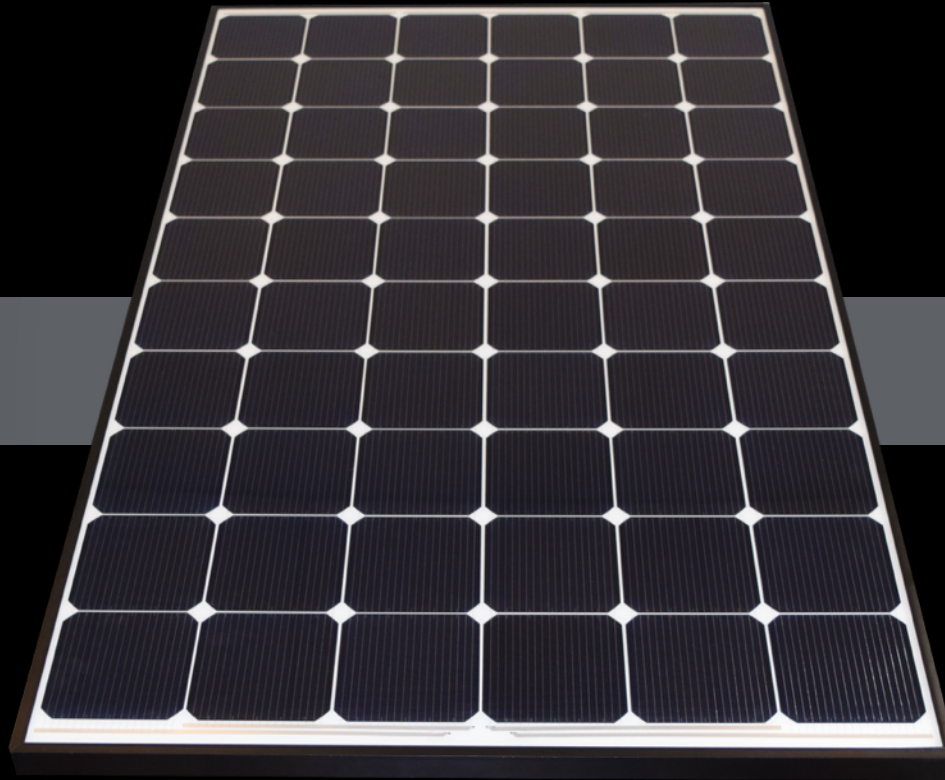


Welcome to the Next-Generation of Solar





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Manufactured in Riviera Beach, Florida

Designed with Swiss Precision

We believe in the future of the sun.

Using the most powerful and abundant energy source, we will deliver a piece of it to your home by harnessing the power of the sun.

Our **Mission** is to manufacture a state-of-the-art solar module with quality, performance and efficiency.

Our **Vision** is to facilitate the energy demands of our free world with a quality, efficient, and environmentally friendly module while pursuing the future in solar energy.

Our **Message** is to share the privilege of the sun and give everyone a piece of our largest energy supplier.

We believe in the future of energy, we believe in our sun. 



Inside

SolarTech

Universal

*W*elcome to the next generation of solar technology. Here at SolarTech Universal, we strive to deliver nothing but the best. Optimized with the latest technology in manufacturing, we are partnered with industry leaders in establishing a unique and exciting production line to produce the latest in the manufacturing of solar.

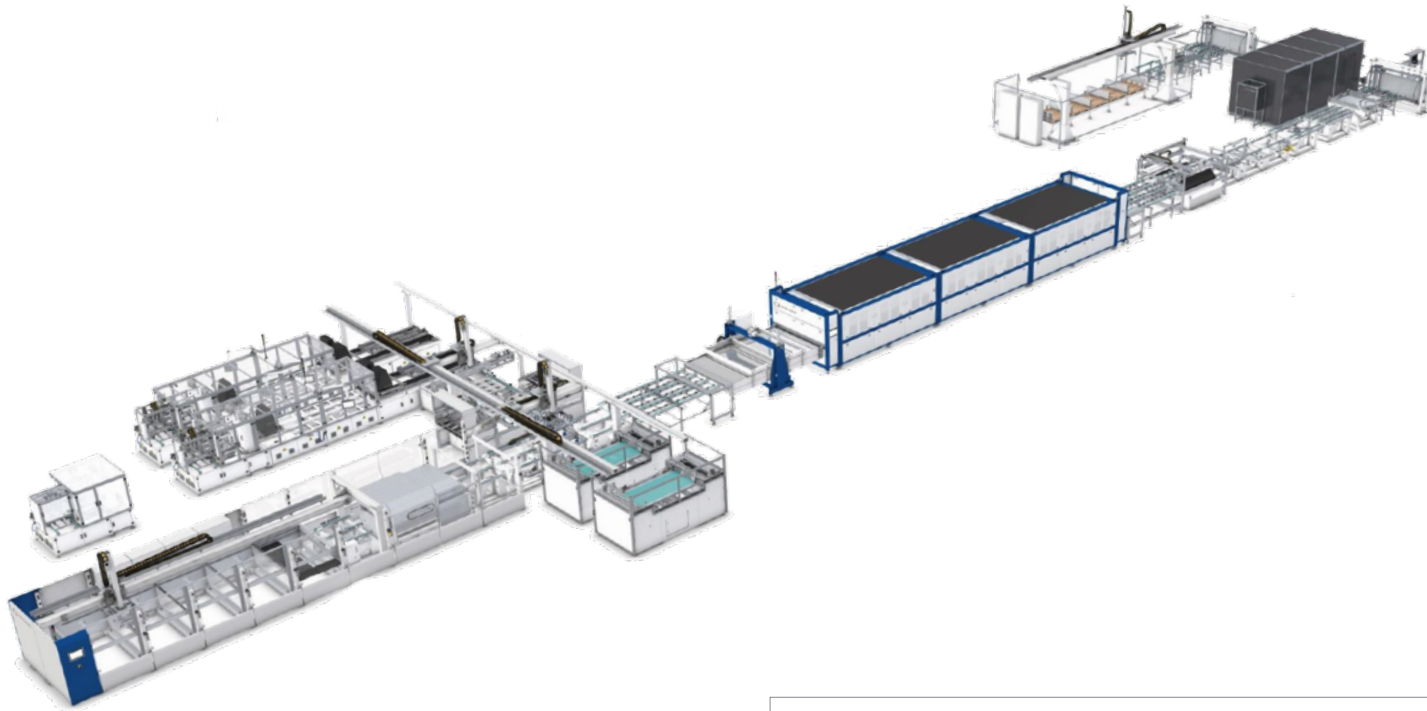
In partnership with Meyer Burger, SolarTech Universal created the “Quantum” panel. Utilizing the latest technology, engineered with the highest standards from Switzerland, SolarTech Universal has established a state-of-the-art manufacturing facility.

Efficiency

Amazing Design

Power *with a*
Premium Promise

Design render of the next generation production line for the Quantum series panels.



Tailor made from our partners in Switzerland by Meyer Burger.



www.MeyerBurger.com



Swiss-made Engineering

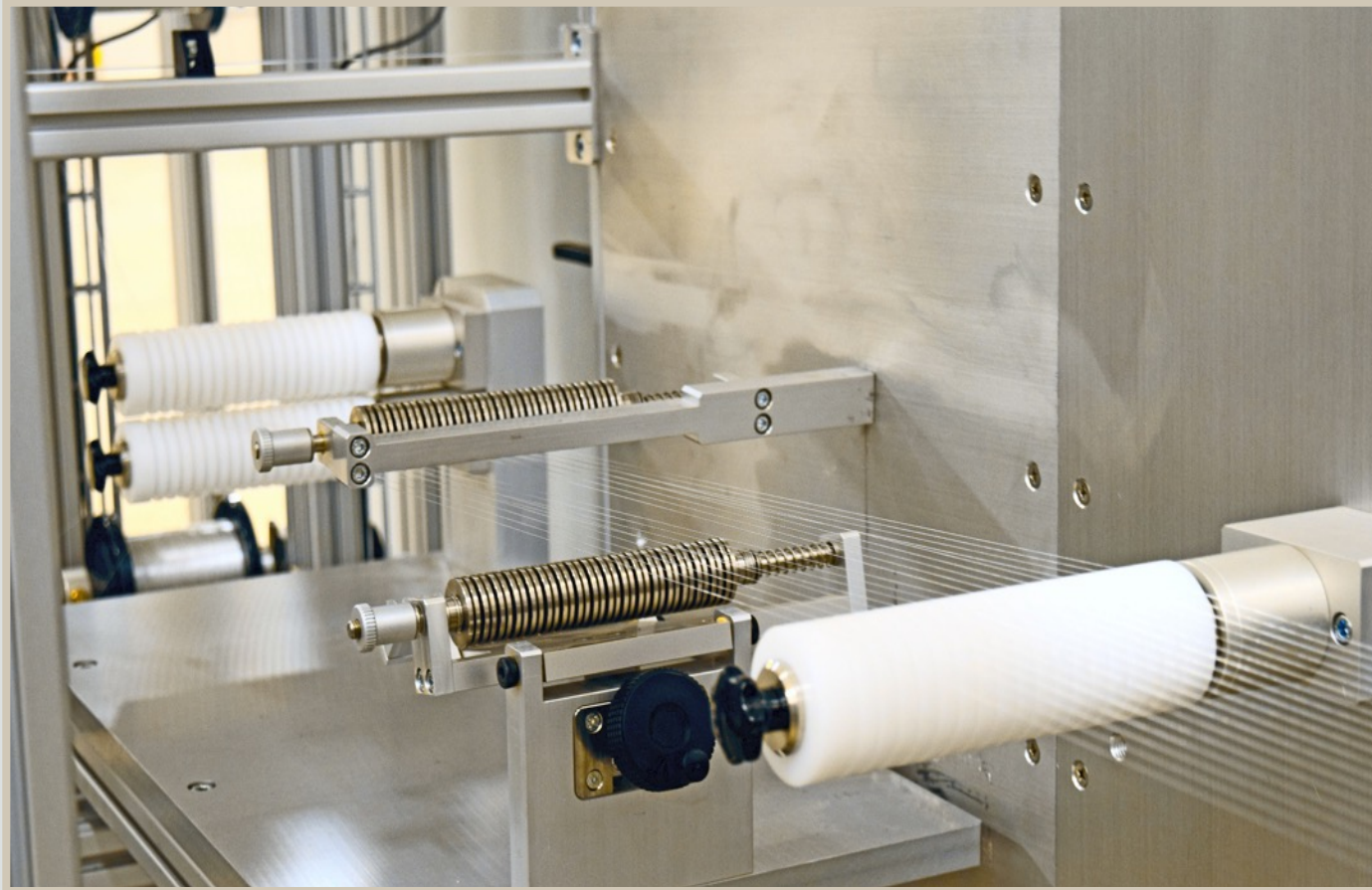
Meyer Burger is the leading global technology company specializing in innovative systems and processes based in semiconductor technologies and employs around 1,700 people across three continents.

"Our focus is on photovoltaics while our competencies and technologies also cover important areas of the semiconductor and the optoelectronic industries as well as other selected high-end markets based on semiconductor materials." - Meyer Burger

Swiss-made Partnership

Meyer & Burger Ltd was founded in 1953 as a manufacturer and focused on watch jewel manufacturing machines.

- In 1999, the company announced the founding of Meyer & Burger Holding AG and brought the first band of solar into the market.
- The company started off 2003 with the opening of the Russian, Asian and American markets and the establishment of subsidiaries in China and Japan in its expansion.
- In 2006, the group of Meyer & Burger Holding AG was renamed to Meyer Burger Technology Ltd and relocated the company headquarters to Baar.
- In November 2007, the company went to the stock exchange.
- In 2013, Meyer Burger presents revolutionary SmartWire Technology for the first time to the world.
- In 2014, SolarTech Universal established their state-of-the-art U.S. production plant featuring SmartWire Technology with the help of Meyer Burger.



SmartWire Technology

An evolution in solar engineering

SolarTech Universal believe's in the future of renewable energy and solar is our passion. After spending years in research and development, we are fulfilling our vision of creating the next generation of solar panels and establishing our footprint in the industry with the use of SmartWire Technology.

SolarTech Universal's goal is to innovate within the solar industry. Creating the next generation panel is no small task. With the help of our business partners, the creation of the manufacturing line was a unique process which helped create an extremely exciting, powerful, and consistently efficient module with a premium promise to produce the best that solar has to offer.

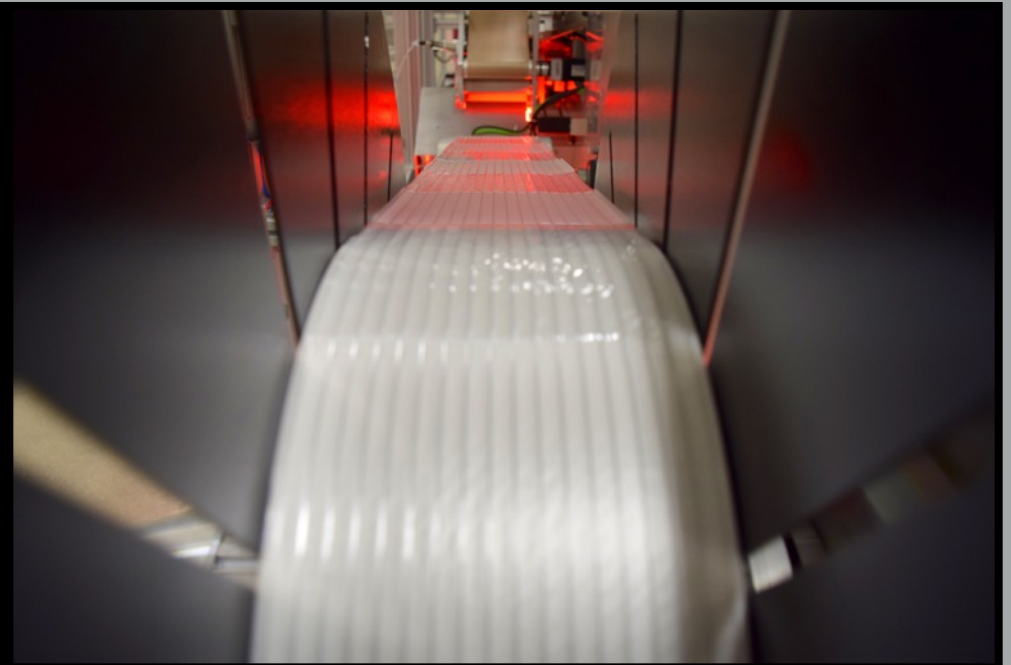
It all starts from a single wire

Introducing our Next-Generation production line. Starting with SmartWire, the next few pages will walk you through the establishment of the Quantum Series panel.

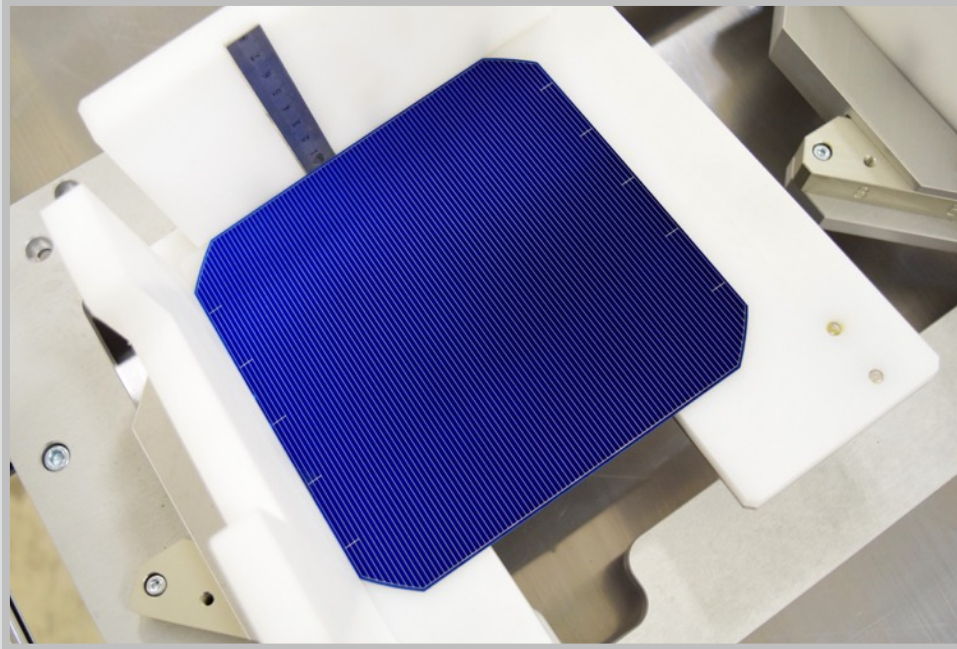
By replacing busbars on the solar cells with SmartWire, there is a significant reduction of shading on the cell which allows greater light penetration. In addition, SmartWire creates a dense contact grid of 2,660 points, minimizing the opportunity for electron/hole recombination. The increased number of contact points also allows for increased electron collection. More electrons plus more collection equals greater power output, especially in low light conditions. Combined with the high peak watt power; the added low light power creates greater energy density, lowering the cost per kilowatt hour (kWh).

From a wire to a roll

SmartWire electrode foil acts as a substrate for the otherwise fragile solar cells. As a result, negative effects of micro-cracks are eliminated providing a greater energy yield today and ensuring the longevity of the product in the future .



Foil wire assembly



PERC cells

Introducing PERC cells

High efficiency mono-crystalline PERC (passive emitter rear contact) solar cells generate more open circuit voltage and current by increasing internal reflectivity. This allows the cells to achieve an average efficiency of 20.9%. In addition, the average light induced degradation (LID) is 1%, compared to the industry average of 4%. This means more power for today and tomorrow.



Extremely durable and efficient Glass

Our 3.2 mm fully tempered glass protects the solar cells from harsh environmental conditions. The outside surface has an anti-reflective coating which allows for an industry leading 93.8% light transmittance for a perfect synergy of performance and longevity.

High efficiency performance glass





Encapsulate

Encapsulate strong as ever

The module is prepared for lamination with the addition of two sheets of encapsulate and a backsheet. Quantum modules use a thermoplastic polyolefin (TPO) encapsulation material which is vastly superior to ethyl vinyl acetate (EVA) which is used in 80% of modules on the market today. TPO is a naturally water repellent material which is not subject to discoloration caused by UV exposure. EVA is a natural water absorber which experiences yellowing when exposed to UV.

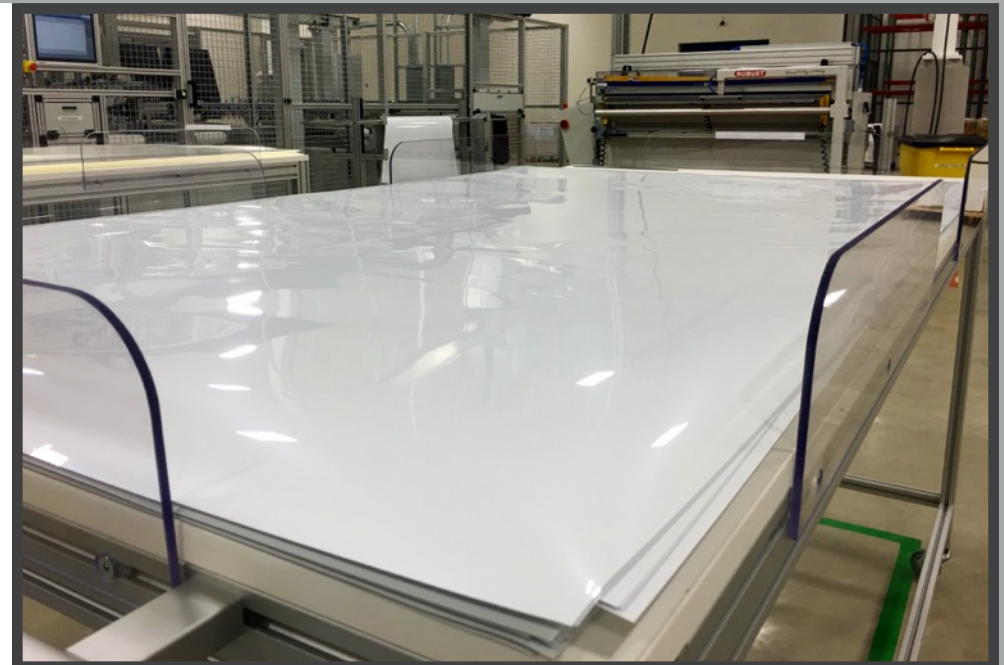


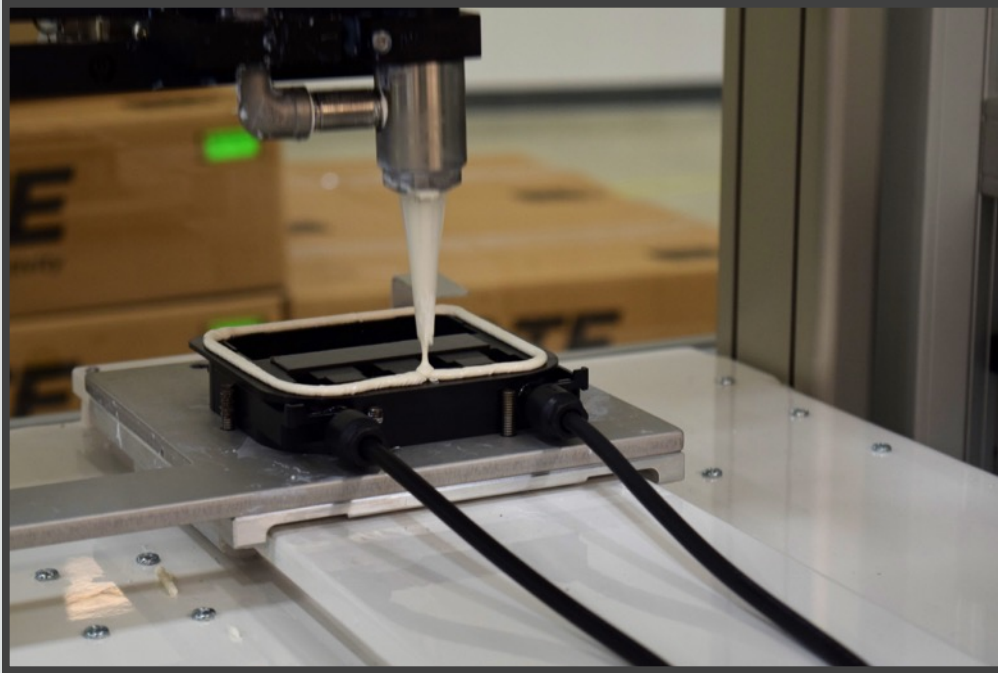
Backsheet

Backsheet established for strength

Similar to the encapsulate, the Quantum backsheet is inherently water repellent. The composite laminate consists of polyethylene terephthalate (PET), aluminum, and polyolefin (PE) layers. This PET and PE exterior layers provide exceptional water repulsion while the interior aluminum layer offers superior rigidity and durability providing exceptionally longevity for the module.

The end results are modules that will not delaminate and remain optically clear, providing a long lasting, high performance, energy yield for decades on end.





Junction-Box (w/silicone sealant)

Junctions glued to perfection

The Tyco Electronic, Z-Rail, junction box is dual rated IP 65/67. This dust tight junction box is certified to withstand wind driven water up to 12.5L per minute and water submersion up to 1M. Outfitted with (3) bypass diodes, negative effects of shading and hot-spots are mitigated. The boxes are sealed with Dow PV-804, which is certified to stay cured from -50°C to 180°C , ensuring excellent performance in any environment.

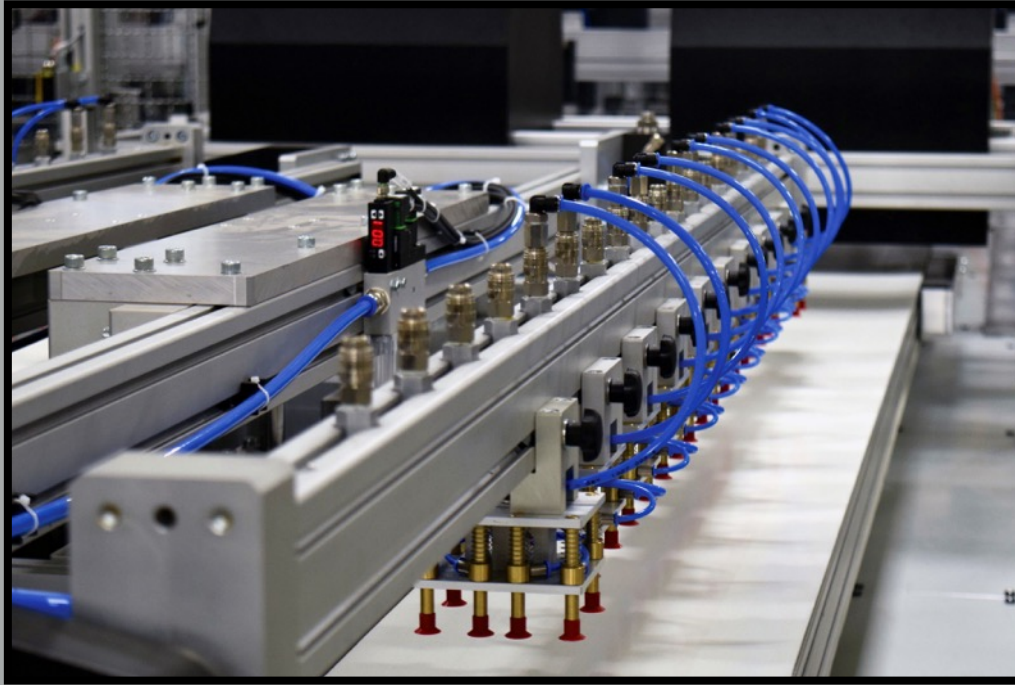


Framing in progress

Quantum's rigid 42mm, extruded 6063, T-5 hardened, anodized, aluminum frame is mechanically compressed with extruded aluminum corner keys. The virtually indestructible frame will withstand Mother Nature's strongest wind and snow loads. Available in Space Black or Metallic Silver, these frames are as beautiful as they are durable.

MiniTech frame press





Matrix transfer assembly station

SolarTech Universal began with a concept of developing the next generation of photovoltaic modules that would change the way we think about and use solar today. With a passion to help change the world for the better, SolarTech Universal took on the mission to manufacture a state-of-the-art solar module, that would not only be more efficient, but push the industry one step closer into the tomorrow SolarTech Universal wants to see it become.

The Next-Generation of solar manufacturing

The production line is fully automated which means greater efficiency with reduced faults. Every panel made demonstrates our consistent quality and promise for a premium product.

Our state-of-the-art line also means:

- + Every module is 100% inspected at more than 10 computer controlled points supported by 5 process technicians trained in quality control.
- + 100% of the cells are inspected and sorted prior to integration into the module. This input control allows a smaller module Power Tolerance of +/- 1.5%.
- + A+++ Flashing controls calibrated with SUPI calibrated Golden Modules guarantees uncertainty at < 1%.



Highest rated solar panel flasher in the industry

The national solar UL / TUV testing association

A+ A+ A+

Along side the state-of-the-art facility, SolarTech Universal's panels are tested by only the highest standards within the industry. Our Pasan panel flasher achieved an A+ rating with the UL and TUV administration for being the most accurate panel flasher and provides extremely efficient testing measures in the world.

Innovation comes from every detail. Consistently.

Consistency and efficiency is what we are proud of. Our Pasan solar flasher certifies each module at the end of its production run ensuring we have an accurate measurement. Compared to the industry standards, SolarTech Universal's Pasan flasher is 20% more accurate at the rate of *99.12%*. Our panels will come out of manufacturing with peak performance and quality every time, while producing more kilo watt hours and increasing the customers economic benefits.





Matrix transfer component from our production line

Next-Generation Innovation

SmartWire Technology (SWT) is the most innovative method of creating cell strings. SolarTech Universal's partnership with Meyer Burger has established a new line of technology which produces a solar panel radically better in every way. With a full integrated production line, SolarTech offers an aesthetically pleasing and premium design, which allows the module to be unique within the PV industry.



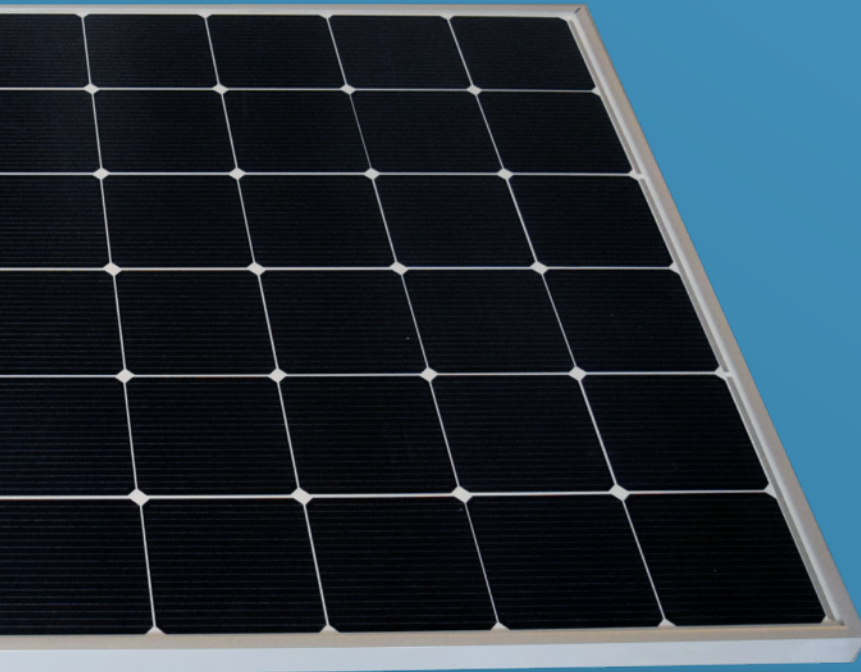
Industry leading
state-of-the-art Manufacturing.
Standard.

At SolarTech Universal, we scour the globe in search of the most preeminent materials the industry has to offer. Combined with our fully automated manufacturing system, we offer consistent high power modules that will last a lifetime. Each material has been carefully tested to meet our best-in-class standards.

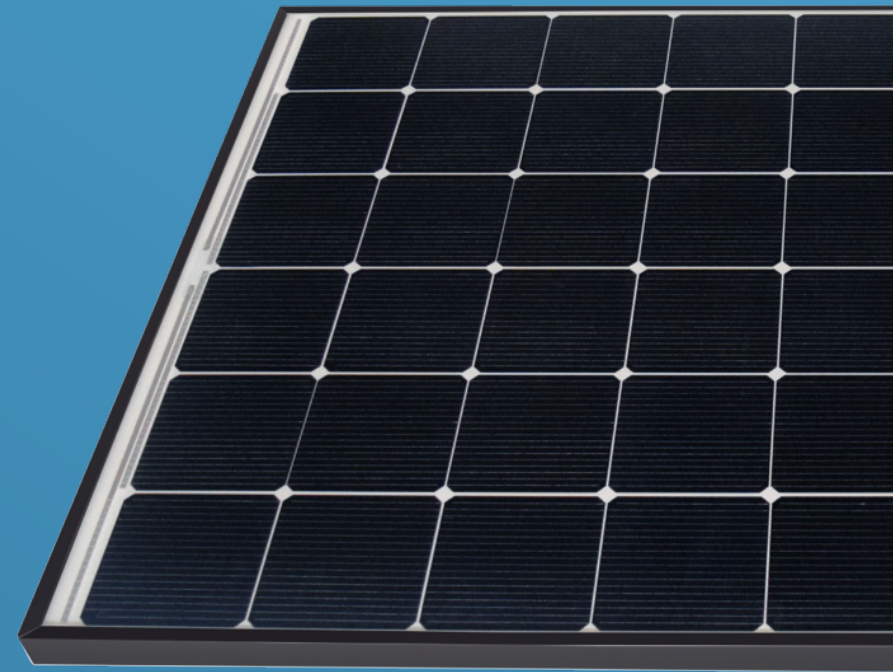
SmartWire Technology is here.



Perfected
from
cell to cell



Metallic Silver



Space Black

Brilliant Colors.

Panels designed with aesthetics in mind.

Quantum series panels include anodized aluminum frames in Space Black or Metallic Silver color options to allow better choices to meet your solar needs.

Premium Design.



Smart enough to be the best.
Welcome to SmartWire Technology.



Q **QUANTUM SERIES**

SmartWire Technology featured in our Quantum series panels.

Introducing The Quantum Series



There's a **panel**.

Then there's **Quantum**.

Quantum, the first and newest line of solar modules are here for today, ready for tomorrow.

The Quantum series panels combine dynamically efficient power with SmartWire Technology to create an exciting, all new solar module.

The cells used in the Quantum Series don't carry the typical busbar design, which allows for more light to enter each cell resulting in greater efficiency.

Our vision is to deliver an exciting new product to our customers and allow clients to feel happier and share our enthusiasm about the future of solar.

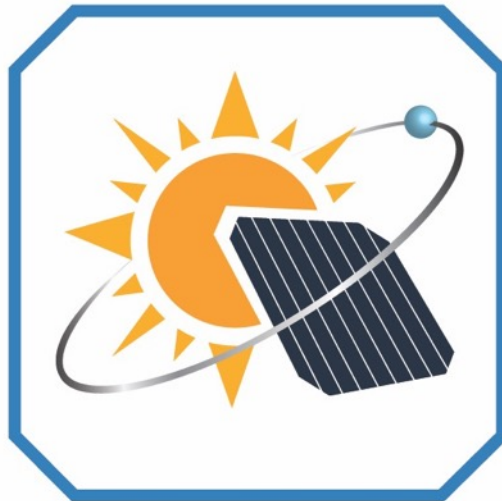


“We wanted to deliver to the world

something that is not being offered today. With our strong key values as a company, we knew solar wasn't having any breakthrough success and something was needed to re-energize the industry. SolarTech Universal is making the future bright for the photovoltaic industry and we're getting the world excited about the future of solar!”

– SolarTech Universal







SOLARTECH
UNIVERSAL