



**solar**case<sup>TM</sup>

**Solarcase provides a stylish, practical and efficient way to display information throughout the day and night.**

They have the same interactive features as the solarpost, so people are aware of their existence from a distance at night and are able to read the information displayed easily when they approach and the illumination intensity increases.

The solarcase has a wide variety of applications and is particularly useful in rural locations where conventional street lighting and mains electric supply does not exist or would be prohibitively expensive to install.



## SMART INTELLIGENT SOLAR POWERED STREET FURNITURE

UK PATENT APPLICATION  
NO. 1515614.4 PENDING

## SOLARCASE TECHNICAL SPECIFICATION

### KEY FEATURES

- Zero energy costs
- Solar energy harvested from 12 vertical faces totalling 300,000 mm<sup>2</sup>
- Ni-Mh batteries, 10 yr life -40°C to +85°C
- LED high performance white LED strip lighting
- 14 Days autonomy (without daylight)
- Battery disabled during transit or in stock
- PIR sensors trigger LED bright-up on approach
- Guaranteed to light from dusk to midnight

### SOLARCASE CONTROL SYSTEM

The Solarcase 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 Solarcase, 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 batteries are charged throughout the day from the energy harvested from the solar panels. The Solarcase control system has battery management technology which mitigates full discharge by reducing the LED brightness until there is sufficient ambient light to charge. To maintain battery levels during transportation the battery can be disabled by briefly placing a magnet against the Solarcase, once installed the magnet is used again to activate ready for use. The advanced battery technology offers an exceptional temperature range & improved solar charging tolerance.

The Solarcase control system monitors the ambient light



levels, anticipating the transition from day to night. The automatic transition allows for seasonal changes in light levels for any environment. As night falls, a 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 Solarcase control unit is fully sealed and uses IPX7 connectors.

### SOLAR PANELS SPECIFICATION

- Power: 51.60 watts (12 x 4.3w panels)
- Material: Polycrystalline Silicon
- Construction: Photovoltaic cells sealed behind UV stabilised tempered glass.
- Total Area: 300,000 mm<sup>2</sup>

### BATTERY SPECIFICATION

- Type: Ni-MH batteries
- Capacity: 2 x 6.4v 10ah
- Lifetime: 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.

### LIGHT EMITTING DIODE (LED) SPECIFICATION

- LED light strip housed in aluminium extrusion complete with lens and end caps
- Illumination - CRI LED's
- LED colour temperature - 12v (4100k)

## PIR SENSORS SPECIFICATION

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

## POST 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
- Powder coating finish any RAL colour
- IP rating 66 ( ingress protection)

## CASE SPECIFICATION

### A1

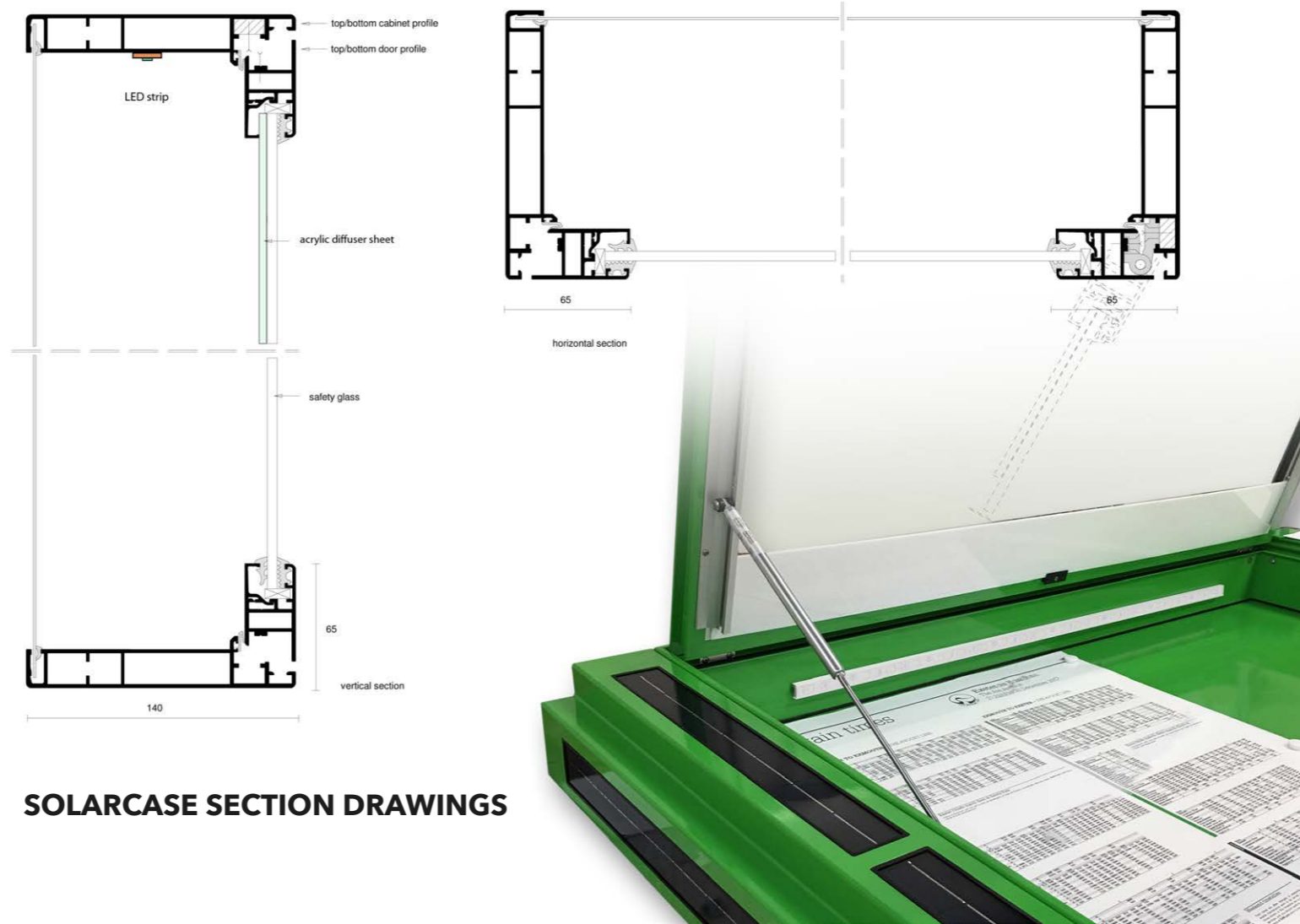
Overall size: 740mm w x 1080mm h  
Visual size: 610mm w x 860mm h

### A0

Overall size: 1330mm w x 1080mm h  
Visual size: 1200mm w x 860mm h

### Special sizes available on request.

- Aluminium construction
- Powder coated
- Toughened glass covers
- Side hinge - left or right or top hinged with gas cylinders
- Permanent ventilation
- Magnetised interior back panel
- Vandal and frost proof locks
- 140Mm deep
- Available in any RAL colour



**SOLARCASE SECTION DRAWINGS**

