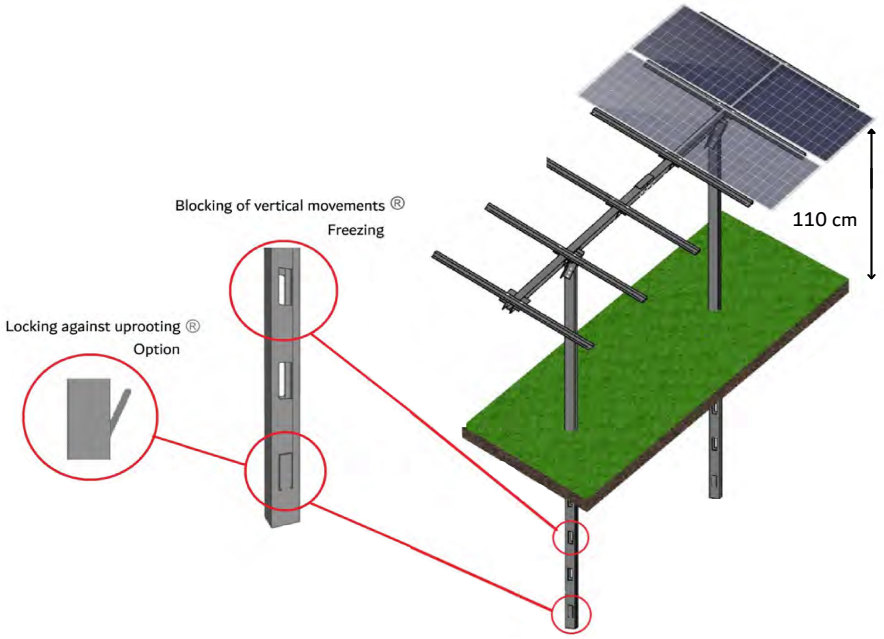
Greatness PV BIFACIAL MAX®

1x5 BiFacialMAX Ground PV

BIFACIAL MAX 1x5 ground structure is made of high-quality closed profiles steel covered with an additional protective coationg that provudes long-term protection of the surface of steel elements, ensures high resistance to corrosion and abrasion and has self-regenerating properties.

BIFACIALMAX structures are manufactured in a Polish steel profiles factory located in Wolental according to the highest European standards confirmed by certificates.



Top quality closed profiles

1x5 vertical layout

Tilt angle 25'

Weight of the structure
119 kg for 5 modules

Modules start
H = 110 cm

For modules: Width 1134mm with bolt spacing 1100mm or 1400mm

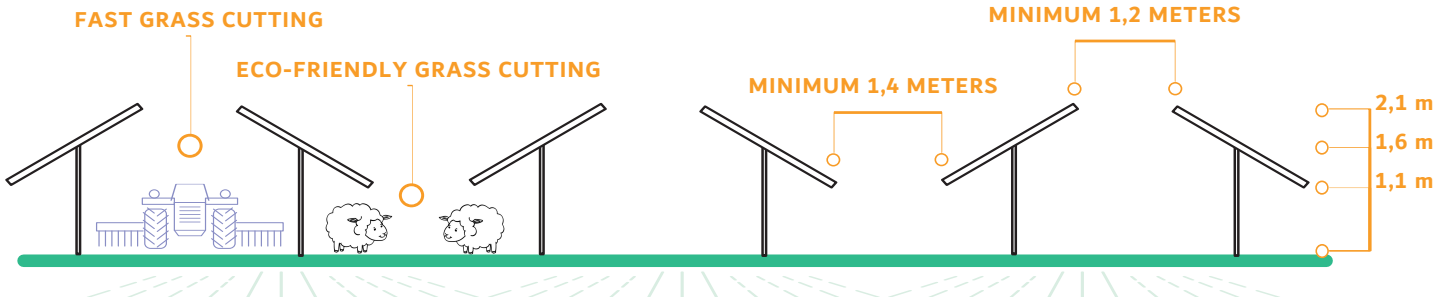
1,2,3,4
Snow Zone

1,2
Wind zone - 200 km/h Option

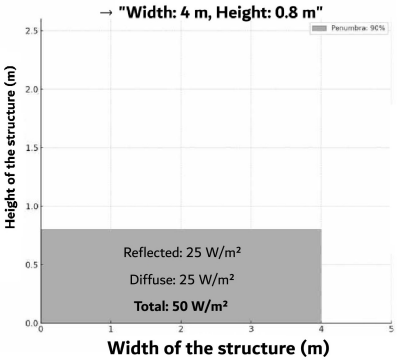
Modules length
L = 230 cm

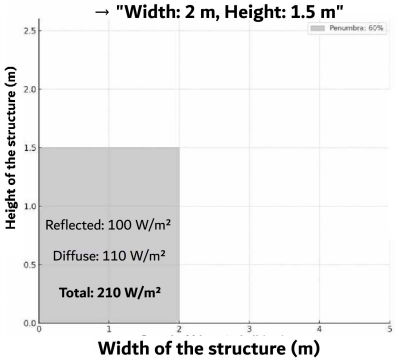
In accordance with European standards	Certificates
PN-EN 1991-1-1 Eurocode 1	EN 1090-5:2017
PN-EN 1991-1-3 Eurocode 1	EN 1090-2:2018
PN-EN 1991-1-4 Eurocode 1	EN 1090-4:2018
PN-EN 1993-1-3 Eurocode 3	EN 1090-3:2019
PN-EN 1993-1-8 Eurocode 3	

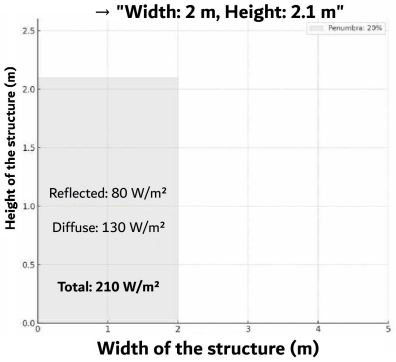
RECOMMENDED BIFACIALMAX® **TABLE LAYOUT EAST WEST 1P** STATIONARY SYSTEM-ALBEDO 26%
GUARANTEEING 20% MORE ENERGY GENERATION PER YEAR FROM THE BACK OF THE BIFACIALMAX MODULES

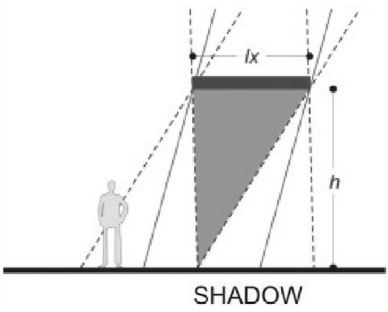


Level of irradiation reaching the rear side of the panels (W/m²)









STEEL CLOSED PROFILE

S355
STEEL S355

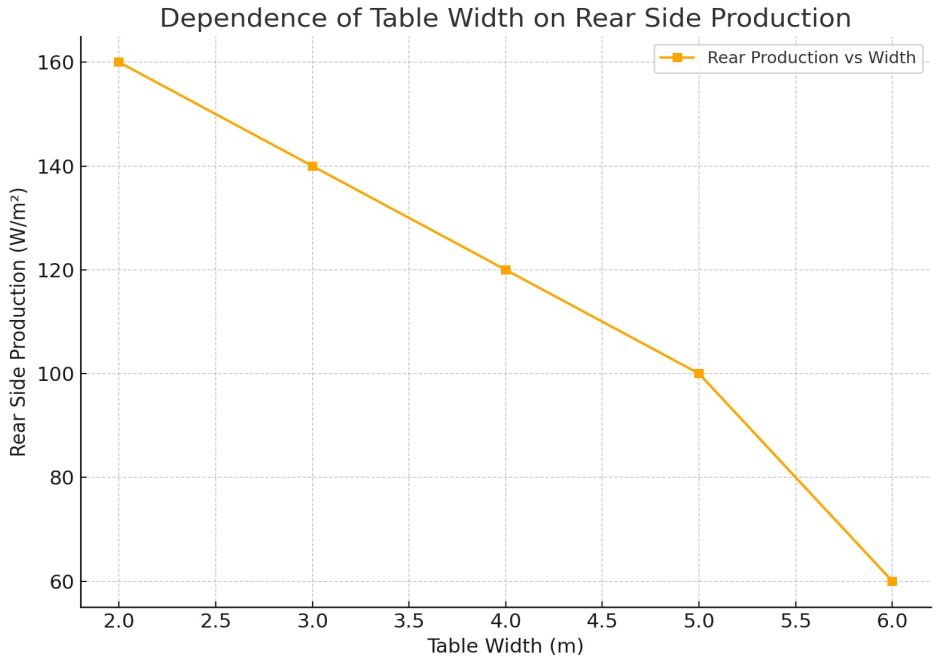
MAGNELIS 600
MAGNELIS 600 COATING

3 mm
THICKNESS WALL THICKNESS 3 mm

50 lat
DURABILITY DESIGN LIFE 50 YEARS

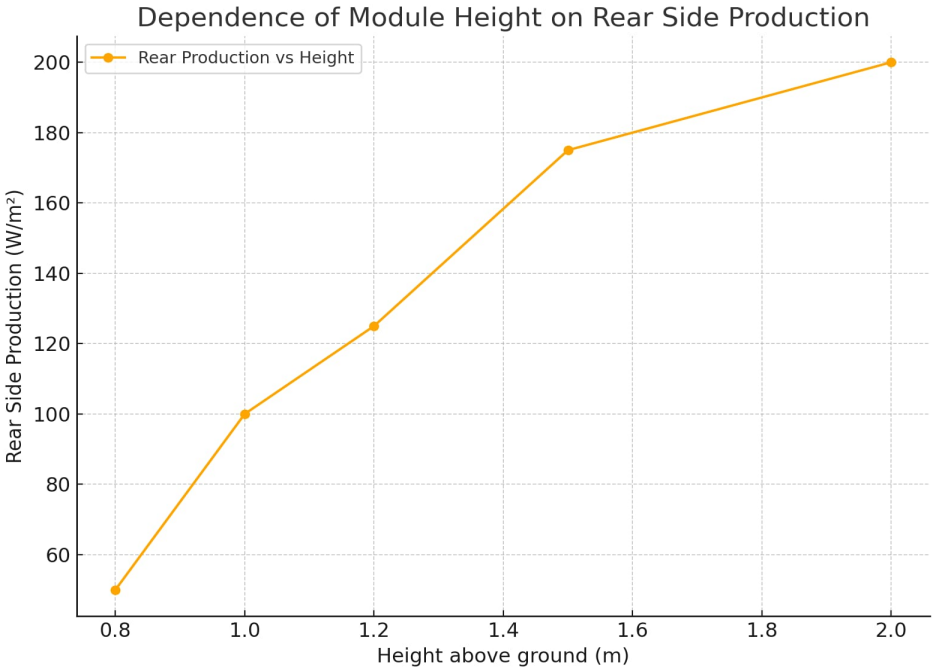
Effect of table width on illumination of the back side of the modules

- In narrow tables (e.g., the width of one row of panels, about 2 meters), reflected and diffused light is much more accessible to the back side of the panels. As a result, the back side works more intensively, which directly translates into higher system efficiency.
- For wide tables (e.g., 5-6 meters, where several rows of panels lie next to each other), the area under the panels is more shaded. Light finds it harder to reach the back side of the modules, as it is blocked by the top modules in the center of the table. This reduces the yield on the back side.



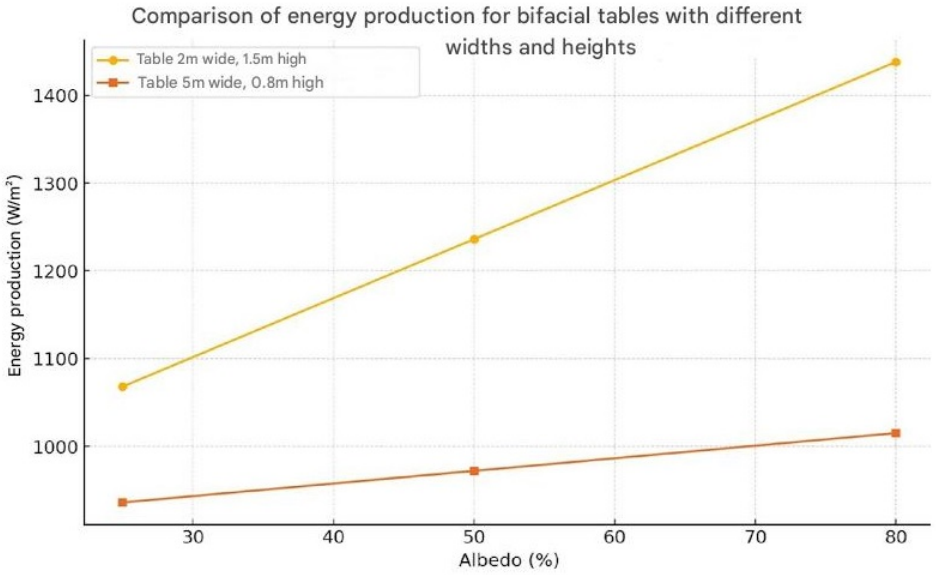
Impact of mounting height

- The higher positioning of the panels promotes better lighting underneath, as the sun's rays have more room to reflect and reach the back of the modules.
- In narrow tables, the high-mounted modules even allow direct sunlight to reach under the panels, significantly increasing the rear yield.



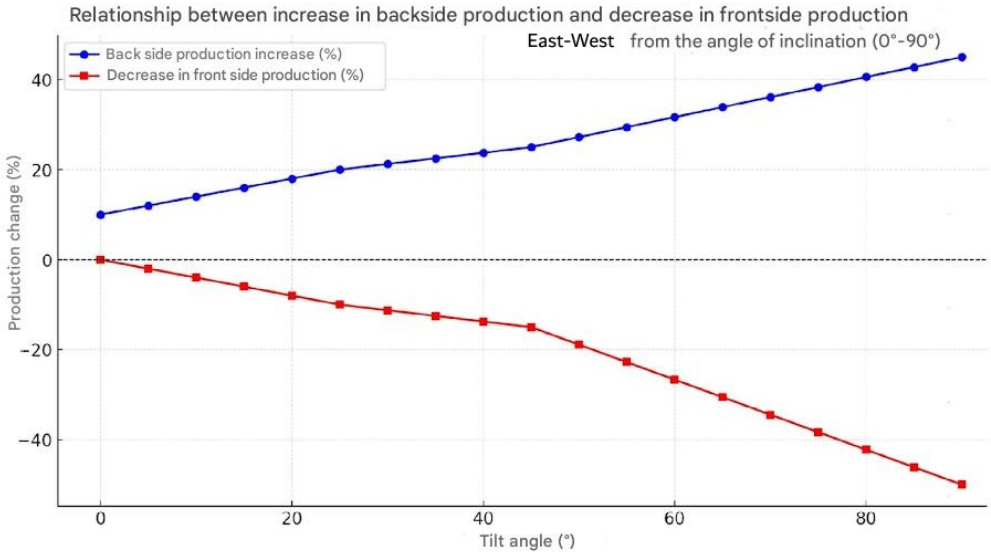
The importance of light reflection and scattering

- The substrate (e.g., light-colored surfaces such as snow or sand) has a big impact on the amount of reflected light reaching the back of the panels.
- With narrower tables and more light reaching under the panels, the albedo (ground reflection) effect is fully exploited.



Energy efficiency

- Narrow tables, especially high-mounted ones, provide up to several times the yield from the back of the panels compared to wide tables. This is due to better illumination and less light restriction.
- Wider tables are less effective for bifacial modules because they limit light access to the back of the panels, especially in the middle rows.



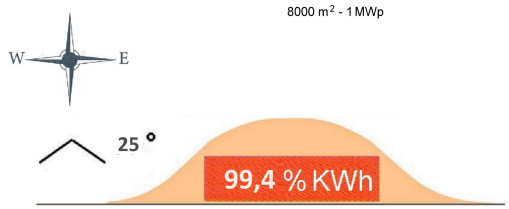
Summary:

For bifacial modules:

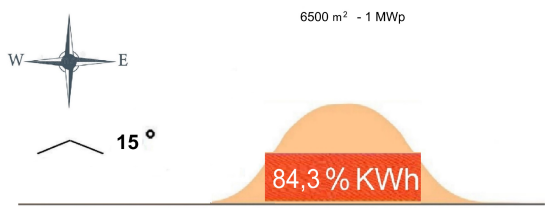
- Narrower tables are much more efficient than wider ones, as they allow better illumination of the back side of the panels.
- Mounting the panels high further increases the amount of reflected and diffused light, which raises energy yields.

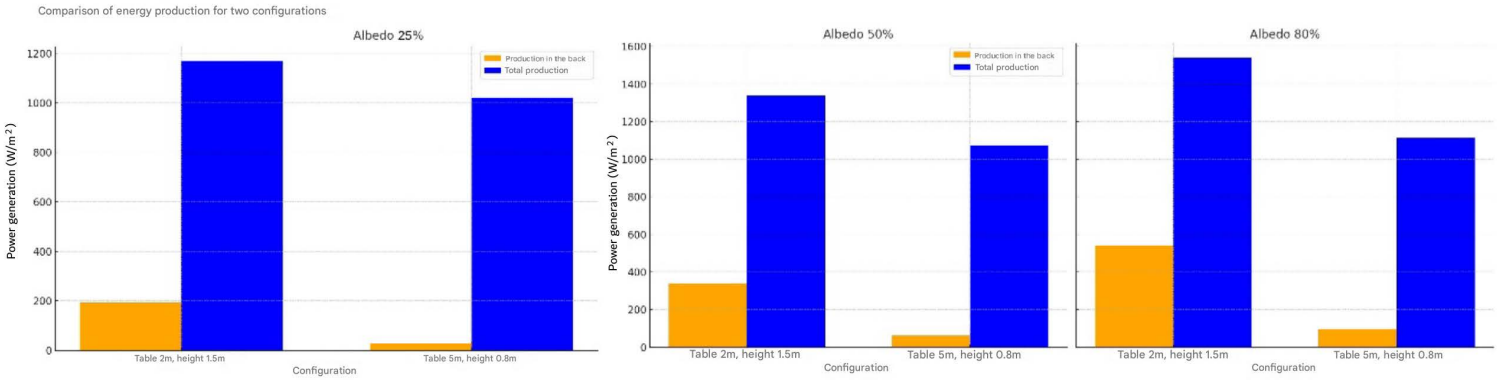
Comparison of energy production for two Wast-West 25° configurations
at different values of ground albedo: 25%, 50% i 80%.

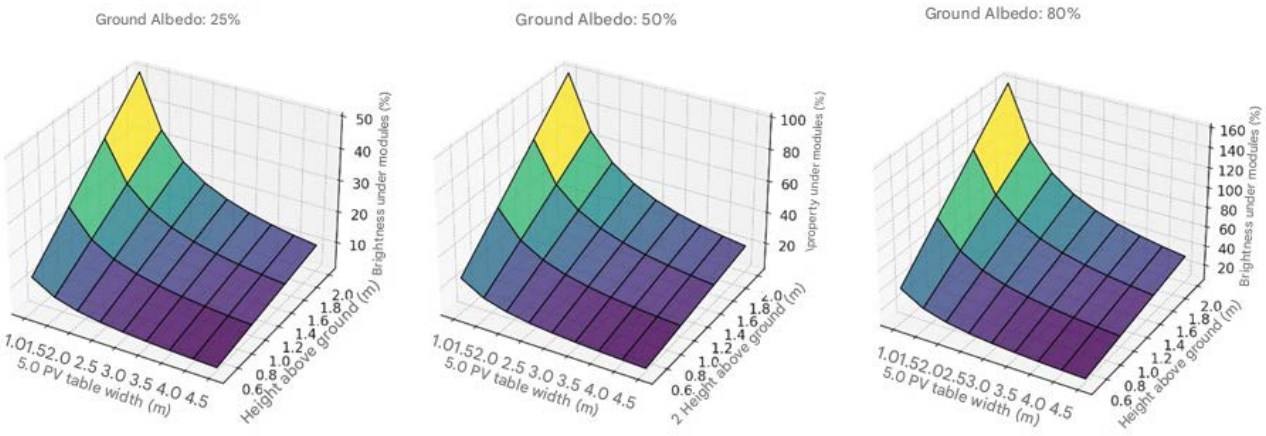
1. Table 2 m wide and 1.5 m high



2. Table 5 m wide and 0.8 m high







Comparison of energy production east-west 25°
at different values of ground albedo: 25%, 50% i 80%. Depending on the height and width of the table.

BifacialMAX Sp.zo.o.
Ul. Jabłowska 75, 83-200 Starogard Gd, Poland
w w w . b i f a c i a l m a x . c o m .
E - m a i l : o f f i c e @ b i f a c i a l m a x . c o m .
T e l . (1) : + 4 8 5 0 5 - 0 3 1 - 7 3 3 . T e l . (2) : + 4 8 5 1 2 - 6 5 9 - 3 7 6

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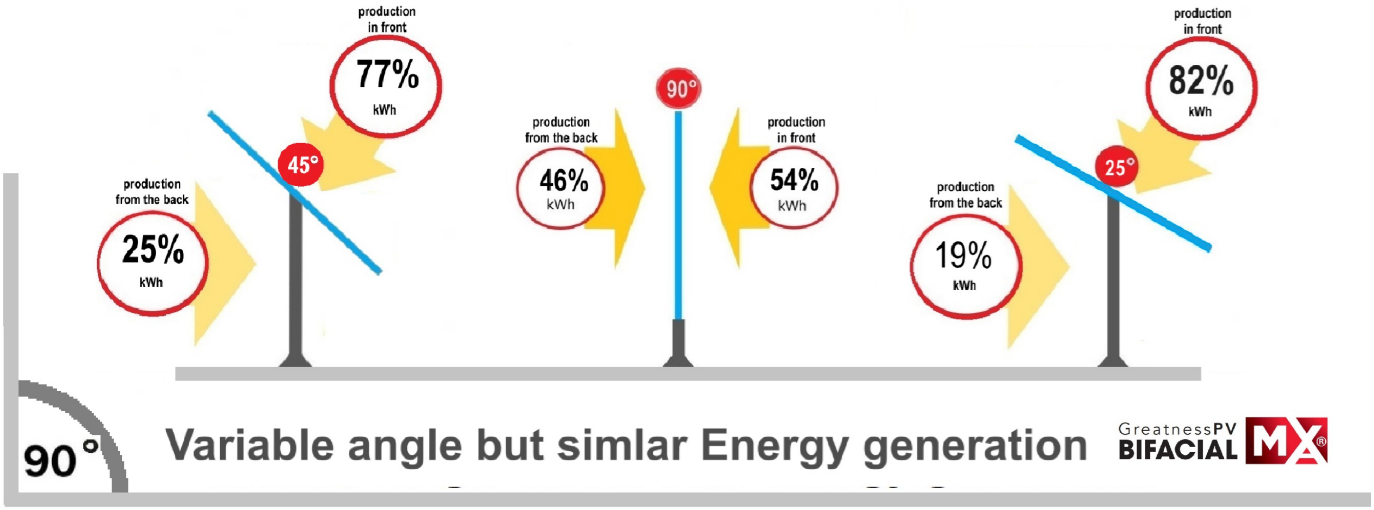
East-West PV orientation - more Energy then South-North

at the grass albedo 26%



Variable angle but simlar Energy generation

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