# DYNAMIC GLASS
## FOR SOLAR CONTROL

CONVERLIGHT®
*by ChromoGenics*

People need daylight. Glass façades provide light and open settings but they also place high demands on how energy should be handled, with respect to the environment, comfort and sustainability.  Access to daylight while screening out direct sunlight might seem contradictory, but dynamic glass can fulfill these needs in a single product.

# MORE COMFORT WITH LESS ENERGY

ConverLight® is the flexible, smart window solution providing effective solar protection for increased indoor comfort and lower energy consumption – while allowing people to experience natural contact with the outside world. ConverLight® windows adapt automatically or manually to daylight and solar radiation, without any external equipment destroying the view or changing the façade's esthetic appearance.

The energy savings come from reduced needs for air conditioning, since the surplus solar radiation can be reduced effectively by dynamically shading the glass. Together with lower operational and maintenance costs, ConverLight® makes for a very efficient solution. The environmental footprint is reduced while people experience well-being from their interior environment. ConverLight® also contributes to fulfilling the requirements of environmental certifications such as LEED, BREEAM and Green Building.

Dynamic solar control provides natural contact with the outside world and reduces undesirable heat influx

Low operating and maintenance costs

Contributes to fulfilling the requirements of environmental certifications

# ADVANCED TECHNOLOGY
# EASY CONTROL

ConverLight® is an electrochromic glass with dynamic solar protection properties, and can be used in all types of glass solutions, from single pane glass to insulation glass with multifunctional properties. When the sunlight intensifies on the façade of the building, the glass becomes darker and the solar energy's radiation is reduced.

The control unit has maximum compatibility thanks to its open interface, which results in a future-proof solution. With the option of integrating the control unit into various building automation systems, ConverLight® can easily form part of a tailor-made control solution for any project. The control unit is equally well suited to smaller installations, such as automatic control from a solar sensor or integrated control with other functions such as heating, cooling, ventilation and lighting.

Compatible control unit can be integrated into various building automation systems on the market

Flexible and future-proof thanks to open interface

Gentle, pleasant changing of glass toning

# SUN, **COMFORT** AND UNLIMITED VIEWS

## SOLAR CONTROL WHEN NEEDED

- Dynamic solar control can reduce solar radiation up to 90%
- Allows warming effects of solar radiation during colder seasons
- UV protection reduces risk of fading interiors
- Sound reduction properties
- Safety via laminated and tempered glass

## ADAPT TO NEEDS

- Maximum compatibility thanks to open interface in control unit
- Can be integrated into control solutions for solar sensors, temperature sensors, calendars, etc.
- Control solar screening in defined zones
- Better regulation of interior climates
- Reduced reflections on computer screens

## BETTER VIEWS

- Natural contact with the world outside – we need daylight
- No need for installing and maintaining exterior solar protection, such as awnings, mechanical shades or retrofitted plastic foils
- You choose when you want darker glass
- High optical quality

# SIMPLE, **SUSTAINABLE** AND FLEXIBLE

## EASY INSTALLATION

- Compatible with various building automation systems on the market
- Easy to integrate the control unit into various control solutions for buildings
- Suitable for new construction, reconstruction and renovation
- Transported and handled like ordinary glass

## SUSTAINABLE CONSTRUCTION

- Lower energy consumption due to reduced needs for building cooling
- User-controlled comfort with access to daylight
- Contributes to environmental certifications such as LEED and BREEAM
- Low operating cost as it only uses electricity when changing the tint

## ARCHITECTURE AND DESIGN

- Easier to handle sunlight on large glass surfaces
- Glass sections as large as 1.55 x 4.40 m
- Can be combined with several other functions of insulated glass
- Proprietary FreeForm®production method provides design flexibility: rectangular, triangular, round or bent glass

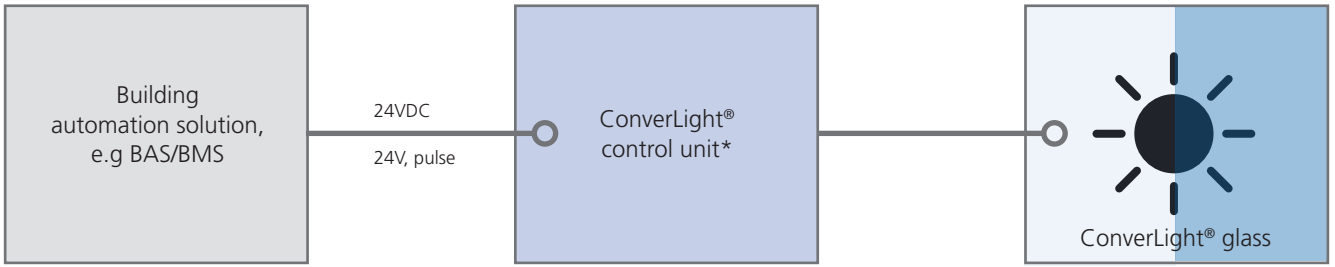
# CONVERLIGHT®

## DYNAMIC PROPERTIES

| Glass construction<br>ConverLight® (CL) ) is delivered in a laminated construction with two tempered glass panes | | | | | | | Daylight | | | | | | | | | | Energy $U_g$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Outward reflection, % | | Inward reflection, % | | Light transmission, % | | g value/ solar factor | | $R_a$-index | | |
| | CL | Argon | LowE | Argon | LowE | Total thickness, mm | Light | Dark | Light | Dark | Light | Dark | Light | Dark | Light | Dark | U-value W/m²K |
| Single-glazed | 44.3 | | | | | 9,0 | 11 | 7 | 12 | 7 | 66 | 17 | 0,63 | 0,31 | 91 | 89 | 5,5 |
| Double-glazed | 44.3 | 16 | 6 | | | 30,9 | 13 | 7 | 15 | 11 | 59 | 15 | 0,43 | 0,13 | 92 | 88 | 1,1 |
| Triple-glazed | 44.3 | 16 | 4 | 16 | 6 | 50,7 | 15 | 7 | 18 | 15 | 54 | 14 | 0,36 | 0,10 | 92 | 88 | 0,6 |

Examples of measured values with ConverLight®. Daylight according to EN 410. U-value according to EN 673.

## CONTROL WITH CONVERLIGHT CONTROL UNIT




* EMC standard according to EN 6000-6. Product safety according to EN 60950.

# WE MAKE BUILDINGS MORE ATTRACTIVE

ChromoGenics is a leader in dynamic glass with controllable optical properties. The company's unique electrochromic technology ConverLight®, provides dynamic solar control with increased indoor comfort and energy efficiency. In 2016 the company started sales and deliveries to real estate projects in Scandinavia.

ChromoGenics is located in Uppsala. The production facility includes climate-stabilized cleanroom facilities, production lines for ConverLight® glass laminates, testing and development facilities.

The technology is derived from the world leading research center at Ångström Laboratory at Uppsala University. The plant has been partly financed by a conditional loan from the Swedish Energy Agency. ChromoGenics share (CHRO) is listed on Nasdaq First North Stockholm with G&W Fondkommission as Certified Adviser.

ConverLight® is developed, manufactured and marketed by ChromoGenics AB.

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ChromoGenics

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