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**2026 Product Manual**



**Mission**

Powering the earth and the future, making life better

**Vision**

To become the most trusted PV enterprise through continuous innovation and management excellence

**Slogan**

Stand the test of time

# CONTENTS

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01

About SUNTECH

02

Product Introduction

03

Sustainable Manufacturing  
Capabilities

## About SUNTECH

Founded in 2001, Suntech Power is a world-renowned manufacturer of photovoltaic (PV) products, engaged in the R&D and production of solar cells and modules.

As a pioneer in the global PV industry with 25 years of module manufacturing experience, Suntech has established a worldwide sales network, positioning itself as a reliable and sustainable energy partner to its customers.



**25 yrs**  
Of Manufacturing Experience

**100+**  
Countries and Regions Covered

**5000+**  
Global Partners

**600+**  
Authorized Patents

## Leading Innovative Technologies

To ensure product reliability under extreme conditions such as **heat, wind, snow, and salt corrosion**, our CNAS-certified labs conduct strict tests, complemented by **world-renowned third-party verification**.



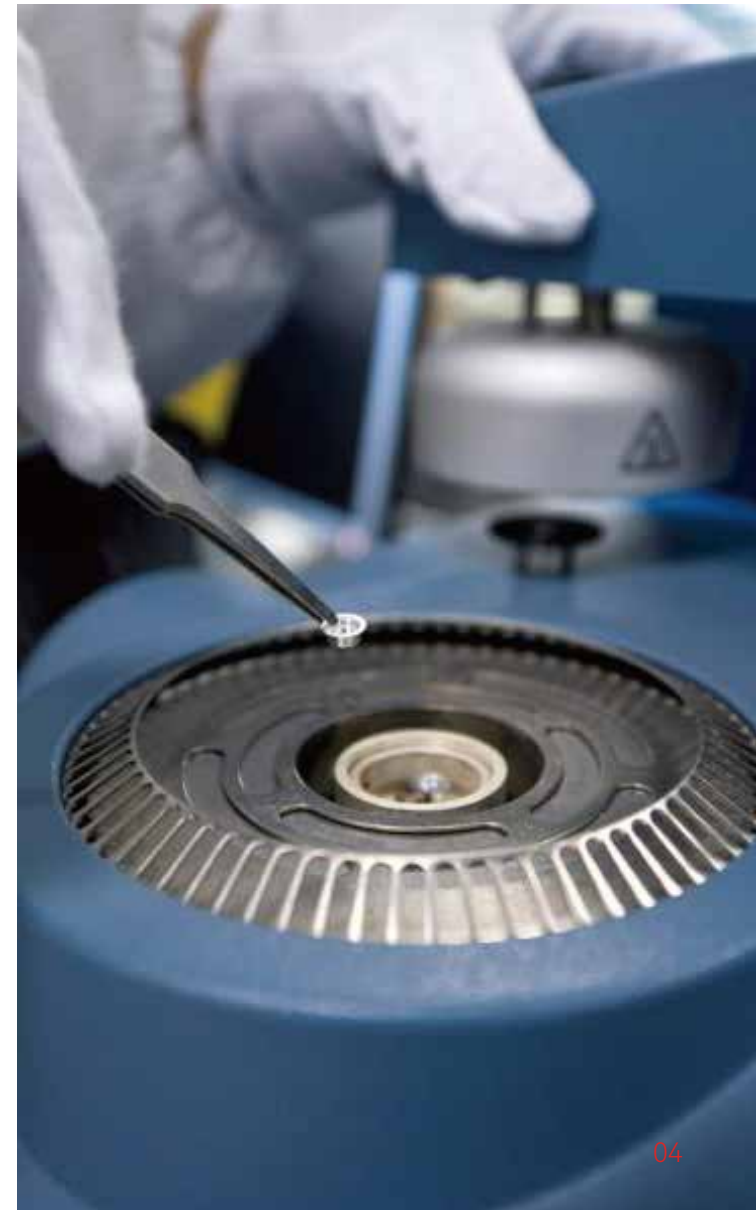
**ISO 9001**  
Quality Management System

**ISO 14001**  
Environmental Management System

**IEC/TS 62941**  
PV Manufacturing Quality System

**ISO 45001**  
Occupational Health & Safety System

**ISO 50001**  
Energy Management System



# Ultra T 2.0 Technology

## Half-cell Technology

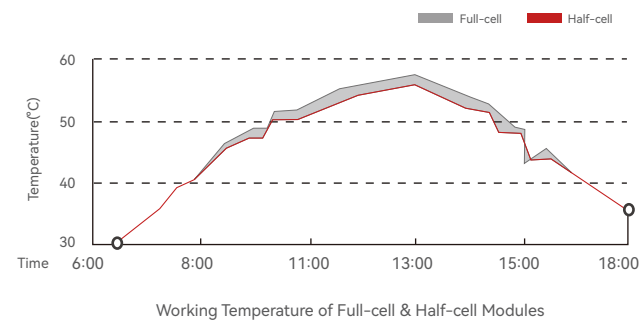
### Reducing Current and Loss:

Current density is reduced by 50%, internal power loss is reduced by 25%, and rated output power is increased.



### Lower Working Temperature:

The working temperature of the half-cell modules is 2-3°C lower than the full-cell modules, improving the reliability of the module and the energy yield.



## SMBB Technology

### Reducing String and Increasing Energy:

An increase in the number of busbar shortens the lateral current collection path, decreases the component  $R_s$  (series resistance), and increases the output power.



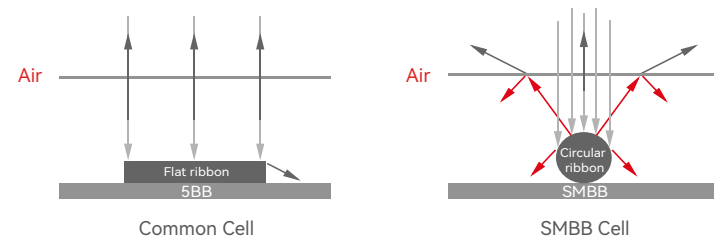
### Reducing Busbar Loss:

The busbars are more densely distributed, reducing loss.



### Improving Efficiency:

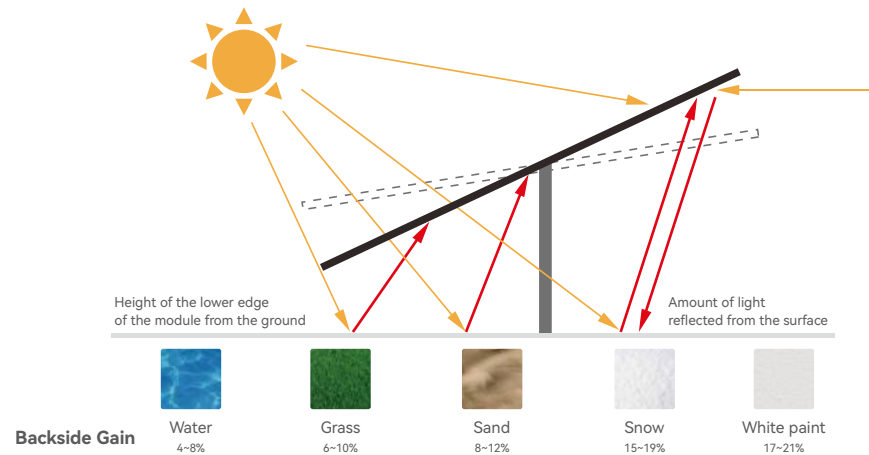
The circular ribbon reduces the shading area and repeatedly reflects the incident light to enhance the power generation.



## Bifacial Technology

### Double-sided Generation, Powerful Energy Boost:

To make the most of reflection and scattering of light, modules should be placed in high reflective environments such as water, sand, grass and white painted ground. With various types of brackets, more power is obtained, under lower kilowatt-hour costs.

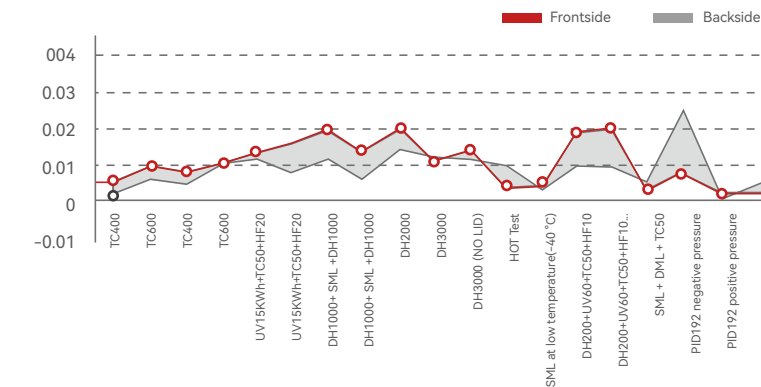


\*Note: Using the tracker as an example

### High reliability:

Bifacial modules demonstrate superior long-term reliability, higher quality, and create more value.

### Long-term reliability of bifacial modules

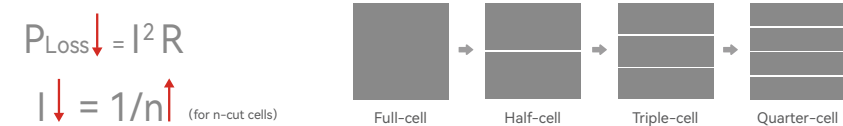


\*Note: Using the 182 mm bifacial module as an example

# Ultra T 3.0 Technology

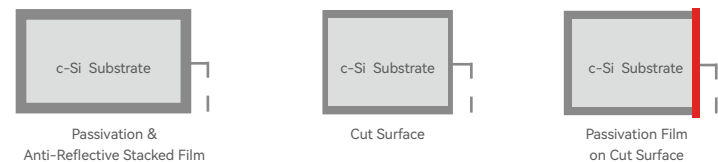
## Multi-Cut Cell Technology

Resistance loss is lowered significantly, enhancing overall power conversion efficiency. Hot spot risk is minimized effectively, improving the module's operational stability and durability. Fully compatible with large-size, split-cell, and stacked-cell technologies, supporting flexible product design and application expansion.



## Edge Passivation Technology

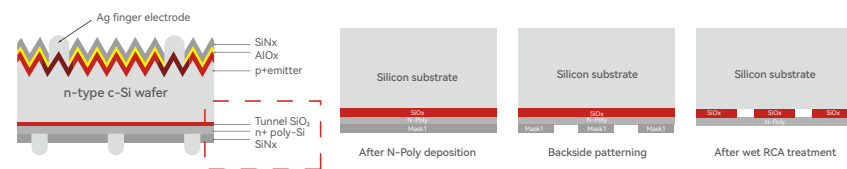
Adopting spatial atomic layer deposition technology enables fast thin-film deposition with high-quality passivation performance, enhancing the electrical property stability of modules. This technology repairs cutting-induced damage and optimizes edge recombination, effectively improving module power generation efficiency and long-term reliability.



## Poly-Finger Technology

Adopting spatial atomic layer deposition technology enables fast thin-film deposition with high-quality passivation performance, enhancing the electrical property stability of modules.

This technology repairs cutting-induced damage and optimizes edge recombination, effectively improving module power generation efficiency and long-term reliability.

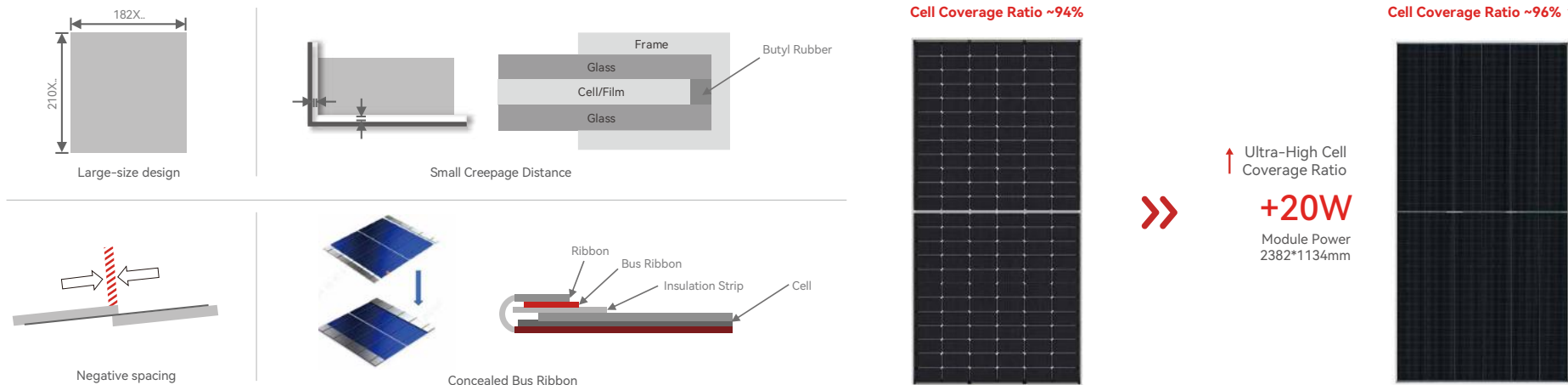


↑ **0.15%**  
 Cell Efficiency

↑ **5%**  
 Bifaciality Rate

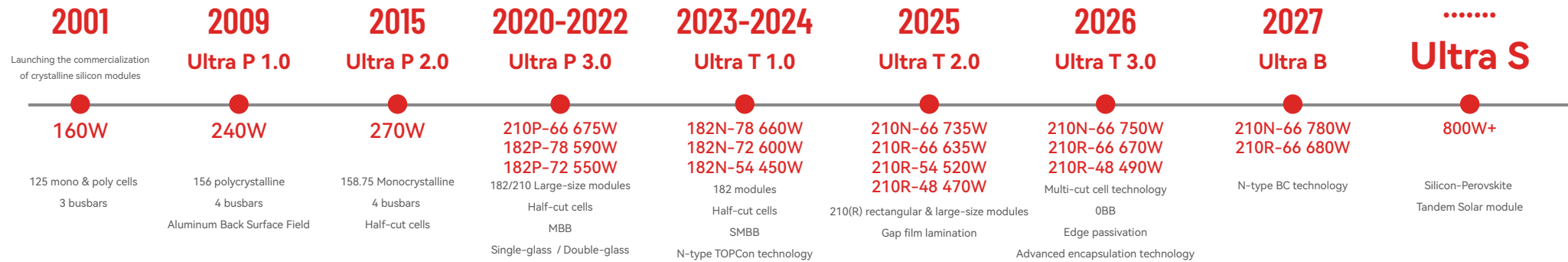
## Full-Screen Packaging Technology

Adopting negative spacing process, combined with large-size silicon wafer, butyl rubber encapsulation and 180° folded concealed busbar technology, it maximizes the utilization of cell area, increases the effective power generation area of the module, and improves module power.



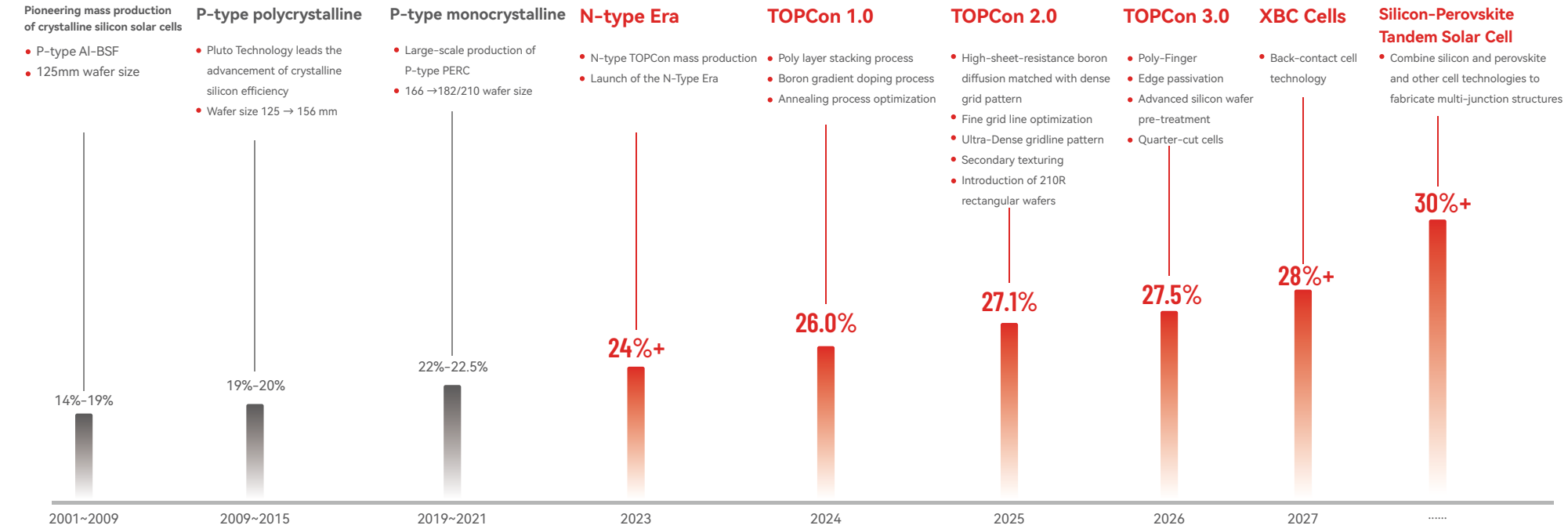
# 25 Years of Craftsmanship

25 years of manufacturing excellence, generational leap to N-type TOPCon targeting 800W.  
High reliability, adaptability, and returns for 100+ countries.

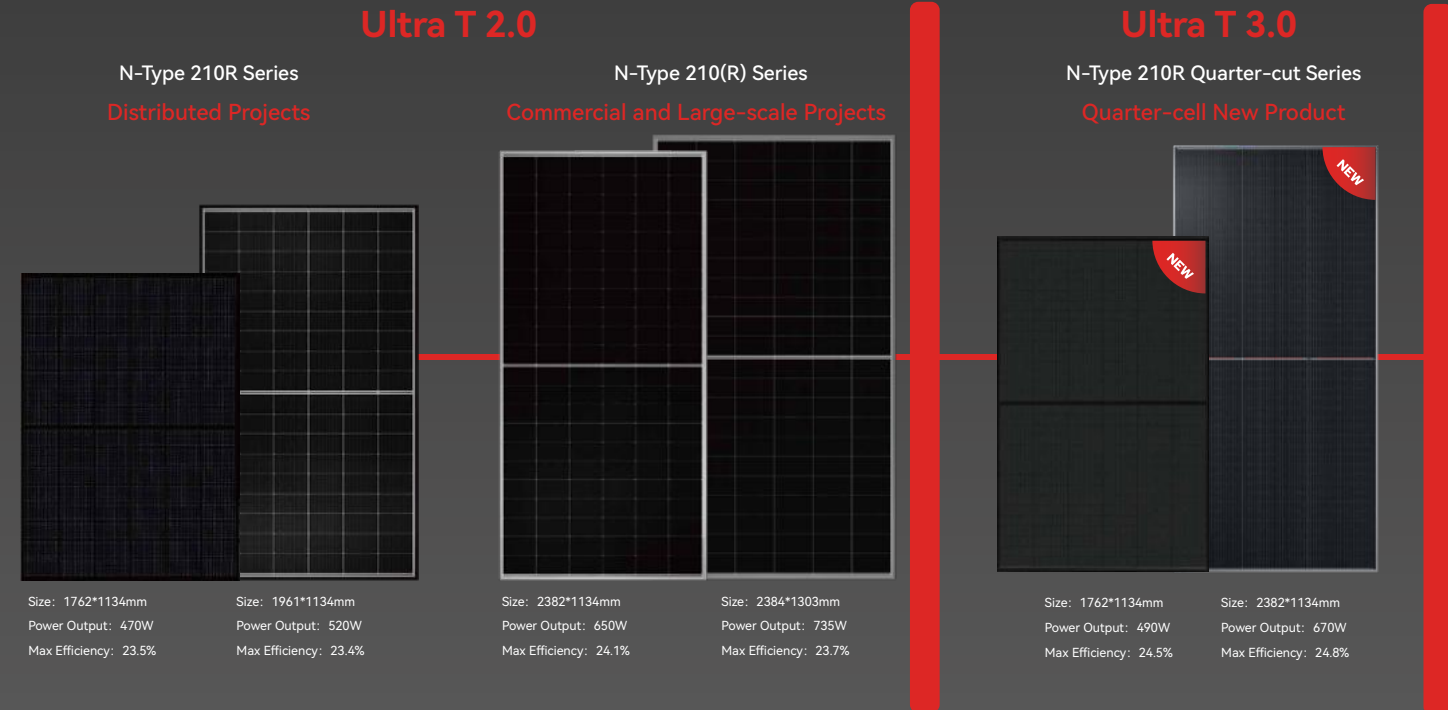


# Pioneering New Frontiers

Suntech has built a full-chain technology matrix integrating short, medium-and long-term synergies, focusing on the mainstream TOPCon track, refining advanced BC processes, and strategically advancing into the forefront of perovskite tandem technology. Tempered by time, with innovation pushing the boundaries, this iterative loop—linking mass production, cutting-edge R&D, and future reserves—injects sustained momentum into the global transition to zero-carbon energy.



# Core Product Series



# Ultra T 3.0 New Quarter-cut Modules

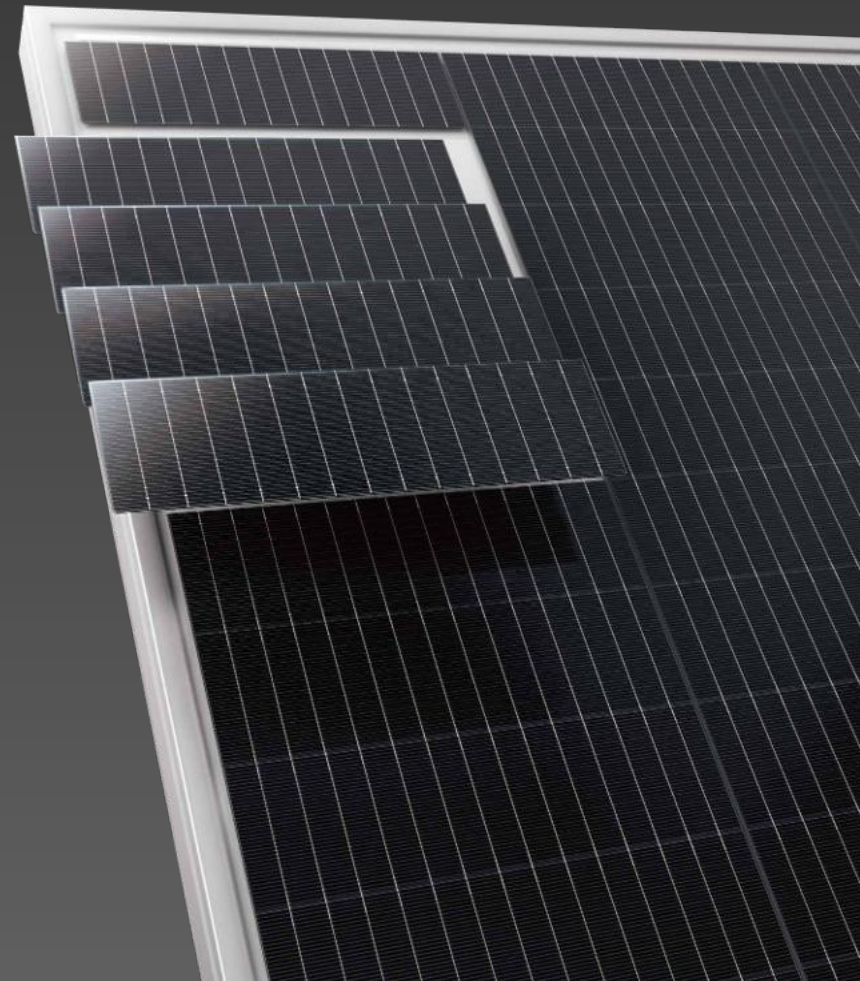
Power Output **670<sub>w</sub>**  
Up to

Power Temperature Coefficient Optimized to **-0.26%**

Bifacial Rate **85<sub>±5%</sub>**  
Increased to

Annual Degradation **-0.35%**  
Optimized to

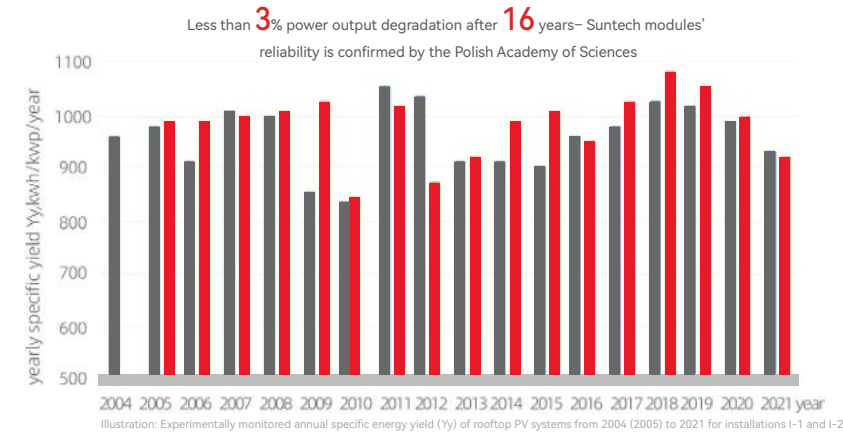
- Metal contact optimization
- Multi-Slicing + Edge Passivation
- Cell Process & BOM Material Optimization
- Advanced Encapsulation Technology
- Poly-Finger
- Strong Performance Under Low Irradiance, Perfect Adaptation to All Scenarios



# Sustainable Manufacturing Capabilities

## Case Study 1: Rooftop PV systems in Sinsheim, Germany

According to pv magazine, a study by the Polish Academy of Sciences on two rooftop PV systems in Sinsheim, Germany, which have been reliably operating for over 18 years.



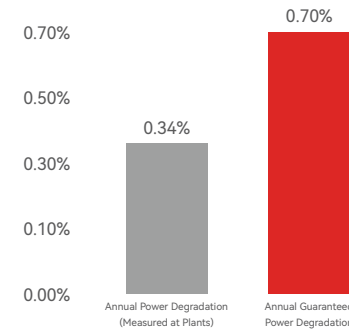
## Case Study 2: Bigiareza(2MW) Project

In the Bigiareza 2MW project in Greece, Suntech modules achieved an annual degradation rate of 0.34%, significantly below the guaranteed 0.70%.

### Power Degradation at Operating Plants

**0.70%**  
Annual Guaranteed Power Degradation

**0.34%**  
Annual Power Degradation (Measured at Plants)



Suntech modules deliver exceptional reliability, surpassing typical industry degradation rates and exceeding the global 25-year ≤20% warranty standard.

Designed for a 25-year lifecycle, our products are a testament to Suntech's enduring quality and the company's resilient journey through industry cycles truly **standing the test of time**.



# Stand the Test of Time