

Advent Solar: Frequently Asked Questions

Who is Advent Solar?

Advent Solar is a leading innovator of next generation silicon-based solar technology. The Company focuses on delivering intellectual property (IP) for intelligent, high-energy silicon photovoltaic (PV) solutions. With patented, advanced technologies, Advent Solar enables higher value products that are *Beautiful by Design™*, changing the rules for smart grid economics.

With its industry leading Advent Solar® Ventura™ Technology, Advent Solar provides the blueprint for high-performance solar modules that deliver the industry's best value for silicon PV modules. Advent Solar solutions offer the industry's only comprehensive cell-to-module architectural approach that is scalable to silicon types and amenable to highly automated semiconductor-like manufacturing. Advent Solar's unique approach enables higher value at many levels, to shift solar from an "alternative" to a mainstream energy source.

What products does Advent Solar provide?

Advent Solar provides IP and services to enable higher-valued cell and module products. The Company has established a strong patent portfolio around the Ventura platform and has validated products based on the technology for high-volume production.

What is Advent Solar® Ventura Technology™?

Advent Solar® Ventura™ Technology combines the unique Emitter Wrap-Through (EWT) back-contact cell with Monolithic Module™ Assembly (MMA), delivering the solar industry's only comprehensive cell-to-module solar architecture. Ventura cell technology maximizes light capture efficiency with the patented EWT back contact approach. Furthermore, it achieves the optimal balance between efficiency and cost – maximizing module energy output with minimal interconnect resistance, while using thinner silicon wafers to reduce cost. Ventura Solar Technology architecture is versatile enough to accommodate different silicon types, such as multi-crystalline, mono-crystalline and upgraded metallurgical silicon (UMG), and is scalable in scope to increase value with system-level features.

What is Emitter-Wrap Through (EWT)?

Advent Solar holds the exclusive license for Emitter-Wrap Through (EWT), which is a breakthrough cell-design developed at Sandia National Laboratories by James Gee, Advent Solar's Chief Scientist. EWT's design eliminates grid obstruction while still using low-cost solar-grade materials and fabrication processes. EWT cells have a clear advantage in terms of high efficiency with low-cost potential.

What is Monolithic Module Assembly (MMA)?

Monolithic Module Assembly (MMA) enables fully automated module assembly, applying proven, high volume, high precision semiconductor-style manufacturing techniques. Using robotic "pick and place" methods, each cell is perfectly arranged onto a monolithic integrated circuit backsheet. Novel bonding techniques form low resistance electrical contacts between the cells and backsheet with integrated circuit. The integrated backsheet is produced by very high-volume, low-cost roll-to-roll processing. By using planar processes and reducing the complexity of manufacturing processes, this approach results in highly repeatable, consistent module output with maximum yields.

Is Advent Solar a privately-held company?

Yes. Advent Solar has raised approximately \$118M USD in venture funding to date. Its investors include @Ventures, Battery Ventures, EnerTech Capital, Firelake Capital, Globespan Capital Partners, New Mexico Co-Investment Partners, Sun Mountain Capital and ZBI Ventures.

**What are Advent Solar's revenues?**

As a privately-held company, Advent Solar does not disclose financial information.

When was Advent Solar founded?

Advent Solar was founded in 2002. It secured an exclusive license from Sandia National Laboratories in 2003 to commercialize EWT and MMA technology, which was developed by Advent Solar Chief Scientist and Founder James Gee during his career with Sandia National Laboratories.

Who is on Advent Solar's leadership team?

Advent Solar's executive management team has more than 250 years of combined experience in the solar and semiconductor industries. The team includes:

- Peter Green, President and Chief Executive Officer
- Dick Trueblood, Chief Financial Officer
- Martin Hermann, Chief Strategy Officer
- Naresh Baliga, Vice President, Strategic Marketing
- Fares Bagh, Vice President, Engineering and Technology
- James Gee, Founder and Chief Scientist

What is your relationship to Sandia National Laboratories?

Sandia National Laboratories exclusively licensed the EWT and MMA technology to Advent Solar. Sandia National Laboratories continues to support Advent Solar as part of their solar-energy research programs to assist the U.S. photovoltaic industry.

Does Advent Solar hold any patents?

Yes. Advent Solar has an extensive international patent portfolio, including several key patents on EWT and MMA technologies. Some of the patents are exclusive licenses from Sandia National Laboratories, where Advent Solar's technical team conducted pioneering work on EWT and MMA. Additionally, Advent Solar has several patents granted in the area of back contact solar cell methods and fabrication.

What is the Solar Green Index?

The Solar Green Index is a measurable benchmark for assessing the efficiency and value of silicon PV architectures from a system perspective, developed by Advent Solar. One of the key factors in this index is the ratio of module efficiency to cell efficiency – the higher the index, the better the delivered value.

What does *Beautiful by Design*[™] mean?

Beautiful by Design is Advent Solar's brand promise. It encapsulates the Company's vision to create solar cells and modules that are aesthetically pleasing. Designed with building integrated photovoltaic (BIPV) market needs in mind, they feature perfectly aligned, clean, blue silicon squares that customers are proud to showcase.



Where is Advent Solar headquartered?

Advent Solar is based in Albuquerque, New Mexico, U.S.A. Its corporate headquarters received Leadership in Energy and Environmental Design (LEED) certification in 2008, demonstrating the Company's commitment to strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. Its address is:

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What is Advent Solar's website?

www.adventsolar.com

Who can I contact for more information?

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