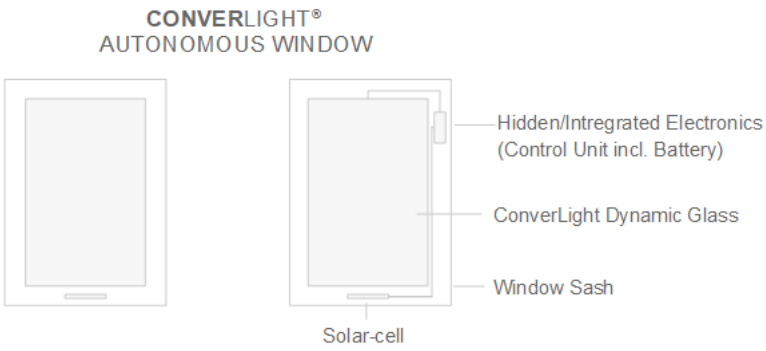
ConverLight® Autonomous Window (AW), Technical specification

This is a product sheet for the ConverLight® Autonomous Window (AW), to inform the customer, or other contractor, of its technical details and requirements.

DEFINITION CONVERLIGT DYNAMIC

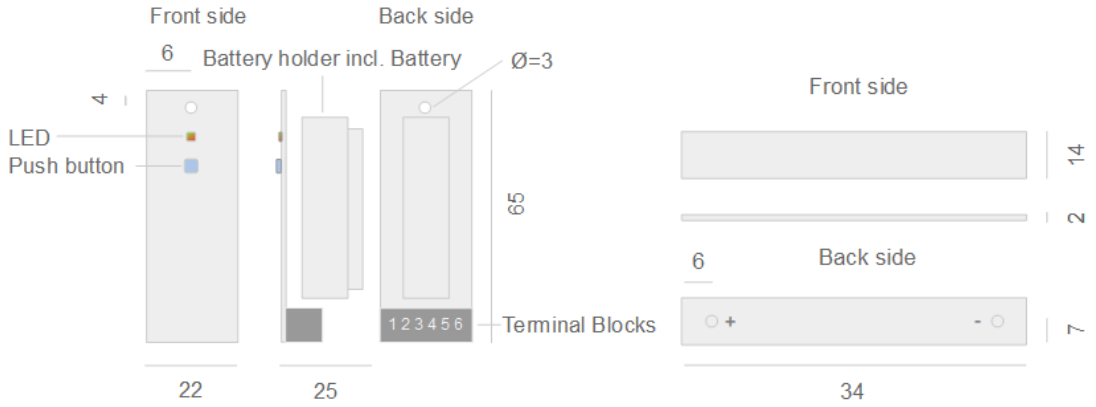
ConverLight Dynamic is a controllable solar-control glass that provides improved indoor comfort and contributes to better energy efficiency in the building, without blocking views and daylight exposure. With ConverLight, it is always possible to customize the solution depending on the conditions and requirements for the current installation.

TECHNICAL SPECICIKATION AUTONOMOUS WINDOW (AW)

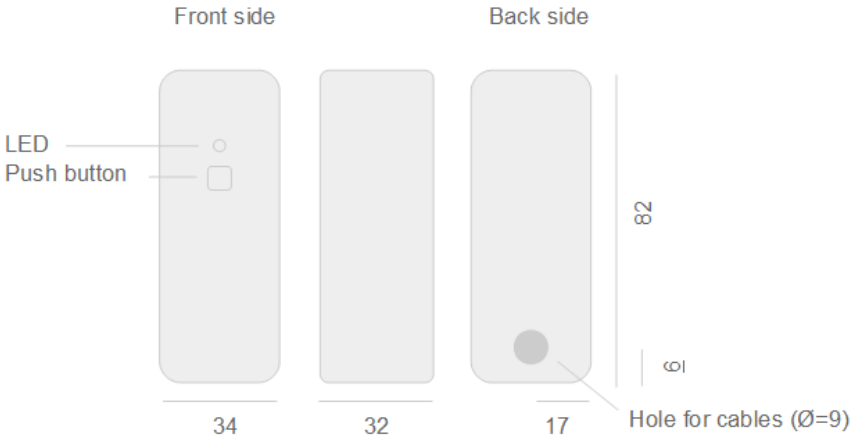


The ConverLight Autonomous Window (AW) is a completely self-sufficient and regulating window, and where all electronics are hidden in the window sash, which makes the solution completely independent of external cables and control systems. The power is generated from a small solar cell located on the outer sash bottom, which is possible because of ConverLight extremely low power and energy requirements. The automation and control are carried out automatically by a control unit that is integrated into the window sash. In order to guarantee windows function in the winter, or long periods without sun, there is also a small battery added to the control.

Technical Specification AW			
Mechanical / Housing			
Type	**W x H x D (mm)**	**Protection**	**Comment**
Solar cell	86 x 12 x 2	IP66	Placed outside window sash
Electronics	22 x 65 x 25	IP20	Control unit incl. Battery, placed concealed/integrated in window sash or in enclosure.
Housing (option)	34 x 82 x 32	IP50	When placing electronics on the inside of the sash.
CLD Glass	max 2.5m^2	-	Configuration optional.
Control Glass			
Amount Glass	**Control**	**Levels**	**Comment**
1	Autonomous	Continuous	Level is automatically adjusted to the optimum level according to the current solar intensity and temperature
Kraft			
Main	**Reserve**	**Function without sun**	**Comment**
Solar cell	Battery (AAA)	>2 month	Even if the battery is discharged, the function always starts-up with sunshine
Interface Control unit			
Push Button	**Status indication**	**Terminal Blocks**	**Comment**
On/Off/Status	Red/Green LED	Solar-cell/Battery/Glass	For detailed instructions see table below.



Schematic image Electronic (Control unit incl. Battery) and Solar cell

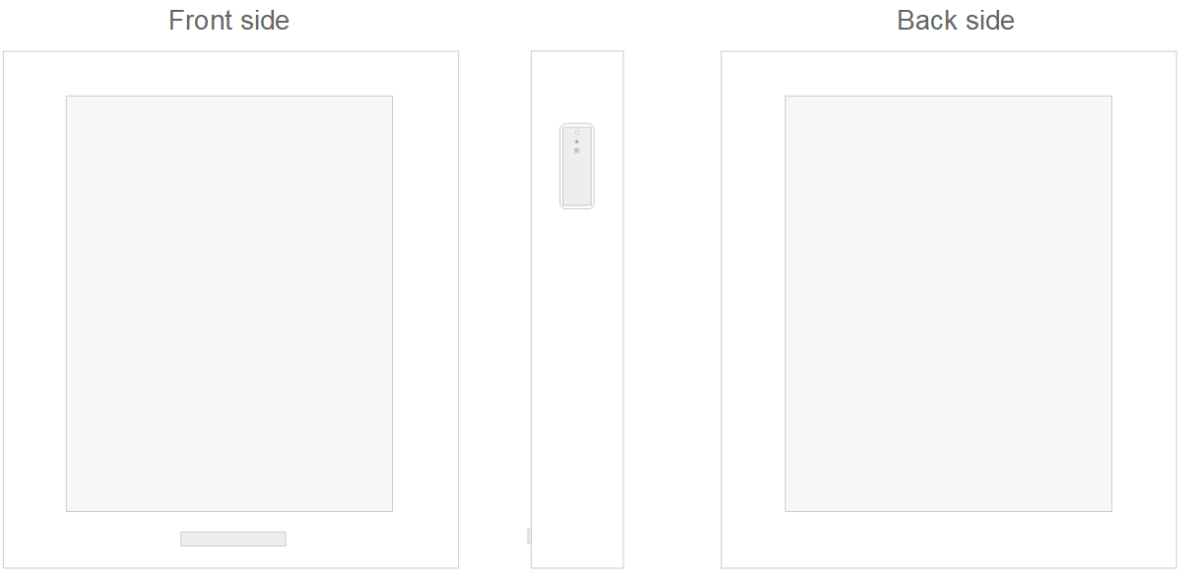


Schematic image of Housing

Wiring				
Explanation Connection Terminals				
Terminal	**Connection**	**Polarity**	**Area**	**Comment**
1	Solar cell	Black Cable (-)	2x0.5mm^2	Requires cable entry and weather seal in window sash
2	Solar cell	Red Cable (+)		
3	Battery	Black Cable (-)	2x0.5mm^2	
4	Battery	Red Cable (+)		
5	Glass	Red Cable (+)	2x0.5mm^2	
6	Glass	Black Cable (-)		

Instruction Button and Status indication			
Press button	**Indication LED**	**Function /Status**	**Comment**
Long press (>1s)	Red, 10s	OFF (constant bright mode)	When solar control is not needed
	Green, 10s	ON (Autonomous mode)	When solar control is desired
Short press (<1s)	Red, blinks	Bright state	Fully bright
	Green, blinks	Dark state	Level is automatically adjusted to the optimum level according to solar intensity and temperature
-	Red, blinks	Brightening in progress	Lasting for about 20min, depending on glass size, solar intensity, temperature.
	Green, blinks	Darkening in progress	

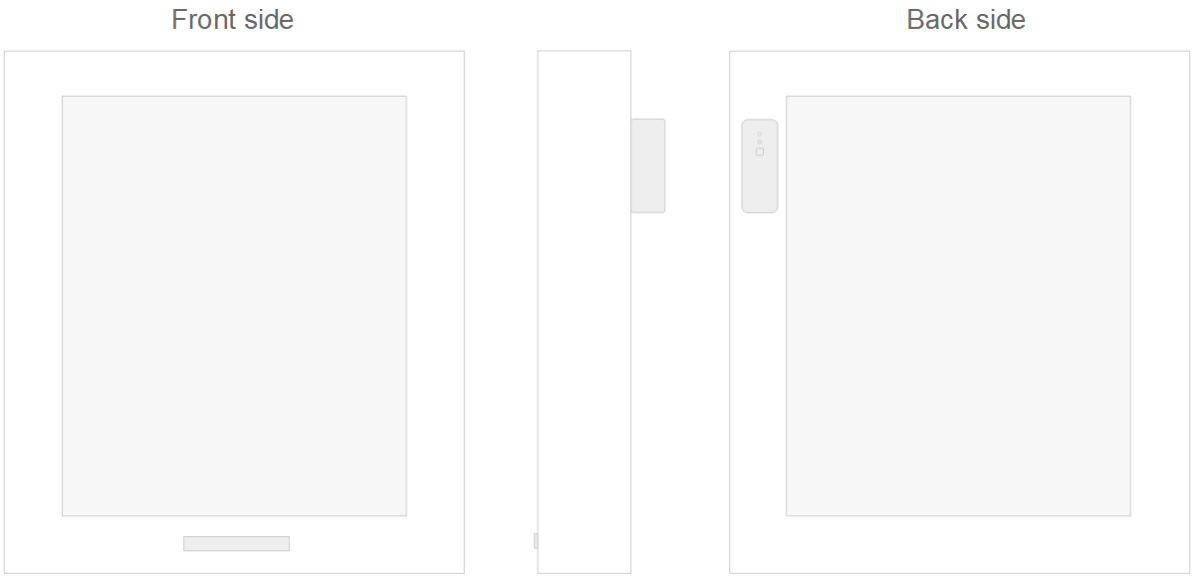
EXAMPLE, INTEGRATED IN WINDOW SASH



Schematic image ConverLight AW integrated in window sash.

Schematic image wiring for ConverLight AW integrated in window sash

EXEMPLE, HOUSING ON INSIDE WINDOW SASH



Schematic image ConverLight AW with housing on inside window sash.

Schematic image wiring ConverLight AW with housing on inside window sash.

For questions, please contact ChromoGenics.