

## Solatube® Daylighting Systems

Solatube Daylighting Systems, the world's leading Tubular Daylighting Devices\*, deliver the benefits of brilliant, natural light to both new and existing buildings, enhancing working and living environments and enabling artificial lighting to be switched off during daylight hours, thus significantly reducing energy costs. They provide the highest level of daylight delivery with unrivalled U-value performance, up to Passivhaus standards, and with impressive acoustic insulating properties.

**Introduction** Since the Solatube patent was granted over 20 years ago, more than 2 million Solatube Daylighting Systems have been supplied and installed in over 40 countries around the world.

**Authority** Solatube Daylighting Systems are the subject of Agrément Cert. 08/4597 and comply with Parts B, F and L of the Building Regulations and Parts TS 2, TS 3 and TS 6 of the Technical Standards (Scotland). Independent European test reports covering thermal, acoustic and photometric performance are available on request and include:

- **BRE Test Reports** 233242 and 248038

- **TNO Test Reports**  
034-DTM-2010-02535-S,  
034-DTM-2010-03859-S

- **PEUTZ Test Reports**  
A1942-3E-RA, A1942-4E-RA,  
A1942-7E-RA

**Green issues** Solatube Daylighting Systems have so far offset 31,111,900 kg of CO<sub>2</sub> emissions. This equates to taking 5,715 cars off the road for a full year.

### DESCRIPTION

**The Solatube Brighten Up® Series** Solatube 160 DS and 290 DS Daylighting Systems are of 250 mm and 350 mm diameter respectively. These systems maximise daylight delivery by actively harvesting daylight by means of the patented Raybender® 3000 Fresnel lens dome technology and LightTracker™ dome reflector system. These features alone can more than double the daylight collection over a system without these technologies. This range is ideal for smaller working areas and residential applications and benefits from a U-value of **1.3 W/m<sup>2</sup>K**.

**The Solatube Energy Care Optima™ Range** (An upgrade available for the Brighten Up series) increases the thermal performance to Passivhaus standards by further reducing U-values to **0.5 W/m<sup>2</sup>K** and **0.7 W/m<sup>2</sup>K** for the Solatube 160 DS and 290 DS respectively. Acoustic insulation properties are also enhanced.

**The Solatube SoloMaster® Series** Comprising the Solatube 330 DS-O (for open-ceiling applications) and Solatube 330 DS-C (for closed-ceiling applications) both are

of 530 mm diameter. The LightTracker dome reflector system significantly increases daylight harvesting in these commercial systems, typically used in large, open plan work spaces, offices, factories, warehouses, hospitals, schools and commercial buildings.

### The Solatube 330 DS-C/HO Range

Specifically designed for use in secure environments and institutions, including custody suites and tact cells, this range incorporates additional security features such as stainless steel ceiling framework and physical-attack-resistant glazing. It has been designed for use with BRE software to ensure Average Daylight Factor (ADF) performance requirements can be calculated and designed into each specific application.

### Solatube Daylighting Systems components

- **Roof domes:** of injection moulded, impact-resistant polycarbonate, TP(a) rated incorporating UV screening and LightTracker Dome reflector
- **Roof flashings:** a wide range of flashings available ensuring watertight performance for virtually any roof type and pitch, as well as wall mounted applications
- **Reflective tubing and angle adaptors**
- **Reflective tube material:** 99.7% reflective Spectralight® Infinity material used in all Solatube angles and extension tubes
- **Ceiling diffusers:**
  - Prismatic Vusion™ (supplied as standard) and OptiView® Fresnel lens diffusers used in the Solatube 160 DS and 290 DS have ceiling trim options of white or stainless effect
  - Square diffusers for the Solatube 330 DS-C are attached to a transition box that connects into the round tubing and fits into standard commercial ceiling grids; the Solatube square OptiView diffuser provides an architectural appearance with its matrix of



36 individual Fresnel lenses as well as outstanding light transfer and diffusion; the standard square prismatic diffuser blends into virtually any ceiling design to provide a bright, broad diffusion of natural light

- Standard prismatic diffuser and the optional OptiView lens are used with the Solatube 330 DS-O

### Accessories include:

- **Solatube Electric Daylight Dimmer™**
- **Intumescent Fire Collar®**
- **Solatube Electric Light Add-On Kit**
- **Solatube Bathroom Ventilation Add-On Kit**

\*not a Solatube manufactured product

### PERFORMANCE

**Weather** All roof domes and flashings are entirely weatherproof when installed within the specified guidelines and are hurricane rated. **Light** Full IES photometric data files and BRE performance test results are available on request. **Durability** The original Solatube Daylighting Systems installed over 20 years ago continue to provide levels of daylight to their original specification.

### MAINTENANCE

All Solatube Daylighting System components are maintenance-free. **Cleaning** No cleaning is necessary as the design of the roof dome ensures the system is self-cleaning. Tube sections are sealed using aluminium tape that bonds onto the aluminium substrate.

### ECONOMICS

**Guarantees** A 10 year warranty applies to all Solatube Daylighting System components with a 5 year warranty for electrical options.

### SUPPLY, SERVICES

Details of distributors and approved installation companies are available from the website [www.solatube.co.uk](http://www.solatube.co.uk) and on request from Solalighting (Solatube) Ltd.

- Services to specifiers include:
- Technical and design advice
  - CAD drawings and NBS Plus specifications
  - Lux plots and ADF calculations
  - IES files for Dialux/Relux/Radiance etc.
  - Nationwide installation service
  - BBA certification

Solatube product reference	Tube dia. (mm)	U-Value (W/m <sup>2</sup> K)	Rw (dB)	Light coverage* (m <sup>2</sup> )	Max. tube length (m)
160 DS	250	1.3	41	≤ 10	6
290 DS	350	1.3	38	≤ 18	9
160 DS Energy Care Optima	250	0.5	48	≤ 10	5
290 DS Energy Care Optima	350	0.7	49	≤ 18	8
330 DS-C	530	2.2	45	≤ 25	15+
330 DS-O	530	3.0	37	≤ 25	*

\* Subject to application

® Registered Trademark \* Company advice (Sept 2011) based on sales volume, unit sales, product performance and BBA certification

™ Trademark

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