



# X-LAB UHASSELT

## B-3590 Diepenbeek - Belgium

**Project name :** X-Lab University of Hasselt  
**Architect(s) :** ESSA  
**Project owner :** University of Hasselt  
**Façade contractor :** E-Activ

### Application

High performance triple glazed curtain wall façade as part of a new building construction with embedded solar cells generating electricity and providing shading and cooling for the building and its occupants.

### E-Activ's scope of the work

- Design, planning, supply, and installation of the glass.
- Building system, engineering and installation.
- Electrical installation (DC), testing and commissioning

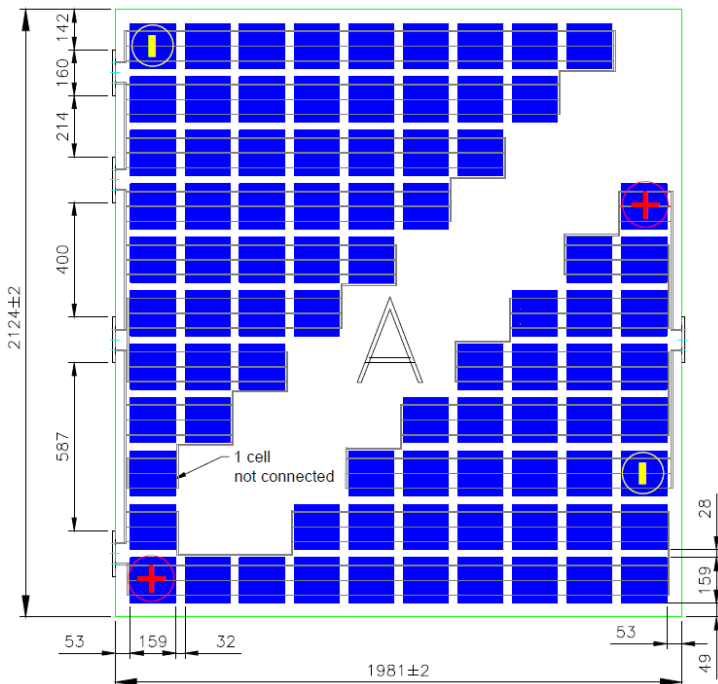
**Completion year :** January 2021

**Quantities :** 50 m<sup>2</sup>

**Power output :** 3,3 kWp

**Estimated annual energy production:** 2,25 MWh

### Design:



### Technical challenges:

- Cell layout to create the letter X after installing the glass and different designs.
- Optimized wiring between the glass units to limit the losses.
- High performance triple glazing.
- Fire Class BS1d0: no combustibility and special module assembling & components

### Features:

- Bespoke photovoltaic triple glass units with different cell layouts.
- Glass thickness calculations according to European standards
- High efficiency ( $\geq 22\%$ ) mono PERC solar cells 159x159 mm

### What makes the project possible?

- Current building regulations: "Nearly Zero Energy Building Directive" 2010/31/EU
- Project owner commitment towards sustainable construction
- E-Activ's experience and specific know-how for building integrated photovoltaic for public buildings.