

Benefit Overview

- Superior occupant comfort
- Optimized light levels
- Increased energy efficiency and savings
- Reduction in size of HVAC equipment
- Elimination of glare



Designing Adaptive Environments

The dynamic nature of the system enables architects to create adaptive environments, so they are no longer limited to designing a system for a single daylighting scenario. IntelaSun offers the flexibility to design daylighting systems that have a larger aperture without the traditional risk of over lighting or overheating a space. Having the ability to control the amount of light that enters a space enables those spaces to be used for a variety of different functions. While a school gymnasium may require a lot of natural light for activities during gym class, the space may need to be dimmed to show movies or to put on performances.

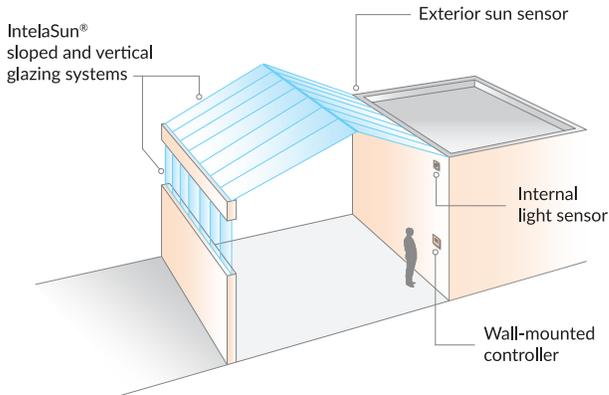
IntelaSun[®] - Dynamic Daylighting System

A dynamic shading system designed for both skylight and wall applications. The key element of its design is the series of SolaBlades[®], which are inserted into our standard two-panel glazing system and act as internal louvers with the freedom to rotate a full 360 degrees. The internal louvers adapt based on sensor data and user settings to effectively regulate and optimize light levels throughout the day, while simultaneously reducing heat gain and eliminating glare. The system's ability to control light transmission levels results in lower peak load demands and significantly improves a building's energy efficiency, leading to predictable energy consumption and associated cost savings.



How Does InteltaSun® Work?

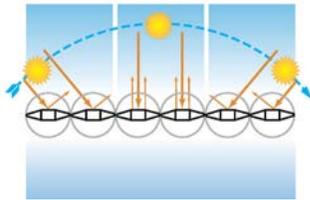
The InteltaSun® System - How it all works



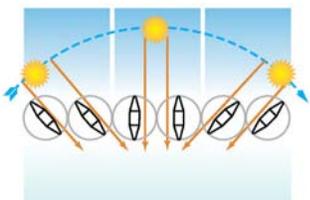
Sensors on the exterior and interior of the building track and analyze the angle of the sun and accurately measure the light levels in the interior space. Based on control settings and data recorded by both sensors, the internal louver system (SolaBlades®) will rotate to effectively regulate and maintain optimal light levels throughout the day, and also limit solar heat gain.

The system is managed from a wall-mounted control and can be programmed to be fully automated or operated manually, based on the user's preference. InteltaSun can also be integrated with other building controls.

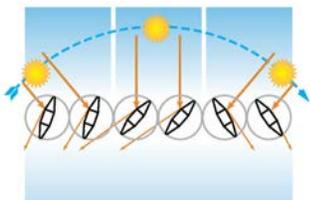
When completely open, the system provides maximum light transmission, and closing the blades will reduce the light transmission to a mere 3%. The process of completely opening or closing the system's internal louvers can be done in 45 seconds or less utilizing the quick dim function.



Minimize light transmission and solar heat gain.



Maximize light transmission regardless of sun angle.



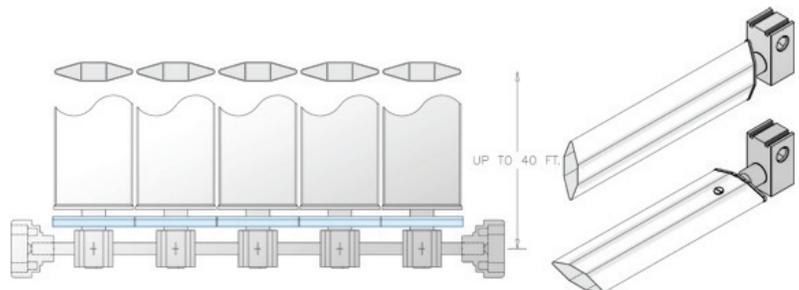
Blades are angled to diffuse light transmission, eliminate glare and maintain user comfort.

SolaBlade® Technology

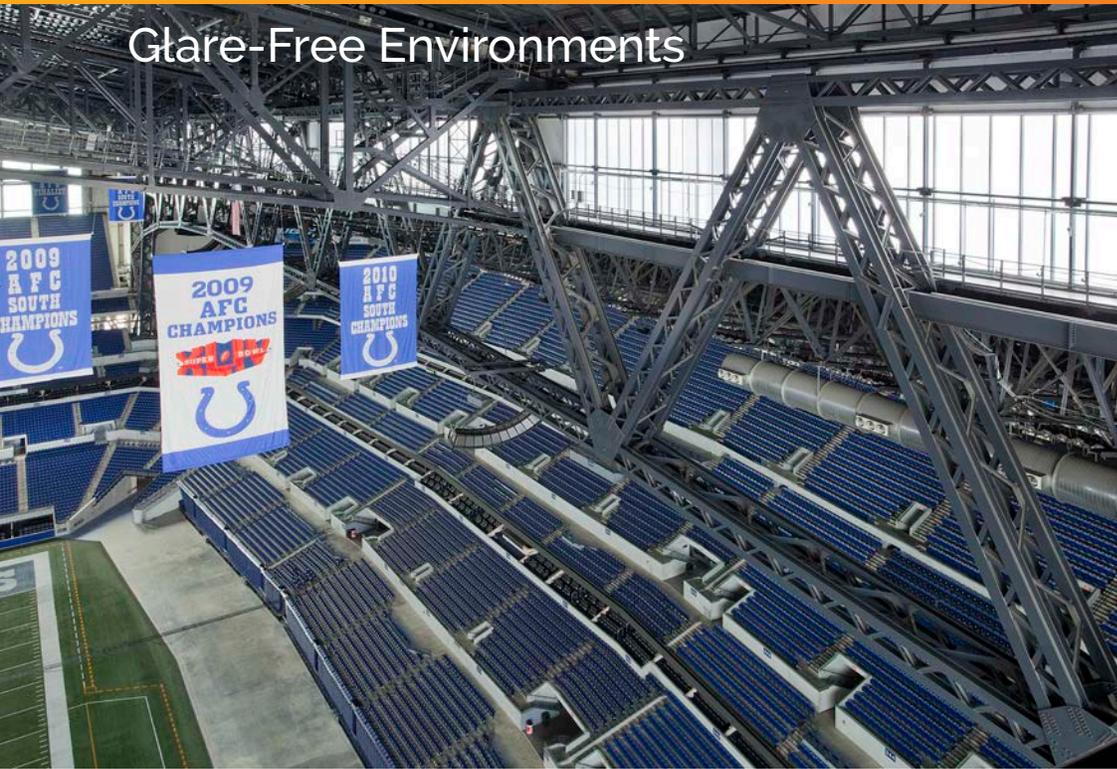
The key element of the InteltaSun system's design is the series of internal rotating louvers, called SolaBlades, which are inserted into our standard two-panel glazing system. The SolaBlades have the ability to rotate a full 360 degrees and gradually adjust their angle throughout the day to deliver and maintain the desired amount of light. By utilizing input from both light sensors and user control settings, these SolaBlades help to optimize building performance by effectively regulating sunlight, solar heat gain, and glare within a given space to ensure maximum occupancy comfort. They also eliminate the need for any type of secondary shading devices.

SolaBlades are mounted onto a single controlling shaft at the base of the glazing panels. Each SolaBlade can freely extend up to 40 feet, eliminating the need for horizontal breaks in the system, which could result in mechanical complications and extra wiring connections.

The free floating SolaBlade design also allows for uninterrupted expansion, contraction and structural movement.



Glare-Free Environments



▲ **Lucas Oil Stadium** id 20468

Indianapolis, IN

HKS, Inc.

An IntelaSun[®] wall system - two 20-ft. tall x 230-ft. long units with ice white glazing - was selected by the owners to bring managed natural daylighting into the new football stadium while controlling glare on the playing field. Each system is controlled by a wall controller mounted in the stadium's central control room. The IntelaSun system provides this professional stadium with the high level of daylight diffusion and glare control that is essential for sports facilities.



▶ **San Benito High School** id 40711

Hollister, CA

Aedis Architects

The gym at San Benito High School in Hollister, CA serves a number of different functions - from sporting events to school assemblies, and therefore requires a number of varying light levels. The gym's 40-ft. x 40-ft. IntelaSun skylight was specified because of its ability to provide the perfect amount of glare-free diffused light for any event.



▲ **Project:** AIRBUS - Final Assembly Hangar id 37098
Location: Mobile, AL
Architect: Reinhard Hagemann GmbH

System Zoning

IntelaSun® glazing systems can be divided into up to 4 different zones and each zone can be controlled by the same controller and pair of sensors. All panels in a zone are subject to the same control logic and commands. These zones can also have up to 4 branches.



▼ **Project:** Stillaguamish Community Center id 38391
Location: Arlington, WA
Architect: Womer and Associates

▼ **Project:** da Vinci Arts Middle School id 26248
Location: Portland, OR
Architect: SRG Partnership

Wall Controller

IntelaSun® systems are managed from a wall-mounted control and can be programmed to be fully automated or operated manually, based on the user's preference. The display indicates both light levels and the position angle of the SolaBlades®. The controller comes equipped with a user-friendly interface for easy operation, and includes a "quick dim" function that will darken the room in 45 seconds or less. Simply tap the button again to open the blades. The controller can also be programmed to control multiple zones, depending on the configuration of the daylighting system, and can even be integrated with other building controls to improve overall building efficiency.

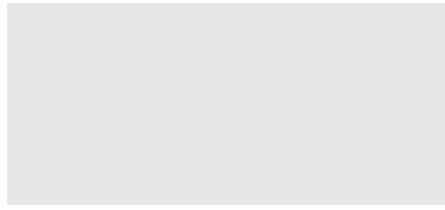
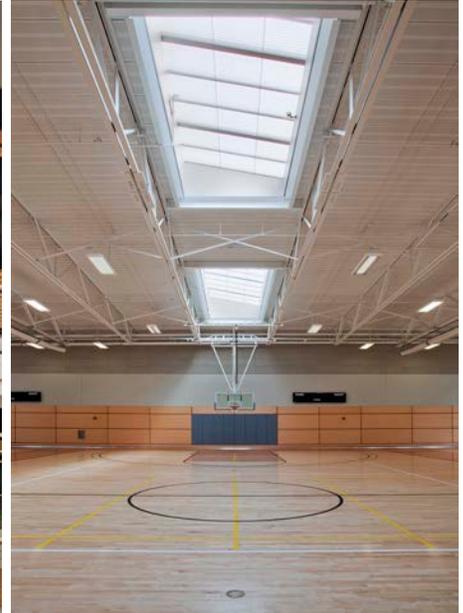


University of Oregon id 36496

Eugene, OR

Robertson Sherwood Architects &
RDG Planning Group

Much of the student recreation facility's design centered on sustainability, and as a result, the building was awarded LEED Platinum status. Daylighting played an integral role, and required a system that could dynamically control light levels to ensure optimal performance. Intelasun was chosen for its ability to effectively minimize solar heat gain and reduce the facility's dependence on electrical lighting. The goal was to reduce overall energy consumption from electrical lighting and HVAC systems while maintaining a high level of glare-free diffused daylight.



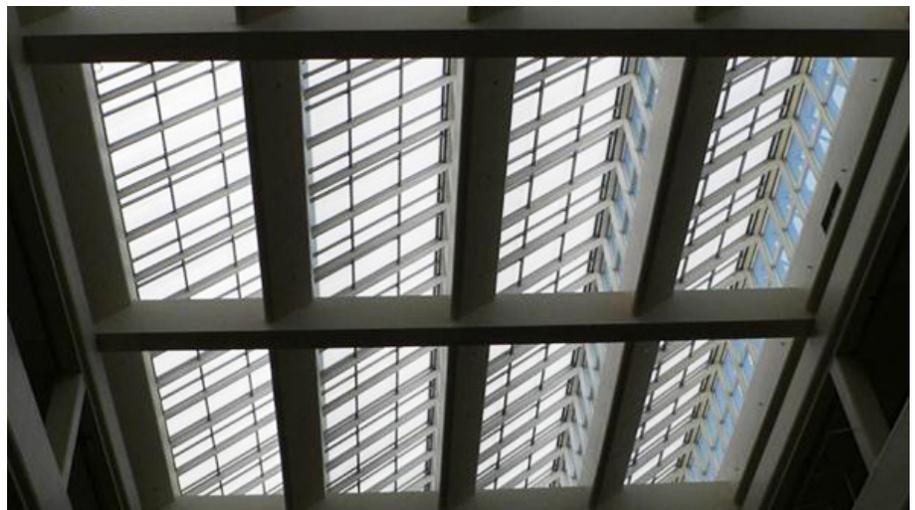
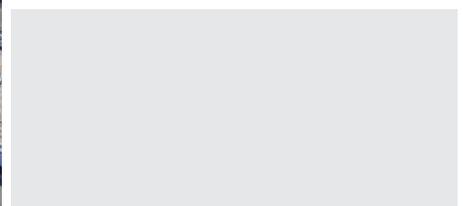
Lockheed Martin id 22772

Sunnyvale, CA

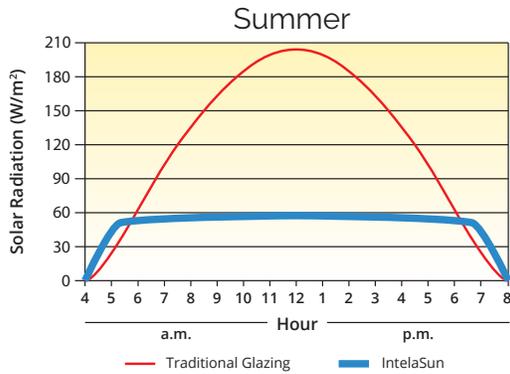
Gordon-Prill

To combat the excessive glare and solar heat gain that was plaguing the interior workspace below and negatively impacting productivity, CPI Daylighting provided a comprehensive retrofit solution to replace 20,000 sq.ft. of glass skylight with an Intelasun[®] controlled daylighting system. The glass was removed and replaced with the Intelasun system, which was installed onto the existing substructures.

Each of the four 12-ft. x 300-ft. rows of Intelasun is controlled by one wall controller that is divided into 4 zones, creating a total of 16 managed daylighting zones for the covered space. The Intelasun system provides each zone with optimal daylight based on the sun's location in relation to the work space. This Lockheed Martin facility has been praised as a textbook example of optimal daylighting.

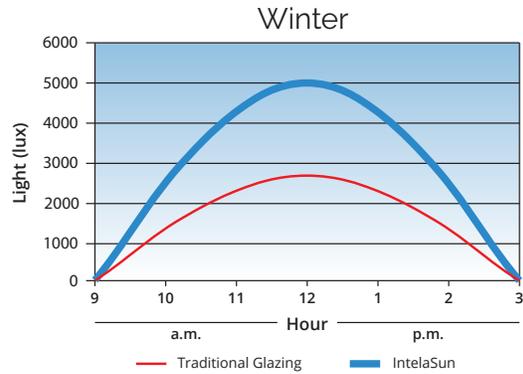


IntelaSun® Compared to Traditional Glazing



IntelaSun Blocks Up To 80% of Solar Heat

**Traditional glazing = Low-E glass*

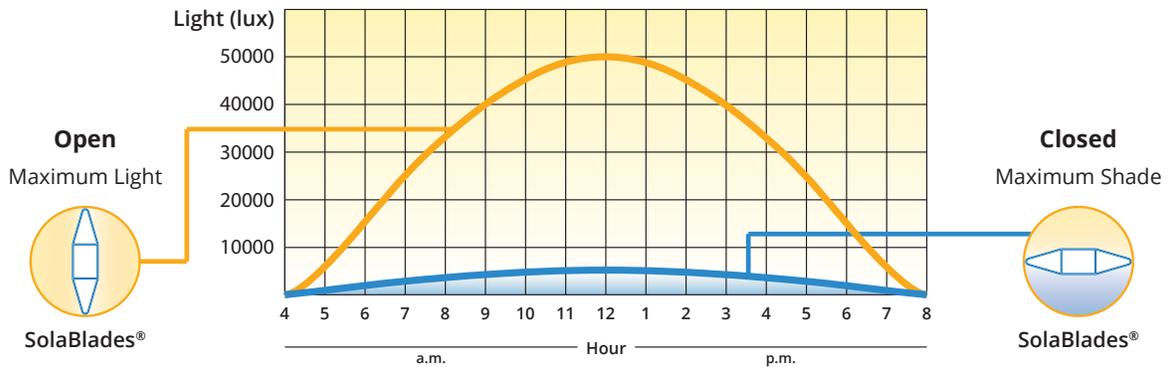


IntelaSun Increases Daylight Transmission 100%

**Traditional glazing = Low-E glass*

Typical Light Level (lux) vs Hour of Day

IntelaSun® Delivers Any Amount of Sunlight Desired



The dynamic nature of the IntelaSun® system allows it to reduce the amount of light transmission during the summer and peak daylight hours, and harvest the available daylight during the winter or early morning and late afternoon hours when the sun is at its lowest. By effectively regulating the light transmission levels throughout the day and year, the IntelaSun system helps to lower peak load demands, which in turn significantly improves a building's energy efficiency. The result, predictable energy consumption and associated cost savings.

Note: The maximum amount of light that can be achieved by the system is dependent on the glazing panels used.

