



SMART LED LIGHTING SOLUTION



ABOUT PHOTONICS

We are pleased to introduce our company Photonics Watertech Private Limited; manufacturer & exporter of Solar LED Street Lights (built-in charge controller & auto dusk to dawn), LED Street Lights, LED Flood Lights, Solar LED Flood Lights, LED High Bay Lights, LED Bulbs, LED Tubelights, Solar Power Packs, Solar Water Pump, Street Light Feeder etc. All our products are CE certified and MNRE approved. We have also DGS&D registration. We have Kendriya Bhandar Rate Contract. We are also providing OEM services.

BENEFITS OF SOLAR/LED LIGHTING

- No UV & radiation
- No environmentally hazardous substances (CFL contains mercury)
- No more bugs around lights. (LEDs don't attract insects)
- No laying down electrical wires and digging hassles required which usually consume close to a month's time for completion
- Zero electricity running cost for solar based lights
- Payback periods of less than 2 years (LED streetlights)
- High durability of solar panels and LEDs . Both solar panels and LEDs last for more than 10 years.
- In comparison, the conventional sodium and CFL lamps typically require replacement once every year.
- Less heat emission and easy disposal due to absence of harmful substances like mercury
- Higher color temperature of light

PHOTONICS DIFFERANTIATING FACTORS

With the background technology of solar and LEDs, PHOTONICS derives its strengths from the following technological aspects:

Thermal management of LEDs: Although LEDs (power LEDs) have a stated life of 60,000 hours. If the heat dissipation is not well managed, it drastically reduces the life, hence thermal management of LEDs is an area where PHOTONICS has focused to make the product much more reliable and differentiated .we choose the right size, area , orientation and material for heat sinks, as well as design the fixture to ensure proper heat dissipation and consequently high durability of the system.

LED Driver/ controller: Many times solar/LED systems fail, not because of faults in solar panel of LEDs, but because of faults in the driver. The controller/driver forms the heart of entire system. The reliability and efficiency of this electronics is the key for overall product reliability. Features like high efficiency, power factor correction, magnetic isolation modularity of strings, voltage fluctuation tolerances etc. are built-in to make the product much more reliable than any off-the-shelf available controller/driver.

Optics: optimal use of asymmetrical optics is very important features of our streetlights to be make them suitable for roadway applications. The light falls in a rectangular fashion (and not circular) to ensure only the road is lit and not areas outside the road, thus making the most efficient usage of available light.

Aesthetics: The look and feel of the streetlight fitting and the overall aesthetical value is strength of our product design.





















Number of LEDs **Power Consumption** 9W (+/- 10%) Maximum Lumens Weight / LED Beam Angle 1.4KG /120° LED luminous Efficiency >=120Lm/w LED working voltage Pole Entry Dia

Input Voltage CRI Color CCT

Number of LEDs

2700-6500 k 60000 HRS Working Life Body Type Aluminum 370x135x55 Dimension IP Rating **IP65**

1080

6.4v (150ma)

Cool White/Warm White

Ø37mm

12V/24V

70-82

9



Power Consumption 9W (+/- 10%) Maximum Lumens 1080 Weight / LED Beam Angle 0.9KG /120" LED luminous Efficiency >=120Lm/w LED working voltage 6.4v (150ma) Pole Entry Dia Ø44mm CRI 70-82 Input voltage 12V/24V Color Cool White/Warm White

2700-6500 k CCT Working Life 60000 HRS Aluminum Body Type 350x90x60 Dimension **IP65** IP Rating

PHOTON-SSL12E5S



Number of LEDs 27 Power Consumption 12W (+/- 10%) Maximum Lumens 1440 Weight / LED Beam Angle 0.9KG /120° LED luminous Efficiency >=120Lm/w LED working voltage

3.25v(120ma) Pole Entry Dia Ø44mm CRI 70-82 12V/24V Input Voltage

Cool White/Warm White Color CCT 2700-6500 k Working Life 60000 HRS

Body Type Aluminum 350x90x60 Dimension IP Rating















SOLAR LED STREET LIGHTS



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle

LED luminous Efficiency LED working voltage Pole Entry Dia CRI

Input Voltage Color

CCT Optics per fixture

Working Life Body Type Dimension

IP Rating

9

11W (+/- 10%) 1540

1.4KG /80° >=140Lm/w 3.18v (350ma)

Ø37mm 70-82 12V/24V

Cool White/Warm White 2700-5500 k 60x135° or 85x135° 60000 HRS Aluminum

370x135x55

IP65

PHOTON-SSL12S



Number of LEDs Power Consumption

Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage

Color CCT

Optics per fixture Working Life Body Type Dimension

IP Rating

9

11W (+/- 10%) 1540 0.9KG /80° >=140Lm/w 3.18v (350ma) Ø44mm

70-82

12V/24V Cool White/Warm White 2700-5500 k

60x135° or 85x135° 60000 HRS Aluminum 350x90x60 IP65

PHOTON-SSL12E



Number of LEDs **Power Consumption** Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia Input Voltage

Color

CCT Working Life Body Type

Dimension IP Rating

12

12W (+/-10%) 1440 1.4KG /120°

>=120Lm/w 6.4v (150ma) Ø37mm 70-82

12V/24V Cool White/Warm White 2700-6500 k

60000 HRS Aluminum 370x135x55



















PHOTON-SSL12E5



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage Color

CCT Working Life Body Type Dimension IP Rating

30

12W (+/- 10%) 1440 1.4KG /120° >=120Lm/w

3.25v(120ma) Ø37mm 70-82 12V/24V

370x135x55

IP65

Cool White/Warm White 2700-6500 k 60000 HRS Aluminum

PHOTON-SSL12ES



Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia 70-82

CRI Input Voltage Color CCT

Number of LEDs

Working Life Body Type Dimension IP Rating

12

12W (+/- 10%) 1440 0.9KG /120° >=120Lm/w 6.4v (150ma) Ø44mm

12V/24V

350x90x60

IP65

Cool White/Warm White 2700-6500 k 60000 HRS Aluminum

PHOTON-SSL1SESS



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia

Input Voltage Color

CCT Working Life Body Type

Dimension IP Rating

36

15W (+/- 10%) 1800 0.9KG /120°

>=120Lm/w 3.25v(120ma) Ø44mm 70-82 12V/24V

Cool White/Warm White 2700-6500 k

60000 HRS Aluminum 350x90x60





















Number of LEDs Power Consumption Maximum Lumens

Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

Input Voltage

CRI

Color CCT

Optics per fixture Working Life Body Type Dimension

IP Rating

12

15W (+/- 10%) 2100

1.4KG /80° >=140Lm/w 3.18v(350ma) Ø37mm 70-82

12V/24V Cool White/Warm White

2700-5500 k 60x135° or 85x135° 60000 HRS Aluminum 370x135x55

IP65

PHOTON-SSL15S



Number of LEDs Power Consumption Maximum Lumens

Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage Color

CCT Optics per fixture

Working Life Body Type Dimension

IP Rating

12

2100 0.9KG /80° >=140Lm/w 3.18v (350ma) Ø44mm

70-82

15

1800

15W (+/- 10%)

1.4KG /120°

>=120Lm/w

6.4v (150ma)

Ø37mm

70-82

15W (+/- 10%)

12V/24V Cool White/Warm White 2700-5500 k

60x135° or 85x135° 60000 HRS Aluminum 350x90x60 IP65

PHOTON-SSL15E



Number of LEDs **Power Consumption** Maximum Lumens

Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

Input Voltage

12V/24V Color Cool White/Warm White

CCT 2700-6500 k° Working Life 60000 HRS Body Type Aluminum 370x135x55 Dimension

IP Rating IP65







1













PHOTON-SSL18



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia CRI

Input Voltage Color CCT

Optics per fixture Working Life Body Type Dimension IP Rating

14

18W (+/- 10%) 2520 1.4KG /80°

>=140Lm/w 3.18v(350ma) Ø37mm 70-82

12V/24V Cool White/Warm White 2700-6500 k 60x135° or 85x135°

60000 HRS Aluminum 370x135x55 IP65

PHOTON-SSL18E



Number of LEDs Power Consumption Maximum Lumens

Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI input Voltage

Color CCT

Working Life **Body Type** Dimension IP Rating

18

18W (+/- 10%) 2160 1.4KG /120° >=120Lm/w

6.4V (150ma)

Ø37mm

70-82 12V/24V Cool White/Warm White 2700-6500 k

60000 HRS Aluminum 370x135x55 IP55

PHOTON-SSL20ES



Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia Input Voltage

Number of LEDs

CCT Working Life **Body Type**

Color

Dimension IP Rating

20

20W (+/- 10%) 2400 0.9KG /120° >=120Lm/w

6.4v (150ma) Ø44mm 70-82 12V/24V

Cool White/Warm White 2700-6500 k

60000 HRS Aluminum 350x90x60





















SOLAR LED STREET LIGHTS



Number of LEDs 20 22W (+/- 10%) Power Consumption Maximum Lumens 2640 Weight / LED Beam Angle 0.9KG /120° LED luminous Efficiency >=120Lm/w LED working voltage Pole Entry Dia

6.4v (150ma) Ø44mm CRI 70-82 Input Voltage 12V/24V Cool White/Warm White Color CCT 2700-5500 k 60000 HRS Working Life

Body Type

Dimension

IP Rating

PHOTON-SSL24



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage Color CCT

Optics per fixture Working Life Body Type Dimension

IP Rating

12 24W (+/- 10%)

Aluminum 370x135x55

IP65

3360 1.4KG /120° >=140Lm/w 3.05v(700ma) Ø37mm 70-82

12V/24V

2700-5500 k 60x135° or 85x135° 60000 HRS Aluminum 370x135x55 IP65

Cool White/Warm White

PHOTON-SSL30



Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage

Number of LEDs

Pole Entry Dia CRI Input Voltage

Color CCT Optics per fixture

Working Life Body Type Dimension IP Rating

14

4200 1.4KG /120° >=140Lm/w 3.05v(700ma) Ø37mm 70-82

30W (+/- 10%)

12V/24V Cool White/Warm White 2700-6500 k

60x135° or 85x135° 60000 HRS Aluminum 370x135x55

IP65



















PHOTON-SSL30E5



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia CRI

Input Voltage Color

CCT Working Life Body Type Dimension

IP Rating

72

30W (+/- 10%) 3600 1.4KG /120°

>=120Lm/w 3.25V (120ma) Ø37mm 70-82

Aluminum 370x135x55

IP65

12V/24V Cool White/Warm White 2700-6500 k 60000 HRS

PHOTON-SSL36



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voitage Color

Optics per fixture Working Life

Body Type Dimension IP Rating

16

36W (+/- 10%) 5040 2.5KG /120° >=140Lm/w 3.05v (700ma)

Ø54mm 70-82

12V/24V Cool White/Warm White 2700-6500 k 60x135° or 85x135°

60000 HRS Aluminum 390x185x67 **IP66**

PHOTON-SSL45



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage

Pole Entry Dia Input Voltage

CCT Optics per fixture Working Life

Body Type Dimension

Color

IP Rating

20

45W (+/- 10%) 6300 2.5KG /120° >=140Lm/w 3.05v (700ma)

Ø54mm 70-82 12V/24V

Cool White/Warm White 2700-6500 k

60x135° or 85x135° 60000 HRS Aluminum

390x185x67 **IP66**



















PHOTON-SSL48

CE | Rolls

Number of LEDs Power Consumption Maximum Lumens

Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage Color

CCT Optics per fixture Working Life Body Type

Dimension IP Rating

21

48W (+/- 10%) 6720 2.5KG /120°

>=140Lm/w 3.05v(700ma) Ø54mm 70-82

12V/24V

Aluminum 390x185x67

P66

Cool White/Warm White 2700-6500 k 60x135° or 85x135° 60000 HRS

PHOTON-SSL48E5



Number of LEDs Power Consumption

Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia

CRI Input Voltage Color CCT

Working Life Body Type Dimension

IP Rating

120

70-82

IP66

12V/24V

48W (+/- 10%) 5760 2.5KG /120° >=120Lm/w 3.25v (120ma) Ø54mm

Cool White/Warm White 2700-6500 k 60000 HRS Aluminum 390x185x67

PHOTON-SSL50



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency

LED working voltage Pole Entry Dia Input Voltage

Color CCT

Optics per fixture Working Life

Body Type Dimension IP Rating

24

52W (+/- 10%) 7280 2.5KG /120° >=140Lm/w

3.05v (700ma) Ø54mm 70-82 12V/24V

Cool White/Warm White 2700-6500 k

60x135° or 85x135" 60000 HRS Aluminum

390x185x67 **IP66**





















PHOTON-SSL60



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage Pole Entry Dia CRI Input Voltage Color CCT

Optics per fixture Working Life Body Type Dimension IP Rating

60W (+/- 10%) 8400 3.5KG /120° >=140Lm/w 3.05v (700ma) Ø54mm 70-82

28

12V/24V Cool White/Warm White 2700-6500 k 60x135° or 85x135° 60000 HRS

IP66

Aluminum 410x233x67

Solar Power Pack

Today households need continuous and regular access to power for various needs. Solar power packs are designed to provide electricity in homes with intermittent or no grid electricity. The power packs being modular in construction can be customised to generate and provide solutions for individual needs.



Solar power packs can begin at about 1000 watts, going up to a few kilowatts. A typical 4-person semi urban/urban home can have a good mix of solar power and grid power balance by choosing to install a 1 KW solar power pack.

Solar Water Pump

A solar water pump has a mini power house at its heart and consists of a calibrated and matching solar array of modules tuned with the equivalent power of pump for that particular application.

The solar water pumping system is capable of running all types of electrical water pumps with applications varying from irrigation to household demands.



Irrigation pumps such as submersible, surface or deep well can also be coupled with drip irrigation systems to enhance the returns from this configuration.



















SOLAR LED FLOOD LIGHTS

PHOTON-SFL10



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage CRI

Input Voltage Color CCT

Working Life **Body Type** Dimension

IP Rating

27

12W (+/- 10%) 1440 0.45KG /120°

>=120Lm/w 3.25v (120ma) 70-82 12V/24V

Cool White/Warm White 2700-6500 k 60000 HRS Aluminum 115x85x80

IP66

54

PHOTON-SFL20



Number of LEDs Power Consumption Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage CRI

Color CCT Working Life Body Type Dimension

IP Rating

Input Voltage

20W (+/- 10%) 2400 1.1KG /120° >=120Lm/w

3.25v (120ma) 70-82 12V/24V Cool White/Warm White

2700-6500 k 60000 HRS Aluminum 180x140x100 **IP66**

PHOTON-SFL30



Number of LEDs **Power Consumption** Maximum Lumens Weight / LED Beam Angle LED luminous Efficiency LED working voltage

Input Voltage Color

CCT Working Life Body Type Dimension IP Rating

30W (+/- 10%)

3600 1.9KG /120° >=120Lm/w 3.25v(120ma)

70-82 12V/24V Cool White/Warm White

2700-6500 k 60000 HRS Aluminum 235×185×110 IP66



















SOLAR CHARGER & INVERTER

MPPT SOLAR CHARGER

- Based on Intetelligent Micro-Controller
- Automatic Selection of Panel Voltage (12V/24V/36V)
- Automatic MPPT Voltage Setting based on Solar Panel Size
- Parameterized Setting of Full Voltage Cut-off for Battery
- Password Protection for Preventing Accidental Change of Parameters.
- Ready with Accessories to Plug n Play with Solar Panel



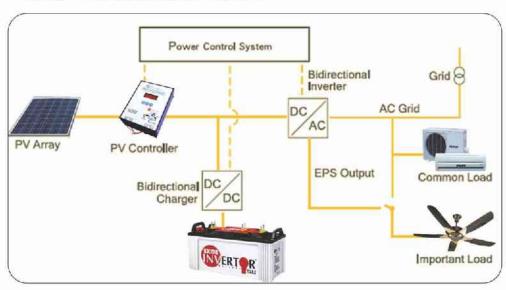
Hybrid Solar Inverter

Photonics Self-use Energy Storage System converts DC electricity generated by solar panels to AC electricity for load to DC for the battery.

The electricity will be provided for existing load first and the excess electricity will be stored in the battery.

Once the power goes down, the inverter will active the Emergency Power Supply to ensure the energy from the batteries can be used for power.

Best usage- Homes, Offices, ATMs, Petrol Pumps etc...



- ➡ INTELLIGENT POWER PRIORITY
- STORE ENERGY FOR NIGHT USAGE
- EMERGENT POWER SUPPLY
- CHARGE BATTERY FROM GRID
- USE IN RAINY CONDITIONS
- EASILY INTEGRATED WITH EXISTING INVERTER

Accreditation

CE DGS&D ROHS MNRE















IES-LM-79-08

IS:16107

IS:16103

IEC:61000

LM-80

IS:10322

IS:13021

PHOTONICS LED TUBE LIGHT

LED tube light is an environment-friendly semiconductor lighting which possesses a number of advantages over the conventional ones such as no flashing, soft light and high color-rendering index that are favorable for the user's eyesight and physical health. With general-standard design of the structure, LED tube can directly replace the conventional fluorescent tube light without any external driver or electric power, and can be widely used in common interior lighting places.

Benefits:

- Energy saving: Compared with the conventional fluorescent tube light, the power consumption saving rate is over 60% under the same illumination.
- High Luminous Efficacy: using the high luminous efficacy and high reliability SMD light source.

PHOTON-LED TUBE LIGHT



Model	Photon-TL10	Photon-TL18	Photon-TL22 22W	
Watts	10W	18W		
Lumens	1000LM	1800LM	2200LM	
Voltage	90-265 V AC 190-265 V AC	90-265 V AC 190-265 V AC	90-265 V AC 190-265 V AC	
Dimensions	Φ26*604mm	Φ26*1214mm	Φ26*1214mm	
Dimmable Feature	Yes (Optional)	Yes (Optional)	Yes (Optional)	
CRI	>80	>80	>80	
Beam angle	1209	1209	1209	
Life span	>40000 hrs	>40000 hrs	>40000 hrs	

PHOTONICS LED BULB

These are powerful LED Bulb which runs on 220 V AC supply. As compared to the regular incandescing and CFL, this LED. Bulb consume very less power, emit less heat and are highly durable while still giving a similar light output. They offer attractive payback periods. We are providing solution 5w, 8w etc

Benefits:

- Save money and energy by using LED bulbs. Generally, an LED consumes. This incredibly low consumption means you will save on your energy costs right from the start
- The solid state technology of an LED is very durable and can withstand high levels of shock and vibration. It's able to operate in extreme temperatures cold, or hot. (-35° C to 80° C).
- LED's convert almost all the energy used into the light output, making them a highly efficient light source. LED's generate less than 30% of the heat of traditional lighting Technologies. With minimal heat generated, LED's are safe to the touch and do not produce any harmful UV rays.

PHOTON-LED BULB



Model	Photon-BL3	Photon-BL5	Photon-BL7	Photon-BL9	Photon-BL12
Watts	3W	5W	7W	9W	12W
Voltage	AC145-265V	AC145-265V	AC145-265V	AC145-265V	AC145-265V
Lumens	339LM	565LM	791LM	1017LM	1356LM
Base	B22/E27	B22/E27	B22/E27	B22/E27	B22/E27
Beam angle	120"	120"	120°	120°	120°

















Exhibitions Pictures

























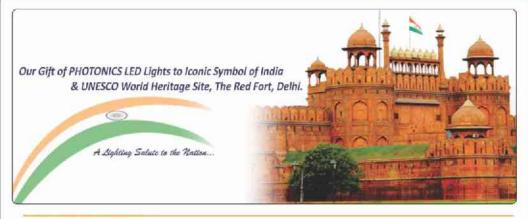












ASI chooses Red Fort as model for power efficiency

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New Delhi: Red Fort has become the Archaeological Survey of India's (ASI) model project for energy efficiency. The world heritage site's annual electricity bill of Rs 3-4 crore is set to reduce by approximately 70% as a Gujarat-based company has donated electric equipment worth lakhs to ASI.

With the donated electric equipment, ASI has installed energy efficient lighting for the front illumination, garden lighting and internal roads from Lahori Gate to Delhi Gate. The equipment donated to Red Fort includes around 300 LED lights, 150 bulbs, among others. "With the LED lighting now in place in major segments inside the monuronment and gives more output. We learnt that harsh lighting in various monuments were harmful to the facade and came up with the idea to donate LED lights. We thought of Taj Mahal and Red Fort first and donated materials worth

about Rs 23 lakh for the latter,' said Rakshit Shah, GM of Gandhinagar-based Photonics who donated the equipment.

The 17th century monument consumes the most power of all ASI-protected buildings in

> The world heritage site's annual electricity bill of ₹3-4 crore is set to reduce by 70% with the equipment donated to ASI

Times Of India Dated 20th Sept., 2014



CEDGS&D ROHS (II) (III) NSIC (III)

















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