,30W,<br>40W   | 12W/15W/20W   | 30W/40W/60W/<br>80W/90W/100/120   |
| 2       | LED Used                         | High brightness high power LEDs, LM80 compliance of high lumen efficacy upto 200 lm/w LED used  |  |   | 135 lm/w  |   |
| 3       | CCT (K)                          |   | For Cool White:-5700-6500K, For Warm White:-2700-3200K, For Neutral White:- 4000-4500K   |   |   |   |
| 4       | CRI                              |   |  | ≥70   |   |   |
| 5       | Optics                           |   |  | PC lenses type-II   |   |   |
| 6       | Lumen efficacy                   | 100 lm/w -120<br>lm/w   | 120 lm/w-150<br>lm/w   | 100 lm/w -120<br>lm/w                                       | 100 lm/w -120<br>lm/w   | 140 lm/w -170<br>lm/w   |
| 7       | No load current                  |   | ≤ 20mA const   | umption at no Load per                                      | charge controller   |   |
| 8       | Type of PV Module                | Higl  | n efficiency Mono/Multi  | Crystalline PV Panel us                                     | sed duly MNRE/BIS app   | proved  |
| 9       | PV Panel Capacity                | 40Wp/50Wp/60<br>Wp  | 40Wp/60Wp/75<br>Wp/100Wp/<br>120Wp   | 40Wp/40Wp/50<br>Wp/50Wp                                     | 25Wp/25Wp/30<br>Wp  | 60W/90W/100W/<br>120W/120W/<br>150W/150W                                  |
| 10      | Battery (Lilon/LifePo4)          | LiFePO4<br>Battery Pack<br>12.8V- 12AH/<br>18AH/24AH  | LiFePO4 Battery<br>Pack 12.8V - 18A<br>H/24AH/30AH/<br>36AH/42AH   | LiFePO4 Battery<br>Pack 12.8V- 12AH/<br>12AH/18AH/24AH      | LiFePO4 Battery<br>Pack 12.8V- 6AH/<br>12AH/12AH  | LiFePO4 Battery<br>Pack 12.8V- 30AH/<br>42AH/42AH/60AH/<br>60AH/66AH/72AH |
| 11      | Ingress Protection Dimming/PIR   | IP65  |  | IP65 with Potted<br>Controller                              |   |   |
| 12      | Motion Sensor/SOC                | Auto inbuilt programmable dimming based on PIR Motion sensor or timer based   |  | Inbuilt Auto PIR<br>Motion sensor &<br>SOC based<br>dimming |   |   |
| 13      | HYBRID-230V AC                   | Not Available   | 230V AC  | Hybrid option available                                     | on request  |   |
| 14      | Indications                      | Green Blinki  | Green Blinking- Battery Charging, Green Stable- Battery fully charged,<br>Red- Battery Low   |   | Blue-Power ON,<br>Grenn Blinking-<br>Battery Charging,<br>Green Stable<br>-Battery Fully<br>Charged, Red-<br>Battery Low,<br>Yellow-Hybrid ON |   |
| 15      | Smart Control<br>System          | Not Available   | Bluetooth based<br>Monitoring, GPRS<br>SIM based control &<br>Monitoring,<br>Wi-fi based control<br>& monitoring<br>available on request | Monitorin   | th based<br>g available<br>equest   | Bluetooth based<br>control & Monitoring<br>available on request           |
| 16      | Dusk to Dawn                     |   | Inbui  | It – Dusk to Dawn auto                                      | ON/OFF  |   |
| 17      | Driver/ Controller<br>Efficiency | ≥90%  |  |   |   |   |
| 18      | Charge Controller Type           | PWM Type MPPT Type  |  |   |   |   |
| 19      | Protection                       | Over Charge , Deep Discharge , Reverse Polarity , Over load, Temperature Compensation, No Load, Short Circuit and other as applicable |  |   |   |   |

Customization in specification can be done on specific requirements.



# Semi-Integrated Solar Street Light

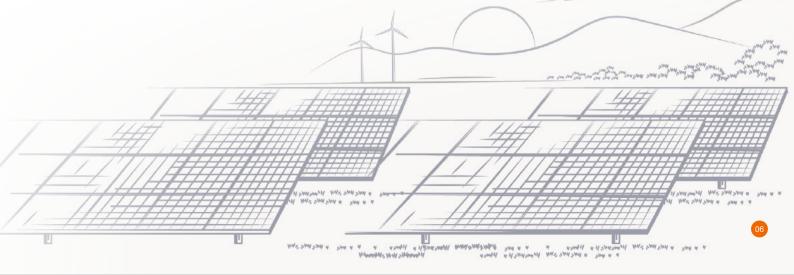
Semi-Integrated solar LED Street light is another way of Solar street lighting solution which comprises LED luminaire as one part made of aluminium die-cast duly powder coated with inbuilt Lithium battery, controller & optional smart sensing technology, another second part is Solar PV Module which installed over top of the pole with PV Frame and can be fix out in any desire direction. Both PV panel & LED luminaire need to be interconnected using external wire to enable its functioning.

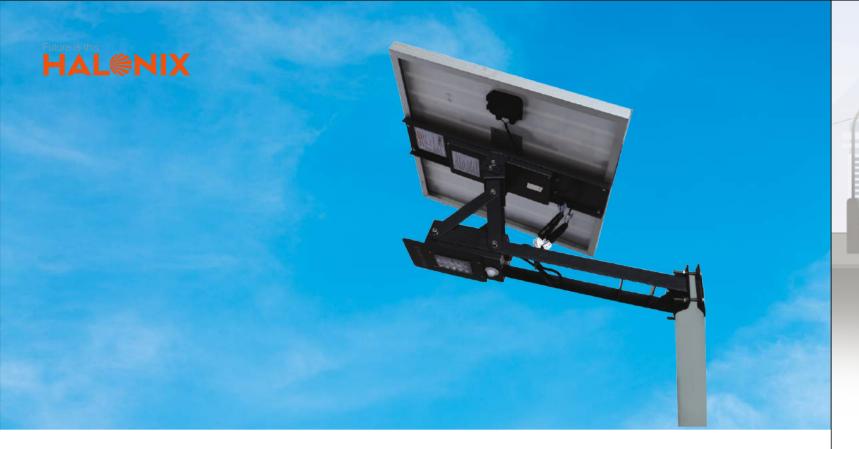




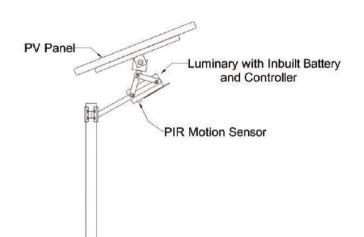
## **TECHNICAL SPECIFICATIONS**

| Wattage (W)   | PARAMETER                     | SPECIFICATIONS   |
|---|-------------------------------|--|
| efficacy 135 lm/w upto 150 lm/w LED used  CCT (K)  For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For Neutral White:- 4000-4500K  CRI  ⊃70  Optics  Direct PC lenses type-II  Lumen Efficacy  100 lm/w-125 lm/w  No Load Current  Type of PV Module  High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS approved  PV Panel Capacity  40Wp/50Wp/60Wp/60Wp/75Wp  Battery (Li-lon/LiFePo4)  LiFePo4 Battery Pack 12.8V  12AH/18AH/24AH/30AH  Ingress Protection  IP65  Dimming/PIR Motion  Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load, | Wattage (W)                   | 12W/20W/24W/30W/40W  |
| CCT (K)  For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For Neutral White:- 4000-4500K  CRI  ⊃70  Optics  Direct PC lenses type-II  Lumen Efficacy  100 Im/w-125 Im/w  No Load Current  Type of PV Module  High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS approved  PV Panel Capacity  40Wp/50Wp/60Wp/60Wp/75Wp  Battery (Li-Ion/LiFePo4)  LiFePo4 Battery Pack 12.8V  12AH/18AH/24AH/30AH  Ingress Protection  Dimming/PIR Motion  Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,                                     | LED Used                      | High brightness high power LEDs, LM80 compliance of high lumen       |
| Neutral White:- 4000-4500K  CRI  ○ptics  Direct PC lenses type-II  Lumen Efficacy  100 lm/w-125 lm/w  No Load Current  Type of PV Module  High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS approved  PV Panel Capacity  40Wp/50Wp/60Wp/60Wp/75Wp  Battery (Li-lon/LiFePo4)  LiFePo4 Battery Pack 12.8V 12AH/18AH/24AH/30AH  Ingress Protection  IP65  Dimming/PIR Motion  Auto inbuilt programmable dimming based on PIR motion sensor or timer based as required  HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency ≥90%  Charge Controller Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   |                               | efficacy 135 lm/w upto 150 lm/w LED used                             |
| CRI ≥70  Optics Direct PC lenses type-II  Lumen Efficacy 100 lm/w-125 lm/w  No Load Current <20mA consumption at no Load per charge controller  Type of PV Module High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS approved  PV Panel Capacity 40Wp/50Wp/60Wp/75Wp  Battery (Li-lon/LiFePo4) LiFePo4 Battery Pack 12.8V 12AH/18AH/24AH/30AH  Ingress Protection IP65  Dimming/PIR Motion Auto inbuilt programmable dimming based on PIR motion sensor or timer based as required  HYBRID-230V AC HYBRID-230V AC Operation available on request  Indications Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency ≥90%  Charge Controller Type MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,                                      | CCT (K)                       | For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For        |
| Optics       Direct PC lenses type-II         Lumen Efficacy       100 lm/w-125 lm/w         No Load Current       <20mA consumption at no Load per charge controller   |                               | Neutral White:- 4000-4500K   |
| Lumen Efficacy  No Load Current  Type of PV Module  PV Panel Capacity  Battery (Li-Ion/LiFePo4)  LiFePo4 Battery Pack 12.8V  12AH/18AH/24AH/30AH  Ingress Protection  Dimming/PIR Motion Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  Indications  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Driver/ Controller Efficiency  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | CRI                           | ≥70  |
| No Load Current   <20mA consumption at no Load per charge controller  | Optics                        | Direct PC lenses type-II   |
| Type of PV Module  High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS approved  PV Panel Capacity  40Wp/50Wp/60Wp/60Wp/75Wp  Battery (Li-lon/LiFePo4)  LiFePo4 Battery Pack 12.8V 12AH/18AH/24AH/30AH  Ingress Protection  IP65  Dimming/PIR Motion Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC  HYBRID-230V AC  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Lumen Efficacy                | 100 lm/w-125 lm/w  |
| approved  PV Panel Capacity  40Wp/50Wp/60Wp/60Wp/75Wp  Battery (Li-lon/LiFePo4)  LiFePo4 Battery Pack 12.8V 12AH/18AH/24AH/30AH  Ingress Protection  IP65  Dimming/PIR Motion Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | No Load Current               | <20mA consumption at no Load per charge controller                   |
| PV Panel Capacity  Battery (Li-Ion/LiFePo4)  LiFePo4 Battery Pack 12.8V  12AH/18AH/24AH/30AH  Ingress Protection  Dimming/PIR Motion  Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   | Type of PV Module             | High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS   |
| Battery (Li-Ion/LiFePo4)  LiFePo4 Battery Pack 12.8V  12AH/18AH/24AH/30AH  Ingress Protection  IP65  Dimming/PIR Motion  Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   |                               | approved   |
| Ingress Protection  IP65  Dimming/PIR Motion Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   | PV Panel Capacity             | 40Wp/50Wp/60Wp/60Wp/75Wp   |
| Ingress Protection       IP65         Dimming/PIR Motion       Auto inbuilt programmable dimming based on PIR motion sensor or timer based as required         HYBRID-230V AC       HYBRID-230V AC Operation available on request         Indications       Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low         Smart Control System       Bluetooth/GPRS SIM based control & Monitoring (available on request)         Dusk to Dawn       Inbuilt-Dusk to Dawn auto ON/OFF         Driver/ Controller Efficiency       ≥90%         Charge Controller Type       MPPT Type         Over Charge , Deep Discharge , Reverse Polarity , Over load,   | Battery (Li-Ion/LiFePo4)      | LiFePo4 Battery Pack 12.8V   |
| Dimming/PIR Motion  Auto inbuilt programmable dimming based on PIR motion sensor or timer based as required  HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   |                               | 12AH/18AH/24AH/24AH/30AH   |
| Sensor/SOC  HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Ingress Protection            | IP65   |
| HYBRID-230V AC  HYBRID-230V AC Operation available on request  Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Dimming/PIR Motion            | Auto inbuilt programmable dimming based on PIR motion sensor or      |
| Indications  Green Blinking Battery Charging, Green Stable- Battery Fully Charged Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   | Sensor/SOC                    | timer based as required  |
| Red-Battery Low  Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   | HYBRID-230V AC                | HYBRID-230V AC Operation available on request                        |
| Smart Control System  Bluetooth/GPRS SIM based control & Monitoring (available on request)  Dusk to Dawn  Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency  ≥90%  Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Indications                   | Green Blinking Battery Charging, Green Stable- Battery Fully Charged |
| request)  Dusk to Dawn Inbuilt-Dusk to Dawn auto ON/OFF  Driver/ Controller Efficiency ≥90% Charge Controller Type MPPT Type Over Charge , Deep Discharge , Reverse Polarity , Over load,   |                               | Red-Battery Low  |
| Dusk to Dawn       Inbuilt-Dusk to Dawn auto ON/OFF         Driver/ Controller Efficiency       ≥90%         Charge Controller Type       MPPT Type         Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Smart Control System          | Bluetooth/GPRS SIM based control & Monitoring (available on          |
| Driver/ Controller Efficiency ≥90%  Charge Controller Type MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,  |                               | request)   |
| Charge Controller Type  MPPT Type  Over Charge , Deep Discharge , Reverse Polarity , Over load,   | Dusk to Dawn                  | Inbuilt-Dusk to Dawn auto ON/OFF                                     |
| Over Charge , Deep Discharge , Reverse Polarity , Over load,  | Driver/ Controller Efficiency | ≥90%   |
|   | Charge Controller Type        | MPPT Type  |
| Protection Temperature Compensation, No Load, Short Circuit and other as  |                               | Over Charge , Deep Discharge , Reverse Polarity , Over load,         |
|   | Protection                    | Temperature Compensation, No Load, Short Circuit and other as        |
| applicable  |                               | applicable   |





# **Integrated Solar Street Light with PV Rotation**



Integrated Solar LED Street light is another form of All-in-one solar street light ready to install directly over pole, only having PV module rotation features in desire direction irrespective of LED Luminaire direction to get maximum solar irradiation over PV Panel. This street light also come out with all features as AIO solar light and easy to maintenance.







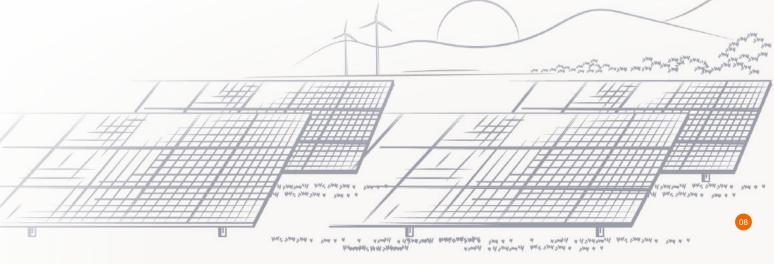




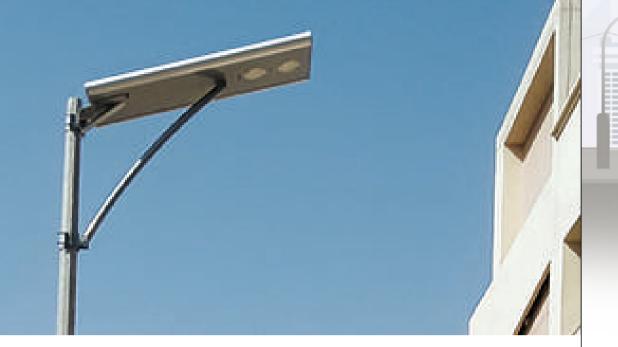


#### **TECHNICAL SPECIFICATIONS**

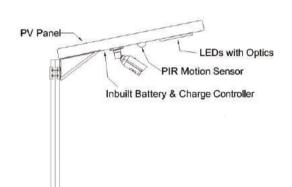
| PARAMETER                     | SPECIFICATIONS   |  |  |
|-------------------------------|--|--|--|
| Wattage (W)                   | 12W/20W/24W/25W/30W/40W/50W/60W                                      |  |  |
| LED Used                      | High brightness high power LEDs, LM80 compliance of high lumen       |  |  |
|                               | efficacy 135 lm/w upto 150 lm/w LED used                             |  |  |
| CCT (K)                       | For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For        |  |  |
|                               | Neutral White:- 4000-4500K   |  |  |
| CRI                           | ≥70  |  |  |
| Optics                        | Direct PC lenses type-II   |  |  |
| Lumen Efficacy                | ≥120 lm/w-140 lm/w   |  |  |
| No Load Current               | <20mA consumption at no Load per charge controller                   |  |  |
| Type of PV Module             | High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS   |  |  |
|                               | approved   |  |  |
| PV Panel Capacity             | 40Wp/ 50Wp/ 50Wp/ 60Wp/ 60Wp/ 75Wp/ 100Wp                            |  |  |
| Battery (Li-lon/LiFePo4)      | LiFePo4 Battery Pack 12.8V   |  |  |
|                               | 12AH/ 18AH/ 24AH/ 24AH/ 30AH/ 36AH/ 36AH/ 42AH                       |  |  |
| Ingress Protection            | IP65   |  |  |
| Dimming/PIR Motion Sensor/    | Auto inbuilt programmable dimming based on PIR motion sensor or      |  |  |
| SOC                           | time based as required   |  |  |
| HYBRID-230V AC                | HYBRID-230V AC Operation available on request                        |  |  |
| Indications                   | Green Blinking Battery Charging, Green Stable- Battery Fully Charged |  |  |
|                               | Red-Battery Low  |  |  |
| Smart Control System          | Bluetooth based Monitoring & control (available on request)          |  |  |
| Dusk to Dawn                  | Inbuilt-Dusk to Dawn auto ON/OFF                                     |  |  |
| Driver/ Controller Efficiency | ≥90%   |  |  |
| Charge Controller Type        | MPPT Type  |  |  |
| Protection                    | Over Charge , Deep Discharge , Reverse Polarity , Over load,         |  |  |
|                               | Temperature Compensation, No Load, Short Circuit and other as        |  |  |
|                               | applicable   |  |  |
|                               |  |  |  |







# All-in-One Solar Street Light with Camera



All-in-one solar LED street light with Camera is a stand-alone system which illuminate area at the same time vigilance entire area with 24hours Camera operation operated over GPRS SIM. Camera integrated with fitting externally and powered up with inbuilt battery with IP65 connector having communication provision based on GPRS and LAN connectivity. This Camera is duly IP65 bullet type with inbuilt speaker & Microphone features. This AIO with Camera also comes with Hybrid 230V AC operation Modern designs use wireless technology and fuzzy control mechanism under smart solar light solution that enable operator to easy understand, operate and remotely control and monitoring of all measurable parameters at individual light level. The street lights using this technology can operate as a network with each light having the capability of performing the turning on and off of the network along with many more features that enable human operator to do as required.

















#### **TECHNICAL SPECIFICATIONS**

| PARAMETER                     | SPECIFICATIONS   |  |  |
|-------------------------------|--|--|--|
| Wattage (W)                   | 24W30W/40W/60W   |  |  |
| LED Used                      | High brightness high power LEDs, LM80 compliance of high lumen       |  |  |
|                               | efficacy 135 lm/w upto 150 lm/w LED used                             |  |  |
| CCT (K)                       | For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For        |  |  |
|                               | Neutral White:- 4000-4500K   |  |  |
| CRI                           | ≥70  |  |  |
| Optics                        | Direct PC lenses type-II   |  |  |
| Lumen Efficacy                | ≥120 lm/w  |  |  |
| No Load Current               | < 20mA consumption at no Load per charge controller                  |  |  |
| Type of PV Module             | High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS   |  |  |
|                               | approved   |  |  |
| PV Panel Capacity             | 80Wp/100Wp/120Wp/165Wp   |  |  |
| Battery (Li-Ion/LiFePo4)      | LiFePo4 Battery Pack 12.8V   |  |  |
|                               | 36AH/42AH/54AH/72AH  |  |  |
| Ingress Protection            | IP65   |  |  |
| Dimming/PIR Motion Sensor/    | Auto inbuilt programmable dimming based on PIR motion sensor or      |  |  |
| SOC                           | time based as required   |  |  |
| HYBRID-230V AC                | HYBRID-230V AC Operation available on request                        |  |  |
| Indications                   | Green Blinking Battery Charging, Green Stable- Battery Fully Charged |  |  |
|                               | Red-Battery Low  |  |  |
| Smart Control System          | Bluetooth based Monitoring & control (available on request)          |  |  |
| Dusk to Dawn                  | Inbuilt-Dusk to Dawn auto ON/OFF                                     |  |  |
| Driver/ Controller Efficiency | ≥90%   |  |  |
| Charge Controller Type        | MPPT Type  |  |  |
| Camera Type                   | Remote Monitoring Smart IR 4G 3MP Bullet IP66 Camera <2.5W in        |  |  |
|                               | night (SIM not included)   |  |  |
| Mic & Speaker within Camera   | Available on Request   |  |  |
| Light Mode                    | Full Colour/Infrared/Intelligent, Infrared Distance > 20 Meters      |  |  |
| Storage                       | 64 GB SD Card Inbuilt Expandable up to 128GB (motion based           |  |  |
|                               | storage suitable to store upto 10-15 days Recording than auto delete |  |  |
|                               | hour wise)   |  |  |
| Resolution S/N Ratio          | 2304x1296, > 39.1dB  |  |  |

Customization in specification can be done on specific requirements.

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# Stand-Alone Solar Street Light

Stand-alone solar LED Street light is conventional solar street lighting solution which comprises of Pole, LED Luminaire, PV Panel, Battery box, Charge controller, PV Mounting frame and wires for interconnection of all these components to start enabling of its working. Modern designs use wireless technology and fuzzy control mechanism under smart solar light solution that enable operator to easy understand, operate and remotely control and monitoring of all measurable parameters at individual light level. The street lights using this technology can operate as a network with each light having the capability of performing the turning on and off of the network along with many more features that enable human operator to do as required.







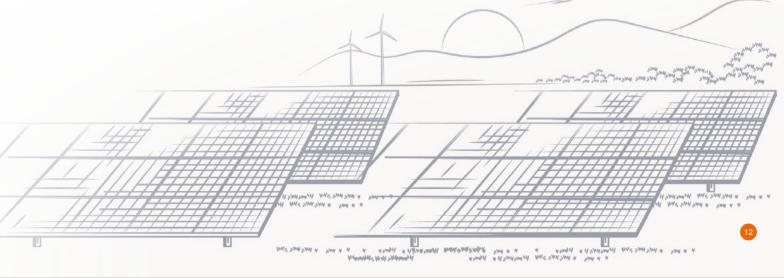






#### TECHNICAL SPECIFICATIONS

| PARAMETER                     | SPECIFICATIONS   |  |  |
|-------------------------------|--|--|--|
| Wattage (W)                   | 12W/20W/24W/30W/40W/45W/50W/60W/2x45W                                |  |  |
| LED Used                      | High brightness high power LEDs, LM80 compliance of high lumen       |  |  |
|                               | efficacy 135 lm/w upto 150 lm/w LED used                             |  |  |
| CCT (K)                       | For Cool White:- 5700-6500K, For Warm White:-2700- 3200K, For        |  |  |
|                               | Neutral White:- 4000-4500K   |  |  |
| CRI                           | ≥70  |  |  |
| Optics                        | Direct PC lenses type-II   |  |  |
| Lumen Efficacy                | ≥100 lm/w to 120 lm/w  |  |  |
| No Load Current               | <20mA consumption at no Load per charge controller                   |  |  |
| Type of PV Module             | High Efficiency Mono/Multi Crystalline PV Panel used duly MNRE/BIS   |  |  |
|                               | approved   |  |  |
| PV Panel Capacity             | 40Wp/50Wp/50Wp/60Wp/80Wp/100Wp/100Wp/120Wp/175Wp                     |  |  |
| Battery Type                  | Low Maintenance LED Acid LMA/ Life Po4                               |  |  |
| Ingress Protection            | IP65/IP66  |  |  |
| Dimming/PIR Motion Sensor     | Optional Inbuilt timer based or PIR motion sensor based Dimming      |  |  |
| HYBRID-230V AC                | HYBRID-230V AC Operation available on request                        |  |  |
| Indications                   | Green Blinking Battery Charging, Green Stable- Battery Fully Charged |  |  |
|                               | Red-Battery Low  |  |  |
| Smart Control System          | Bluetooth based Monitoring & GPRS SIM based remote control &         |  |  |
|                               | Monitoring (available on request)                                    |  |  |
| Dusk to Dawn                  | Inbuilt-Dusk to Dawn auto ON/OFF                                     |  |  |
| Driver/ Controller Efficiency | ≥90%   |  |  |
| Charge Controller Type        | MPPT Type  |  |  |
| Protection                    | Over Charge , Deep Discharge , Reverse Polarity , Over load,         |  |  |
|                               | Temperature Compensation, No Load, Short Circuit and other as        |  |  |
|                               | applicable   |  |  |
|                               |  |  |  |
|                               |  |  |  |





# Solar Post - Top Pole

Integrated solar post top lantern equipped with Lithium Ferro Phosphate battery, vertically mounted mono-crystalline solar panel. MPPT charger and extruded aluminium construction for sturdiness and long life. Choice of street light and post top optics and pole height of 4 & 6 meters. Charger and battery accommodated inside the pole and accessible through service hatch for ease of maintenance. Vertically mounted panels on all four sides to catch sunlight throughout the day.

#### Benefits

- Brings light to areas without access to electric grid.
- Elegant design.
- Preserves landscape as no trenching for cabling required.
- Saves energy.
- Environment friendly.

#### Features

- Replaceable IP-66 Lithium Ferro Phosphate battery for long life and hassle free operations.
- MPPT charge controller for maximum efficiency.
- Sturdy aluminium alloy construction for sturdiness and long life.
- Factory set dimming profile for run time maximization.

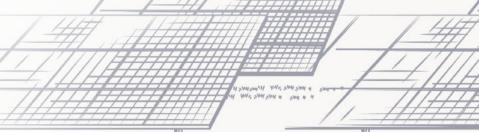






#### TECHNICAL SPECIFICATIONS

| PARAMETER                     | SPECIFICATIONS   |
|-------------------------------|--|
| Wattage (W)                   | 15W/20W/30W  |
| LED Used                      | High brightness high power LEDs, LM80 compliance of high lumen efficacy 135 lm/w upto 150 lm/w LED used. |
| Luminaire Housing             | Aluminium diecast duly powder coated with plug in and out type fitting                                   |
| CCT (K)                       | For Cool White:-5700-6500K, For Warm White:-2700-3200K, For Neutral White:-4000-4500K                    |
| CRI                           | ≥70  |
| Optics                        | Diffuser for uniform 360° light distribution   |
| Lumen Efficacy                | ≥100 lm/w to 120 lm/w  |
| No Load Current               | ≤ 20mA consumption at no Load per charge controller  |
| Type of PV Module             | High efficiency Mono Crystalline PV Panel used duly MNRE/BIS approved                                    |
| PV Panel Capacity             | 90Wp/180Wp/180Wp   |
| Battery (Li-lon/LiFePo4)      | Integrated LiFePO4 Battery Pack 12.8V 42AH/42AH/60AH   |
| Ingress Protection            | IP66   |
| Dimming                       | Auto inbuilt pre-programmable timer based dimming  |
| HYBRID-230V AC                | Hybrid 230V AC operation available on request  |
| Indications                   | Green Blinking- Battery Charging, Green Stable- Battery fully charged, Red- Battery Low                  |
| Smart Control system          | Bluetooth based monitoring & control (available on request)  |
| Dusk to Dawn                  | Inbuilt – Dusk to Dawn auto ON/OFF   |
| Driver/ Controller Efficiency | ≥90%   |
| Charge Controller Type        | MPPT Type  |
| Pole Type                     | Total pole length 4/6 meter made of Aluminium Extrusion UV Resistance powder                             |
|                               | coated – PV Panel placement arrangement 2 meter from top, base plate Aprx.                               |
|                               | 250x250x12MM M20X700MM Foundation Nuts & bolts   |
| Pole Length                   | 4Meter/4 Meter/ 4-6 meter  |
| Protection                    | Over Charge , Deep Discharge , Reverse Polarity , Over load, Temperature                                 |
|                               | Compensation, No Load, Short Circuit and other as applicable   |







# Solar High - Mast & Solar Flood Lighting Solution

Solar High-mast & Solar Flood lighting product is suitable for Octagonal pole height 7 to 9 meter with 4 to 6 nos. Light per pole/Mast to be installed at major junction to illuminate surrounding area.

#### **SOLAR HIGH-MASTLIGHT**

#### All-in-one Solar High-mast

Solar High-mast light can be either in form of All-in-one product or stand –alone product type. All-in-one solar high-mast basically contain mounting structure along with all-in-one solar led street light suitable to be installed over mounting structure to avoid overlapping and ensure smooth working.

#### Semi-Integrated Solar High-mast

Semi-Integrated solar high-mast in similar to stand-alone solar led street light but it also contain specific structure along with semi-integrated solar led street light with PV Panels.

#### Stand-alone Solar High-mast

Stand-alone solar high-mast in similar to stand-alone solar led street light with all interdependent components like Battery, PV Panel, Luminaire, PV Panel, wires and charge controller.

#### Customized product specifications can be provided as per project requirements.







#### Solar Traffic Blinker

Solar traffic lights are signalling devices powered by solar panels positioned at road intersections, pedestrian crossing and other locations to control the flows of traffic. They assign the right of way to road users by the use of lights in standard colors (red - amber/yellow - green), using a universal colour.







#### **TECHNICAL SPECIFICATIONS**

| PARAMETER                     | SPECIFICATIONS   |
|-------------------------------|--|
| Dia of blinker                | 200mm(8 inch)/300mm(12 inch)   |
| Color                         | Red/Amber/Green  |
| LED Used                      | 5 mm water clear viewing angle 24 Degree-RED-623 to 625 wavelength, AMBER/YELLOW-602 to 604 wavelength, GREEN (BLUISH)-498 to 502 wavelength |
| Luminaire Housing             | Polycarbonate (Suitable for extreme Weather Condition) with inbuilt Battery  |
| Gasket                        | Yes, for Waterproof Sealing (Between Lens & Body)  |
| LED Quantity/Wattage          | 96-8 Watts / 176-12 Watts  |
| Optics                        | UV Stabilized, Molded, Water Clear Polycarbonate   |
| Flashes Frequency             | 30-40 flashes / Minutes  |
| No Load Current               | ≤ 20mA consumption at no Load per charge controller  |
| Type of PV Module             | High efficiency Mono Crystalline PV Panel used duly MNRE/BIS approved  |
| PV Panel Capacity             | 90Wp/180Wp/180Wp   |
| Battery (Li-Ion/LiFePo4)      | LiFePO4 Battery Pack 12.8V 6AH   |
| Ingress Protection            | IP65   |
| Visibility Range              | Visibility up to 300-500-meters  |
| Operation                     | 24 hours   |
| Mounting Clamp                | For Mounting traffic single and solar panel  |
| Smart Control system          | NA   |
| Dusk to Dawn                  | NA/ on request available   |
| Driver/ Controller Efficiency | ≥90%   |
| Pole Type                     | Suitable for 3" pole dia 3-4 meter pole length   |
| Protection                    | Over Charge , Deep Discharge , Reverse Polarity , Over load, No Load, Sh Circuit and other as applicable                                     |

Customization in specification can be done on specific requirements.



# **Solar Home Lighting System**

Solar Home lighting system is stand-alone system for rural & Urban area to lit-up the home. This system consist of LED Lamps & Fans along with required wires, Battery, Battery Box, PV Panel, PV Panel frame, charge controller and all other accessories to enable fully functioning of home lighting system.

This is user friendly, easy to use and easy to maintenance.



#### **TECHNICAL SPECIFICATIONS**

| Product series Parameters        | Solar Home Lighting System  |                                    |  |  |
|----------------------------------|---|------------------------------------|--|--|
| Туре                             | Home Lighting System-1  | Home Lighting System-2             | Home Lighting System-3                                 |  |
| System Configuration             | 2 nos. X7W DC Bulb, 2 nos.<br>X5W DC Bulb, 1 nos. X3W   | 2Nos.X4W Bulb                      | 2Nos.X4W Bulb,<br>1 Nos.X7W Bulb,<br>1Nos. X15w DC Fan |  |
| LED Used                         | High brightness LEDs, LM80 co   | ompliance                          |  |  |
| CCT (K)                          | For Cool White:-5700-6500K, F<br>Neutral White:- 4000-4500K   | or Warm White:-2700-3200K,         | For  |  |
| CRI                              | >70   |                                    |  |  |
| Optics                           | Diffuser for uniform light distribu   | ution                              |  |  |
| Lumen Efficacy                   | ≥100 lm/w   |                                    |  |  |
| No Load Current                  | ≤ 20mA consumption at no Load per charge controller   |                                    |  |  |
| Type of PV Module                | Multi-crystalline PV Panel  |                                    |  |  |
| PV Panel Capacity                | 50Wp  | 40Wp                               | 100Wp  |  |
| Battery (Li-Ion/LiFePo4)         | LMLA Battery 12V 40AH   | LiFePO4 Battery<br>Pack 12.8V 12AH | LiFePO4 Battery<br>Pack 12.8V 30AH                     |  |
| Ingress Protection               | For Indoor use only   |                                    |  |  |
| Dimming/PIR Motion<br>Sensor/SOC | NA .  |                                    |  |  |
| HYBRID-230V AC                   | Hybrid 230V AC operation available on request   |                                    |  |  |
| Indications                      | Green Blininking- Battery Charging, Green Stable- Battery fully charged, Red- Battery Low                   |                                    |  |  |
| Smart Control system             | Bluetooth based monitoring & control available on request   |                                    |  |  |
| Dusk to Dawn                     | Inbuilt - Dust to Dawn auto ON/OFF or switch based ON/OFF   |                                    |  |  |
| Driver/ Controller efficiency    | ≥90%  |                                    |  |  |
| Charge Controller Type           | MPPT Type   |                                    |  |  |
| Protection                       | Over Charge , Deep Discharge , Reverse Polarity , Over load, No Load, Short Circuit and other as applicable |                                    |  |  |

Customization in specification can be done on specific requirements.



#### **Solar Lantern Solution**

Halonix's Solar LED Lantern is a best suited portable eco-friendly lighting solution for indoor or outdoor lighting. Solar Lantern is a portable lighting device consisting of a PV module, battery, lamp and electronics. Battery, lamp and electronics are placed in a suitable housing made of durable ABS, plastic or fiber.

#### **KEY FEATURES**

- Safe, Efficient and Eco Friendly
- Uniform 360 Degree light Coverage
- Aesthetically designed portable light
- Mobile charging facility
- A/C mains and Solar Charging options
- Automatic dusk to dawn off
- Safety features like Over Charge, deep discharge, short ckt Protection.
- Custom model also available as per demand.



#### **TECHNICAL SPECIFICATIONS**

| PARAMETER                    | SPECIFICATIONS  |
|------------------------------|---|
| Wattage (W)                  | 2W/4W   |
| LED Used                     | Mid/High power SMD High Brightness LEDs, LM80 Compliance  |
| CCT (K)                      | 5700 to 6500  |
| CRI                          | >70   |
| No Load Current              | < 1mA consumption per charge controller   |
| PV Module                    | Mono /Poly Crystalline MNRE approved  |
| Battery                      | Li-Ion/ LIFEPO4/ SMF  |
| Light Output                 | Multiple Light levels - 100% and 60%  |
| Dusk to Dawn                 | Inbuilt – Dusk to Dawn auto ON/OFF  |
| Duty Cycle                   | 4 Hours a day (at Full brightness level), under average daily insolation of 5.5 kWh/sq.m. on a horizontal surface             |
| HYBRID-230V AC               | Available   |
| Indications                  | Battery Low, Battery Charging, Battery Fully Charge   |
| Facility for Mobile Charging | USB Port for Mobile charging. In Case of mobile charging, the duty cycle of light gets reduced.                               |
| Protection                   | Over-charge, Short- circuit, No Load, deep discharge ,battery reverse Polarity, reverse flow of current through the PV Module |





# Solar SPV Based Garden Bollard & Gate Lighting Solution

Halonix Solar Garden Bollard & Gate lighting Are standalone solution ready to install in garden/Park Of boundary wall to illuminate the area with solar power.

this is ready to used IP65 product with uniform lighting distribution and customized as per client requirement.



#### **TECHNICAL SPECIFICATIONS**

| Product series<br>Parameters | Solar Garden Bollard &gate Lighting Solution  |                  |  |
|------------------------------|---|------------------|--|
| Туре                         | Solar Bollard Light   | Solar Gate Light |  |
| System Wattage               | 3W  |                  |  |
| LED Used                     | High brightness LEDs, LM80 compliance   |                  |  |
| CCT (K)                      | For Cool White:-5700-6500K, For Warm White:-<br>Neutral White:- 4000-4500K                                  | -2700-3200K, For |  |
| CRI                          | >70   |                  |  |
| Optics                       | Diffuser for uniform light distribution   |                  |  |
| Lumen Efficacy               | ≥80 lm/w  |                  |  |
| No Load Current              | ≤ 20mA consumption at no Load per charge controller   |                  |  |
| Type of PV Module            | Mono-crystalline 10Wp PV Panel  |                  |  |
| Battery (Li-lon/LiFePo4)     | LiFePO4 Battery Pack 12.8V 12AH   |                  |  |
| Mounting                     | 590mm/850mm pole Surface Mounting   |                  |  |
| Ingress Protection           | IP65  |                  |  |
| Dimming                      | Inbuilt Pre-programmable Auto Dimming on request  |                  |  |
| HYBRID-230V AC               | NA NA   |                  |  |
| Indications                  | NA  |                  |  |
| Smart Control System         | NA  |                  |  |
| Dusk to Dawn                 | Inbuilt - Dust to Dawn auto ON/OFF or switch based ON/OFF   |                  |  |
| Driver/Controller Efficiency | ≥90%  |                  |  |
| Charge Controller Type       | PWM Controller  |                  |  |
| Protection                   | Over Charge , Deep Discharge , Reverse Polarity , Over load, No Load, Short Circuit and other as applicable |                  |  |

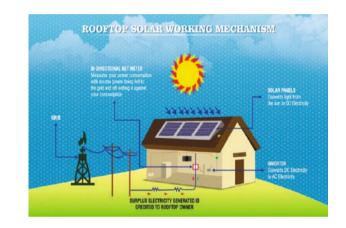
Customization in specification can be done on specific requirements.



#### Solar Power Plant Solution

Halonix offers rooftop, ground mount solar plant and solar water pumping system for residential, commercial and government sectors. As an approved MNRE channel partner, we provide end to end power plant solutions with remote monitoring and controlling system along with many customizations like DG Synchronisation etc.

It can be customized as per project or demand. We use high efficient crystalline silicon PV Panel which is in compliance with industry standard such as IEC 61251, IEC 61730 and other as per MNRE guidelines and standards. We use highly robust and efficient solar inverter which comply IEC 61683, IEC 62109 and other standards along with all other sub- components as per standard. The PV module and its structure are designed to withstand highly corrosive





# ON Grid Solar Plant OFF-Grid Solar Plant Solar Grid Tie Inverter Grid Battery Bank Load OFF-Grid Solar Plant Solar Grid Inverter Load Load

# **Process flow- Power plant project**



We have a dedicated team who interact with the customer and based on their requirements, site survey takes place and accordingly techno-commercial offer is submitted. We do provide warranty over complete system as per industry standards and our all India service team looks after the on-site service/AMC support whenever needed.



# **Applications**



Street/Roadways Lighting



Smart Cities Project



Municipal Corporations/ Municipalities



MLA/MP Projects



Gram Panchayat/ Villages



CSR Projects



Street Circles and Pathways



Educational Institutes and Industries

#### **Actual Site Installation Images**



Smart Solar Street Light (Gujarat)



Integrated Solar High-Mast (Odisha)



Solar water pumping system 1 HP (Odisha)



Stand-Alone Solar Street Light 24W (Mumbai)



Stand-Alone Solar Street Light 12W (Delhi)



Integrated Solar Street Light 30W (Haryana)



Integrated Solar Street Light 40W (Punjab)



Integrated Solar Street Light 20W with PV rotation arrangement (Odisha)



Solar High-Mast - 120W (UP)



AIO Solar Light 9W (Salem)



AIO Solar Light 20W (Amritsar)



Solar Post Top Pole (Visakhapatnam)



# **GLOSSARY**

Alternating Current (AC): Electrical current in which the flow of electric charge continually reverses direction.

Hybrid: Lighting product can run over DC/230VAC power.

Ambient Lighting: Lighting that is designed to provide uniform light levels throughout an area.

Beam Angle: Size of the cone of light produced by lighting source measured in degrees.

CCT (Color correlated temperature): The absolute temperature of a blackbody whose chromaticity most nearly resembles that of the light source. Usually specified in Kelvin (K). The lower the Kelvin temperature, the warmer the light feels, or appears. CW: 5500-7000K; NW: 4000-5500K; WW: 2700-3200K

CRCA: Cold rolled cold annealed

CRI: Color rendering international system to rate lighting device ability to render object colors. CRI range (0-100) Natural outdoor light has a CRI of 100.

Diffuser: Optical element used to mix light ray to improve uniformity of light.

Direct Current (DC): Electrical current in which the flow of electric charge moves in one direction only.

Efficacy: The light output of a light source divided by the total electrical power input to that source, expressed in lumens per watt (lm/W).

Goniophotometer: A photometric device for testing the luminous intensity distribution, efficiency and luminous flux of luminaires.

Glare: Glare is caused by brightness of any objects within the visual field which is brighter than the adaptation level of eye.

Heat Dissipation: This is the transition of thermal energy form a hotter object to a cooler object. In case of LED products heat sinks made from high quality aluminium and other alloys accomplish this.

Illuminance: The intensity of light falling on a surface area. Its unit is lux (lx).

Infrared: Electromagnetic radiation with wavelength range from 700 nm – 3000 nm.

IP: Ingress Protection, Degree of protection against dust and water.

LED: Light emitting diode solid state semiconductor device that converts electrical energy directly into light.

Luminaires: Lighting fixture complete with lamp, housing, power supply and optical components used to direct light.

Luminous Efficacy: Measurement of how effective the light source is converting electrical energy to lumens of visible light. Usually expressed in lumens per watt (lm/W).

Light Intensity: It is the measure of light output in specified direction. Its unit is Candela(cd).

Luminance: Luminance is the measure of the brightness of a surface upon the eye. It is the ratio of luminous intensity to the area.

MS: Mild Steel, A material that is used in housing of luminaires.

Power Factor: The active power divided by the apparent power (i.e., product of the rms input voltage and rms input current of a driver).

Ultraviolet (UV): Invisible radiation that is shorter in wavelength and higher in frequency than visible violet light. UV rays are light waves that are similar to the light from the sun. UV radiation can cause oxidation, fading of colors of furniture, carpet, draperies and art work.

Uniformity: It is the ratio of minimum to average illuminance.

Watt: The unit of electrical power as used by an electrical device during its operation. Many lamps come with rating in watt to indicate their power consumption.

#### NOTES:

- All dimensions are in 'mm'
- Tolerance-Dimensions <u>+</u>10mm; Beam angle <u>+</u>10 degree
- The image depicted in the catalogue may vary from the actual product
- ØB: cut out dimension
- HALONIX TECHNOLOGIES PVT. LTD. reserves the right to make any changes in the design and data without any prior notice







| Notes |  |
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#### CORPORATE OFFICE

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For more information/customer feedback contact customer service executive

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Actual site installation image of Solar Post Top Pole - Visakhapatnam