

Perfecting daylight through innovation



A History of Innovation



Solatube International, Inc. celebrates 25 years of being the worldwide leading manufacturer and marketer of tubular daylighting devices.

Daylight. Pure and bright, it's the most energy-efficient light source on the planet. It beautifully illuminates interior spaces, and drives human performance and satisfaction. It also cuts energy costs and minimizes impact on the environment. As a result, architects and designers have continually sought ways to incorporate reliable and consistent natural light into their commercial building projects without sacrificing thermal performance.

As the company that pioneered the development of tubular daylighting devices (TDDs) and introduced them to the market, Solatube International, Inc. has spent more than 25 years developing breakthrough optical technologies that allow Solatube Daylighting Systems to deliver the highest quality natural light with the best color rendition to any space, regardless of building orientation.

Our patented optical domes featuring Raybender® and LightTracker™ Technologies, proprietary Spectralight® Infinity Tubing, and specially designed Solatube Decorative Fixtures and Diffusers work together as one for powerful and predictable energy-efficient performance. We offer a wide array of models and components to build the ideal configuration, fulfilling any conceivable design intent. This innovative engineering also has earned our systems recognition for their ability to help design professionals achieve their LEED®, and Net Zero Energy design goals.

Creating innovative daylighting solutions is the core of our business, and we constantly seek new ways to take the technology to the next level. If daylighting is in your future plans, Solatube Daylighting Systems can deliver exceptional performance guaranteed to make your project a lasting success.

Leading the Industry We Created

The Solatube story began in the 1980s when a lone Australian inventor created a product that revolutionized the way daylight was brought into a building. Known as a tubular daylighting device, this product was a compact and leakproof alternative to traditional skylights. After being patented, it became the first Solatube product ever sold and the catalyst that transformed the daylighting industry.

Since that time, Solatube International has continued to innovate with new and updated models; advanced optical technologies; daylight dimming, lighting and ventilation devices; and modular, performance-enhancing components. And there's more to come.

Browse the timeline below to see where we've been and where we're heading.

1986	Applied for first patent
1987	First prototype installed
1991	First Solatube product sold
1995	Spectralight 2000 Tubing released
2000	SolaMaster® Series launched
2000	Patented Raybender Technology introduced
2000	Light Intercepting Transfer device unveiled
2000	Brighten Up® Series launched
2000	Solar Star® Fans debuted
2002	0-90 Degree Extension Tube rolled out
2002	Spectralight Infinity Tubing unveiled
2003	Daylight Dimmer launched
2004	OptiView® Diffuser introduced
2007	Patented Brighten Up Series updated
2007	LightTracker Reflector released
2007	Raybender 3000 Technology introduced
2009	SolaMaster Series extended with Solatube 750 DS model
2011	Solatube Decorative Fixtures unveiled
2012	Solatube Smart LED™ System launched
2013	SkyVault Series debuted
2013	SkyVault Amplifier launched
2014	Raybender HD Technology introduced
2014	SkyVault Collector launched
2015	Thermal Insulation Panel introduced
2015	Launched the SkyVault Daylight Dimmer
2016	Square Diffusers introduced
2016	Solar NightLight ISn launched
2016	Solatube celebrated 25th anniversary
2017	SolaMaster Series extended with Solatube 300 DS model
2017	SoftLight Technology launched
2018	INFRAREduction™ Technology introduced



Innovative Solatube Daylighting Systems use advanced optics to capture, transfer and deliver high-quality daylight to residential and commercial buildings.

Breakthrough Technology

Solatube Daylighting Systems use a proprietary capture-transfer-deliver process that brings the optimal amount of natural light into building interiors. By combining breakthrough optical technologies with progressive engineering, our products deliver powerful performance for any application.

Maximized Capture

Advanced Dome Optics

Advanced optical domes capture daylight using proprietary rooftop technologies that harvest low-angle morning, afternoon, and winter daylight to increase light output.

Raybender HD Technology

An extensive, patented daylight-capturing microlens that:

- Increases the harvest of low-angle light for maximum collection capacity
- Boosts light output under marginal daylight conditions and winter months
- Extends daylight delivery during low-light hours of the day
- Works with LightTracker Technology to increase harvesting of low-angle light rays
- Comes standard with the SkyVault Collector

Raybender 3000 Technology

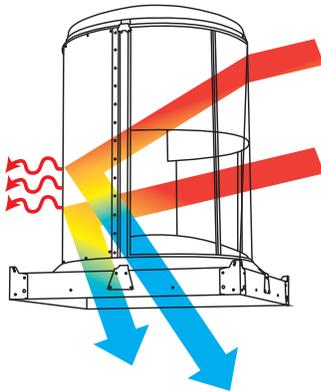
A patented daylight-capturing Fresnel lens that:

- Redirects low-angle daylight for maximum light capture
- Rejects overpowering midday sunlight and heat
- Provides consistent daylighting throughout the day
- Comes standard with Brighten Up Series models and the SolaMaster 750 DS model

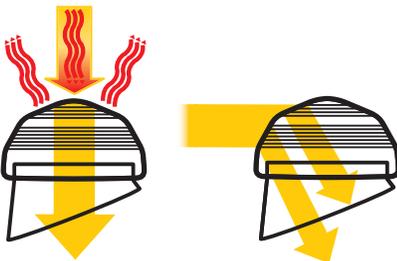
LightTracker Technology

An innovative in-dome reflector made of Spectralight Infinity material that:

- Redirects low-angle morning, afternoon, and winter daylight for maximum light capture
- Increases light input for greater light output
- Delivers unsurpassed year-round performance
- Comes standard with Brighten Up Series models, the SolaMaster 330 DS model, and the SkyVault Collector



Raybender HD increases the harvest of low-angle light.



Allows light in but blocks heat

Redirects low-angle light downward



Increases light input for greater output

Efficient Transfer

The World's Most Reflective Tubing

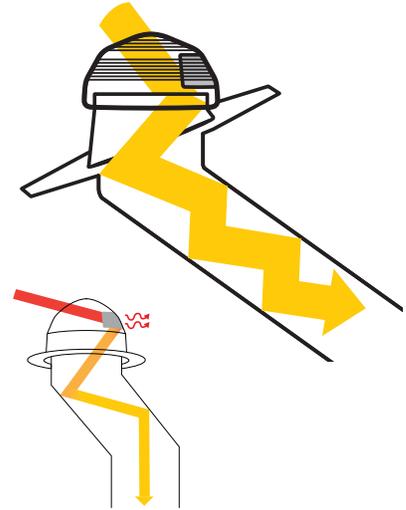
Proprietary Spectralight Infinity Tubing transfers maximum daylight from rooftop to ceiling with minimal light loss and perfect color rendition. INFRAREDuction Technology features spectral filtering properties to provide maximum specular reflectance of visible light while preventing infrared light from entering the building interior.

Spectralight Infinity Tubing

Tubing made of the world's most reflective material that:

- Delivers 99.7%* specular reflectivity for maximum daylight transfer
- Provides the purest color rendition possible so colors are truer and brighter
- Allows for lengthy tube runs and 90 degree turns to deliver daylight to lower floors
- Delivers the visible spectrum of light with minimal solar heat gain
- INFRAREDuction Technology integrated using a proprietary process to filter out infrared wavelengths and minimize solar heat gain

*Specular reflectance greater than 99% with wavelength specific reflectance up to 99.7% for the visible spectrum



Transfers maximum light without heat or color shifts

Controlled Delivery

Versatile Fixtures and Diffusers

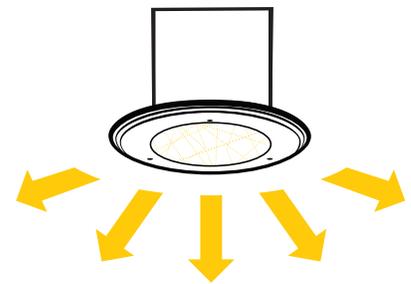
Specially designed optical lenses evenly disperse daylight throughout the area to reduce glare and provide visual comfort. Powerful options let users control light output.

Engineered Light Diffusion

Optical lenses and lighting control options combine to:

- Create a location-specific, controlled visual effect
- Provide visual comfort
- Deliver superior diffusion
- Provide total control with dimming, ventilation and nighttime lighting options*

*Options not available with all models.



Evenly distributes light throughout an area

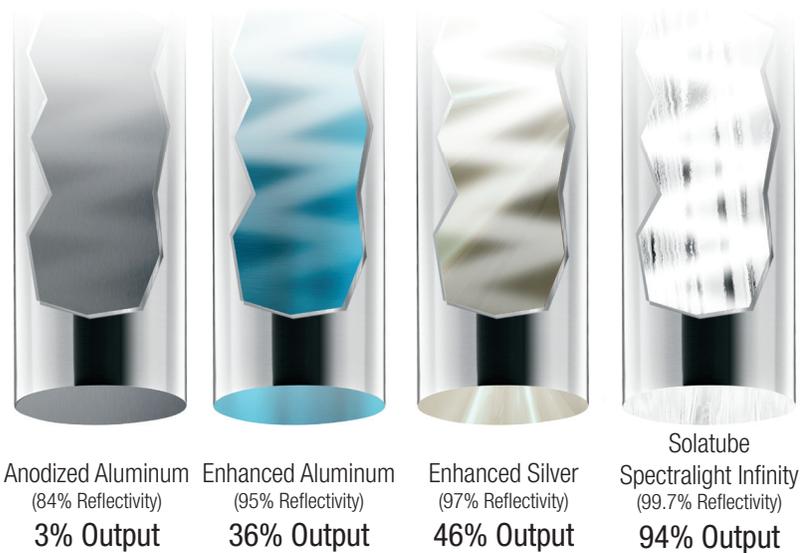


The Solatube Advantage

While the individual components of Solatube Daylighting Systems are designed to perform at the highest level, they are also engineered to work together. Each part enhances the performance of other modules in the system to produce the most effective and advanced tubular daylighting device on the market. That's the Solatube Advantage.

Light Transfer Efficiency

Light Transfer Efficiency (LTE) relates to the amount of light that travels through a TDD daily, seasonally and between multiple floors. Raybender and LightTracker Technologies in combination with Spectralight Infinity Tubing allow Solatube Daylighting Systems to enhance light transfer efficiency by maximizing the collection of low-angle rays. They also minimize light loss as daylight is transferred down into the interior space below. This results in the industry's longest tube runs with optimal light output and minimal seasonal variation.



*Light output is measured after 20 bounces

Colors can shift significantly, depending on the tubing material.



Color Temperature Maintenance

Color Temperature Maintenance (CTM) measures how effectively a daylighting system delivers reflected light without a color shift. Solatube Daylighting Systems perform well in this area, thanks to Spectralight Infinity Tubing and its "spectrally-neutral" properties. This allows it to reflect all the visible wavelengths equally well, so light color doesn't change as it travels down the tube. As a result, Solatube Daylighting Systems deliver the brightest, purest daylight without a major color shift over the course of the day and throughout the year. The daylight delivered to the interior is the same color temperature as the daylight outside. Our tubing also provides perfect color rendition, so colors appear in their true state. As an added bonus, the UV-inhibitors built into the dome ensure interior colors will never fade.

Photometry

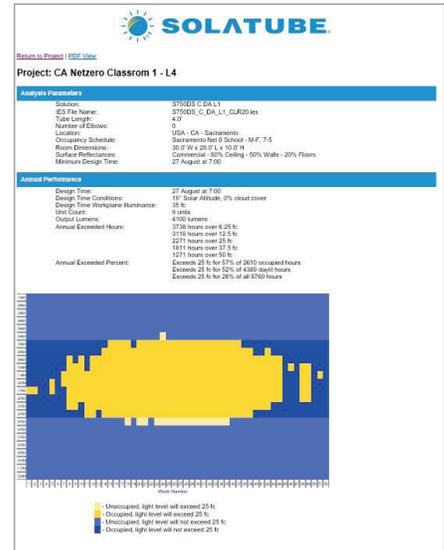
Solatube International pioneered the use of detailed IES photometric data files for analyzing interior daytime illumination of tubular daylighting devices (TDDs). A measure of the distribution of light, photometry is a critical element in developing a TDD-based solution that delivers highly effective and visually comfortable natural light to building occupants. Using relative photometry, light output from any Solatube product configuration can be simulated for thousands of weather data sites for any time of the year or on an annualized basis. The unique, highly advanced optical technologies and design features of Solatube Daylighting Systems produce a predictable level of output, optical control, and user-adjustability of daylight that are unparalleled in the daylighting industry.

Light to Solar Heat Gain Ratio

Light to Solar Heat Gain Ratio (LSG) compares visible transmittance (VT) and solar heat gain coefficient (SHGC). The ratio reveals how well a daylighting product transmits useful visible light rays while filtering out problematic heat-carrying infrared rays.

Solatube Daylighting Systems create the ideal balance between VT and SHGC to deliver pure, bright daylight without the added solar energy that can cause heat buildup and force air conditioning units to work harder.

In fact, our daylighting systems offer energy performance that is more than double that of other natural lighting products. This is due to proprietary Raybender Technology and Spectralight Infinity Tubing, which features Cool Tube Technology. This combination makes it possible to deliver only the visible spectrum of light while filtering and dissipating infrared rays. In addition, thermal breaks designed between the flashing and tubing ensure heat is not conducted from the roof to the interior. The result is maximum light and minimal heat gain.



The Solatube Design Calculator simplifies daylighting design by estimating light output quickly and easily.

Solatube Product Lines

Brighten Up Series



160 DS



290 DS

SolaMaster Series



750 DS
Closed Ceiling



330 DS
Closed Ceiling



300 DS
Closed Ceiling



750 DS
Open Ceiling



330 DS
Open Ceiling

SkyVault Series



M74 DS Core



M74 DS
with Amplifier



M74 DS
with Collector



M74 DS with
Amplifier and Collector

Visit solatube.com/techresources for specifications, CAD drawings, BIM, installation instructions, cut sheets, approvals or other related information.



www.solatube.com
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