

## SOLARPOST ILLUMINATED BOLLARD TECHNICAL SPECIFICATION

### KEY FEATURES

- Zero energy costs
- Solar energy harvested from four vertical faces totalling 102,300mm<sup>2</sup>
- Lead acid battery with a lifetime of up to 5 years.
- High performance white LED 180 lumens per watt with 71° beam.
- 14 Days autonomy (without daylight)
- 20 Days battery life in transport mode
- PIR sensors trigger LED bright-up on approach

### SOLARPOST CONTROL SYSTEM

The Solarpost control system uses a four channel dynamic boost algorithm to maximise the power generated from each individual solar panel. During the day the light tracks across the Solarpost, illuminating and shading the panels. To capture energy efficiently from direct and indirect sunlight, the optimum power point of the panels is calculated in real time and the charge taken from the panels is adjusted, harvesting the maximum power from each panel.

The battery is charged throughout the day from the energy harvested from the solar panels. The Solarpost control system has battery management technology which mitigates full discharge



**SMART INTELLIGENT SOLAR POWERED STREET FURNITURE**

UK PATENT APPLICATION  
NO. 1515614.4 PENDING



by reducing the LED brightness till there is sufficient ambient light to charge. To maintain battery levels during transportation a low power mode can be initiated by briefly placing a magnet against the Solarpost, once installed the magnet is used again to activate ready for use.

The Solarpost control system monitors the ambient light levels, anticipating the transition from day to night. The automatic transition allows for seasonal changes in light levels. During the night a high efficiency 180 lumens-per-watt white LED illuminates. The brightness of the LED is regulated by a pulse-width-modulation driver circuit, the LED remains at a low light level until activated by the passive infrared (PIR) sensors. The PIR sensors have a detection range of up to 5m, on approach the LED brightens for 10 seconds, gently dimming to the low level.

The Solarpost control unit is fully sealed and uses IPX7 connectors.

### SOLAR PANELS SPECIFICATION

- Power: 17.2W (4 x 4.3W panels)
- Material: Polycrystalline Silicon
- Construction: Photovoltaic cells sealed behind UV stabilised tempered glass.
- Total Area: 102,300mm<sup>2</sup>

### BATTERY SPECIFICATION

- Type: AGM VRLA - Lead Acid Battery
- Capacity: 6V 10Ah
- Lifetime: up to 5 years at 20°C
- Operating Temperature: -20 to +60°C
- Transportation: Meets all requirements of the International Air Transport Association (I.A.T.A Dangerous Goods Regulations).
- Low maintenance
- Excellent recovery from deep discharge.
- Conforms to BS EN61056-1 and IEC1056-1 regulations.

## LIGHT EMITTING DIODE (LED) SPECIFICATION

Colour Temperature: 3700K to 5000K  
 CRI: 75  
 Max Current: 520mA  
 Max LED Power: 1.43W  
 180 lumens per watt

## PIR SENSORS SPECIFICATION

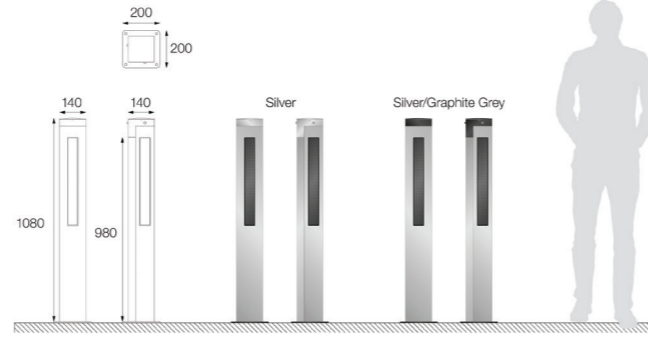
Type: Passive infrared sensor  
 Range: up to 5 metres  
 Detection Angle: 120°

## MATERIALS SPECIFICATION

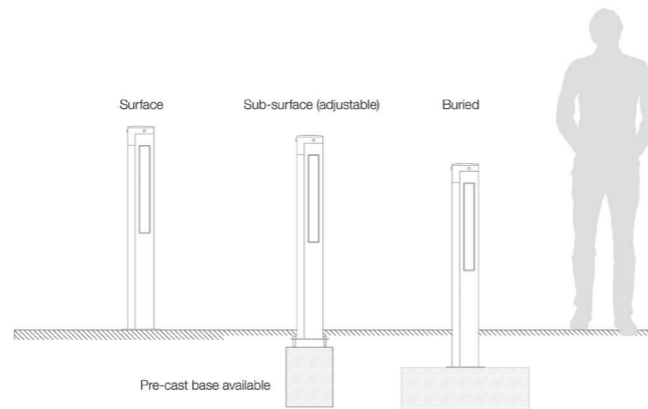
Cap and lid Die-cast aluminium, to BS EN 755-2:2013  
 Post and chassis Extruded aluminium to BS EN 755-9:2001  
 Processing CNC machining with cutter heads using mineral-based coolant  
 Finishing Powder coating to PE54/TRB7202/5/180/ST  
 IP rating 66 (ingress protection)

## DIMENSIONS

(All dimensions in mm)



## GROUND FIXING OPTIONS



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WALL LIGHT



POSTER CASE



STREET LIGHT

