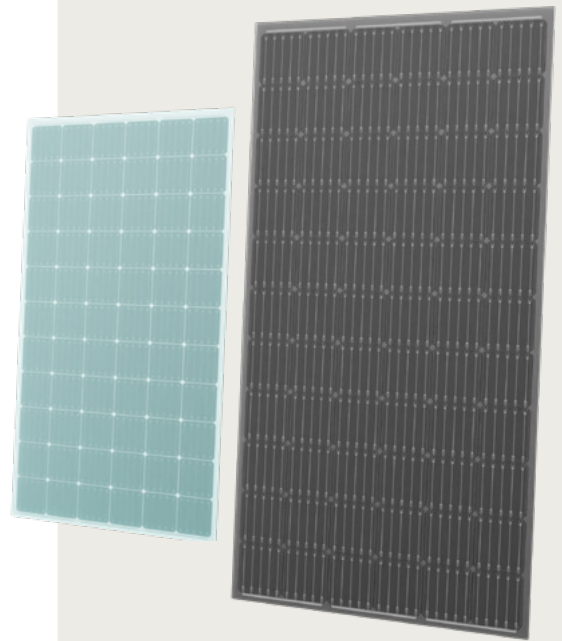


Solar modules

The best use of solar power

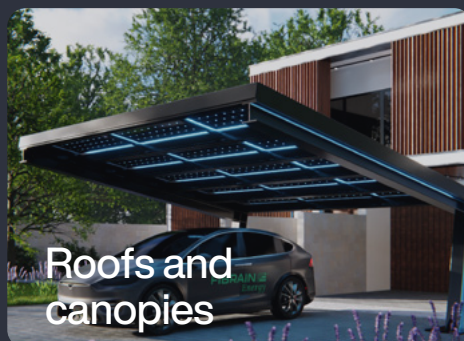
Glass-to-glass solar modules do not contain the weakest link of photovoltaic panels: layers of plastic. Instead, we use glass panes with unique properties that ensure better light distribution and much longer life and resistance to external factors.

- Polish independent manufacturer
- The only comprehensive energy management system on the market
- Modular system, compatible with most energy solutions
- In-house, customizable solution
- Innovative, safe technology



Produce energy *from any glass surface*

FIBRAIN Energy solar modules can be installed anywhere glass can be used in construction. Balconies, facades, canopies, or free-standing installations - anything can be the energy source of your solar installation



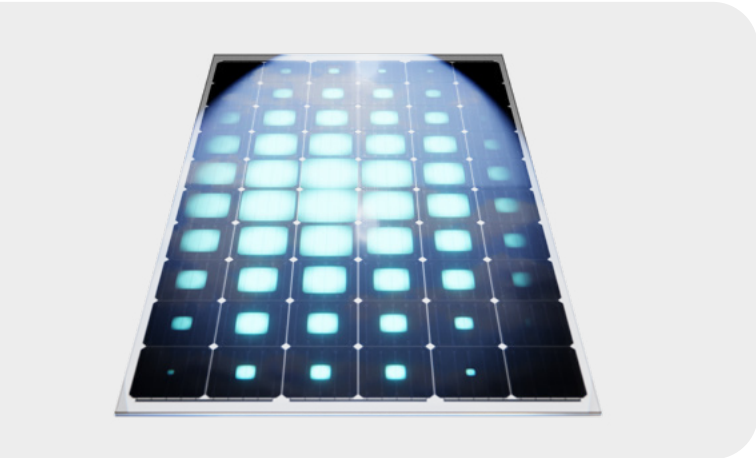
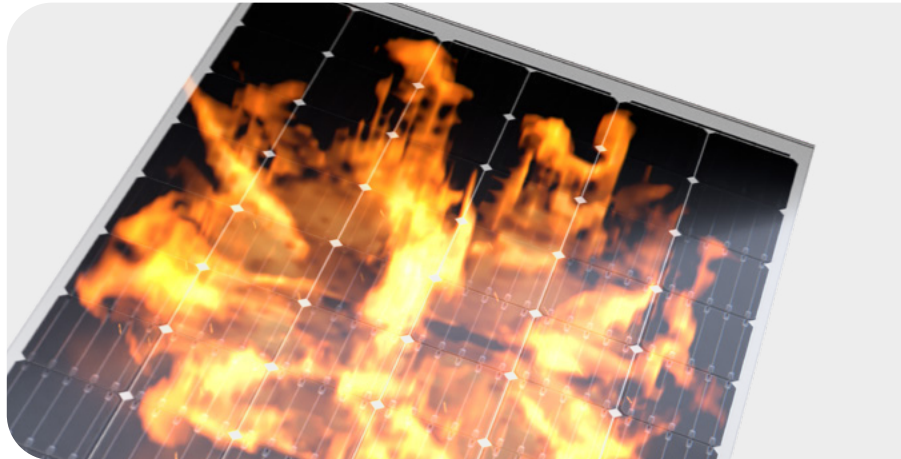
Solar module

Unique design, *exceptional features*



Non-flammability

FIBRAIN Energy solar modules are constructed from two panes of safe tempered glass. This means that they are nearly 100% non-flammable, unlike traditional PV panels.



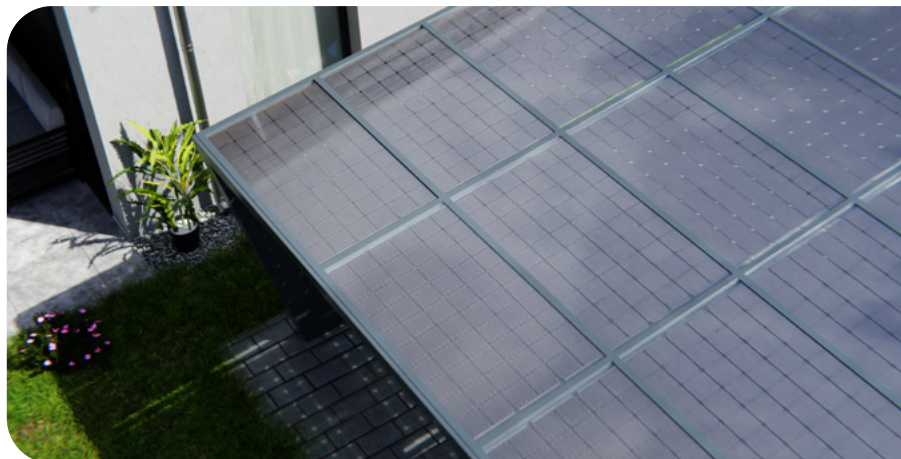
Efficiency guarantee

FIBRAIN Energy solar modules provide impressive efficiency - up to 8% more energy generated compared to standard panels. Panel efficiency is guaranteed at 87% of the initial value after 30 years of use



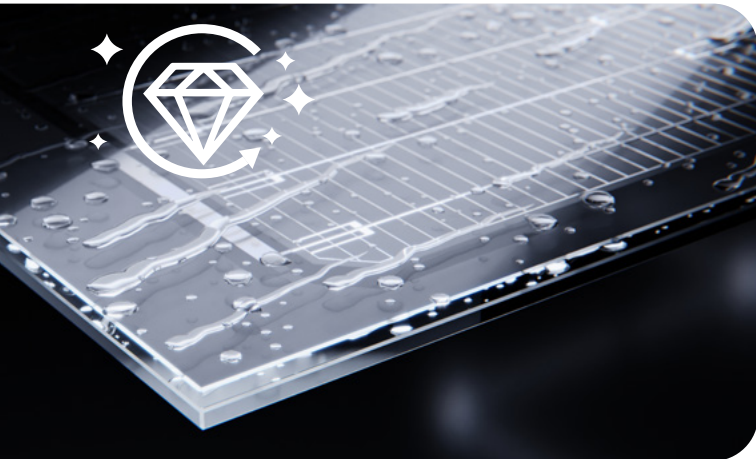
High resistance to mechanical loads

Protecting the module with panes of tempered glass ensures a much longer service life and resistance to micro-cracks, caused for example by hail, which can affect the efficiency of the installation.



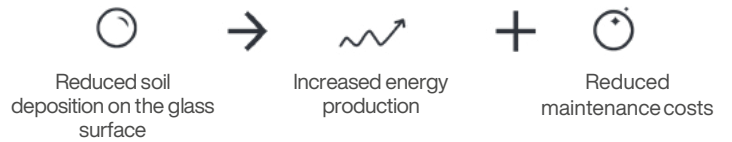
Solar module

Protection, water resistance and durability



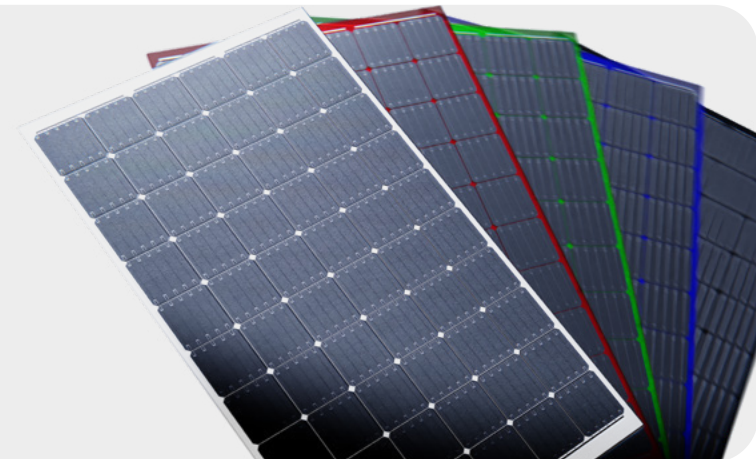
Anti-soiling properties

Thanks to a special diffusive nanostructure, FIBRAIN Energy modules have self-cleaning properties. This lowers the maintenance costs of the installation and – above all – ensures greater efficiency of the installation, where more light simply reaches.



8% more power from the module

The anti-reflective (AR) layer used in FIBRAIN Energy modules helps absorb more light than traditional panels. This has been confirmed by relevant studies conducted by Fraunhofer SP Institute.



Frameless and available in many colours

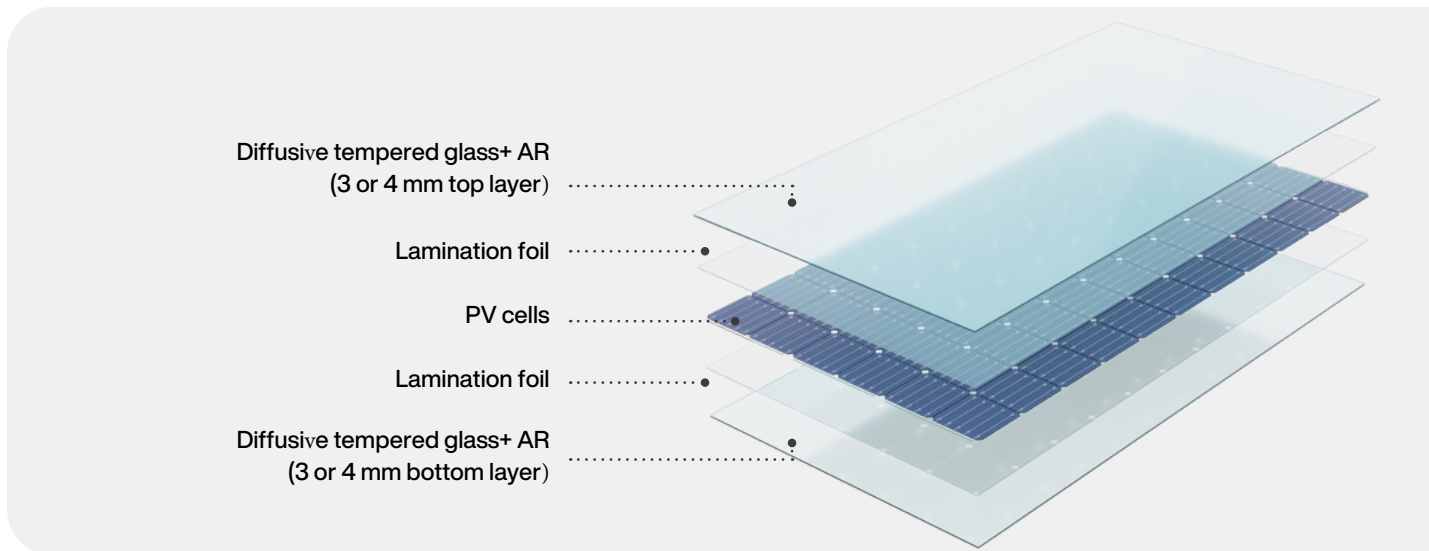
An attractive, frameless design of FIBRAIN Energy's solar modules is available in matte and glossy versions, in a range of RAL colors, which is particularly suitable for both modern and historic buildings.










Solar module

Innovative technology

This solution clearly improves the energy production capabilities of the entire installation. Securing the module with reinforced glass panes ensures a longer service life and significantly improves the protection of photovoltaic cells from micro-cracks. Such a structure carries more static as well as dynamic load and is actually completely resistant to the harmful effects of chemical agents, including ammonia and salt spray.

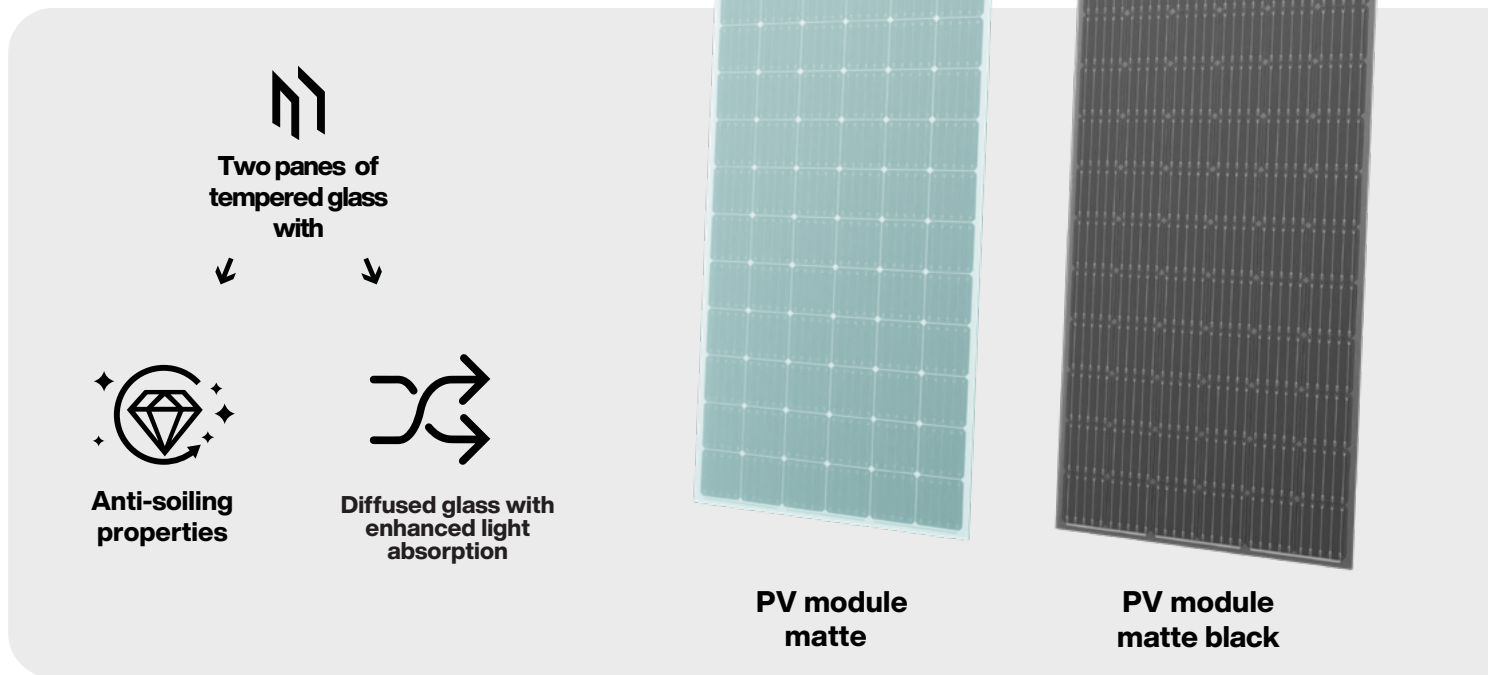


Features comparison

	FIBRAIN Energy Solar module (glass-glass)	Regular PV panel (glass-foil)
 Protection method	Protected by tempered glass on two sides of the module, much more durable and resistant to harmful factors	With only one layer of glass on the top side, they are less strong and can withstand static loads less well
 Resistance to microcracks	Protected by tempered glass on two sides of the module is completely resistant to mechanical loads, reducing the risk of microcracks	The use of two inhomogeneous materials (glass and plastic backsheet) in the event of deflection of the panel, much less protects the cells, which consequently causes micro-damage.
 Bezpieczeństwo przeciwpożarowe	 nearly 100% non-flammable	Can be source of fire
 Lifespan	30 years	25 years
 Performance warranty	88% after 30 years	80% after 30 years
 Efficiency rate reduction	0.4% per year	0.7% rocznie

Glass-glass PV module matte black

Model: ASOL-320P-AR-DF_GG



ELECTRICAL PARAMETERS STC

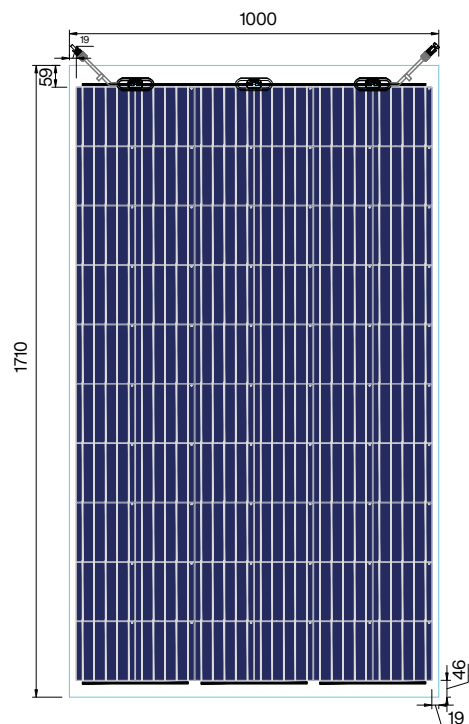
Module	ASOL-320P-AR-G
Maximum power Pmax	320 Wp
Open circuit voltage Voc	40.14 V
Short circuit voltage Isc	9.89 A
Maximum power voltage Vmp	34.26 V
Maximum power current Imp	9.34 A
Power tolerance	-0/+5Wp

STC values measured under standard test conditions (STC): irradiance 1000 W/m², spectrum 1,5 AM, cell temperature 25 °C

The electrical characteristics listed on the product rating label may vary slightly from the specific tions due to the batch of cells used in manufacturing.

ELECTRICAL PARAMETERS STC

Load resistance	5400Pa / 2400Pa
Application class	A



Glass-glass PV module matte black



Model: ASOL-320P-AR-DF_GG

OPERATION

Maximum load (push/pull)	5400Pa / 2400Pa
Operation class	A
Maximum rated protection of 20A	

MECHANICAL PARAMETERS

Dimensions	1710x1000 mm
Weight	34.5±0.5 kg
Front glass	4±0.2 mm tempered
Middle glass	-
Back glass	4±0.2 mm tempered
Enkapsulant	Copolymer EVA
Cells	Monocrystalline Si,
Backsheet	-
Frame	-
Socket	IP68, 3 by-pass diodes
Cabling	Wires 4mm ² , 2x1000mm,
Transparency	H70-H90

POWER DROP

Power drop up to 1 year	97%
Power drop up to 10 years	92%
Power drop up to 30 years	87%

DOCUMENTATION

CE Declaration	yes
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SYSTEM PARAMETERS

Maximum system voltage	1000 VDC
Safety class	II
Mechanical load	5400 Pa
Wind load	2400 Pa

LABELS

AR	Type of glass	Anti-reflective
DF	Type of glass	Diffused
MATT/BLACK	Module color (frosted matt/black matt)	
GG	Module type, glass-glass	



The smartest PV system on the market

Contact us

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