



WWW.NEXTNOVA.COM

Building America's Next Generation of U.S. Solar Cell Manufacturing

In Oklahoma City / Yukon, Oklahoma



Nathan Miller
Chief Strategy Officer

October 14, 2026



Nathan Miller

CSO – Nextnova Solar

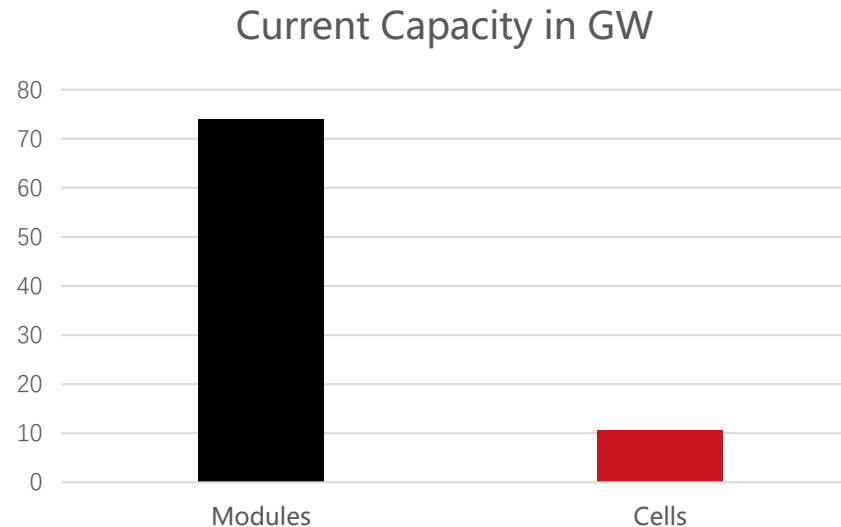
Nathan Miller holds over 20 years of senior leadership experience at leading PV manufacturers and EPC players such as First Solar and LONGi Solar, with expertise in multi-GW key account oversight, utility sales, EPC delivery and renewable energy M&A.

He now acts as Chief Strategy Officer for NEXTNOVA, a newly launched U.S.-based solar manufacturing company, crafting core strategies to advance its domestic solar cell production footprint in America.

The U.S. Solar Industry Has Built the Module Base — Now It Needs the Cell Base

NEXTNOVA

U.S. module assembly has expanded rapidly, but domestic cell production remains a critical bottleneck.



The logical consequence for Nextnova's investors:

Build a cell factory to support the U.S. Supply Chain



A New U.S. Cell Manufacturer Built For The Next Era

Official operation starts from
March 2027

Factory location: Oklahoma,
OK
Initial capacity: 2 GW

Expansion potential: 5 GW
Approx. 300 jobs



A U.S. Solar Cell Manufacturer Built to Move Fast

NEXTNOVA

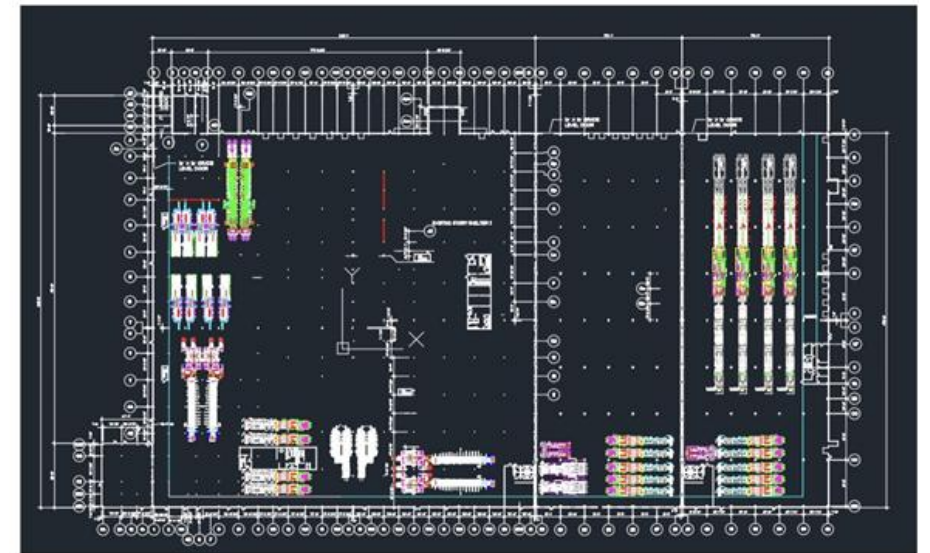
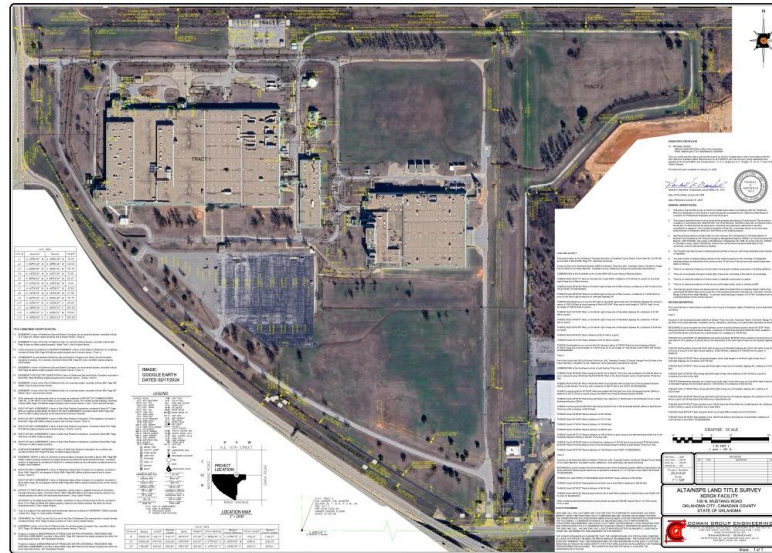
SITE AREA
456,000 sq ft

TOTAL INVESTMENT
\$200, 000, 000

DESIGN CELL
CAPACITY
5 GW in total

2027 -> 2 GW
2028 -> 5 GW

- Dedicated solar cell production environment
- Integrated production and quality infrastructure
- Material flow designed around manufacturing efficiency
- Built with future expansion in mind



The Journey From Building Acquisition to Commercial Production – **in 13 Months**

NEXTNOVA



Equity Structure (FEOC-compliant)

NEXTNOVA

Korean individual

U.S. individual

Nextnova

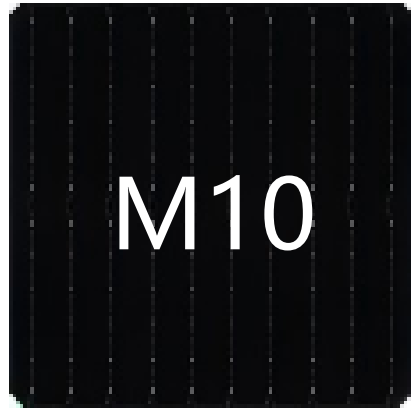
US cell manufacturing facility
Total Investment Amount: \$200,000,000

Solar Cells Initial Offering

182 Monocrystalline Bifacial P-Type Solar Cell

NEXTNOVA

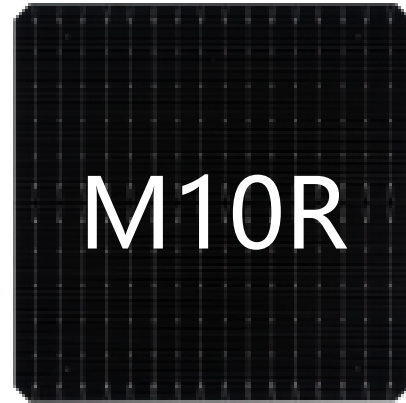
NEP182*182-
10BB



P-type-10BB

7.17 * 7.17 inch
(182 * 182mm)

NEP182.2*183.75-16BB



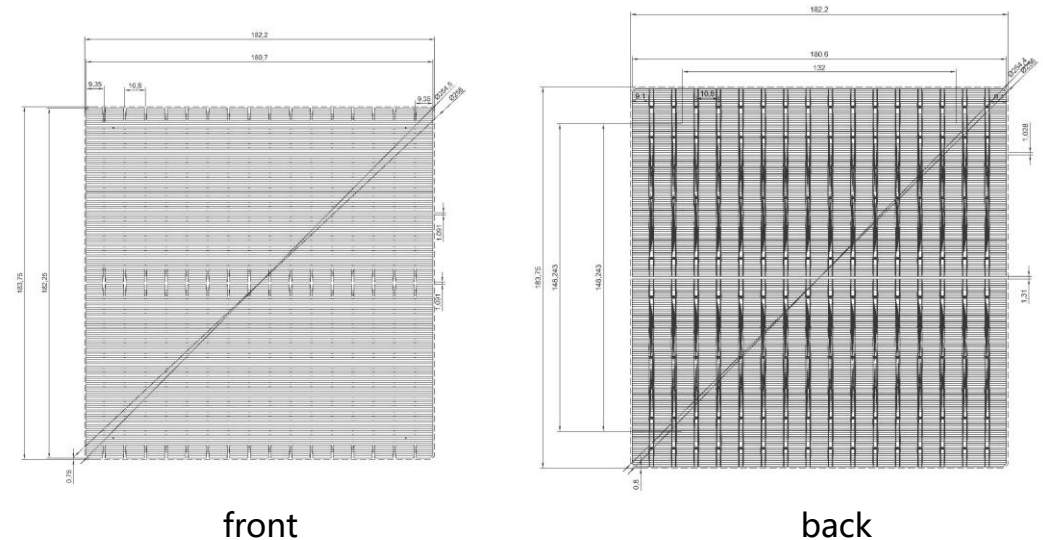
P-type-18BB

7.17 * 7.23 inch
(182 * 183.75mm)

Current P-Type Potential Mass Production Efficiency

$\geq 23.5\%$

- ☀️ Ultra-Efficient solar cells with an anisotropically etched surface
- ☁️ Low CTM loss, ideal choice for high performance modules
- ⚡️ Low pressure diffusion with good uniformity
- 🛡️ Excellent PID resistance



We Are Building a Manufacturing Platform

— Not Just a Production Line

The 4 pillars of Nextnova 's architecture of operation



Advanced Manufacturing
- Precision Process Control
- Automation and inline monitoring



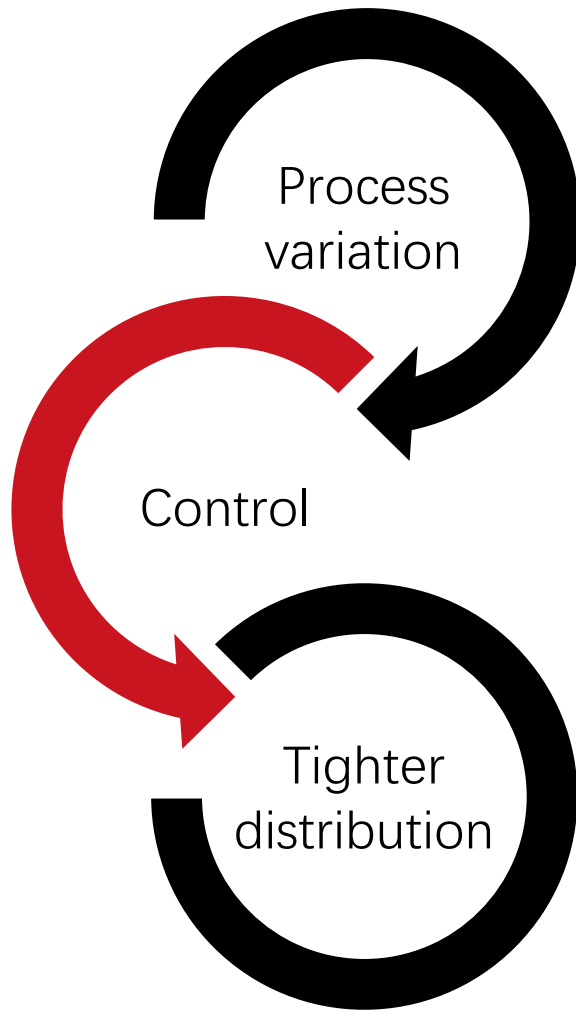
Complete Transparency
- Digital Material and production traceability



Premium Quality
- Inspection, Testing and Continuous Verification



Scalable Production
- Designed for controlled expansion



Process Control Is Where Efficiency Becomes Manufacturing

High Efficiency Is Only Valuable When It Is Repeatable

Based on

- Tight process windows
- Statistical Process Control (SPC)
- ISO quality management standards

Paired with

- Continuous inline monitoring
- Rapid deviation detection
- Data-driven yield optimization

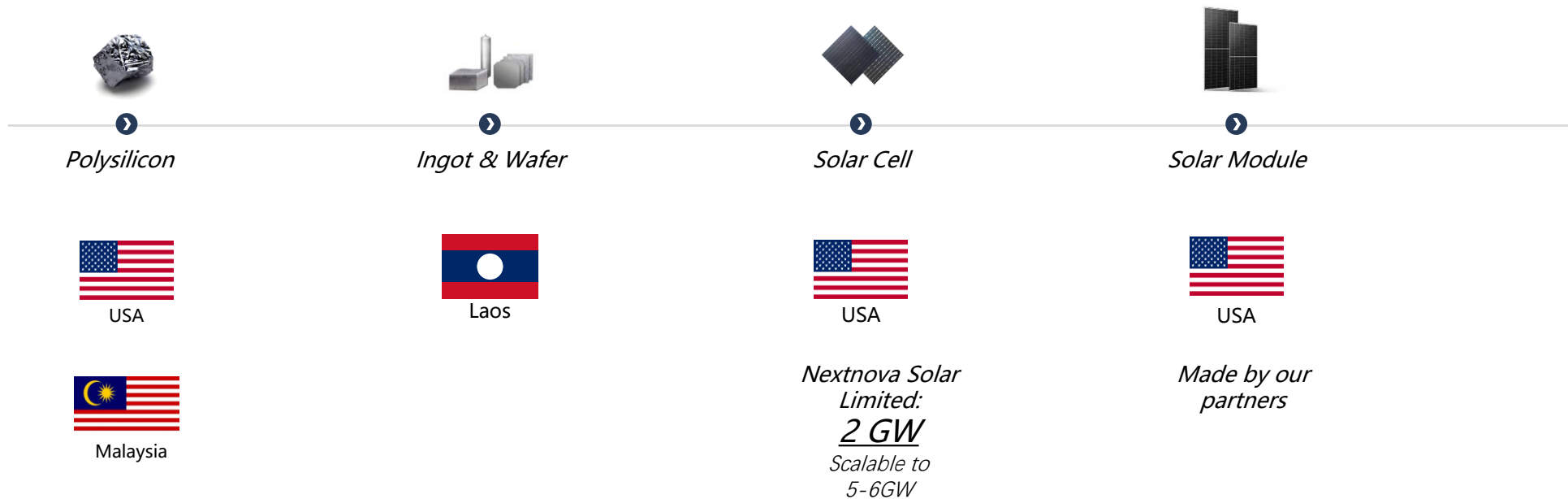
Less variation = more predictable output

Traceability From Polysilicon to Finished Cell

The base for FEOC- and UFLPA compliance

Nextnova offers 100% digital traceability from polysilicon to finished solar cell. Our supply chain focuses on FEOC and UFLPA compliant sourcing.

Rigorous supplier qualification and incoming material inspection ensure only premium raw materials enter the manufacturing process.



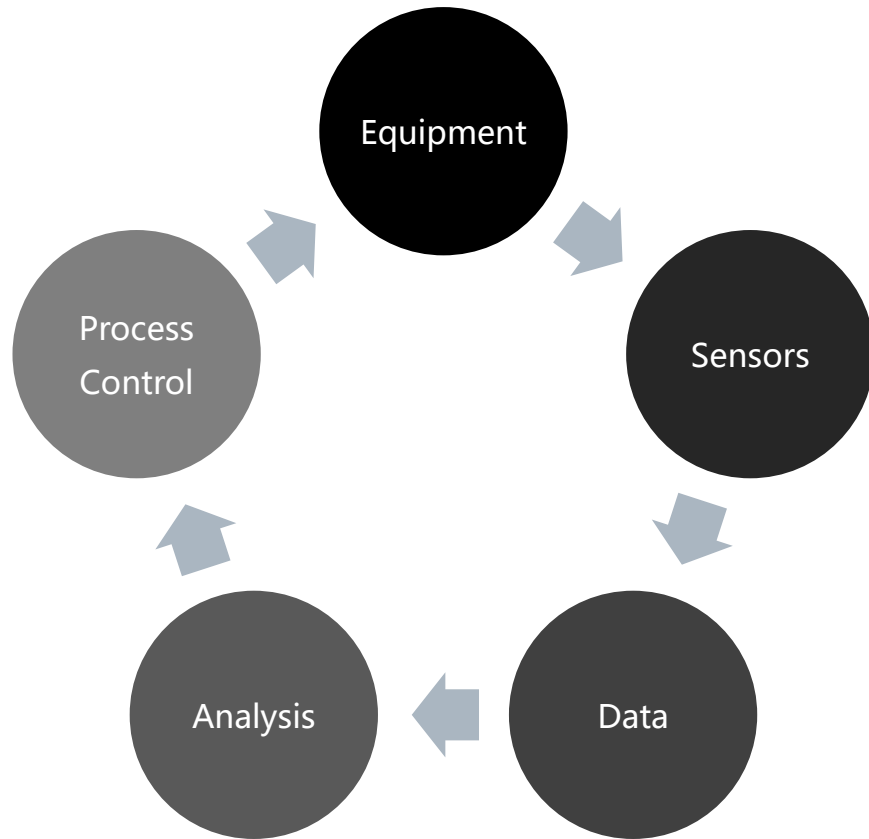
Additionally, we provide

- Production lot tracking
- Process parameter and equipment history
- Inspection and final test records

The Nextnova Manufacturing Architecture

NEXTNOVA

Designed Around Process Control, Data and Quality



- Automated production equipment
- Inline process monitoring
- Advanced process control
- Integrated manufacturing data
- Continuous quality verification

➤ The next slide will give an overview of the major quality tests performed at Nextnova

Quality: 100% Testing.

Because Every Cell Matters.

NEXTNOVA



Advanced metrology systems

measuring wafer thickness, resistivity, texturing, emitter formation, passivation quality, metallization precision, and dimensional accuracy.



100% electrical testing

including current-voltage (I-V) characterization, efficiency, fill factor, open-circuit voltage, short-circuit current, and other key performance metrics for every production batch.



Automated Optical Inspection (AOI)

Detects microscopic defects and contamination
Identifies any process deviation throughout production



Inline electroluminescence imaging (EL)

Identifies hidden microcracks, crystal defect, electrical irregularities



Online Eddy-Current Sheet Resistance Testers

Continuously measure sheet resistance to verify uniform dopant diffusion and electrical consistency across every wafer.

We do more

Because quality is part of our DNA

Photoluminescence (PL) Infrared Testers – Detect crystal defects, impurities, microcracks, and process irregularities that can reduce cell efficiency.

Minority Carrier Lifetime Testers – Evaluate the quality of silicon material and passivation by measuring carrier lifetime, a key indicator of potential cell efficiency.

Suns-Voc Testers – Assess the electrical characteristics of solar cells without contact, enabling optimization of junction quality and overall device performance.

3D Microscopes – Analyze surface topography, metallization profiles, and manufacturing features with high precision.

2D Measuring Instruments – Verify critical dimensions, alignment, and geometric tolerances throughout the manufacturing process.

Electrochemical Titrators – Precisely monitor chemical concentrations used in cleaning, texturing, and other wet-process manufacturing steps to ensure stable process conditions.

Cell Water Boiling Aging Testers – Accelerate durability testing to evaluate the adhesion and long-term reliability of metallization and passivation layers.

Tensile Testers – Measure the mechanical strength and adhesion of interconnections and metallization to ensure robust cell performance during module assembly.

Light-Induced Degradation (LID) Testers – Quantify performance losses caused by prolonged light exposure, ensuring cells maintain high output over their operational lifetime.

Screen Mesh Microscopes – Inspect screen-printing meshes for wear, blockage, and dimensional accuracy, ensuring precise metallization patterns and consistent electrical performance.

Built to Deliver

Transparent. Advanced. Reliable.

Nextnova is a trusted partner for the U.S. solar industry, combining

Transparent: Complete supply-chain and manufacturing traceability
Advanced: Automation, process control and Industry 4.0 manufacturing
Reliable: Rigorous quality systems and verified electrical performance

Our high performance solar cells are engineered to provide

Maximum efficiency and energy yield
Long-term reliability and durability
Consistent performance and enhanced bankability

**2 GW initial capacity
5 GW expansion
potential
Oklahoma, USA
March 2027**

NEXTNOVA

Nextnova Solar Limited

Thank you for your time!

For further information, please contact
Nathan.miller@nextnova-solar.com

Or check out our webpage at
www.nextnova.com

Scan me

Linked 



Scan to
visit

nextnova.com

