

SOLAR PRODUCTS



MOXIE
DEVICES

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ABOUT MOXIE

Moxie Devices Pvt Ltd is a leading electronics system design and product manufacturer working closely as an OEM partner for many leading brands in a wide range of industry segments like Indoor and Outdoor LED lighting products, LED control gear, Solar and Renewable energy, Consumer electronics, IoT, BLDC motor control, Security and Surveillance systems etc. We strive to deliver cutting-edge systems and solutions ensuring the highest level of quality. We are committed to the success of our customers while ensuring care for the environment. Our agile operating model for customized solutions development as per requirements and post-sales support & services are amongst best in the industry.

The company stands for technical achievements, innovation, quality and reliability. At the heart of our technology is our strong R&D team comprising of experienced electronics and embedded systems design engineers and lighting designers and CAD designers. An innovation mindset drives the entire team striving to find newer, better and more efficient means of solving problems and providing solutions whilst never compromising on quality choices thereby ensuring maximum customer satisfaction.

Moxie Devices Pvt Ltd also offers services in consulting & turn-key projects for Indian and overseas customers on customized solutions. Our Customer's testimonials re-affirm their trust in us and quality of products.

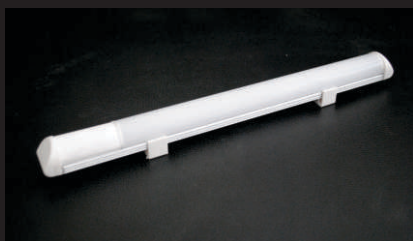
Infrastructure and Quality

Moxie Devices Pvt Ltd design and manufacturing unit covers 20,000 sqft of production and warehousing and R&D facilities - housing some of the latest equipment & machinery to ensure product full technical compliance. Our large workforce of experienced production staff and engineers work in compliance with proper standards & procedures ensuring best quality control. We are dedicated to achieving operational excellence, but that combined with our most important asset - our skilled and knowledgeable people - that we are able to consistently deliver with speed, service and quality.

Moxie Devices Pvt Ltd maintains an ISO 9001:2015 certified quality management system for its production facilities. Our facility is registered SSI and MSME. Majority of our products are BIS approved and/or certified by UL, TUV, CPRI or other NABL accredited labs.



DC LED Batten



Bright Lux Series



Eco Lux Series

DC LED BATTEN

FEATURES AT A GLANCE

- High lumen output.
- High luminous efficacy.
- Led driver efficiency greater than 90%.
- Technology ideally suited to Indian conditions.
- Applications : Home lighting, Transportation vehicles, Confined spaces lighting etc.

Technical Specification

Input voltage	12V / 24V		
Input wattage	3W	5W	8W

LED Specifications

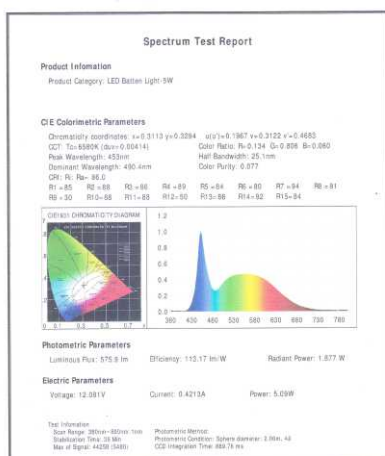
Color temperature (CCT)	> 5500K
Luminous efficacy	> 90 Lumens / Watt
LED type	0.5W LED / 0.2W LED
CRI	> 70
Operating temperature	-20 to +60°C

Driver Specifications

Ingress protection	21
Driver type	Constant current
LED driver topology	Buck
Efficiency	> 90%
Regulation	<3%
Reverse input protection	Auto resettable

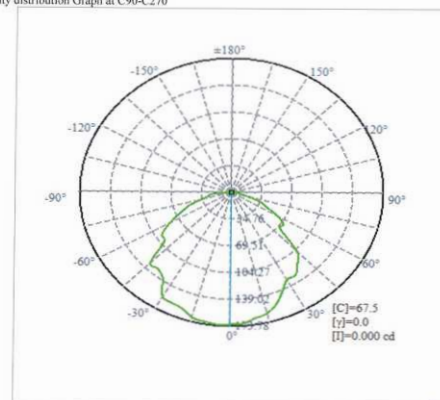


INSTITUTE OF TESTING AND CERTIFICATION
(INDIA) PVT. LTD.



Institute of Testing & Certification
(India) Pvt. Ltd.
Test Report No.: ITC/TEST/NO/1000007-B Page 4 of 4
Authorized Signatory

Intensity distribution Graph at C90-C270



Handled
Tested by

Checked by
Page No.4 of 5

FOR HI PHYSICS LABORATORY (LINE-2)
(Sanjay) Technical Manager
Approved by

DC LED Bulb



Bright Lux Series



Eco Lux Series



DC LED BULB

FEATURES AT A GLANCE

- MNRE compliant.
- High lumen output.
- UV emission free light.
- High quality led bulb is made for indoor application.
- Cool white bulb is soothing to eye, without dark bands.

Technical Specification

Input voltage	12V		
Input wattage	3W	5W	7W

LED Specifications

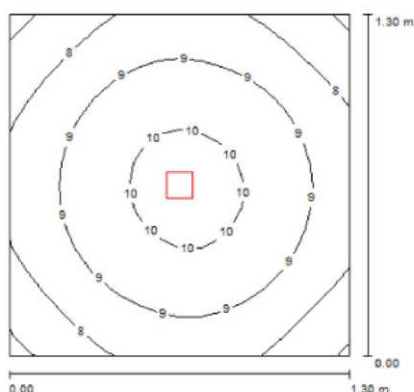
Color temperature (CCT)	> 5500K
Luminous efficacy	> 80 Lumens / Watt
LED type	0.5W LED / 0.2W LED
CRI	> 70
Operating temperature	-20 to +60°C

Driver Specifications

Driver type	Constant current
LED driver topology	Buck
Efficiency	> 90%
Regulation	<3%
Reverse input protection	Auto resettable

Housing

Ingress protection	20
Heat sink	Aluminum
Size (Dia)	57mm 60mm
Diffuser type	Poly carbonate
End cap type	E27
Color	White



Height of Room: 3.000 m, Mounting Height: 2.500 m, Light loss factor: 0.80

Values in Lux, Scale 1:17

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$
Workplane	1	8.87	6.80	10	0.766
Floor	0	4.57	3.98	4.94	0.871
Ceiling	0	1.34	0.03	1.68	0.022
Walls (4)	0	7.94	1.09	29	1

Solar Lantern



Bright Lux Series



Eco Lux Series



SOLAR LANTERN

FEATURES AT A GLANCE

- MNRE compliant.
- Micro controller based design.
- USB port for mobile charging.
- Dual lighting mode with switch.
- LED indicators: Charging status / Low battery / Fault conditions.
- Battery supported Lead Acid, Li-ion, Lifepo4.
- Ideal current less then 1mA, enabling very long stock time even with battery connected.

Technical Specification

LED driver type	Constant current
LED driver topology	Boost
Battery voltage	12V / 11.1V / 12.8V
Efficiency	> 85%
Idle current	< 1ma
CRI	> 70
CCT	5500K - 6500K
Temperature range	0 to +60°C

Protections

Reverse current flow protection	Provided
Battery overcharge protection	Provided
Battery deep discharge protection	Provided
Reverse PV protection	Provided
Reverse battery protection	Auto resettable
Short circuit protection	Present – Both electronic and fuse

PWW Solar Charge Controller



Eco Lux Series



Bright Lux Series



Bright Lux Series

PWM SOLAR CHARGE CONTROLLER

FEATURES AT A GLANCE

- MNRE compliant.
- Supported load upto 300W.
- Battery supported: Lead acid, Li-ion, Lifepo4.
- Panel supported: Upto 300W solar panel (12V / 24V).
- 3 stage MCU controlled charging algorithm for long battery life.

System Specification			
CCU rating	12V - 5Amp	12V - 10Amp	12V / 24V - 30Amp
Solar panel supported	Upto 75V	Upto 120V	Upto 300V
Load supported	40W	80W	250W
Battery Charging			
Charging type	3 – stage PWM charging		
Charging efficiency	> 95%		
Idle current	< 5 mA and <1 mA(MNRE)		
Temperature compensation	Provided		
Load Management			
Load efficiency	> 95%		
Low battery cut-off	11.1V ± 2%	11.1V ± 2%	11.1V / 22.2V ± 2%
Battery reconnect	12.5V ± 2%	12.5V ± 2%	12.5V / 24.4V ± 2%
Mobile Charging			
Charging connector	USB connector		
LED Indicators			
Low battery	Red indicator		
Charging	Green indicator		
Battery status	Red indicator (25%, 50%, 75%, 100%)		
Protection and Other Features			
Ingress protection	21		
Over load protection	Provided		
Reverse current flow protection	Provided		
Battery overcharge protection	Provided		
Battery deep discharge protection	Provided		
Reverse PV protection	Provided		
Reverse battery protection	Auto resettable		
Short circuit protection	Provided both electronic and fuse		

MPPT Solar Charge Controller



Eco Lux Series



Bright Lux Series

MPPT SOLAR CHARGE CONTROLLER

FEATURES AT A GLANCE

- Supported load upto 200W.
- Panel supported: upto 200W solar panel.
- LCD display for easy monitoring of the system.
- Battery supported: Lead acid, Li-ion, Lifepo4.
- Three stage MPPT charging algorithm for maximum utilization of solar power.
- Three stage battery charging process for efficient charging and long battery life.

System Specification		
CCU rating	12V - 10Amp	12V - 15Amp
Solar panel supported	Upto 150V	Upto 200V
Load supported	100W	150W
Battery Charging		
Charging type / algorithm	MPPT / 3 - stage (MPPT, absorption & float)	
Charging efficiency	> 95%	
Idle current	<15mA	
Temperature compensation	Provided	
Load Management		
Load Efficiency	> 95%	
Low battery cut-off	11.1V ± 2%	
Battery reconnect	12.5V ± 2%	
Mobile Charging		
Charging connector	USB connector	
LED Indicators		
Solar and AC charging	Green indicator	
Low battery and short circuit (error)	Red indicator	
Protection and Other Features		
Ingress protection	21	
Reverse PV protection	Provided	
Battery overcharge protection	Provided	
Battery deep discharge protection	Provided	
Over load protection	Provided	
Reverse battery protection	Auto resettable	
Short circuit protection	Provided – Both electronic and by fuse	
LCD Display		
Display Content	Brand name, Battery status, Battery voltage, Charging current, Discharging current, Solar panel voltage, Solar panel current, Load voltage, Load current	

Solar Home Lighting System



SOLAR HOME LIGHTING SYSTEM

FEATURES AT A GLANCE

- MNRE compliant.
- In built all necessary protection.
- SHLS easy installation and maintenance free.
- Charge controller unit has DC jacks for Load connections.
- System component include Luminary, Fan and CCU with USB mobile charger.
- Three stage of MCU controlled charging algorithm for better battery life.

System specification

System voltage	12V
Battery support	Lead acid, Li-ion, Lifepo4
Battery capacity	Upto 120Ah
Solar panel	Upto 150Wp
Charging type	3 – stage PWM charging
Charging efficiency	> 90%
Idle current	< 5 mA and <1 mA (MNRE)
Low battery cut-off	11.1 V \pm 2%
Battery reconnect	12.5 V \pm 2%
Temperature compensation	Provided

Home lighting Models

Model -I	3W DC light * 2
Model -II	3W DC light*2, 5W / 8W DC light
Model -III	3W DC light, 5W / 8W DC light, 18W fan

Mobile Charging

Charging connector	USB connector
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LED Indicators

Low battery	Red indicator
Charging	Green indicator
Battery status	Four red indicator (25%, 50%, 75%, 100%)

Protection and Other Features

Ingress protection	21
Over load protection	Provided
Reverse current flow protection	Provided
Battery overcharge protection	Provided
Battery deep discharge protection	Provided
Reverse PV protection	Provided
Reverse battery protection	Auto resettable
Short circuit protection	Present – Both electronic and fuse

MPPT Intelligent Solar Power Pack



MPPT INTELLIGENT SOLAR POWER PACK

FEATURES AT A GLANCE

- Load upto 150W.
- Panel supported: upto 200W solar panel.
- Battery supported: Lead acid, Li-ion, Lifepo4.
- Intelligent hybrid MCU control MPPT charging.
- LCD display for easy monitoring of the system.
- Battery charging facility from utility grid with Intelligent switching.
- MPPT charging algorithm for maximum utilization of solar power.
- System component include Luminary, Fan and CCU with USB mobile charger.

System specification	
Charging type / algorithm	MPPT / 3 – stage charging
Charge controller rating	12V / 10Amp
SMPS charging (grid charging)	Provided
Intelligent charging	Provided
Temperature compensation	Provided
Charging efficiency	> 95%
Idle current	< 10mA
Load wattage	Upto 150W
Low battery cut-off	11.3V \pm 2%
Battery reconnect	12.5V \pm 2%
Mobile Charging	
Charging connector	USB connector
LED Indicators	
PV and AC charging	Green indicator
Low battery and Short circuit	Red indicator
Protections	
Ingress protection	IP-21 with ventilation
Over load protection	Provided
Reverse current flow protection	Provided
Battery overcharge protection	Provided
Reverse PV protection	Provided
Short circuit protection	Provided – Both electronic and by fuse
LCD Display	
Display Content	Brand name, Battery status, Battery voltage, Charging current, Discharging current, Solar panel voltage, Solar panel current, Load voltage, Load current

PWM Solar Led Street Light



Eco Lux Series



Eco Lux Series



Bright Lux Series



Bright Lux Series



PWM SOLAR LED STREET LIGHT

FEATURES AT A GLANCE

- MNRE compliant.
- Four stage dimming (on demand).
- OEM model with customer markings.
- Battery supported: Lead acid, Li-ion, Lifepo4.
- 3 stage MCU controlled charging algorithm for long battery life.

Technical Specifications	
Input voltage	12V / 24V
LED Specification	
Color temperature (CCT)	> 5500k
Luminous efficacy	> 110 Lumens / Watt
Secondary optics	Batwing / Circular
LED Type	5W pwer LED / 1W power LED
CRI	> 70
Operating temperature	-20 to +60 °C
Driver Specification	
Charging topology / charging stage	PWM / 3 stage charging, bulk, absorption, float
Solar panel	Upto 300Wp
Load wattage	Upto 60W
Efficiency	>90%
Self-consumption	< 10 mA
Temperature compensation	Provided
Dusk to dawn	Automatic
Low battery cut-off	11.3V / 22.2V \pm 2%
Reconnect voltage	12.2V / 24.4V \pm 2%
LED Indicators	
Low Battery indicator	Red indicator
Charging indicator	Charging indicator
Protection & Reliability Parameters	
Ingress protection	65 & 66
High voltage protection	Provided
Battery deep discharge protection	Provided
Battery over charge protection	Provided
Reverse polarity protection	Provided
Short circuit protection	Provided – Both electronic and by fuse

MPPT Solar Led Street Light



Eco Lux Series



Bright Lux Series



Bright Lux Series



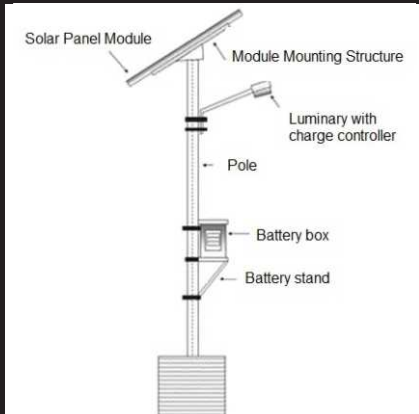
MPPT SOLAR LED STREET LIGHT

FEATURES AT A GLANCE

- MNRE compliant.
- Four stage dimming (on demand).
- OEM model with customer markings.
- Battery supported: Lead acid, Li-ion, Lifepo4.
- 3 stage MCU controlled charging algorithm for long battery life.
- Three stage MPPT charging algorithm for maximum utilization of solar power.

Technical Specifications	
Input voltage	12V
LED Specification	
Color temperature	> 5500k
Luminous efficacy	> 110 Lumens / Watt
Secondary optics	Batwing / Circular
LED type	5W power LED / 1W power LED
CRI	> 70
Operating temperature	-20 to +60 °C
Driver Specification	
Charging stage	3 stage charging (MPPT, Absorption, Float)
Solar panel support	Upto 200W
Load wattage	Upto 80W
Efficiency	>90%
Low battery cut-off	11.3V ± 2%
Reconnect voltage	12.2V ± 2%
Temperature compensation	Provided
Dusk to dawn	Automatic
LED Indicators	
Low Battery indicator	Red indicator
Charging indicator	Green indicator
Error	Both LED blink
Protection & Reliability Parameters	
Ingress protection	65 & 66
Open circuit protection	Provided
High voltage protection	Provided
Battery deep discharge protection	Provided
Battery over charge protection	Provided
Reverse polarity protection	Provided
Short circuit protection	Provided – Both electronic and by fuse

Solar Led Street Light System



SOLAR LED STREET LIGHT SYSTEM

FEATURES AT A GLANCE

- System contain luminaire, solar panel, battery, pole and accessories.
- Battery supported (Tubular Lead acid, Gel type, Li-ion, Lifepo4).
- Led luminaire with high power led and integrated led driver with charge controller.
- Gl pole & panel structure & battery boxes with different heights as per specification.
- Customization as per requirement feasible.

Technical Specifications					
System wattage	7W	12W	24W	45W	60W
Charge controller type	PWM	PWM	PWM/ MPPT	PWM/ MPPT	PWM/ MPPT
Battery voltage	12V, 11.1V, 12.8V				
Battery type	Lead acid, Gel type, Li-ion, Lifepo4				
Solar panel	Poly/Mono-crystalline				
Pole	4.5 Mtr	5 Mtr	6 Mtr		
Battery box	Powder coated box				
Wire & accessories	Provided				
Luminary					
Electronic efficiency	> 90%				
Dusk to down	Automatic				
Dimming	4 stage dimming provided				
Protection	All necessary protection provided				
LED Specification					
Color temperature (CCT)	> 5500k				
CRI	> 70				
Luminous efficacy	> 110 Lumens / Watt				
Secondary optics	Batwing / Circular pattern				
LED type	5W power LED / 1w Ppower LED				
LED make	High power LED- OSRAM / CREE / Nichia or equivalent with lens				
LED Indicators					
Low Battery indicator	Red indicator				
Charging indicator	Green indicator				
Error	Both LED blink				
Housing					
Ingress protection	IP 65 / 66				
Housing material	Aluminium PDC (ADC-12)				
Diffuser type	Polycarbonate	Full glass	Toughened glass		
Battery Specification					
Battery capacity (Lead acid)	40Ah	75Ah	100Ah	200Ah	150Ah*2
Dimming	No	No	Yes	Yes	Yes
Solar panel size	40W	75W	120W	150W	300W
Autonomy / Back up	48 hour	46 hour	36 hour	36 hour	42 hour

Integrated Solar Street Light



Eco Lux Series (Semi)



Bright Lux Series



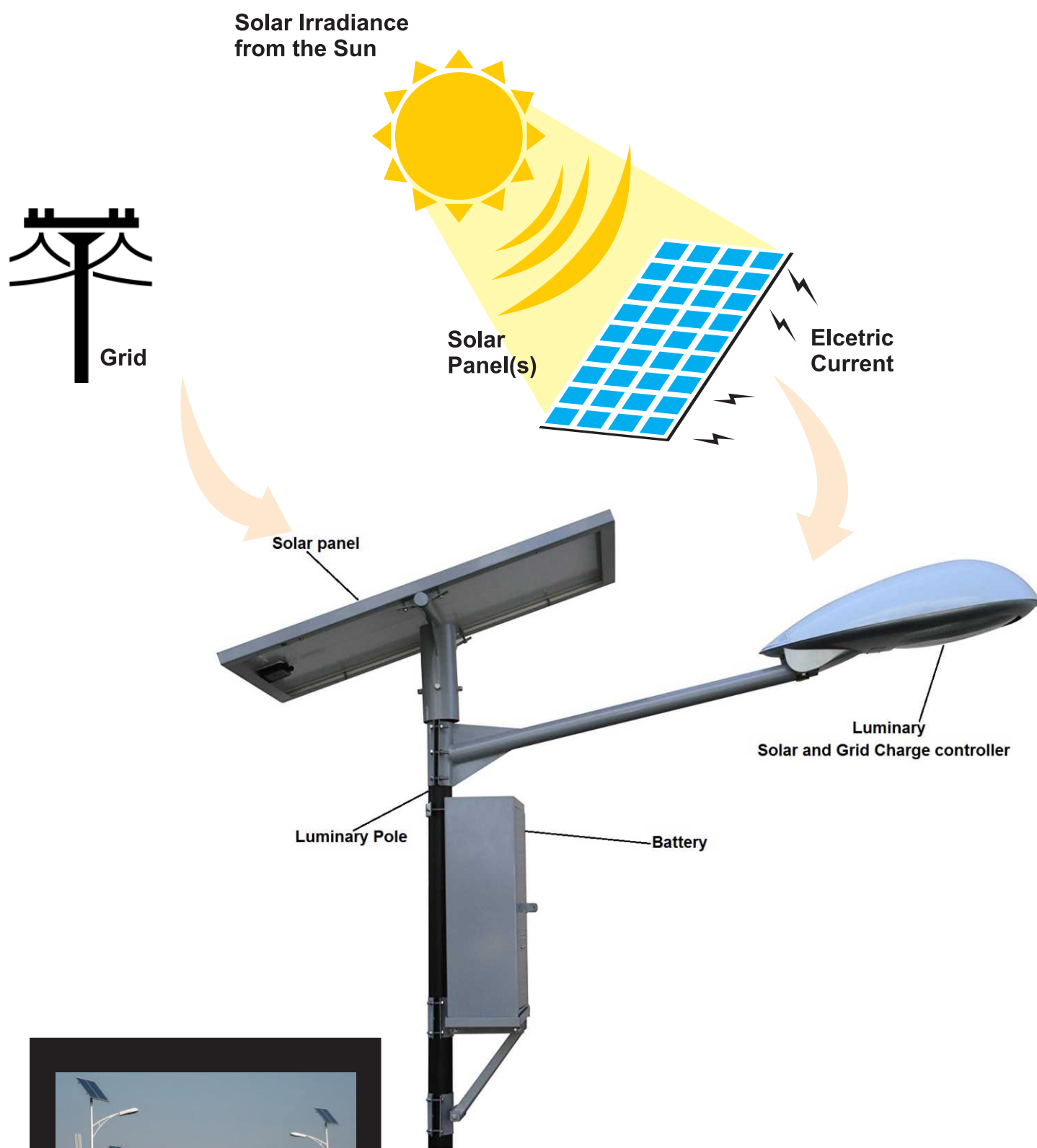
INTEGRATED SOLAR STREET LIGHT

FEATURES AT A GLANCE

- Rust free GI pole & arm.
- Motion sensor supporting.
- Bright LED light during night.
- Battery supported (Li-ion, Lifepo4).
- Easy installation maintenance free.
- Adequate protections and indications.
- Inbuilt battery, No risk of battery theft.
- Automatic dusk to down / Timer operation.
- Customization as per requirement feasible.
- High power output light with Integrated battery and solar panel.

System Specifications				
System wattage	12W	15W	20W	30W
Charge controller type	PWM	PWM	PWM	PWM/ MPPT
Battery type	Li-ion & Lifepo4	Li-ion & Lifepo4	Li-ion & Lifepo4	Li-ion & Lifepo4
Battery capacity	15Ah	24Ah	30Ah	35Ah
Solar panel	40Wp	60Wp	75Wp	100Wp
Light backup time	Full night with dimming	Full night with dimming	Full night with dimming	Full night with dimming
Battery voltage	11.1V, 12.8V			
Solar panel	Poly / Mono-crystalline			
Electronic efficiency	> 90%			
Dusk to down	Automatic			
Dimming	4 stage dimming provided			
Protection	All necessary protection provided			
LED Specification				
Color temperature (CCT)	> 5500k			
CRI	> 70			
Luminous efficacy	> 100 Lumens / Watt			
Secondary optics	Batwing / Circular			
LED type	5W power LED / 1W Power LED			
LED make	High power LED - OSRAM / CREE / Nichia or equivalent with lens			
LED Indicators				
Low battery indicator	Red indicator			
Charging indicator	Green indicator			
Protection				
Battery deep discharge protection	Provided			
Battery over charge protection	Provided			
Short circuit protection	Provided – Both electronic and by fuse			
Housing				
Ingress protection	IP 65 with electronics			
Housing material	Aluminium PDC (ADC-12)			

Hybrid Solar Street Light



HYBRID SOLAR STREET LIGHT

FEATURES AT A GLANCE

- Inbuilt solar and grid charging.
- System autonomy issue resolve.
- High power light output during night.
- Adequate protections and indications.
- Easy installation maintenance free.
- Battery supported (Lead acid, Li-ion, Lifepo4).
- Automatic dusk to dawn / timer operation.
- Customization as per requirement feasible.

System Specification	
Input voltage	12V / 24V
Technical Specification	
LED driver type	Microcontroller based highly configurable design
Charging stage	3 stage charging (Bulk, Absorption, Float)
Solar charging	Provided
Grid / AC charging	Provided
Solar panel supported	Upto 200W
Load wattage	Upto 60W
Efficiency	> 90%
Low battery cut-off	11.3V \pm 2%
Reconnect voltage	12.2V \pm 2%
Temperature compensation	Provided
Dusk to dawn	Automatic
LED Specification	
Color temperature	> 5500k
Luminous efficacy	> 100 Lumens / Watt
Secondary optics	Batwing / Circular
LED type	5W power LED / 1W power LED
CRI	> 70
Operating temperature	0 to +60 °C
LED Indicators	
Low Battery indicator	Red indicator
Charging Indicator	Green indicator
Protections	
Ingress protection	65 & 66
High voltage protection	Provided
Battery deep discharge protection	Provided
Battery over charge protection	Provided
Reverse polarity protection	Provided
Short circuit protection	Provided – Both electronic and by fuse

High Mast Solar Street Light System



HIGH MAST SOLAR STREET LIGHT SYSTEM

FEATURES AT A GLANCE

- High power light output.
- Easy installation maintenance free.
- Adequate protections and indications.
- Battery supported (Lead acid, Li-ion, Lifepo4).
- Three luminary with single charge controller unit solution.

System Specification	
Input voltage	12V / 24V
Technical Specification	
LED driver type	Microcontroller based highly configurable design
Luminary	Street light / Flood light
Battery supported	Upto 200Ah
Solar panel supported	Upto 400W
Load wattage	Upto 140W
Efficiency	> 90%
Low battery cut-off	11.3V / 22.2V± 2%
Reconnect voltage	12.2V / 24.4V± 2%
Temperature compensation	Provided
Dusk to dawn	Automatic
LED Specification	
Color temperature	> 5500k
Luminous efficacy	> 100 Lumens / Watt
Secondary optics	Batwing / Circular
LED type	5W power LED / 1W power LED
CRI	> 70
Operating temperature	0 to +60 °C
LED Indicators	
Low battery indicator	Red indicator
Charging indicator	Green indicator
Protections	
Ingress protection	IP65 for luminary & CCU
High voltage protection	Provided
Battery deep discharge protection	Provided
Battery over charge protection	Provided
Reverse polarity protection	Provided
Short circuit protection	Provided – Both electronic and by fuse



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