

solarstreet



SMART INTELLIGENT SOLAR POWERED STREET FURNITURE

UK PATENT APPLICATION
NO. 1515614.4 PENDING

SOLARSTREET TECHNICAL SPECIFICATION

KEY FEATURES

- Zero energy costs
- Solar energy harvested from four vertical faces totalling 204,000mm²
- Ni-Mh batteries up to 10yr life -40°C to +85°C
- High performance white LED 180 lumens per watt with 71° beam.
- 14 Days autonomy (without daylight)
- Battery disabled during transit or in stock
- PIR sensors trigger LED bright-up on approach

SOLARSTREET CONTROL SYSTEM

The Solarstreet 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 Solarstreet, 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 Solarstreet control system has battery management technology which mitigates full discharge 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 Solarstreet, once installed the magnet is used again to activate ready for use.



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

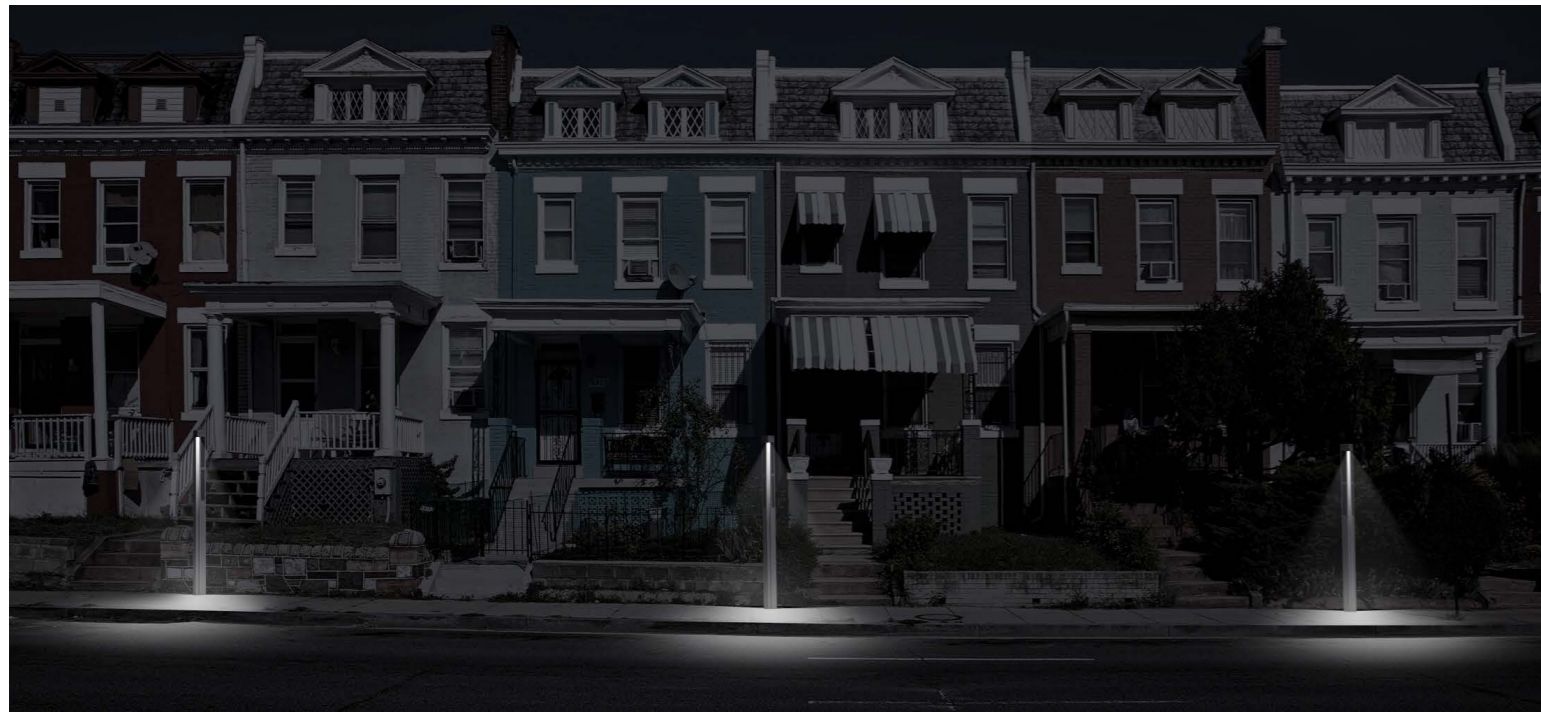
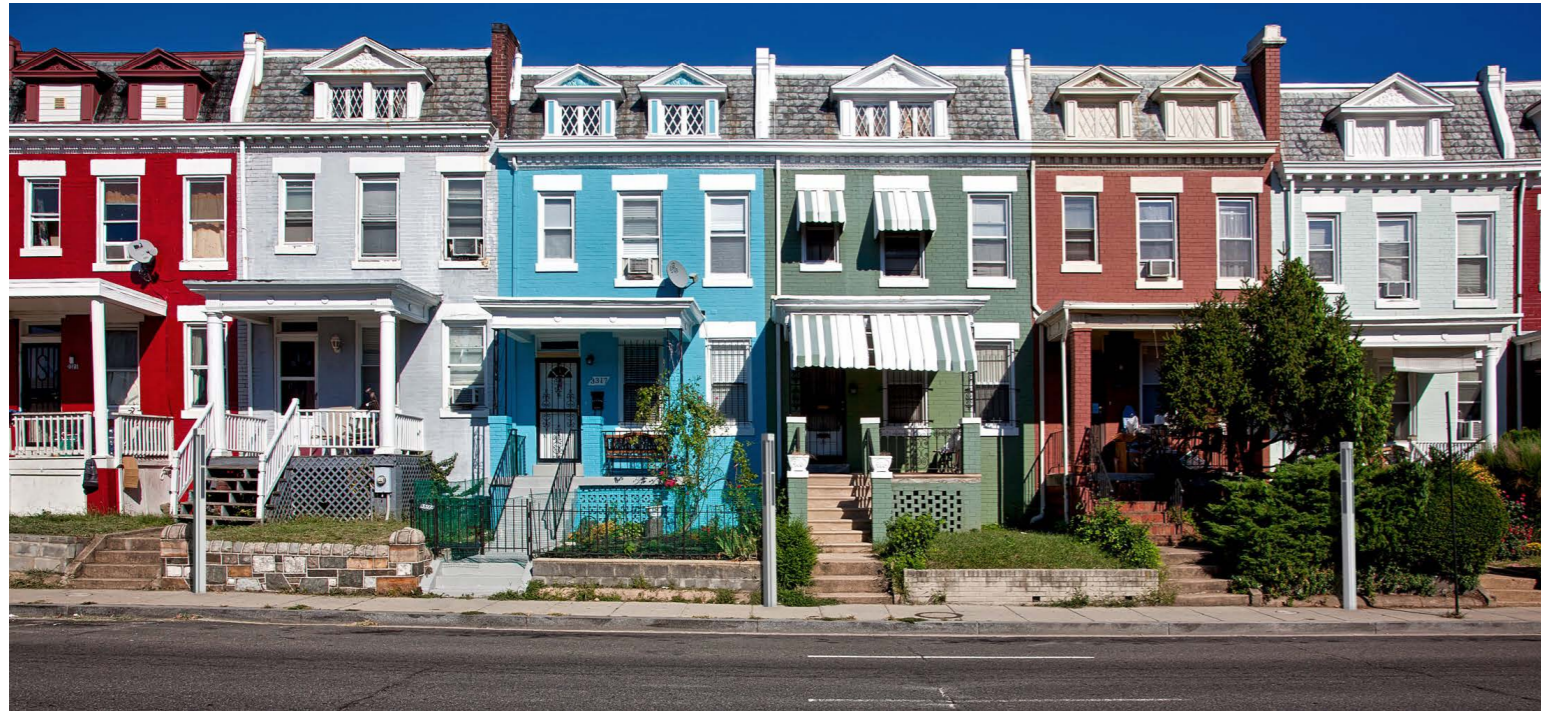
The Solarstreet is available in heights of 2000mm or 3000mm

SOLAR PANELS SPECIFICATION

Power: 30.1W (7 x 4.3W panels)
Material: Polycrystalline Silicon
Construction: Photovoltaic cells sealed behind UV stabilised tempered glass.
Total Area: 204,000mm²

BATTERY SPECIFICATION

Type: Ni-MH batteries
Capacity: 6V 10Ah
Lifetime: up to 10 years at 20°C
Operating Temperature: -40°C to +85°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.



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