

PHOTOVOLTAIC SKYLIGHT

SYSTEM DESCRIPTION

As we can deduce from the word, skylights are architectural details which provide extra illumination indoors, and this has been their primary function until now. The development of innovative PV cells lets us expand skylight functionality to turn them into small power plants.

Skylights are structures that are usually based on a framework of rafters and purlins, and usually infilled with single or two-chamber IGUs, or polycarbonate panes.

This is not enough today. To provide skylights with the added value of power generation, the outer IGU pane is replaced with a PV module, connected to other PV installation equipment with the wiring concealed in the water gutters of the aluminium rafters.

The PV skylights can be delivered in both standard and structural versions.

Skylights equipped with PV module glazing ensure:

- Proper illumination of rooms (with the transparency set to the customer's requirements)
- High thermal insulation performance (the PV modules form the outer panes of the IGUs)
- Optimum power generation
- NoFrost enabled PV modules to melt snow
- Constant indoor illumination with natural light (NoFrost keeps the skylights clear of snow)

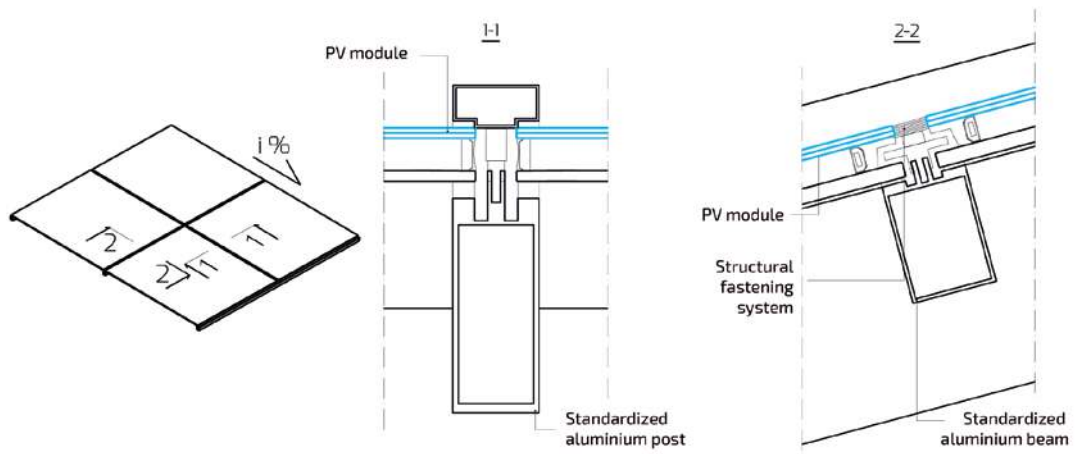
The ML System photovoltaic modules are infill panels compatible with the majority of commercial aluminium glazing systems for skylights, e.g. Aluron, Aluprof, Yawal, Ponzio, Reynaers, Sapa, Wicona, Schuco, Aliplast, Rehau, Alusystem, and others.

The PV module panel sizes are adapted to the building architectural design, designer's guidelines and project investor's demands. The PV modules can be manufactured in irregular shapes.

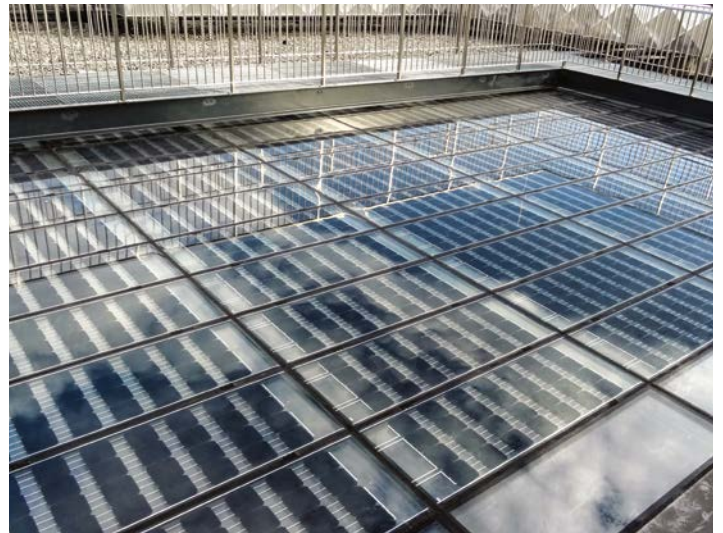
System technical specifications

Unit power	max. 200 Wp/m ²
PV cell efficiency	max. 22.5%
Max. operating voltage	1000 V DC
Module types	Monocrystalline, incl. back-contact Polycrystalline Thin layer
Optional	Bifacial NoFrost Printed

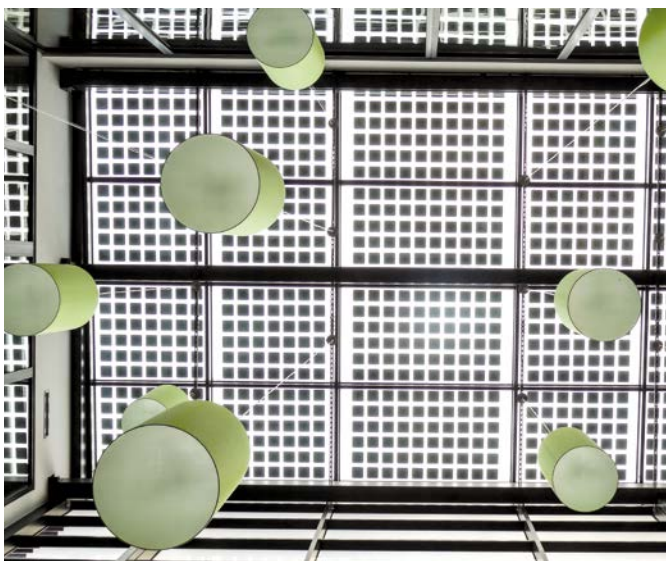
Substructure material	Ref. system manufacturer
Maximum module size	Ref. system manufacturer
Structure colour	See RAL palette
PV module IGU thickness	Ref. system manufacturer
PV module IGU type	Single IGU, transparent Single IGU, enamel-coated 1-chamber IGU 2-chamber IGU
PV module IGU heat transfer coefficient	0.8-1.1 W/m ² K
Module transparency	as required



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