



Naturally Smart. Remarkably Simple.

LightFlex™
DAYLIGHTING DELIVERY SYSTEM for
SUSPENDED-CEILING APPLICATIONS

It's time to consider the benefits of daylighting.

Numerous independent studies link daylight and exterior views to higher levels of satisfaction and productivity. Studies also show that learning, working and shopping under daylight increases human performance.

- Students with highest levels of daylight progressed 20-26% faster on math and reading tests respectively in school study¹.
- Satisfaction arising from properly daylit environments attribute to lower absenteeism, employee retention, increased productivity and a reduction in claims for workman's compensation.
- Up to 40% increase in sales in retail study².
- Harvesting daylighting reduces the use of non-renewable energy resources.
- Harvesting daylight properly for illumination is a zero energy, zero carbon producing, passive/direct solar measure.
- An effective daylighting system, which includes properly controlled toplighting, sidelighting and electric lighting, provides substantial reduction in total cost of ownership.
- Controlling the electric lighting to dim or turn off when daylighting is sufficient reduces energy consumption.



¹ Above data supported by Heschong Mahone studies, 1999, 2003 and PG&E Daylighting Initiative AAA Office, California.

² Based on Pacific Gas and Electric / Heschong Mahone study on Daylighting and retail sales.

day·light har·vest·ing

The controlled admission of indirect or diffused daylight into a building to provide useful illumination and enhance the visual environment.

Effective daylighting is achieved through the strategic placement of skylights and windows in conjunction with lighting controls that monitor available daylight and respond as needed to decrease or increase electric lighting.



Daylighting, LEED® and Building Codes

LightFlex® and skylights can both help you to achieve LEED points and to meet the new building code requirements for daylighting in ASHRAE 90.1-2010, IECC - 2012 and IGCC (International Green Construction Code). For LEED, LightFlex can help you to achieve the following credits:

LEED 2009 Credits:

Sustainable Sites	SS Credit 8.1	<i>Light Pollution Reduction</i>	Materials and Resources	MR Credit 5	Regional Content
Energy and Atmosphere	EA Prerequisite 2	<i>Minimum Energy Performance</i>		MR Credit 4	Recycled Content
	EA Credit 1	<i>Optimize Energy Performance</i>	Indoor Environment Quality	IEQ Credit 8.1	Daylight and Views - Daylight

FOR NEW CONSTRUCTION & MAJOR RENOVATIONS

LightFlex can help you to achieve 1 LEED point (*IEQ Credit 8.1 Daylight*) for commercial spaces and up to 3 LEED points for schools.

- Achieve daylighting in 75% of regularly occupied spaces (1 point)
- Achieve daylighting in 75% classrooms and core learning spaces (1 point)
- Achieve daylighting in 90% classrooms and core learning spaces (2 points)

Daylight minimum of 10 fc and maximum of 500 fc in clear sky conditions on September 21 at 9am and 3pm



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Naturally smart. Remarkably simple.

The LightFlex™ daylighting system is the latest innovation from Sunoptics®, a worldwide leader in high-performance prismatic daylighting solutions.

It's daylighting delivery for suspended-ceiling applications. Imagine walking into an interior hallway, dark office or conference room that automatically illuminates with daylighting when you enter the space. LightFlex makes it possible.

LightFlex features advanced design and superior technology that provides optimal daylight throughout the day, maximizing glare-free, 100%-diffused quality lighting, while minimizing the power needed for electric light.

Implementing an integrated lighting design with Acuity Brands LED or fluorescent luminaires, LightFlex and intelligent lighting controls provides a complete, smart solution for improved comfort and well-being, reduced energy consumption and high-quality illumination at the lowest watts-per-square-foot.

1 CAPTURE

The LightFlex daylighting system uses the patented Signature Series prismatic skylight which is highly efficient at capturing low-angle sunlight — allowing daylighting for more hours and days of the year in more geographic locations.

The superior system comes standard with a conventional square roof curb delivering industry-preferred flashing methods for simple installation.

The prisms not only capture the available ambient light of the sun, they refract and diffuse the light without substantial visible light reduction allowing for greater light harvest in clear or cloudy sky conditions.

2 TRANSPORT

The LightFlex 21" tubular daylighting device (TDD) includes the patent-pending optic sphere, a high-performance reflective light well and adjustable elbows to bypass obstructions between the roof and suspended ceiling. The rectangular/square straight light well is available in 2' x 4' and 4' x 4' sizes with the same high-performance.

The LightFlex system light wells feature 98% reflective MIRO-SILVER® with greater than 99% specular quality and 25-year warranty from Alanod® on their reflective surfaces.

3 CONTROL

Light Control Louvers allow you to adjust the amount of daylight entering the room as well as daylight darkening for visual presentations or blocking electric light in compliance with night sky requirements.

The LightFlex daylighting system is available both nLight® enabled and coupled with Lighting Control & Design (LC&D) control systems, allowing control of both daylight and electric lighting for energy savings and the creation of an adaptable, fully-responsive visual environment.

4 DISTRIBUTE

The LightFlex daylighting system features optically-designed diffusers in photometric distributions and aesthetics that complement LED or fluorescent luminaires providing seamless transitions between sources.

Choose from a variety of Acuity Brands luminaire diffusers to complete your lighting design.

The Sunoptics® advantage:



SIGNATURE SERIES High-Prismatic DOMES

EFFECTIVE. Sunoptics is the pioneer of a unique concept in skylight design – prismatic skylights designed and formulated to provide the maximum amount of natural light transmission with the optimum level of diffusion for 100% glare-free, distributed light. This soft yet bright, natural light illuminates more effectively over a wider area of the room for more hours of the day.

FLEXIBLE. Sunoptics prismatic domes for LightFlex suspended-ceiling applications are available in 21" tubular, 2' x 4', and 4' x 4' sizes to maximize application choices and design styles. Conventional prismatic domes for open spaces in Signature Series, Pyramid and Double-Hip, are available in a host of sizes and styles to maximize your daylighting design choices.

WORRY FREE. Skylight designs are available in Single, Double and Triple Glazed to meet thermal requirements. Insulated thermal break, integral frame condensation gutter and exterior weeping gutter; foam curb seals (no caulking required); and integral-frame weather sweep are standard on our 800MD frame design. As for durability, the patented Signature Series Dome leads the industry for structural integrity.

Sunoptics extrudes and thermally forms all of its own high-performance prismatic acrylic and UV-capped polycarbonate right here in the U.S. Sunoptics also regrinds 100% of its post-industrial waste providing recycled content which has the potential for obtaining points necessary for LEED® certified projects.

LIGHT CONTROL LOUVERS

For complete daylighting control, louvers are available for the LightFlex system as well as conventional daylight solutions. Available as single- or multi-blade, the louvers allow you to adjust the amount of light coming in from the prismatic dome and through the MIRO-SILVER® highly-reflective light well. You can bring more light into the room, dim, or close off the daylight delivery giving occupants complete control of their lighting needs.

For automatic operation, the system is simple – and exclusive to Sunoptics. Integrated with Acuity Brands' controls, LightFlex can be pre-calibrated to provide the required illumination level for the use of the space. The system will adjust the louvers and turn on or off the electric lighting, as needed, to maintain the preset level of illumination. A digitally programmable wall-mounted control panel provides light level and timed-override adjustments, giving you complete control over your lighting – and your energy use.

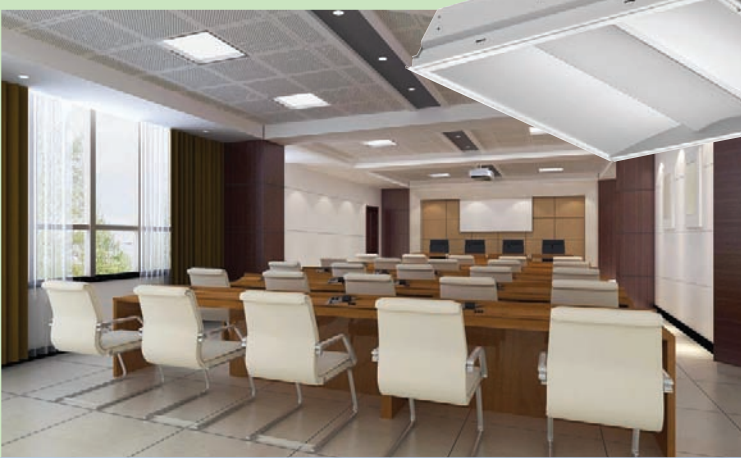


ACUITY BRAND DIFFUSERS

AESTHETIC CHOICES. As a high-performance daylighting solution, LightFlex delivers quality lighting through a variety of prismatic acrylic diffusers for a wide range of suspended-ceiling applications. You can match or complement your new or existing Acuity Brands LED or fluorescent electric lighting product in aesthetics or photometric distribution.

Three proprietary drop-lens design options – pan, pyramid or flat – and an integrated grid retainer coordinate with the LightFlex unit to provide a uniform external appearance inside your space.

Only Acuity Brands gives you such a wide selection of lighting and controls options to realize your lighting design.



The Competitive Advantage

With Acuity Brands' broad portfolio of lighting product and solutions, you can achieve high-quality lighting of interior spaces with the newest energy-efficient lighting and controls technology. Your economic payback analysis is a phone call away.

PATENT-PENDING PRISMATIC OPTIC SPHERE

The LightFlex tubular system features the unique, patent-pending optic sphere, which uses the prism-based optics to maximize daylighting delivery.

The unique optic sphere is located between the skylight and the roof curb. It is designed to maximize the capture of daylight provided by the Signature Series Dome and drive the available light deeper into the highly reflective MIRO-SILVER® light well enhancing the quantity and quality of the natural light that is collected at the ceiling diffuser.

The result inside your space is an optimum amount of glare-free, diffused daylighting.





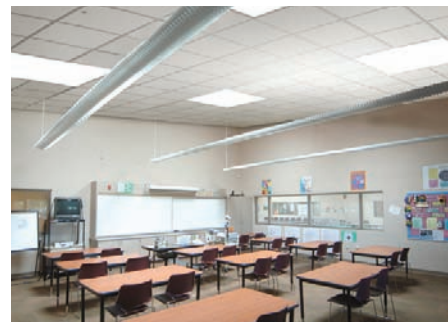
BUDGET CONSCIOUS, RESULTS FOCUSED

By introducing daylighting into the classroom, schools can excel at providing enhanced learning *and* at attaining measurable financial savings.

Studies show that poor lighting adversely affects learning. Conversely, the superior quality of light provided by daylighting correlates to proven, increased student performance in math and reading scores, and in attendance.

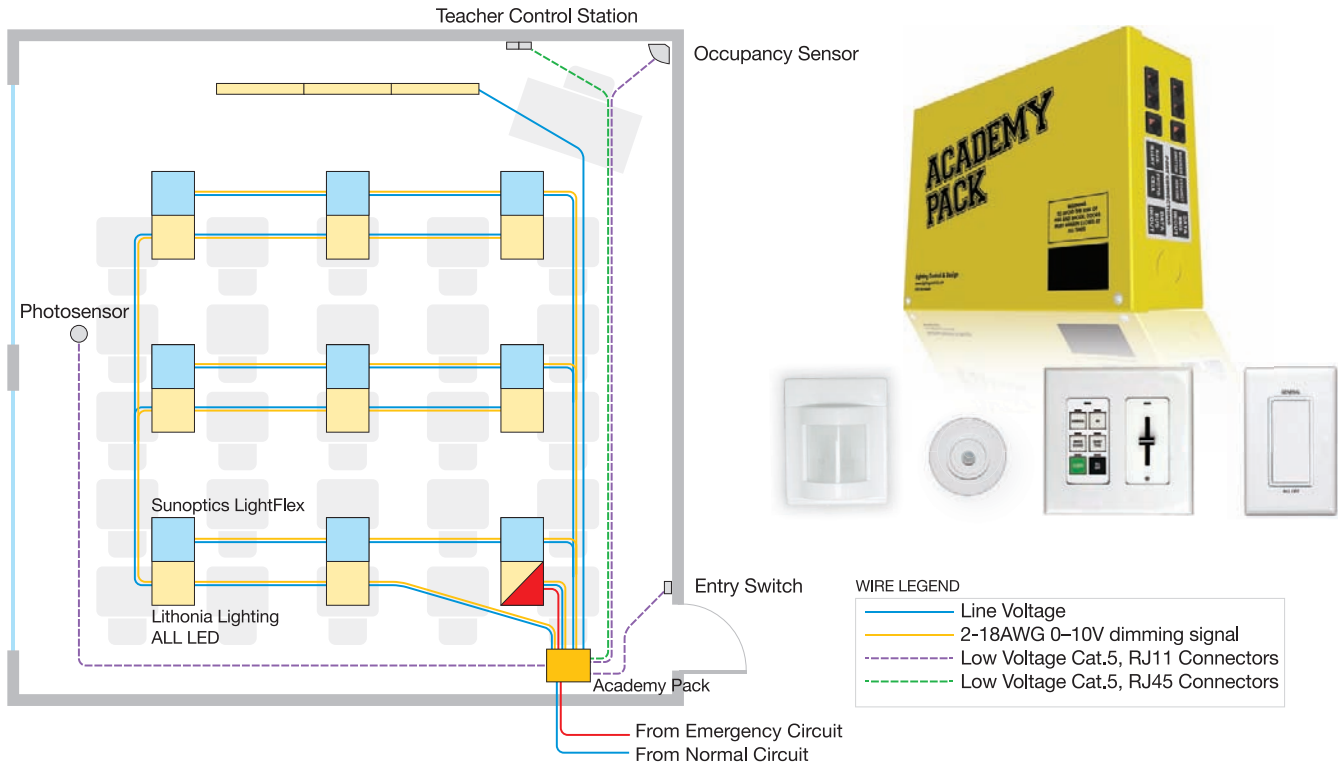
Because lighting is such a large component of a school's budget, you can also reduce your utility costs significantly by combining a daylighting system with controls. Whether for new construction or as retrofit elements, a combination daylighting/controls system provides a rapid return on the investment by allowing you to keep electric lighting off for the majority of the school day.

Giving students the means to improve their learning is vital. While educational investments are paid back in ways not always measured in dollars, budgets are still top-of-mind.



In the classroom, LightFlex + Controls = Savings

Classroom application example features: Sunoptics LightFlex™ and Lithonia Lighting® AL Family LED luminaires and Lighting Control & Design (LC&D) Academy Pack controls.



LC&D Academy Pack

Featuring LC&D-manufactured GR 2400 technology, the Academy Pack is a complete, prepackaged, stand-alone lighting control solution that is both flexible and intuitive.

It is designed to enhance the learning environment, reduce energy expenditures, and activate emergency lighting.

Installation is quick using modular connections that plug into the side of the enclosure. All of the equipment is pre-programmed to your specifications.

The Academy Pack includes: a GR 2400 control panel; push-button programmable occupancy sensor; SnapLink relay; indoor photosensor; teacher control station (with optional slider) and a low-voltage entry switch.

Lighting Design Objectives

Students

- The right amount of light for the task at hand
- Improved visibility and visual comfort to aid in recognition and legibility

Teachers

- Enable learning activities
- Improve mood, concentration
- Simple, intuitive operation
- Reliability
- Reduce off-task behavior

Administrators

- Improve teaching outcomes
- Comply with codes, standards, budgets
- Minimize energy use
- Lower maintenance burden



PERFORMANCE, ENERGY-SAVINGS & CONTROL

According to Energy Star analysts, lighting accounts for nearly 35% of electricity used by commercial or educational facilities in the United States.

The advanced design and superior components of LightFlex provide the most glare-free, high-quality lighting throughout the day, allowing you to greatly reduce your need for electric lighting. The integrated light control louver combined with quality diffusers distributes and maintains the optimum footcandle levels where you need it. If supplemental electric light is needed, the controls system will brighten the electric luminaires to preset footcandle levels.

And, because aesthetics are important, LightFlex gives you the most options in the industry with regard to your daylighting products, from the shape of the unit to the finish and light-output distribution on the ceiling-surface diffuser.

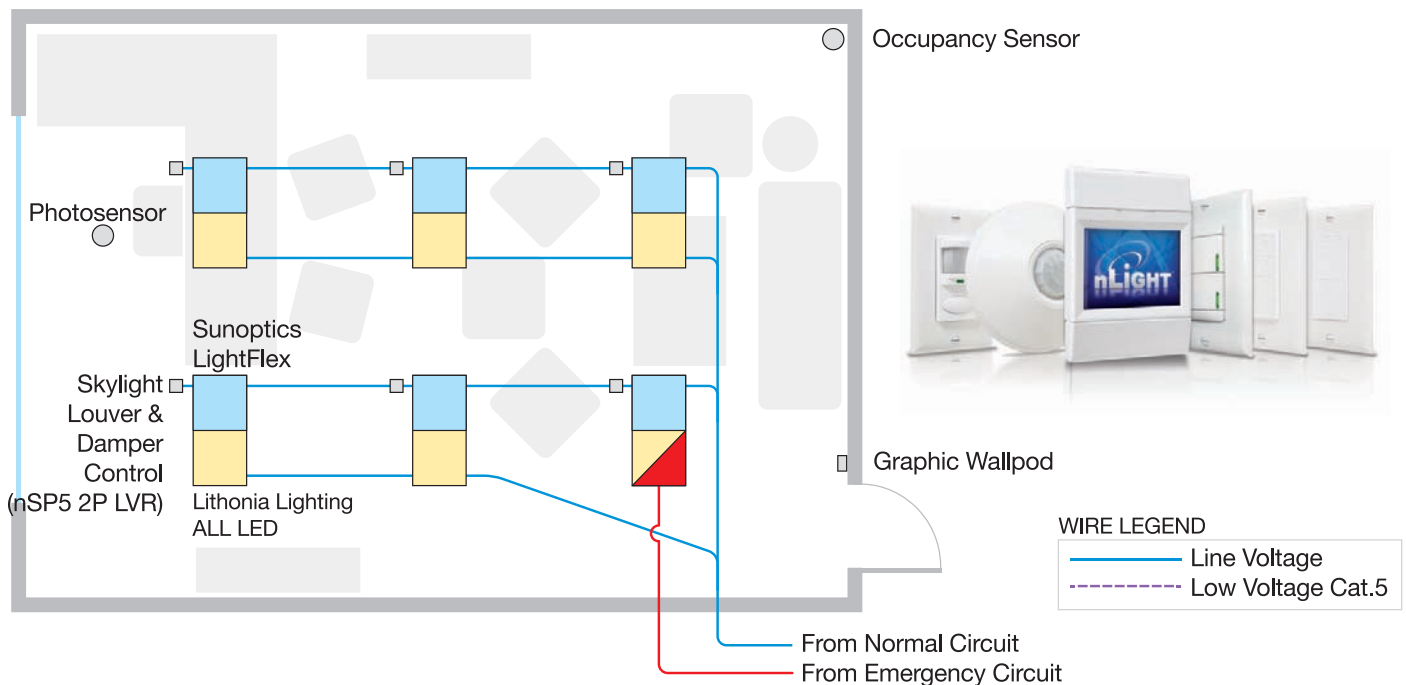
When combined with electric lighting, dimming and occupancy controls, LightFlex reduces energy consumption, improves comfort and well-being, and delivers quality illumination.

LightFlex www.Sunoptics.com/LightFlex



For the office, LightFlex™ means multiple benefits

Office/classroom application example features: Sunoptics LightFlex™ with nLight® enabled Lithonia Lighting® AL Family LED luminaires and Sensor Switch® controls.



Sensor Switch® Products

nLight® technology was developed by Sensor Switch®, an Acuity Brands company. nLight® provides a revolutionary digital architecture and networking technology that cost-effectively integrates time-based, daylight-based, sensor-based, and manual lighting controls. Designed to function stand-alone in an individual zone or networked together across an entire facility or campus, nLight® is an easy-to-use, easy-to-install system that can cut energy consumption and enhance occupant convenience.

The graphic wall panel provides a clear and comprehensive tool for managing the electric and daylighting visual environment in today's modern classroom — and integrates with occupancy and light sensors for optimum energy usage.

Lighting Design Objectives

Office lighting impacts productivity as well as the satisfaction levels of employees. Office lighting improvements will reduce energy consumption and provide a better working environment.

- Energy-efficient lighting fixtures
- Control over personal workspace
- Programmed settings for individual offices and lobby areas
- Daylight harvesting
- Unoccupied shut-off with overrides
- Energy use optimization, monitoring and reporting



Sunoptics is the inventor and worldwide leader in high-performance prismatic daylighting. Since 1978, we have stayed true to our original and vision of an energy independent world through daylighting. Sunoptics high-performance prismatic skylights optimize lighting performance through patented-prismatic lenses that provide the maximum amount of light transmittance while maintaining 100% diffusion which eliminates undesirable hot spots, glare and UV damage to the daylighted space.

Sunoptics is dedicated to creating the finest daylighting environments in which to work, shop, learn, live and play, and we are committed to reducing the world's dependence on fossil fuels for energy. Since 1978, over one billion square feet of daylighted space have been installed worldwide using Sunoptics Prismatic Skylights reducing millions of kilowatt hours annually for our customer while eliminating billions of tons of CO2 in the process.

There's No Greater Efficiency Than Off™



EXPERIENCE DAYLIGHTING at the SUNOPTICS®
Daylighting University in Sacramento, California



Expanding the boundaries of lighting™

Acuity Brands is an industry-leading developer and manufacturer of lighting, lighting controls and integrated solutions that affordably deliver the highest quality of light and minimize energy usage. Our product portfolio includes indoor and outdoor lighting solutions combining luminaires, wiring, fixture- and panel-based controls and daylighting. Whether your design goals prioritize energy savings, user comfort, flexibility, future re-configurability or code compliance — our highly-experienced, national lighting experts are ready to connect you to the right solution.



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