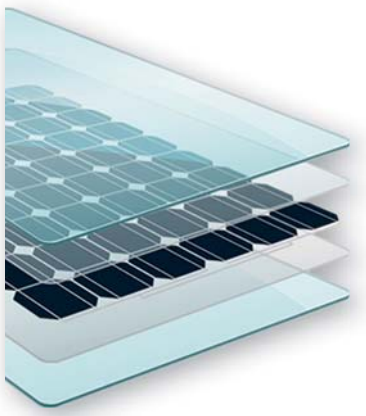
SOLAR PHOTOVOLTAIC **PANEL**



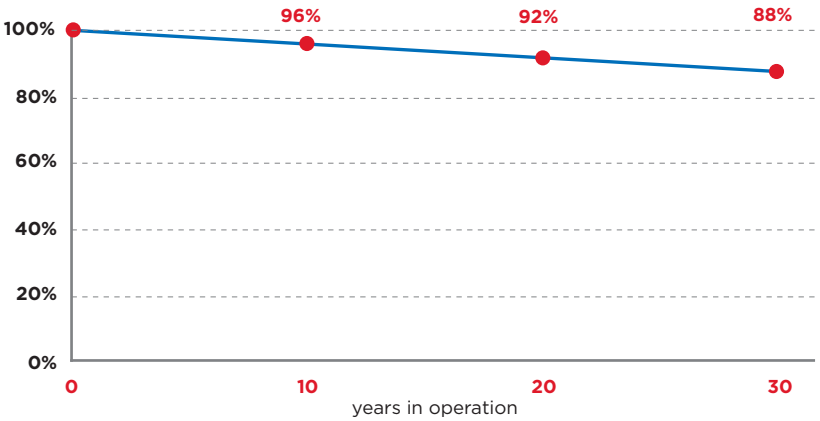
DG-450-B Photovoltaic Panel

Solar photovoltaic panel glazed on both sides **(double-glass)**, its effective area consists of **bifacial halfcut** solar cells.

Max. power	450 Wp
Voltage at maximum power	41.7 V
Current at maximum power	10.80 A
Short circuit current	11.39 A
Maximum system voltage	1500 V DC (IEC)
Maximum series fuse rating	20 A
Dimensions	2111 x 1049 x 35 mm (with frame)
Weight	29 kg
Top/back glass thickness	2 mm, solar clear glass
Output cables	1130 mm
Wind load	2400 Pa
Snow load	5400 Pa
Code	**20374**

MADE IN EUROPE

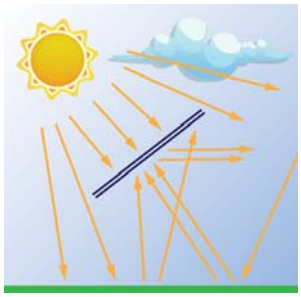
20 years warranty against manufacturing defects and 30 years guaranteed performance



After 30 years of operation, we guarantee 88% panel performance.

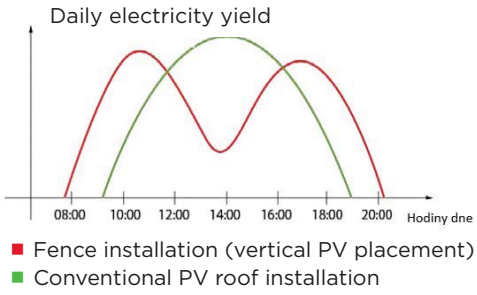
Bifacial panel

The effective area is formed by double-sided solar cells. By capturing the reflected sun rays at the rear, the instantaneous power output of the panel is increased by up to 25% depending on the layout and reflectivity of the surface under the panel.



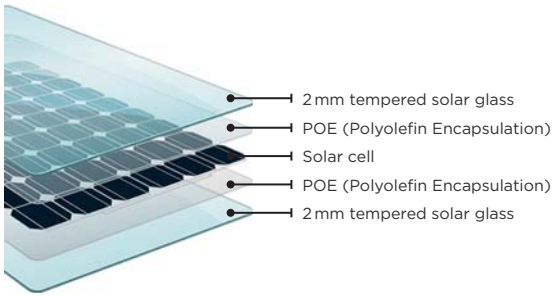
Vertical installation

In vertical installations with east/west orientation, the double-sidedness of the panel can be fully exploited. The graph shows that the all-day gain is comparable to a south-facing installation, but the distribution of solar gains during the day is much more favourable in the vertical design. Vertical installation is suitable for e.g. fences, noise barriers or agrovoltaics.



Double-glass panel

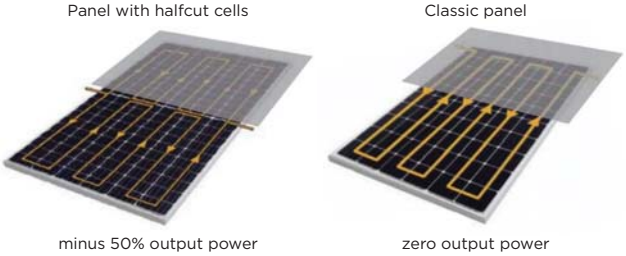
The top and bottom layers are made of high strength solar glass. The panel can also serve as a roof covering (e.g. for carports). The all-glass design provides a (snow) load capacity of up to 5400 Pa (approx. 540 kg/m2) and wind resistance of up to 2400 Pa.



Halfcut solar cells

Advantages:

- **Increased efficiency**
  Since the cells are shorter, there is less resistance in them, resulting in lower losses and higher efficiency.
- **Longer service life**
  Since the cells are smaller, they are less loaded and the risk of their damage is significantly reduced.
- **Better performance in low light**
  In low light, solar cells tend to generate less current. Since the cells in the halfcut panel are shorter, they generate more current, resulting in improved low-light performance.
- **Reduced shading losses**
  If one cell is shaded, it will not affect the performance of the whole panel as much, because only one half of the cells are shaded. The panel is divided into 6 segments of 24 cells each. The individual segments operate independently. When one segment is shaded, the other segments work. However, the effect applies to the whole array, even if the shading is only on one panel.



Atypical usage/installation options

The panels in the standard design ensure 2% transparency (light permeability). However, we can also supply other designs of panels to order - other dimensions, transparency, etc. Panels with higher transparency are suitable, for example, for agrovoltaics, greenhouses or use in the construction industry.

More installation examples

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