

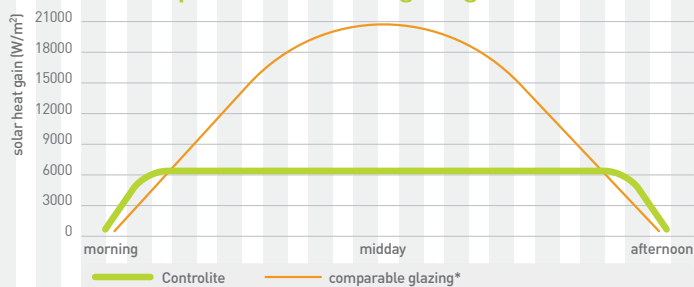
OPERABLE DAYLIGHTING SYSTEM



controlite  
intelligent daylighting system

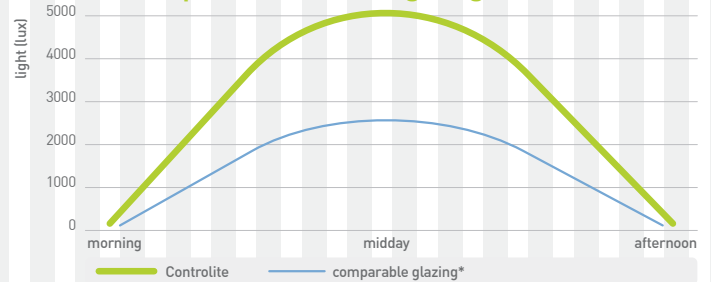


#### Controlite compared to traditional glazing — summer



Controlite blocks 80% of solar heat gain (W/m²).

#### Controlite compared to traditional glazing — winter



Controlite increases daylight transmittance by 100%.

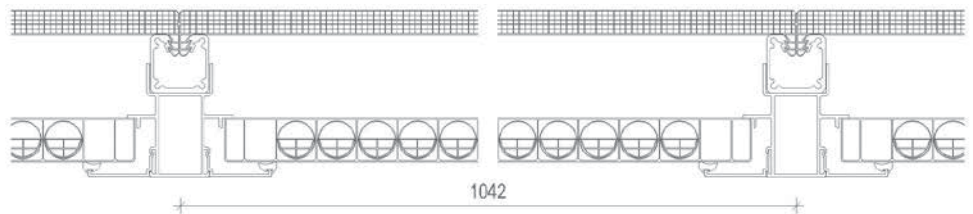
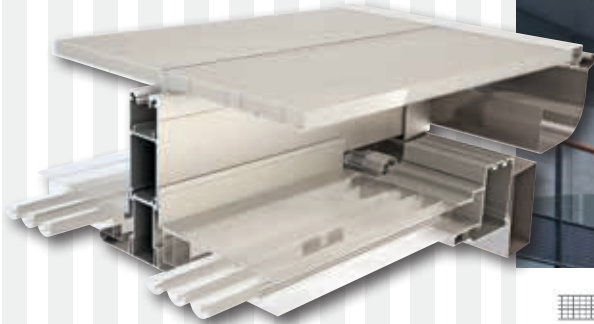
\*Comparable glazing: 30% insulating, Low E-glass, or 25mm opal multiwall polycarbonate.

#### WHY CONTROLITE?

1. Delivers optimal comfort in variable climatic conditions by maximizing available daylight in winter and reflecting solar heat in summer.
2. Enables daylighting solutions with significantly larger surface area, thereby increasing overall daylight in the building.
3. Improves well-being of building tenants, visitors and users for increased productivity and an improved indoor environment.
4. Creates ideal natural lighting in classrooms and significantly improves the learning environment.
5. Prevents glare with uniformly diffused light: stadiums are perfectly lit for TV broadcasts, athletes are not affected by looking into direct sunlight.
6. Withstands weather and temperature extremes due to durable materials and construction.
7. Permits multiple uses of covered spaces by adapting indoor light level.
8. Saves energy and reduces heating/cooling costs, reduces electricity usage and costs.
9. Reduces capital investment in air-conditioning equipment.
10. Integrates into sustainable design, reduces energy consumption and consequent greenhouse gas emissions and significantly contributes to reducing the building's overall carbon footprint.

# Danpalon plus Controlite

## Roofing Applications



## Vertical Applications

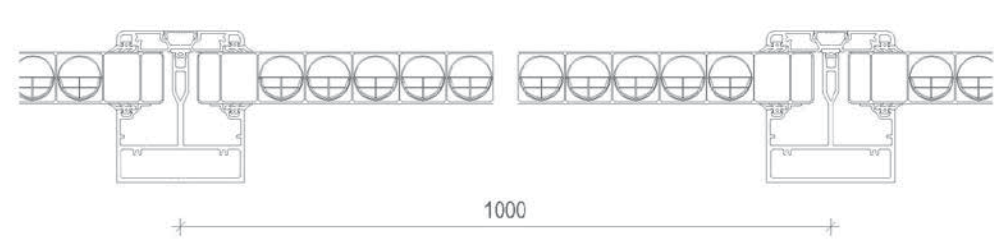


- The double layered system utilises an external layer of 16mm Danpalon (supported by a 100% leakproof aluminium frame) together with an internal layer of Controlite panels.
- This provides superior insulation, eliminates glare and protects mechanical components from the elements. A large range of connectors are available, enabling spans up to 9 metres in typical wind conditions.

Connector size varies according to span required




# Traditional Controlite



A single layer of Controlite supported with an aluminium glazing bar frame can be used instead of the double layered system in certain applications. Contact your local distributor for more information.



|  | Danpalon plus Controlite<br>for roofing                |        | Danpalon plus Controlite<br>for vertical applications |        | Traditional Controlite          |        |
|--|--|--------|---|--------|---------------------------------|--------|
|  | Open   | Closed | Open  | Closed | Open                            | Closed |
| Assembly thickness (mm)  | 116-250 (depending on span)                            |        | 116-200 (depending on span)                           |        | 88                              |        |
| Assembly module (mm)   | 1042   |        | 1042  |        | 1000                            |        |
| Maximum length (mm)  | 11980  |        | 11980   |        | 11980                           |        |
| Weight including frame (kg/m²)   | 14.5   |        | 14.5  |        | 9.5                             |        |
| U value (W/m²K)  | 1.0  | 0.9    | 1.0   | 0.9    | 1.8                             | 1.7    |
| Acoustic insulation  | 27 dBA   |        | 27 dBA  |        | 21 dBA                          |        |
| Light transmission   | 37%  | 5%     | 37%   | 5%     | 60%                             | 6%     |
| Minimum pitch  | 5 degrees (ideally 9 degrees)                          |        | N/A   |        | 14 degrees (ideally 25 degrees) |        |
| Manufacturing certification  | ISO 9001 – ISO 14001                                   |        |   |        |                                 |        |
| Additional finishes available<br>on Controlite panels                              | Softlite plus standard colours (subject to lead times) |        |   |        |                                 |        |
| Compliant with AS1562 – 3  | Yes  |        |   |        |                                 |        |

It's possible for carefully controlled daylight to provide all necessary interior lighting with less heat emitted than is released by incandescent or fluorescent lights.

Kevin Klustner, "The Six Degrees of Building Efficiency" (GreenerBuildings)\*

\*<http://www.greenerbuildings.com/news/2007/09/04/six-degrees-building-efficiency>

In building design, bringing daylight indoors lifts our mood and improves productivity. But too much sun indoors causes glare and overheating.

Light transmission correlates directly to solar heat gain. Managing light transmission and solar heat is critical to effective design and efficient energy use. Traditional skylights and daylighting systems often deliver too much sunlight on hot summer days and fail to take advantage of the natural light during short winter days.

The challenge remains:  
How can we "let in" the optimal amount of light all year round yet avoid unwanted heat?

## How It Works

The Controlite system presents a dynamic, cost-effective solution for managing and controlling daylight in office buildings, shopping malls, schools, libraries, stadiums, museums, and more.

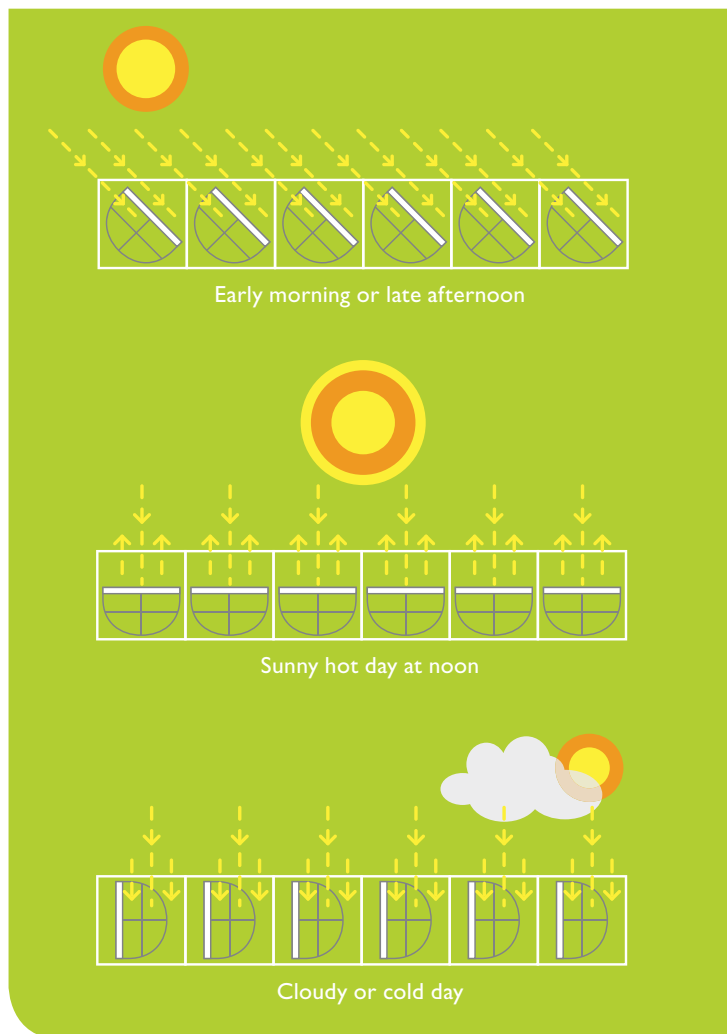
An external sensor detects the direction of the sun; internal sensors register the level of light inside the building. The intelligent system then balances light levels, solar heat, and shade to transmit uniformly diffused light and create a comfortable indoor environment.



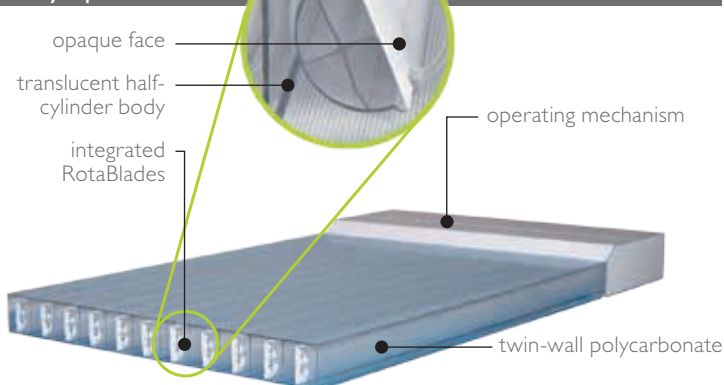
Fully closed

### System Components

- Durable, one-piece, twin-wall polycarbonate glazing panels with integrated RotaBlades.  
**Panel size:** 980mm(wide) x 30mm (high) x up to 11 980mm (maximum length).  
Second layer of multicell polycarbonate panels, 1042mm (wide) x 16mm (high) x up to 11 980mm (maximum length).
- **Aluminium structural glazing system.** Module width: 1042mm.
- **User control panel** to set the desired light levels.
- **External sun sensor** to detect the direction of sun's rays.
- **Internal light sensor** to monitor the desired level of daylight.



Fully open





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Your Controlite Specialist is:

[www.danpalon.com.au/controlite](http://www.danpalon.com.au/controlite)

