

 SOLARWATT®

Green  energy
for a new farming
generation.



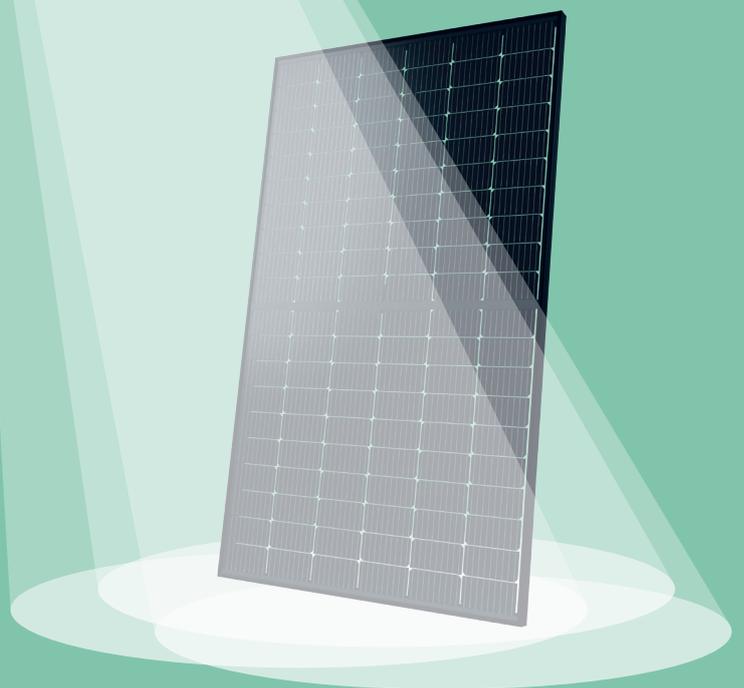
FOR OVER
30
YEARS

GERMAN
QUALITY
SINCE
1993



Creating a brighter
future since

1993



Powering the future.

As pioneers of the solar energy industry we've been providing the tools that allow people to decide for themselves where their energy comes from since 1993. We have long recognised the need for perfectly coordinated, well-designed and reliable products that are easy to use. With premium German quality, our solar panels come with comprehensive guarantees that assure smooth operation and consistently high energy yields for decades to come.

We offer the many advantages that come from dealing with a manufacturer with a large network, more than just installation. With Solarwatt, you get clean electricity, clean heat, and clean electromobility, from your own roof. You also hugely reduce your costs and emissions. We all benefit from that. Discover how we can all start working for a better tomorrow, today.



A handwritten signature in black ink, appearing to read 'Detlef Neuhaus'. The signature is stylized and fluid, with a long horizontal stroke at the end.

Yours,
Detlef Neuhaus,
CEO



You care about the environment.

The lifeblood of a thriving agricultural enterprise

You're a farmer – an entrepreneur – building a lasting legacy for your family, committed to maximising returns from your land and property and cutting your CO2 emissions. Farmers across Europe are discovering the savings and independence that the latest solar PV technologies can deliver. You invest in equipment to generate returns and reduce the risk of costly technical failure. You will want your PV modules to last as long as the roofs that hold them. For your independence and peace of mind, our Vision glass-glass modules are robust, reliable, long-lasting and equipped to cope with all farming environments and weather conditions.

You care about

- ✓ **Sustainability** - You know the importance of the environment.
- ✓ **Family** - You run a business with those most dear to you.
- ✓ **Independence** - You value your freedom.
- ✓ **Innovation** - You know that tradition and modernity go hand in hand.
- ✓ **Business** - You are an entrepreneur. You want to maximise your harvest.





We do too – clean, green energy

Solarwatt premium photovoltaic systems capture the power of the sun to deliver clean energy, helping you lower energy bills and prepare your farm for the future. As a German manufacturer, we have been at the cutting edge of this industry for more than 30 years.

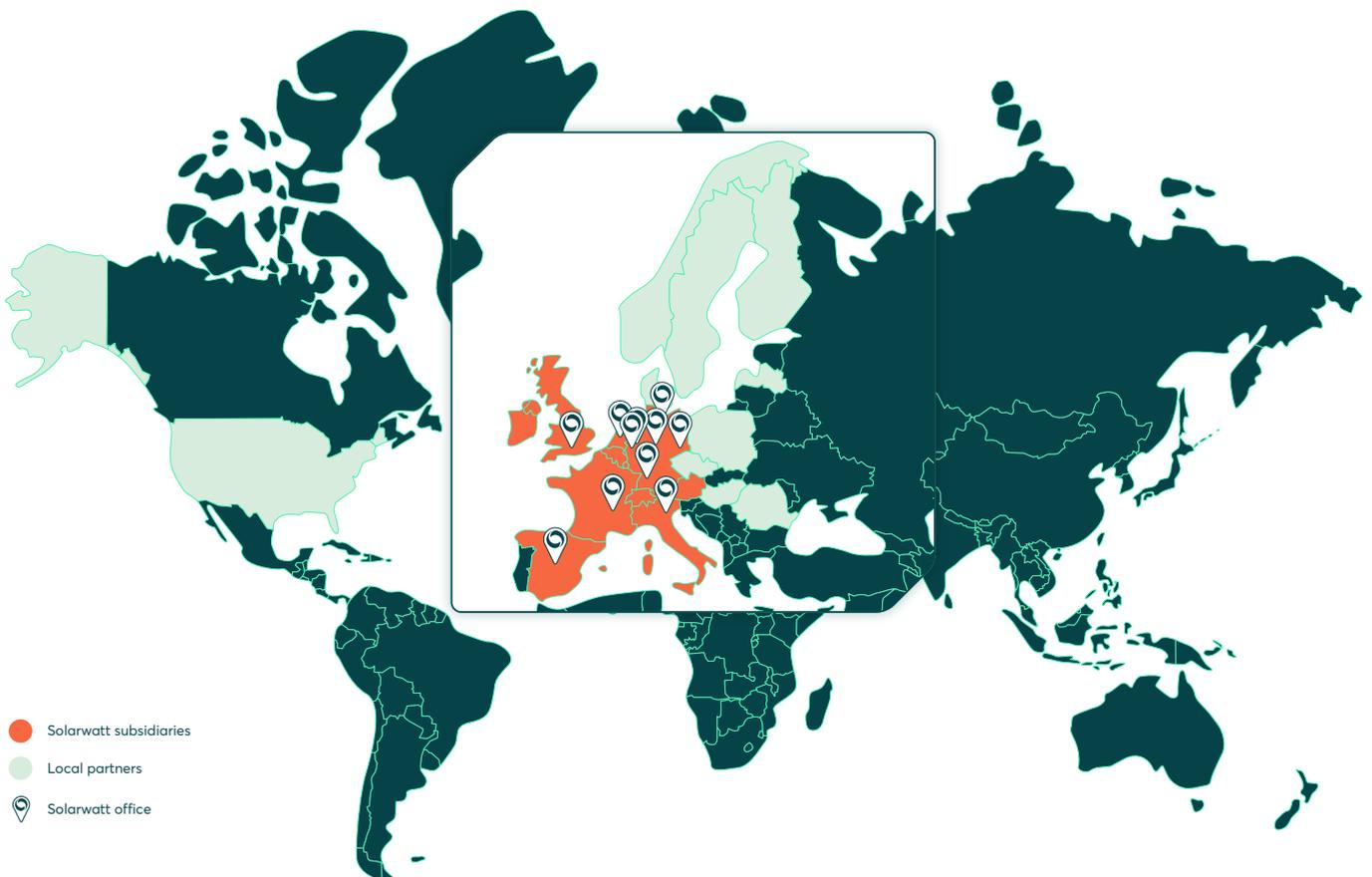
And so do we

- ✓ **Sustainable technology** - We ensure you get the most sustainable products and technologies.
- ✓ **Local support** - We know about family and are right next to you through our local partners.
- ✓ **Individual solutions** - Protection from rising energy prices, plus increased independence from utilities.
- ✓ **Modern, advanced technology** - We ensure you get the most advanced technology from our almost 30 years of experience.
- ✓ **Return on investment** - We provide the highest energy yields for decades, maximising energy harvest.



"Farming has changed as much as any industry – so we need to be forward-thinking & innovative in order to maximise our return on investment. Cutting our electricity costs gives us an edge and equips our business better to meet future challenges."

Pat Smith, Local Power Ltd., Ireland



Glass-glass technology. The generational modules.

The major advantage of glass-glass modules lies in the material properties themselves: glass does not age. Our rigorously tested modules withstand thick snow loads, aggressive gases including ammonia plus acid rain and salt mist – so energy yields remain stable, for generations to come.

The power-generating solar cells are protected by a 2-millimeter thick glass layer on both sides, bonded together by lamination to be water- and airtight. As a result, Solarwatt modules not only achieve a much longer service life, but also generate more electricity than conventional solar panels.



● Glass-foil ● Glass-glass

	Glass-foil	Glass-glass
Product guarantee	15 years	30 years
Guaranteed yield	218.000 kWh*	432.000 kWh*
Performance guarantee	25 years	30 years
Guaranteed yield	354.000 kWh*	432.000 kWh*

SOLARWATT glass-glass-modules

- 30-50 % more kWh guaranteed
- 15-45 % less electricity production costs
- 2 x doubled product warranty period

Return on investment to grow your business.

Our photovoltaic modules can generate up to 50 years of environmentally friendly electricity. Our advanced modules, batteries and energy management systems offer lasting protection against energy price volatility and grid failure.

That's why we offer an industry-leading 30-year warranty on product and performance, covering repair and replacement, transport and reinstallation costs. After 30 years, our modules are guaranteed to still have at least 90% of their original output.

* based on a simulated 12kWp, 35°, south installation in Cambridge, UK (PV Sol)



Glass-glass modules provide optimum protection for the valuable solar cells

- ✓ Glass-protected from both sides
- ✓ No fractures, cracks or dead cell areas
- ✓ Minimum degradation of power for more than 30 years

Anti-reflective glass

Embedding material

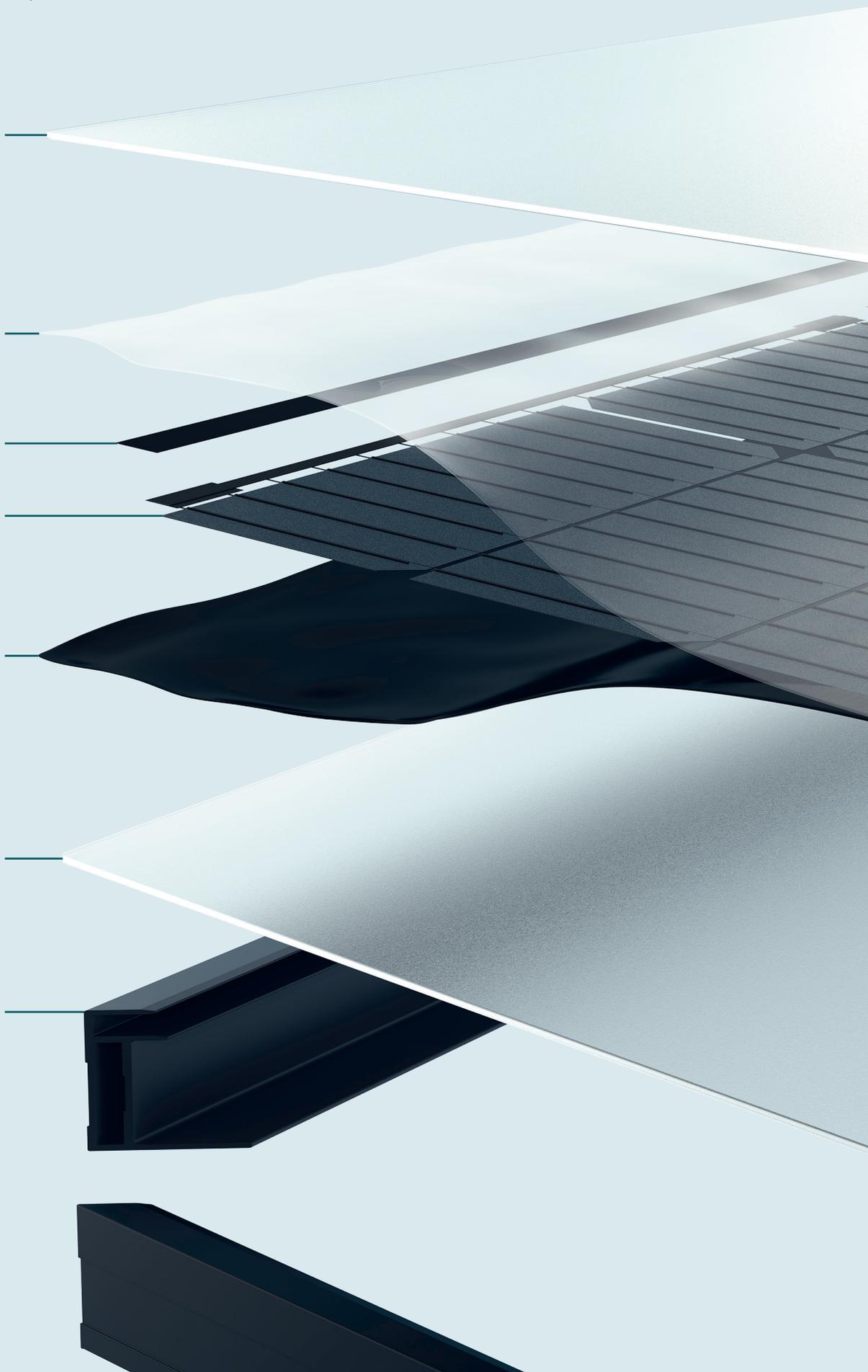
Cross-connector cover

Highly efficient cells

Embedding material

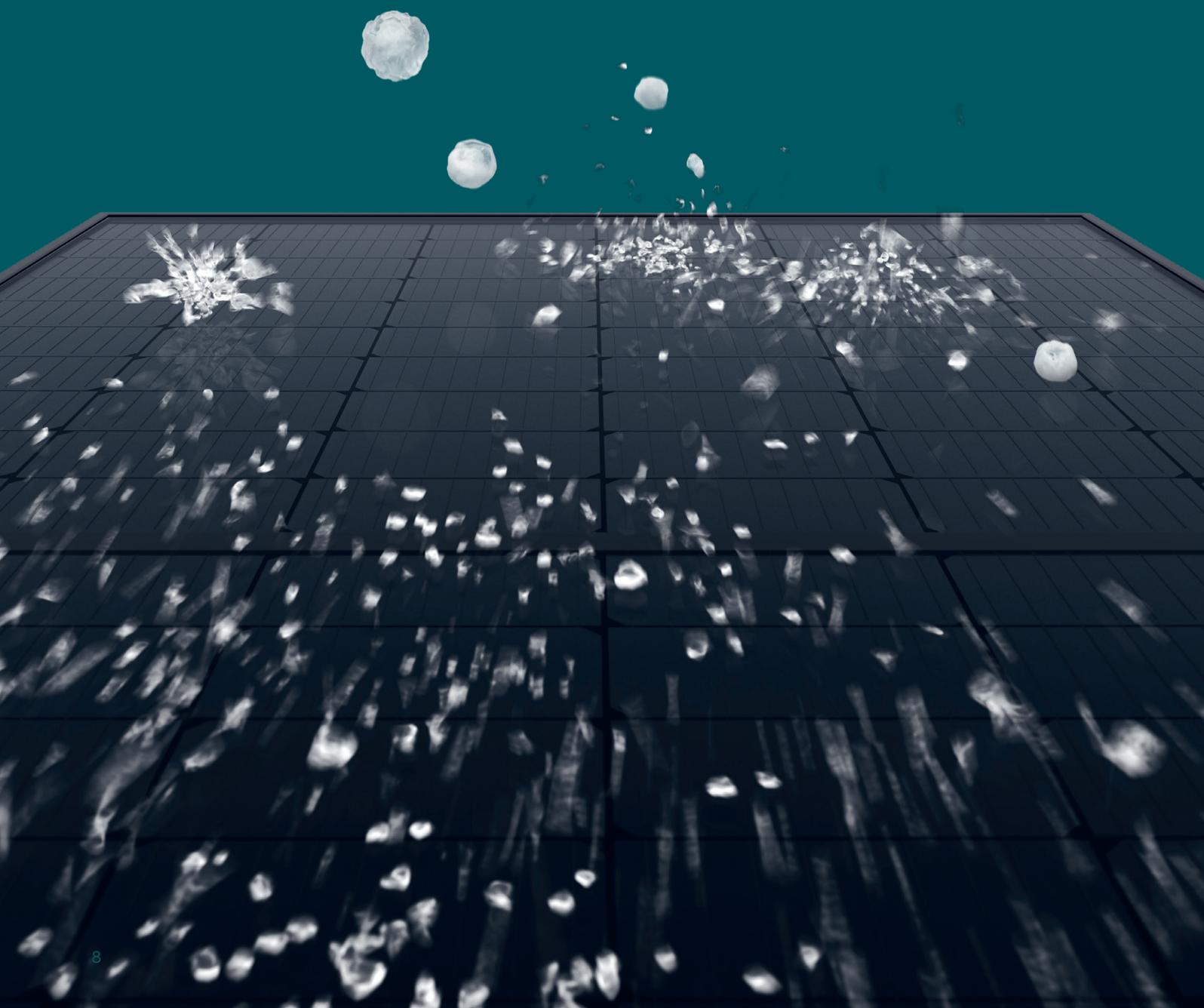
Thermally tempered glass

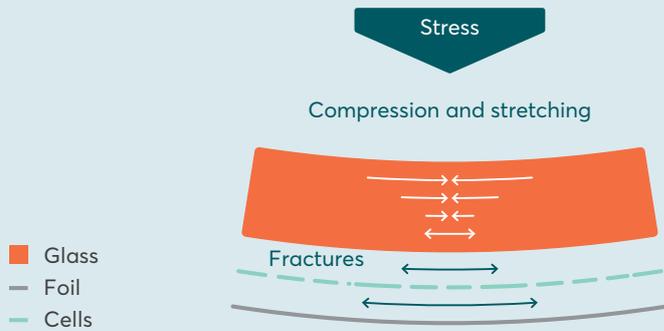
Aluminum frame



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

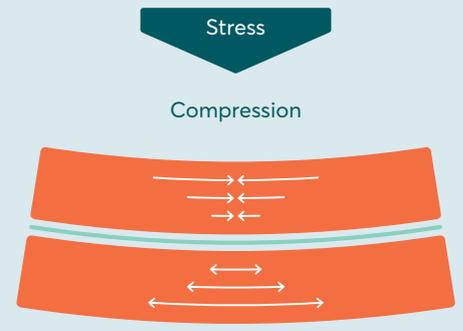
Powerful PERC & TOPCon cells are sensitive by nature – so, in our state-of-the-art manufacturing processes, we enclose them on both sides with thermally tempered glass. This makes our glass-glass modules significantly more robust than traditional glass-foil modules. With this protection, mechanical stresses caused by hail, harsh weather or snow won't lead to microcracks and the cells are generally less susceptible to damage. Steam and other highly aggressive agents such as salt spray or ammonia are also unable to penetrate the glass. And because glass doesn't really age like other materials, even time itself would struggle to take its toll.





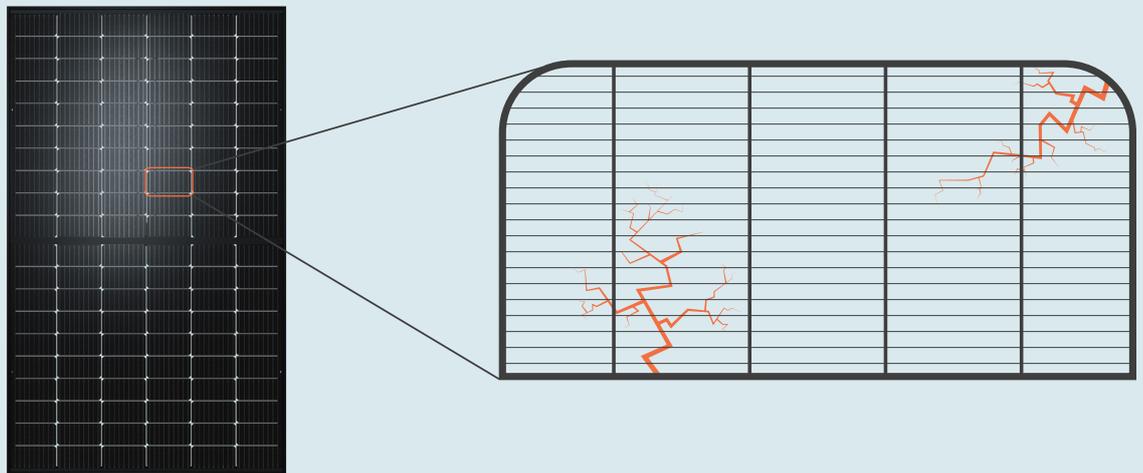
Glass-foil modules

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 fibre 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 microcracks. 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 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.

Panels that adapt to your needs.

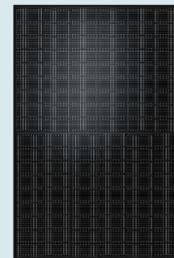
Get to know our modules and find exactly the right solution for your requirements. The following applies to all glass-glass panels from Solarwatt:

- ✓ 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

High performance M6

TOPCon Vision

Vision 60M style (black edition)

Panel vision GM 3.0 style

Panel vision AM 4.5 black **New**



Power

Up to 325 Wp

Up to 370 Wp

Up to 420 Wp

Properties

Lightweight
Small roof use
Dark appearance

Transparent, bifacial gain,
black frame

High performance, bifacial,
low carbon optional, full
black in between the cells

Cell Type

Cell format G1
158.75 mm
60 full cells

Cell format M6
166 mm
half-cut + multiwire

Cell format M10,
182mm, TOPCon
half-cut + multiwire

Dimensions (mm)

1,700 × 1,000 × 35

1,780 × 1,052 × 40

1,722 × 1,134 × 35

Weight (kg)

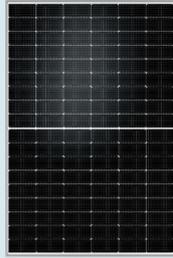
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25

25.4



As a building material Frameless glass-glass



Panel vision AM 4.5 style **New**



Up to 420 Wp

High performance, bifacial, low carbon optional, transparent between the cells

Cell format M10, 182mm, TOPCon half-cut + multiwire

1,722 × 1,134 × 35

25.4

Panel vision AM 4.5 pure **New**



Up to 425 Wp

High performance, bifacial, low carbon optional, full white in between the cells

Cell format M10, 182mm, TOPCon half-cut + multiwire

1,722 × 1,134 × 35

25.4

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 placement in e.g. carports and canopies

Cell format M2 156 mm 36 full cells

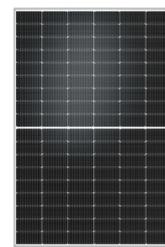
1,550 × 710 × 9

25



On the roof and in the roof

Framed glass-foil



Classic

SOLARWATT Panel classic
AM 2.5 black **New**

SOLARWATT Panel classic
AM 2.5 pure **New**



	SOLARWATT Panel classic AM 2.5 black New	SOLARWATT Panel classic AM 2.5 pure New
Power	Up to 430 Wp	Up to 430 Wp
Properties	Low-carbon optional, full black in between the cells	Low-carbon optional, white in between the cells
Cell type	Cell format M10 182 mm TOPCon half-cut + multiwire	Cell format M10 182 mm TOPCon half-cut + multiwire
Technology	Glass-foil laminate	Glass-foil laminate
Quality	20 year product warranty 25 year performance warranty FullCoverage optional	20 year product warranty 25 year performance warranty FullCoverage optional
Dimensions (mm)	1,722 x 1,134 x 35	1,722 x 1,134 x 30
Weight (kg)	21.4	21.4



1



2



3

- 1 Eesterga, Netherlands
- 2 Ireland
- 3 Ireland



"Investing in solar energy is a project for our future. I chose Solarwatt glass-glass modules to have the most homogeneous energy production possible over a period of more than 40 years, I hope."

— Nicolas Miau, EARL DE NORÉ, France

"I chose Solarwatt glass-glass modules for a ground mounted solar PV-installation on my farm because of the strong warranties and the proven strength and robustness of the panels."

— Kevin Lynch, Cooper Insulation Co., Ireland



"Glass-glass solar panels have a significantly higher fire resistance than glass-foil panels. As a farm, we want to become more sustainable and we strongly believe that investing in solar will ensure a good return on investment for decades to come."

— Ben Scheepers, Saasveld, Netherlands





Our story

Solarwatt was founded in 1993 with a clear objective: to make clean energy easily accessible to as many people as possible. Five years later, we developed the first glass-glass module on the market. Today, the company employs approximately 700 people, with new talent joining us all the time. Our staff are located in Germany, the UK, Sweden, Italy, Belgium, the Netherlands and Spain. We have development teams and a state-of-the-art production facility in Dresden and an innovation center in Hürth, Germany. We've also gained a strong technology partner in BMW.

Each product is developed with maximum consistency and quality in mind. The result is sophisticated products that can be trusted to function extremely reliably for a long time to come. After all, it's only with time that we reap the full benefits – benefits enjoyed by each individual user, the environment, and our wider society. We do what we do not just because we love this planet, but also because we need to do it, to give ourselves and our children a chance of a better tomorrow. A brighter future cannot be built overnight, but we can get there in small steps. And so each day, system by system, we gradually work to create the cleaner, better world we envisage. As veteran pioneers, we have already experienced and achieved plenty. But there is still so much more to do.

Powerful and cost effective - The Solarwatt System approach.

Solarwatt is the only supplier to produce all the essential components of your solar system itself: PV modules, energy managers, and battery storage. These building blocks complement each other perfectly and using them together strengthens their efficacy. The result for you: maximum efficiency and independence.



SOLARWATT Panel

Vision modules with glass-glass technology and built-in optimizers for reliable yields for decades.



SOLARWATT Battery

MyReserve's clever battery management system ensures highest efficiency and up to 80 % independence.

SOLARWATT Manager

for intelligent control of all home appliances and maximum utilisation of your PV system with EnergyManager.





Go solar with
Solarwatt.

Be part of a greener future.

We want to make it as easy as possible for you to be part of a positive change in the way we generate energy. No matter whether you'd like a general and no-obligation chat or have specific questions, we'd be happy to talk. We look forward to your call or email.

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