

Buy the most effective tubular daylight system for your home

Solatube® Daylighting System conveniently available from the nationwide build shop



Two model sizes are offered in the Solatube Brighten Up® Series - the Solatube® 160 DS and the Solatube® 290 DS. The patented system pipes amazing levels of free daylight to any dark or windowless room or corridor. Highly efficient, cost effective and simple to install, the Solatube Brighten Up® Series can benefit your wellbeing and the efficiency of your home...

- Transforms dull and gloomy rooms - make a brighter, more welcoming home.
- No running costs - daylight is free!  
Environmentally friendly - switch off lights during the day – reduces your home's carbon footprint.
- A brighter property is easier to sell or rent.
- Product and Performance guarantee from Solalighting Limited.
- Virtually maintenance free.
- Easy to install – Instructions guidelines available from [nbs](#)

#### Solatube® 160 DS

The compact Solatube®160 DS is ideal for bathrooms, toilets, utility rooms, hallways and en-suite bathrooms.

#### Solatube® 290 DS

The larger model, Solatube® 290 DS will illuminate larger rooms such as kitchens, living rooms, dining rooms, large stairwells and bedrooms.

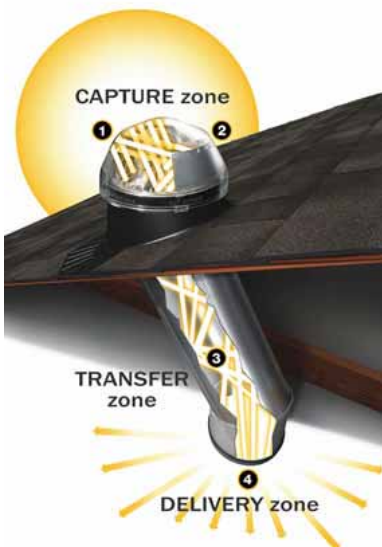
For even larger rooms or long narrow corridors, the Solatube® 160DS or 290DS can be used in multiples providing for a stunningly effective zero carbon lighting system.

#### How does the Solatube Brighten Up® Series work?

Solatube Brighten Up® Series capture daylight from your rooftop, direct it down a highly reflective tube, then delivers it into the room below - simple but brilliant! There are no running costs and the system is maintenance free.

Below is a summary of the product features that make Solatube® the most efficient tubular daylight system ... ever.

1. Patented Raybender® 3000 Dome – Light capture zone  
Solatube doesn't just wait for light to fall on the roof dome and into the tube aperture ... our high tech dome uses a patented Fresnel lens system to actively harvest additional daylight that would otherwise have passed straight through the dome and out the other side, and redirects it down into the tube at the steepest possible angle to minimize bounces (see how fewer bounces mean less light loss in our comparison chart below).
2. Patented LightTracker™ Reflector – Light capture zone  
This unique reflector, 99.7% reflective, is fixed into the dome and greatly increases the surface area available to catch yet more light and redirect it down into the tube.
3. Spectralight® Infinity reflective tubing – Light transfer zone  
Spectralight® Infinity is 99.7% reflective. It is the most reflective material used in tubular daylight systems and is used exclusively by Solatube®. You may have seen it demonstrated on TV. Our comparison chart below shows how tube material with a reflective value lower than 99.7% will have a significant impact on the amount of light delivered.
4. Vusion™ or OptiView® Diffuser – Light delivery zone  
A ceiling diffuser is necessary to distribute the daylight evenly throughout the room below. Solatube® diffusers are sleek and contemporary, and fit neatly to the ceiling with no visible fasteners. They are double-glazed to prevent heat gain/loss and block UV transmission - no faded furnishings!



### How much light will be provide?

The table below shows lumen levels that you can expect to receive with UK weather conditions, but to give an exact figure for light output would be misleading because the Solatube Brighten Up® Series - indeed any tubular daylight system - works in a similar manner to a window - the brighter the day outside, the more light you receive inside.

Model	Tube diameter	Light coverage	*Maximum lumen output	Potential tube length
Solatube® 160 DS	250mm	up to 13m <sup>2</sup> (150ft <sup>2</sup> )	4100	6 metres
Solatube® 290 DS	350mm	up to 22 m <sup>2</sup> (250ft <sup>2</sup> )	8200	9 metres
*with a tube length of 1.8m relative to UK light levels (TMY2 weather data)				

**The daylight systems that will give more light, are those that take the greatest advantage of the available light levels at all times of the day and year - and this is where Solatube® Daylighting Systems are light years ahead of any other product currently available for home applications.**

The patented **Dome with Raybender® 3000 Technology** and **LightTracker™ Reflector** together can more than double the amount of daylight that enters the tube aperture over a system without these features. This is particularly important when the sun is low in the sky - in the early morning, late evening, or during winter months.

The **99.7% reflective Spectralight® Infinity Tubes** ensures as much daylight as possible reflects down the tube. Every time light bounces off a surface a certain amount of light is inevitably absorbed by that surface - how much is absorbed depends on the reflective properties of the surface. The comparison table below shows how the reflective Spectralight® Infinity tubing plays a critical role in achieving its unrivalled performance.

Tube reflectivity comparison chart					
Tube reflectivity value	% of light remaining after bounces				
	0 bounces	5 bounces	10 bounces	15 bounces	20 bounces
<b>99.7% Spectralight® Infinity</b>	<b>100%</b>	<b>98.51%</b>	<b>97.04%</b>	<b>95.59%</b>	<b>94.17%</b>
98.0%	100%	90.39%	81.71%	73.86%	66.76%
96.0%	100%	81.54%	66.48%	54.21%	44.20%
95.0%	100%	77.38%	59.87%	46.3%	35.85%

You can see that even small differences in reflective value will make a significant difference to the amount of light that is finally delivered. For example, the difference between 99.7% and 98% doesn't sound that great, but when you check the percentage of light remaining after just 20 bounces, you can see that Spectralight® Infinity delivers almost 30% more light than a 98% reflective material.

### The Solatube® Daylighting System give much more light than a Flexible duct daylight system

The data in the chart above shows reflectivity values of rigid tube systems. We have not included flexible tube data in the chart because flexible tube by its very nature is not a reliable means of transferring light. Light entering a flexible tube will not necessarily continue to bounce on a downward path, but will scatter randomly in all directions (including upwards) as it bounces off the concertinaed surface of the tube. Some flexible tube system manufacturers claim a reflectivity value of 90% (rather optimistic in our view), but either way such systems are extremely inefficient. A recent study by the BRE (Building Research Establishment) showed that **Solatube® Daylighting Systems can produce more than 10 times the amount of light than a comparably sized flexible duct system.**



Dark corridor application



Shower-room application

**Solatube® has some key advantages over traditional skylights too. While traditional skylights have their place, Solatube can offer adaptable location options, lower cost of purchase and installation, and better lighting performance...**

**Location** - Solatube Brighten Up® Series models can be installed in places where a traditional skylight wouldn't be an option such as rooms without direct roof access or small areas such as bathrooms, closets and hallways. The products offered are compact in design and supplied with two angle adapters as standard that allow for installation around attic obstructions and ease of fitting for different roof pitches/angles.

**Light output** - Traditional skylights pass light through a drywall shaft and into the home. This means that a large percentage of light is absorbed by the walls before it even reaches the room's interior. Also, when direct light enters the drywall boxed section, you often end up with a narrow shaft of light on the floor that can fade carpets and soft furnishings.

The 99.7% reflective tubes used by Solatube® ensure that any loss of light during transfer is minimal. The light is then distributed by a diffuser from *ceiling level* resulting in a uniform distribution of light. Soft furnishings and carpets do not fade under a Solatube® because the polycarbonate dome filters all but 0.1% of UV; the ceiling diffuser then filters all but 2.4% of that UV, with the final result that over 99.9% of UV is filtered out, so no harsh shaft of light - just beautiful, evenly spread, natural light.

**Heat loss/gain** - On a very hot, sunny day it could become uncomfortably hot in a room with a traditional roof light. Similarly, in winter much precious and expensive heat would be lost through a traditional roof light. With the double glazed diffusers there is virtually no heat loss or gain so room temperatures are maintained, thereby saving on heating/air conditioning costs.

**Cost** - The installed cost of a system is usually much lower than for traditional skylights. Remember, the purchase cost of the traditional skylight is only a portion of the total cost, you must also add in the cost of framing members, paint, dry walling, etc.

**Leak-proof** - Traditional skylights have a reputation of leaking. Many times this is an issue of incorrect installation, but their square design invites problems. First, the flat up-slope side can collect branches, leaves and other debris, which can interfere with proper drainage. As the water dams up, it can migrate under slates or tiles to find an escape route, causing leaking. The round design of the Solatube® flashing up-stand and dome allows water and debris to flow past unobstructed. The entire unit is sealed to lock out any moisture ingress.

**Multi-function** - Unlike traditional skylights, the Solatube Brighten Up® Series can also be multi-functional. Solatube® offers several fully integrated options such as an electric light for night-time lighting, a daylight dimmer to block out the light in bedrooms, and a bathroom ventilation system. This means you can have a neat two-in-one or three-in-one-system from a single ceiling fixture - see Accessories pages in the [nbs](#) Technical PDF for more details.

**Maintenance free** - The product are designed to be maintenance free. The design and shape of the roof dome means that debris does not build up and rain will clean away any airborne dirt. All tube joints are sealed with aluminium tape.



Kitchen application

All Solatube Brighten Up® Series models are supplied with everything you need for installation – You may have to specify extension tubes and a Flashing Insulator for your particular project – see below.

The Solatube® kits are supplied with...

- Impact-resistant and UV-stabilized polycarbonate roof dome with Raybender® 3000 Fresnel lens system and LightTracker™ dome reflector.
- Solatube roof flashing to match roof type (Solatube® has a wide range of roof flashings for most UK roof types. Refer Technical Information. A Flashing Insulator is optionally available.
- 99.7% reflective Spectralight® Infinity top tube assembly incorporating adjustable 0-30° angle adaptor, pre-assembled dome ring and moisture control system.
- 99.7% reflective Spectralight®Infinity bottom tube assembly incorporating adjustable 0-30° angle adaptor, pre-assembled ceiling ring with integrated triple seal and twist locking mechanism
- Double-glazed Vusion™ Diffuser with white ceiling trim or optional specification OptiView® Diffuser with white ceiling trim. Refer Technical Information.
- Without of with telescopic Spectralight® Infinity Extension Tube(s) as necessary to fit application.
- All seals, sealants, fixings and Installation Instructions.

PDF leaflets detailing the Technical Information and Installation Instructions for the Solatube Brighten-Up® Series and the associated accessories are available from [nbs](#).



Solatube kits from the [nationwide build shop](#) are priced to include any extension tubes you may require  
See [nbs](#) Technical Information leaflet for details

**PLEASE NOTE THERE ARE SEPARATE NBS TECHNICAL DATA SHEETS FOR THE SOLATUBE® 160DS AND 260 DS UNITS**



**nationwide  
build  
shop**