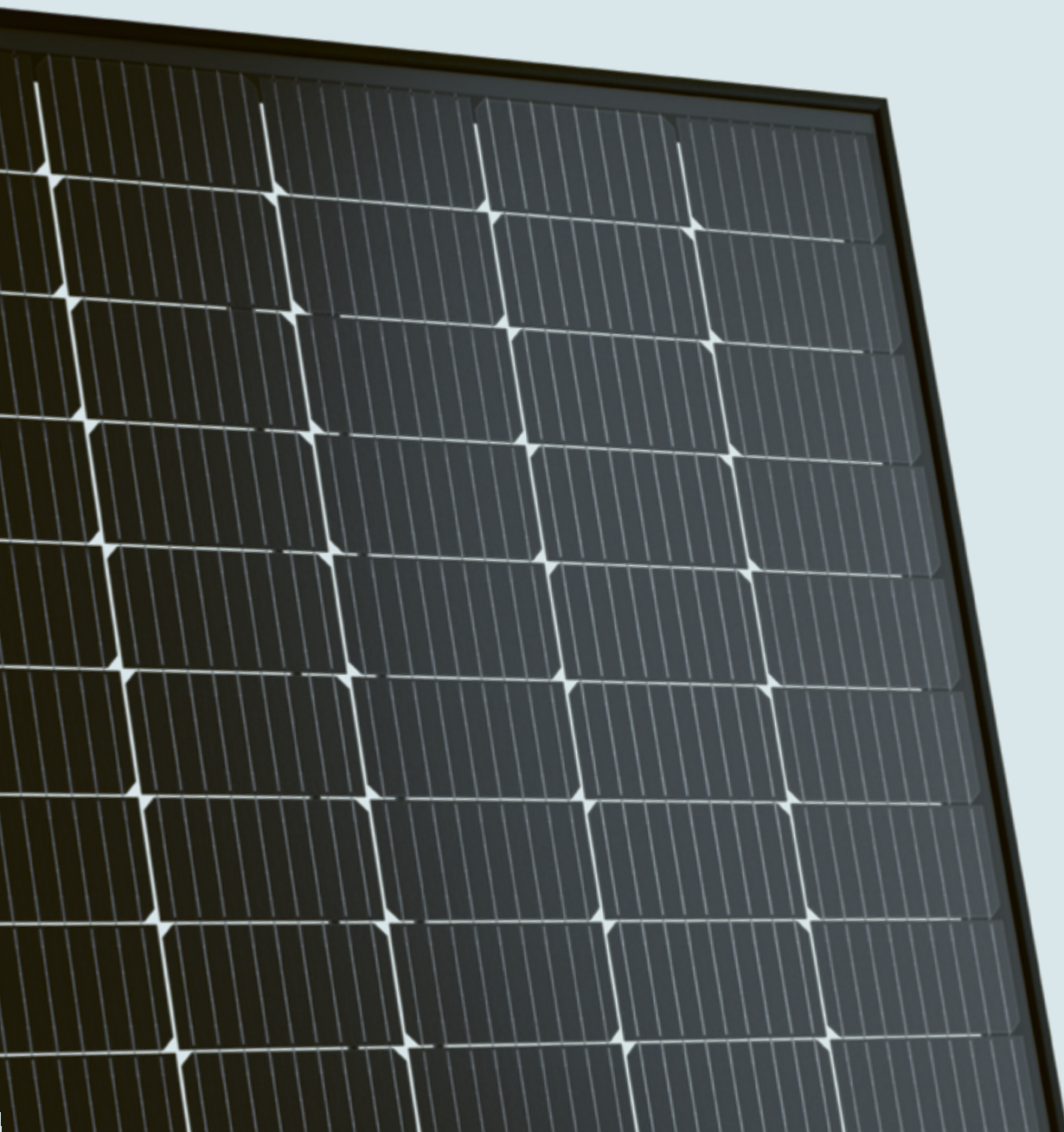




Original premium quality glass-glass panels





0860001
K01bet.04
NFKC001
4x25076
70mm

SOLARWATT

SINCE 1993

**SOLARWATT
QUALITY**



ON GLASS-GLASS PANELS

**30 YEARS
WARRANTY**

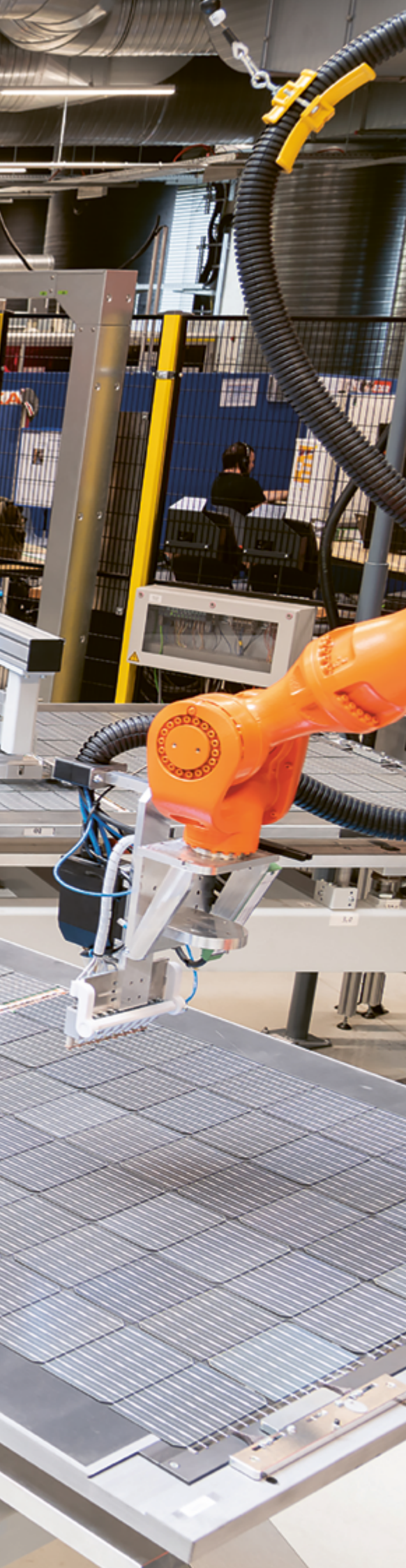


INCLUSIVE

**5 YEARS
FULL
COVERAGE**



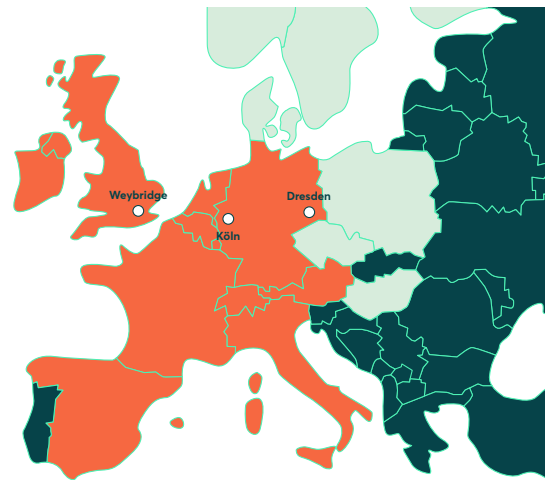
Panel production at Solarwatt's Headquarters location in Dresden, Germany



The solar pioneer from Germany.

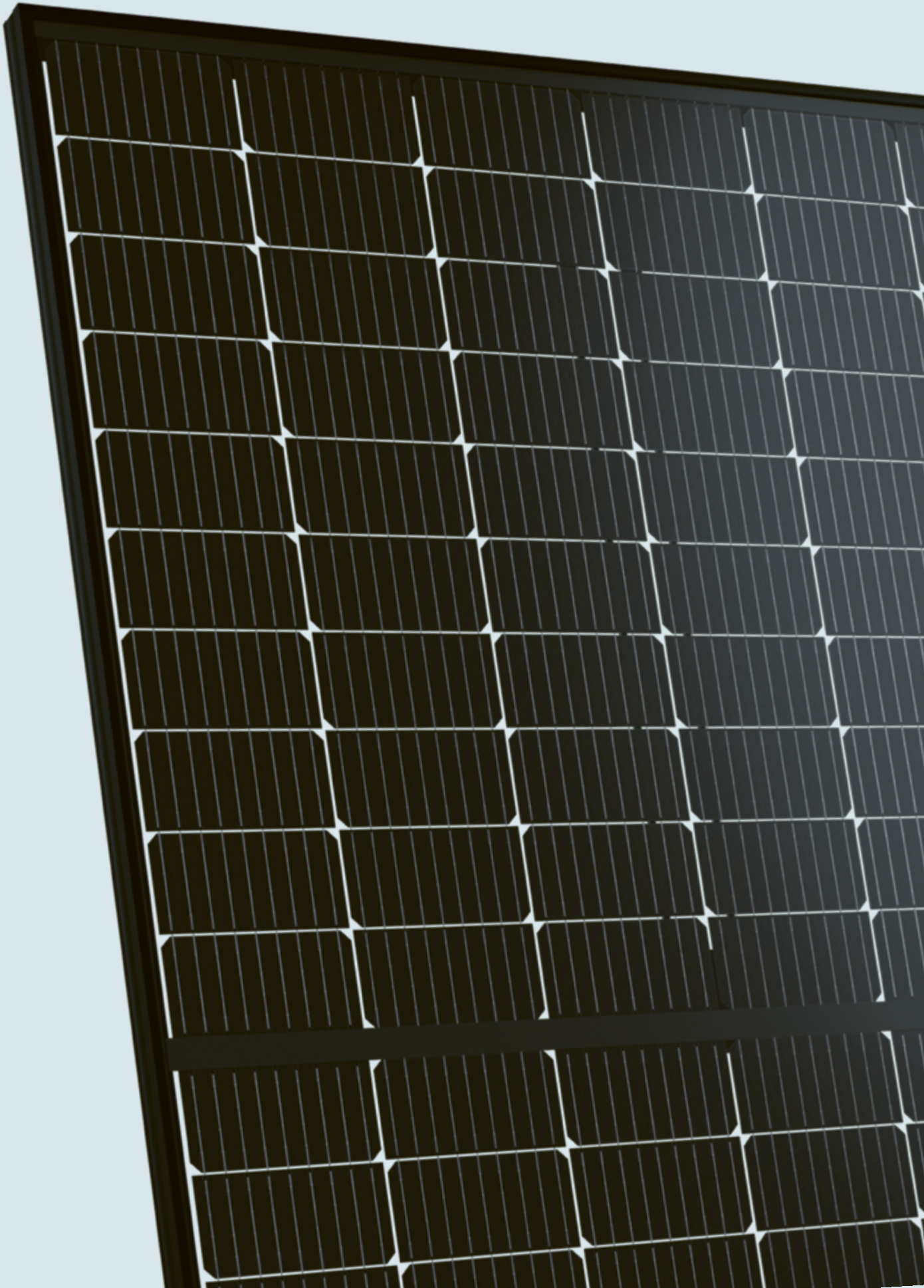
With over 30 years of experience as a photovoltaic pioneer, Solarwatt is the European market leader in glass-glass solar panels and one of the world's largest suppliers of electricity storage. The company was founded in 1993 in Dresden, Germany. Solarwatt has more than 700 employees worldwide and cooperates with international organisations such as BMW, Bosch and E.ON.

Solarwatt is almost 100 % owned by Stefan Quandt, who is also a major shareholder in BMW. Through a close collaboration with BMWi, Solarwatt has developed one of the most automated and innovative factories in the world. Its entire production process is carried out by smart robots that ensure constant high-quality production. Moreover, all components are carefully coordinated with each other. After all, only a properly integrated solar power system yields the highest returns!



Solarwatt Premium Quality.

With subsidiaries in the UK, Netherlands, France, Italy, and Spain, Solarwatt is a global company with a local presence in more than 50 countries. Solarwatt state-of-the-art solar panel technology is equipped for residential and commercial solar PV systems around the world and offers the industry-leading 30-year warranty. We at Solarwatt are committed to powering a better tomorrow – to build a healthier and more sustainable future [for everyone].



More solar power output, highest reliability, beautiful design

A holistic approach.

The new Solarwatt generation of solar panels are guaranteed to produce a 25 % higher yield compared to the industry standard. Additionally, Solarwatt glass-glass panels are significantly more resistant to all mechanical and environmental influences.

To ensure premium quality, Solarwatt solar panels are subjected to much tougher and more varied tests than the standard prescribed by IEC (International Electrotechnical Commission) and 61215/61730. Standard tests do not sufficiently reflect the conditions to which solar panels are exposed in practice. To ensure the highest quality, Solarwatt solar panels are also tested for: PID degradation, LeTID degradation, fire protection, resistance against extreme weather conditions such as hail, wind, and snow, and resistance to salt (for coastal areas) and ammonia (for farms).

That means we offer higher long-term reliability and up to 33 % increase in service life. All our glass-glass panels are designed in Germany. Our timeless designs perfectly blend into your roof or facade to enhance [the visual appeal of] your property.

Panels that top every test. Even the test of time.

- Robust glass-glass composition
- 30-year warranty
- Powerful – 25 % higher yield guaranteed*
- Timeless, elegant design
- Reliable yields for years

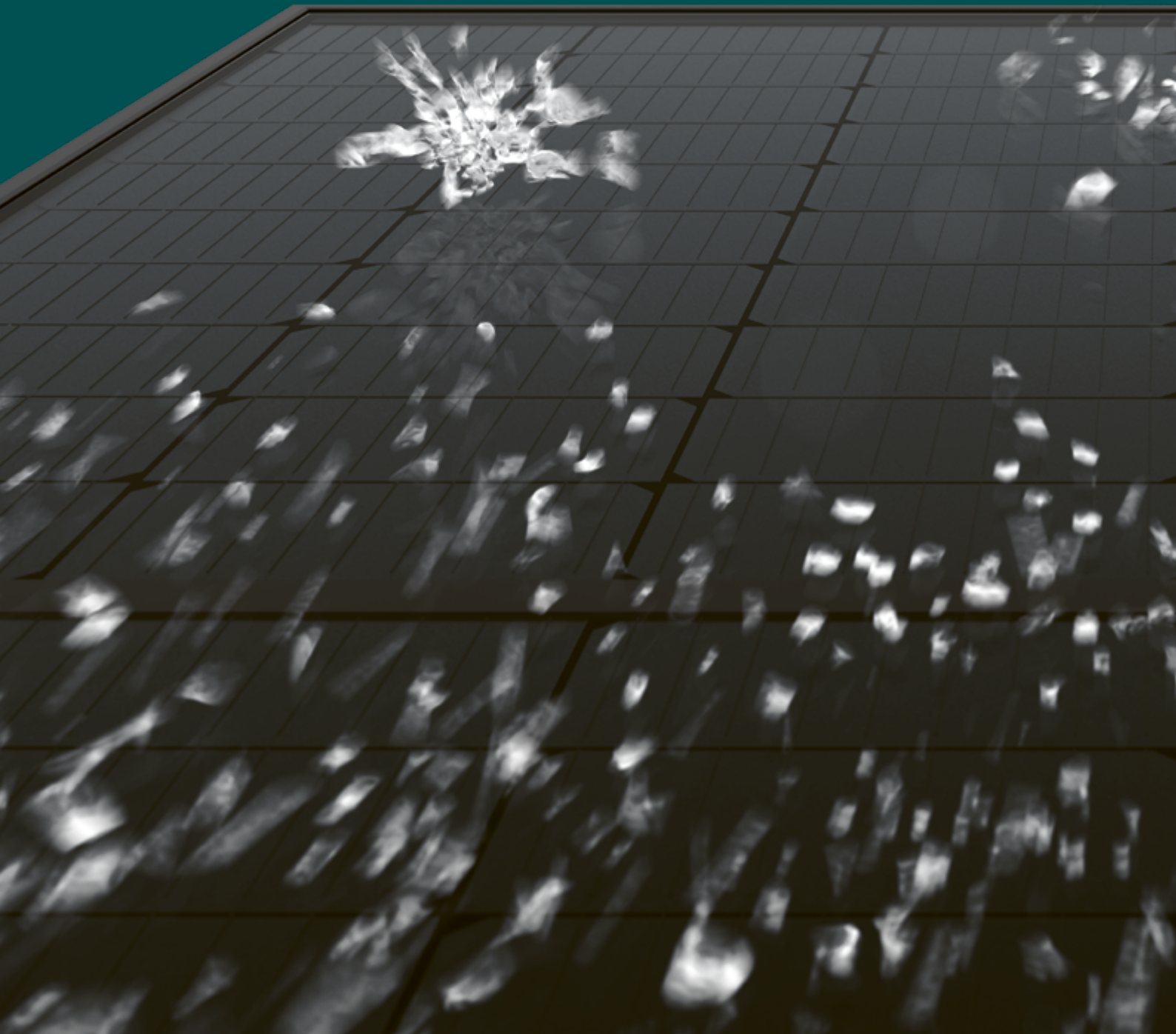
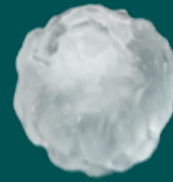
* Compared to standard glass-foil solar panels under the same conditions.



Reliably high yields for many decades to come

Even under the most extreme weather conditions

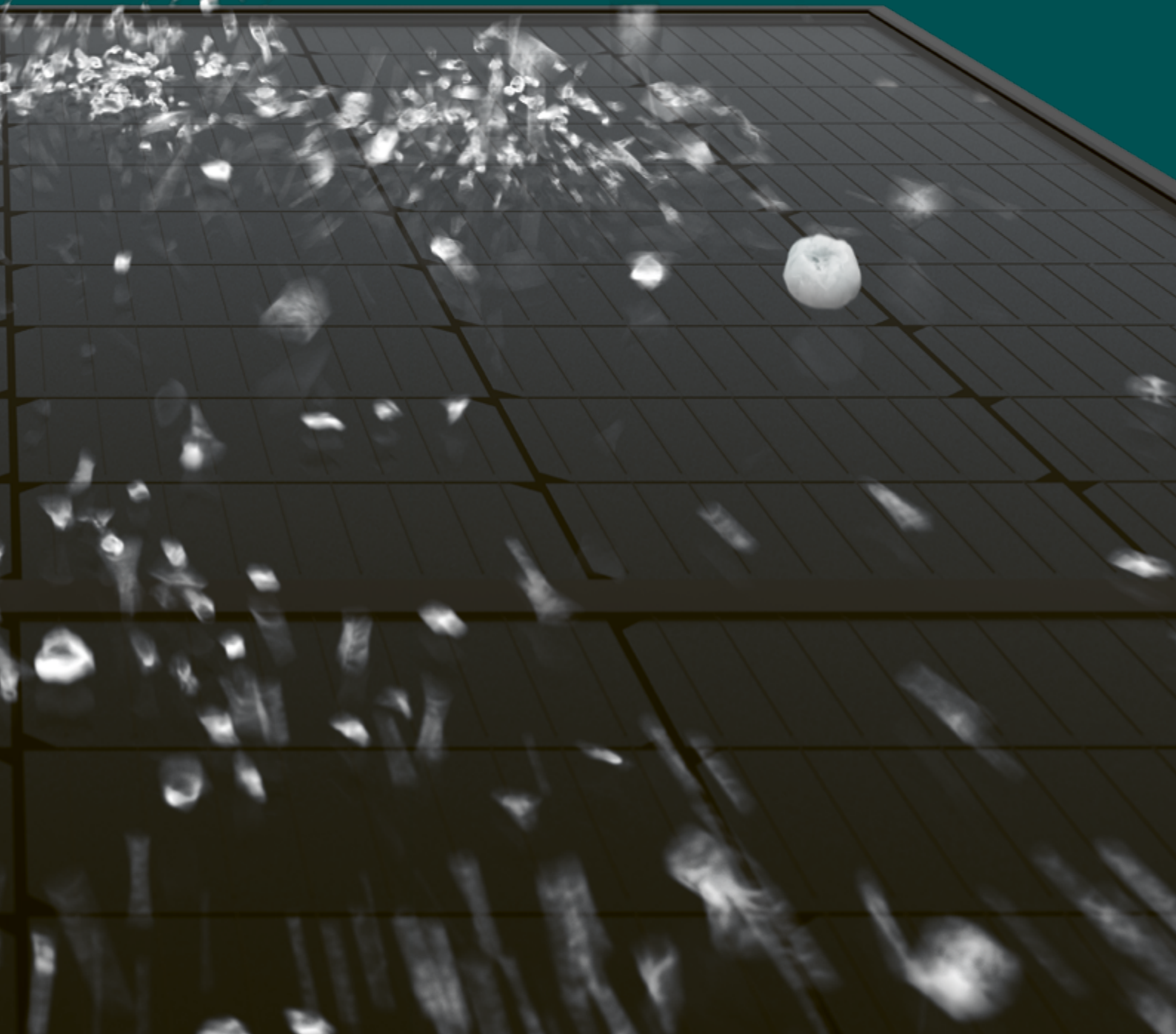
Volatile weather conditions and environmental influences can significantly affect the performance of solar panels. Solarwatt glass-glass panels are built with durability in mind. They are tested under the most extreme weather conditions, including hail, rain, wind, and ice.



High resistance to extreme hailstorms

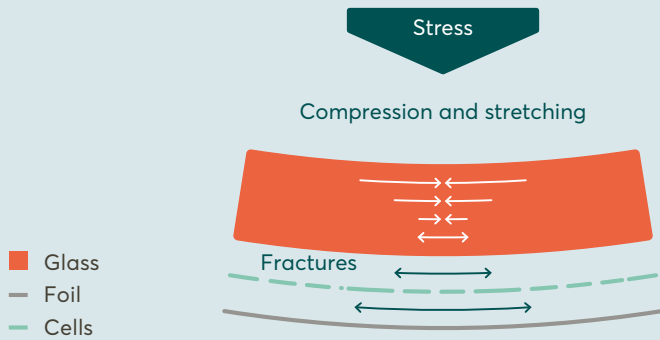
While a standard hailstone test simulates frozen drops with a diameter of 25 mm at a speed of 85 km/h, we use hailstones 45 mm in diameter that collide with the solar panel at a speed of 110 km/h. The result: not even a scratch.

That resistance includes microcracks – fine hairline cracks, invisible to the naked eye. This is important because microcracks can have a major impact on the energy yield of the solar panel. The resistance of our glass-glass solar panels to hailstorms has been confirmed in practice. In areas with intensive hail storms, such as Bavaria in Germany and Austria, Solar-watt systems show the same robust behaviour as in the laboratory.



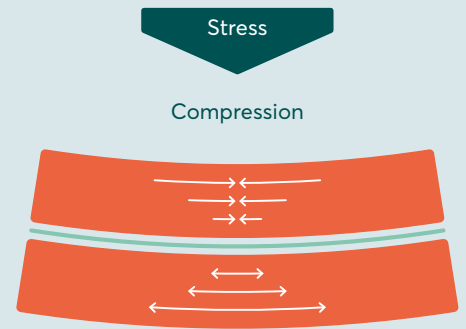


TRAUT 1973-1982



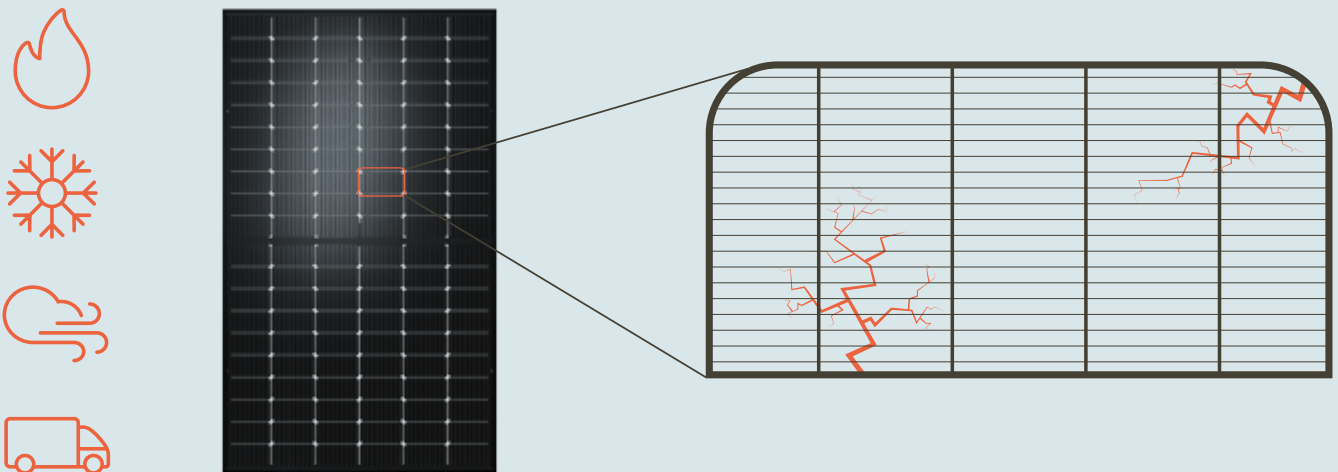
Glass-foil modules

When glass-foil modules are subjected to mechanical stress, such as wind or snow, cells can crack. These cracks permanently reduce the module's energy yield.



Glass-glass modules

In glass-glass modules, the sensitive cells are situated within the neutral fiber of the composite, where they are only bent and never stretched or compressed. This prevents any cracking of the cells.



Microcracks

Microcracks are tiny hairline cracks in a solar cell that are invisible to the naked eye. Even though you cannot see them and adverse effects are unlikely to be produced immediately, microcracks are broken solar cells held in place by the solar module laminate.

After a time, the solar modules will be affected by various pressures such as bending and flexing, caused by external pressure and fluctuating temperatures. During the day, solar panels expand because of higher temperatures. Small imperfections in the silicon cell can lead to larger micro-cracks. The length of microcracks can vary; some span the whole cell, whereas others appear in only small sections.

Microcracks not only lead to significant loss of yield in a solar panel, the performance of panels without microcracks in the same string is also likely to be affected, which consequently affects the lifetime of a solar PV system.

Solar cells are very fragile and unless they're properly protected, microcracks can develop quickly. The chance of microcracks occurring in a glass-glass panel is nil, provided it leaves the factory without them. A manufacturer can verify this with an electroluminescence (EL) test, similar to an X-ray. Solarwatt's high factory quality standards ensure that any solar panel with microcracks is rejected.

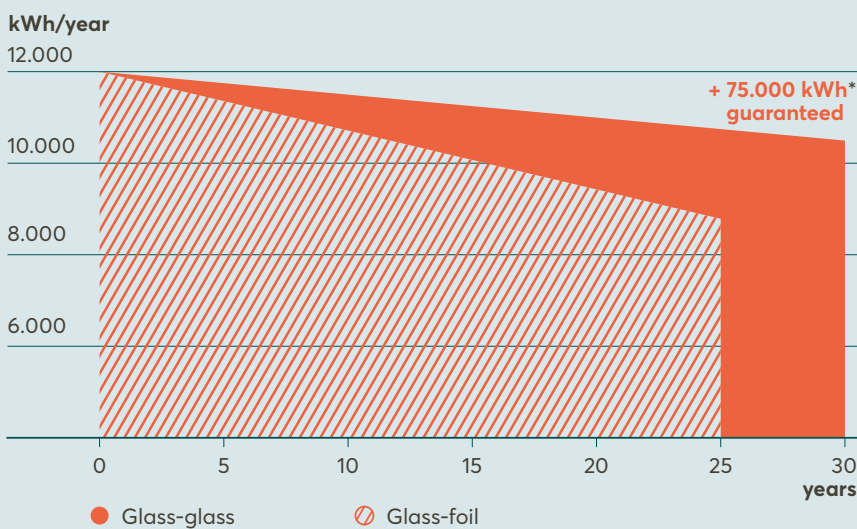
With glass-foil panels, solar cells are much less protected. During transport, installation or, for example, a major hailstorm, microcracks can occur faster. Their effects, however, are not noticed until much later, due to reduced performance following continued deterioration. Microcracks are always outside guarantees provided by manufacturers.

Microcracks in glass-glass panels are covered by Solarwatt's FullCoverage all-risk insurance.

Benefit from solar energy without worry

Installing solar panels is a long-term investment. The value gained comes down to choosing the best, most robust and reliable solar panels that can guarantee highest performance from day one and for many years to come. Solarwatt offers this assurance on three levels.

- Ensuring A-quality components
- Choosing the best performing solar panels
- Quality check – each solar panel is checked for microcracks with an electroluminescence test
- Resistance test – mechanical and weather



More security and long-term savings

25 % higher yield guaranteed, with industry's longest warranties

The robust construction of our glass-glass panels makes them sustainable in every way – offering you reliably high yields for many decades to come. That's why they come with a 30-year guarantee. And because they last longer, they can deliver a consistently high output for longer, too. This means over time, you will achieve a significantly higher yield. Glass-glass panels are a viable and secure investment.

* based on a 10 kWp system, on a south-facing roof at a 30° angle in Munich (Germany), for a 4-person household with a heat pump and electric vehicle charger. Calculation via PV Sol.

Anti-reflective glass

Embedding material

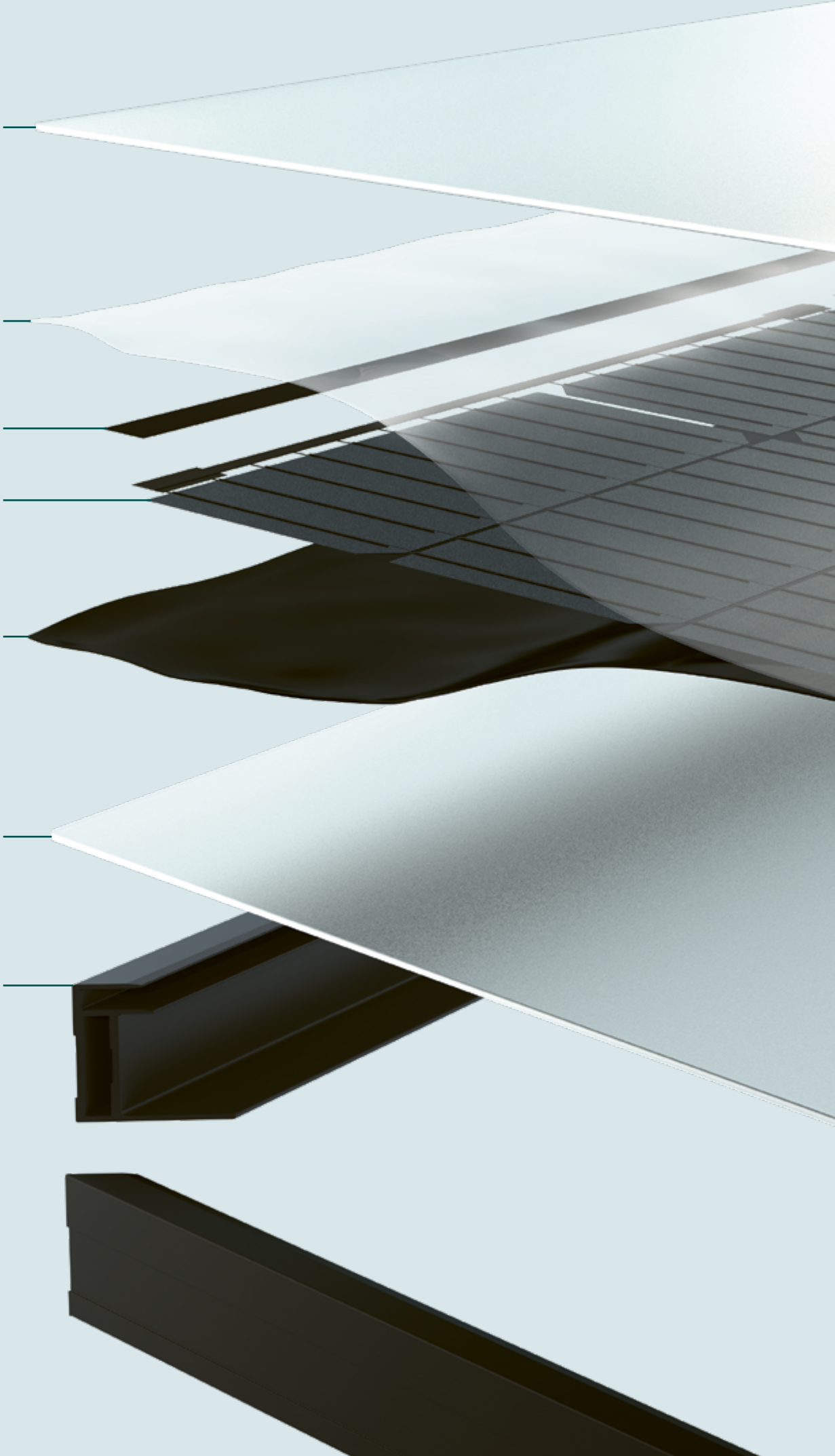
Cross-connector
cover

Highly efficient
cells

Embedding material

Thermally
tempered glass

Aluminum frame



Glass-glass solar panels Quality that has been tested

Solarwatt's new generation of solar panels sets new standard for solar panels. This technology guarantees optimum fire and scratch resistance, withstands high loads, and offers significantly more protection against temperature changes, moisture, and other environmental influence. Thanks to these advantages, Solarwatt's glass-glass panel range has an extremely long service life whilst you benefit from maximum yield stability that cannot be achieved with conventional solar panels. That is why our whole glass-glass panel range carries a 30-year warranty.



Anti-reflective glass and PERC solar cells

Our anti-reflective solar glass reflects a minimum of sunlight and enables the maximum amount to reach the solar cell. By using PERC solar cells, a greater bandwidth of sunlight is converted into solar energy. This is important especially at the beginning and end of the day and in cloudy weather, when solar panels generate more energy. Combining the right glass with the right solar cells ensures the most efficient conversion of sunlight into electricity.



Fire safety

Solarwatt is continually testing various types of glass-glass solar panels to the toughest standard. These solar panels have easily passed the tests and have been awarded the highest fire category, class A.



Suitable solution for every application

Solarwatt offers a tailored approach, keeping a close eye on the application of its products and adjusting their properties accordingly. We offer a variety of solar panels for private and commercial use. Our Panel vision range is suitable for flat roofs, pitched roofs or in roof, e.g. in carports, verandas and facades. We work alongside our customers to find the perfect solution to your needs.

We believe in the quality of our products

Solarwatt's Panel vision glass-glass panels have an extremely long service time. That is why, our entire glass-glass panel range comes with a 30-year warranty.



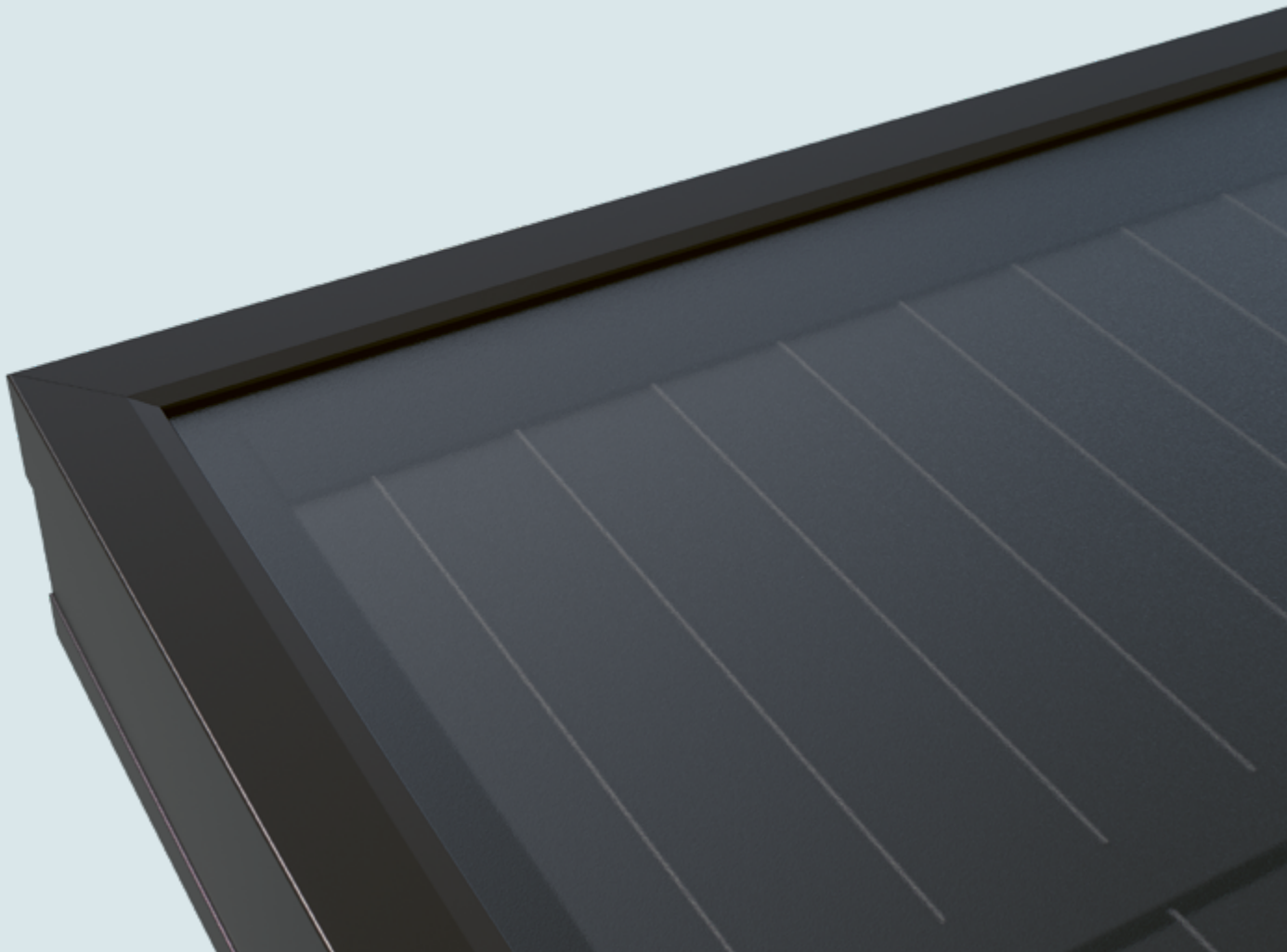
Our warranty services include

- Repair by Solarwatt on site at the customer's premises
- Repair at Solarwatt or a third party
- Delivery of additional panels
- Exchange for replacement panels



Guarantee conditions

- The power of the solar panels decreases to a maximum of 97 % in year 1.
- In the period year 2 to 29, the power of the panels decreases by no more than 0.345 % per year.
- In the 30th year, the guaranteed power is at least equal to 87 % of year 1.



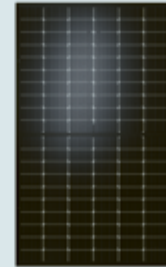
Panels that adapt to your needs.

Get to know our modules and find exactly the right solution for your requirements. The following applies to all glass-glass panels from Solarwatt:

- ✓ Designed in Germany
- ✓ 30 years warranty
- ✓ 5 years FullCoverage included (optional 10 years possible)



On the roof and in the roof Framed glass-glass



Compact

Vision 60M style (black edition)



High performance M6

Panel vision GM 3.0 style



Power

Up to 325 Wp

Up to 370 Wp

Properties

Lightweight
Small roof use
Dark appearance

Transparent, bifacial gain,
black frame

Cell Type

Cell format G1
158.75 mm
60 full cells

Cell format M6
166 mm
half-cut + multiwire

Dimensions (mm)

1,700 × 1,000 × 35

1,780 × 1,052 × 40

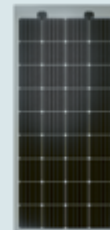
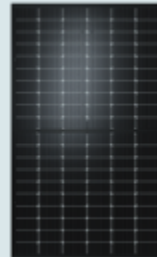
Weight (kg)

22

25



As a building material Frameless glass-glass



High performance M10

Panel vision AM 4.0 black



Up to 400 Wp

Bifacial gain
Full-dark appearance
Low-carbon optional

Cell format M10
182 mm
half-cut + multiwire

1,722 × 1,134 × 35

25.4

Panel vision AM 4.0 pure



Up to 405 Wp

Bifacial gain
Low-carbon optional

Cell format M10
182 mm
half-cut + multiwire

1,722 × 1,134 × 35

25.4

Construction

Panel vision GM 3.0 construct



Up to 370 Wp

Certified building material
Can be used without
substructure in e.g.
carports or parking decks
or on façades

Cell format M6
166 mm
half-cut + multiwire

1,780 × 1,052 × 40

25,5

Vision 36M glass



Up to 185 Wp

20 % transparent
frameless
2 × 4 mm laminate
ideal for overhead place-
ment in e.g. carports and
canopies

Cell format M2
156 mm
36 full cells

1,550 × 710 × 9

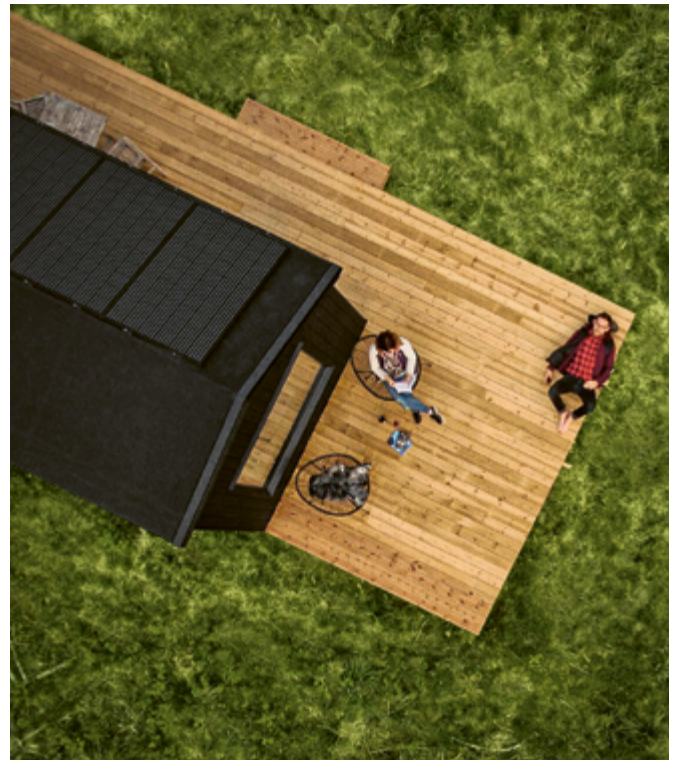
25



1



2



3

- 1 BMW Welt in Munich, Germany, with panels integrated into the roof structure
- 2 Villa with rooftop panels, Sweden
- 3 Tiny house with rooftop panels, Tidaholm, Sweden
- 4 Typical Nordic wooden frame eco villa with rooftop panels, Sweden



SOLARWATT

Panel vision

glass-glass panels

As the pioneer of PV systems and glass-glass technology and the European market leader of solar panels, we are committed to delivering premium solar panels worldwide.

Advantages of all our glass-glass panels

- Our glass-glass panels are exceptionally robust
- Guaranteed 25 % average extra yield over the product lifetime and an extended product warranty period up to 300 %
- Industry's highest: 30-year warranty
- Proven maximum resistance to mechanical and weather simulations to ensure highest quality, longer lifespan, and best performance (rain, wind, storm, hail, snow-load)
- Resistant to extreme environmental influences – e.g. ammonia (farms), aggressive gases and acid rain (industrial), salt (coastal area) and abrasion (sandstorms)
- Resistant to heat-cold cycles: the symmetrical construction of glass-glass panels allows expansion and shrinkage to occur evenly, resulting in considerably less aging
- Glass-glass panels prevent microcracks because there is no tensile and push load on the solar cells
- FullCoverage all-risk insurance of Solarwatt for five or ten years: hedging against financial risks, theft, vandalism, fire, and underperforming yield.
- Best tested' according to CLEAR. Solarwatt solar panels were rated best in a study by CLEAR, an EU project to help consumers make the right decisions regarding decentralised energy supply
- 100 % protection against performance degradation (both PID and LeTID safe)
- Designed and tested in German for premium quality



Highest yields

Our solar panels regularly deliver higher returns than calculated and tested. This is confirmed time and again in practice.



System efficiency

The optimal coordination of all Solarwatt system components guarantees maximum efficiency.



Warranty scope

We offer maximum security with our unique one-year 30all-inclusive product and performance guarantee.



Excellent service

Our service network of expert installation partners ensures a professional and fast service.

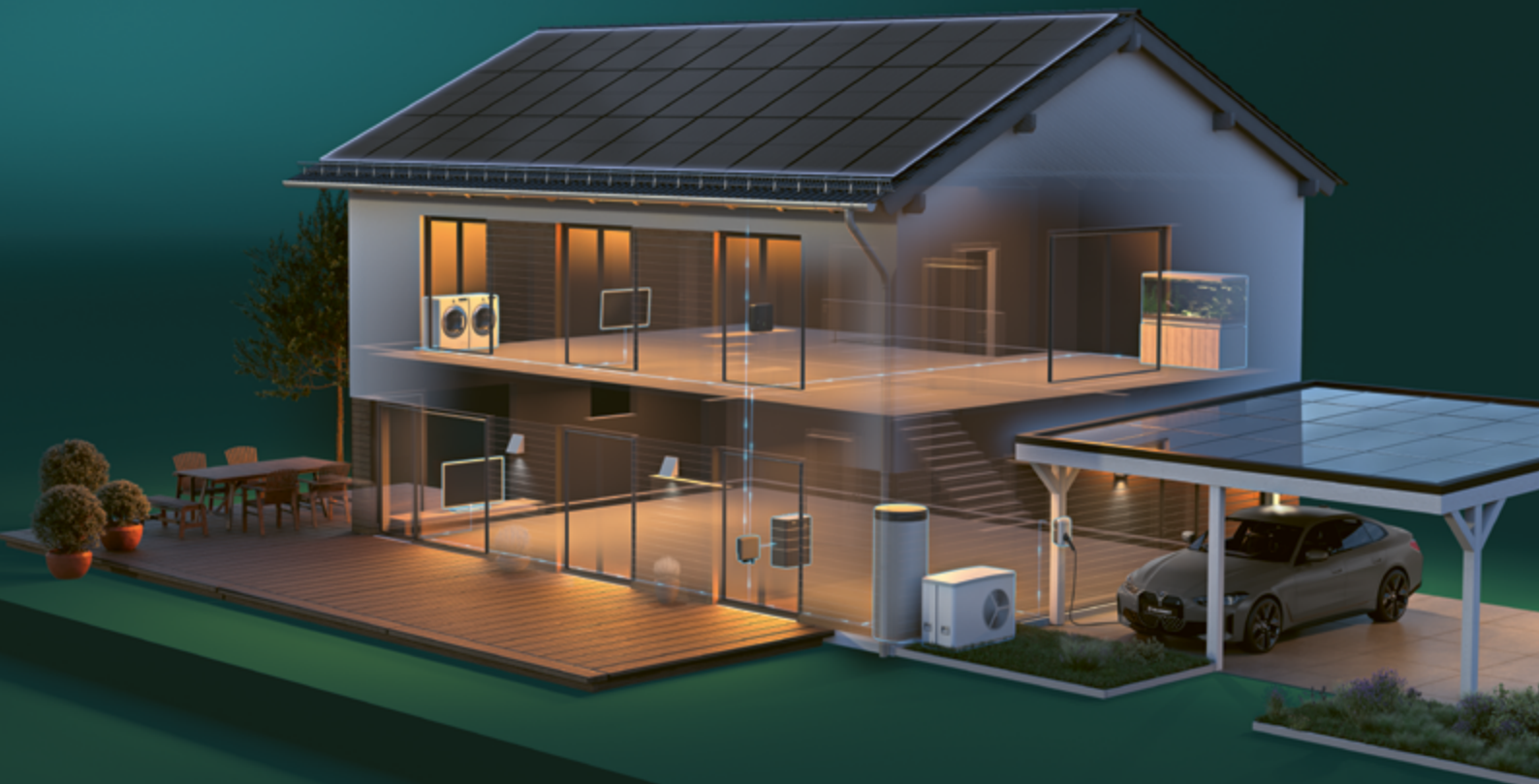


Sustainability

Solarwatt takes back the solar panels after use and recycles them according to the latest standards.



Go solar with
Solarwatt.



**Ask us anything –
no, everything!**


Solarwatt Technologies Ltd.
Shepperton Marina
Felix Lane
Shepperton
TW17 8NS

Neal Goddard
Sales Director UK
T +44-20-3966-1952
M +44-7951-885771
neal.goddard@solarwatt.com

Daniel Adamsbaum
Sales Manager UK
T +44-20-3966-1952
M +44-7522-178901
daniel.adamsbaum@solarwatt.com

solarwatt.co.uk

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**We at Solarwatt
are the lifelong
companion for people
wanting to supply
themselves with
clean  energy.**