

ines  
INSTITUT NATIONAL  
DE L'ÉNERGIE SOLAIRE

liten  
cea tech

# SOLAR ADAPTATIVE FACADE

The soft-technology building-integrated PV module (SBIP) has been designed for positive energy buildings facades. This simple and multi-functional device enhances the energy efficiency of buildings by controlling the solar energy on the facade. Depending on control algorithm and associated sensors, this composite building skin can manage the outside view, the thermal comfort and natural transmitted light, or even solar electricity production, for a better and greener life quality inside. Coloured modules, pixelisation and movement will bring a unique aesthetic to the building facade.



## INTERESTS :

- Better thermal comfort inside the building thanks to the control of radiation entering the building
- Decrease of the building's energy consumption
- Electricity production to power motors and buildings

## > THE SOLAR ADAPTATIVE FACADE

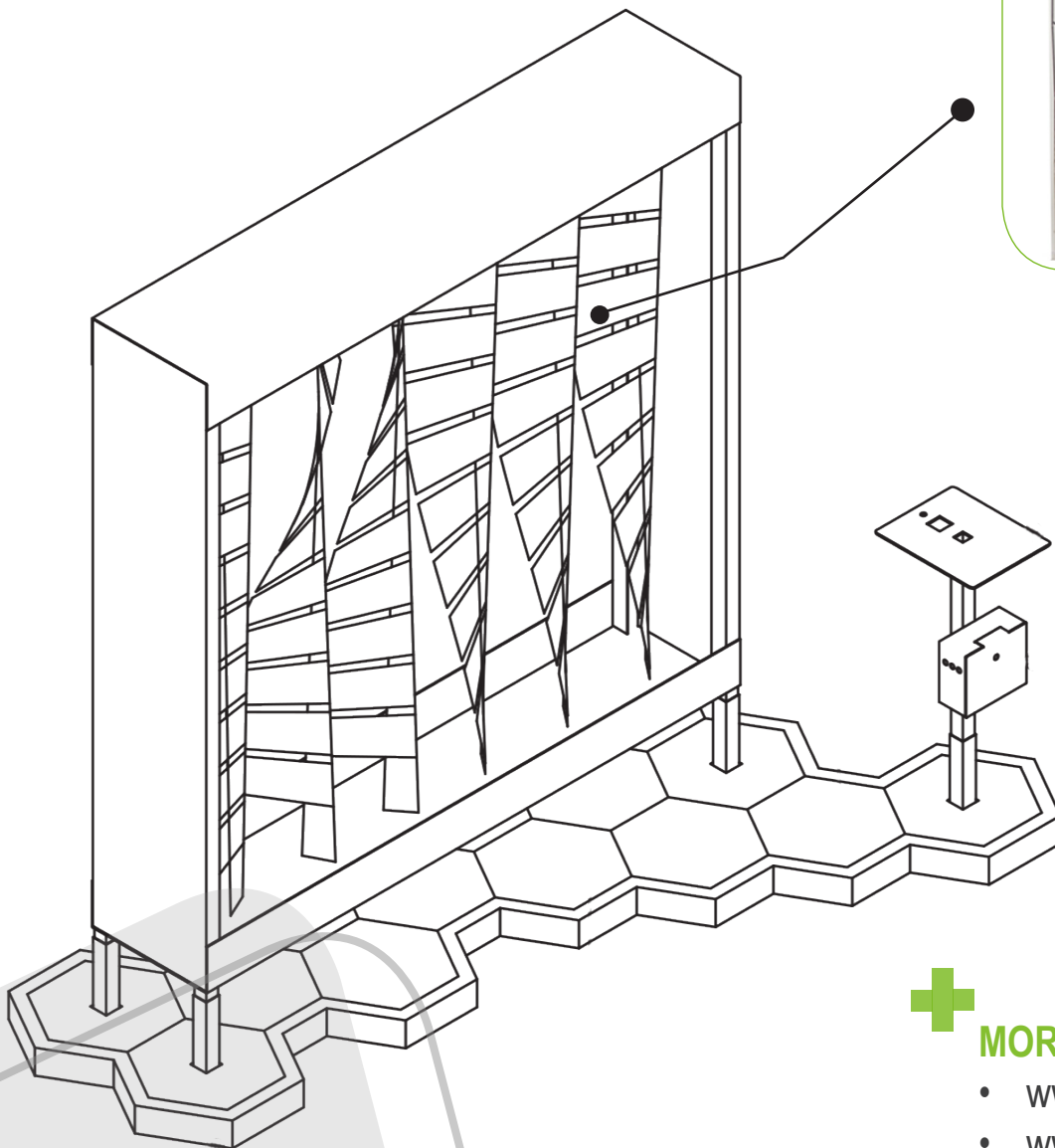
### TECHNOLOGY

A stepper motor is attached to each end of the modules, allowing them to be twisted from above or below. The eight fins positioned horizontally on the module, each containing two photovoltaic cells, follow the movement of the spin, providing a progressive orientation of the fins between them. Then, it is possible to obstruct the sun only at the top, bottom or completely; while producing electricity.

This innovative orientation system allows eight fins to be oriented with only two motors per module and thereby to precisely control the solar gain in a building. This ensures that thermal and visual comfort for occupants can be controlled.

### + THE MODULE :

- 180x38 cm<sup>2</sup>
- Bifacial heterojunction PV cells
- 8 horizontal fins each containing 2 photovoltaic cells
- Power : 72W
- Weight : 1,6kg



### + MORE INFORMATION

- [www.liten.cea.fr](http://www.liten.cea.fr)
- [www.ines-solaire.org](http://www.ines-solaire.org)