



ASTRONERGY

**TO BE THE MOST COMPETITIVE
PHOTOVOLTAIC MODULE
SUPPLIER WORLDWIDE**

www.astronergy.com



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*This brochure is valid until July 2026, the information may be changed and updated, please refer to the latest version.

Solar Together,
For A Greener World





A member of the Solar Stewardship Initiative



Tier 1 PV Module Maker listed by BloombergNEF



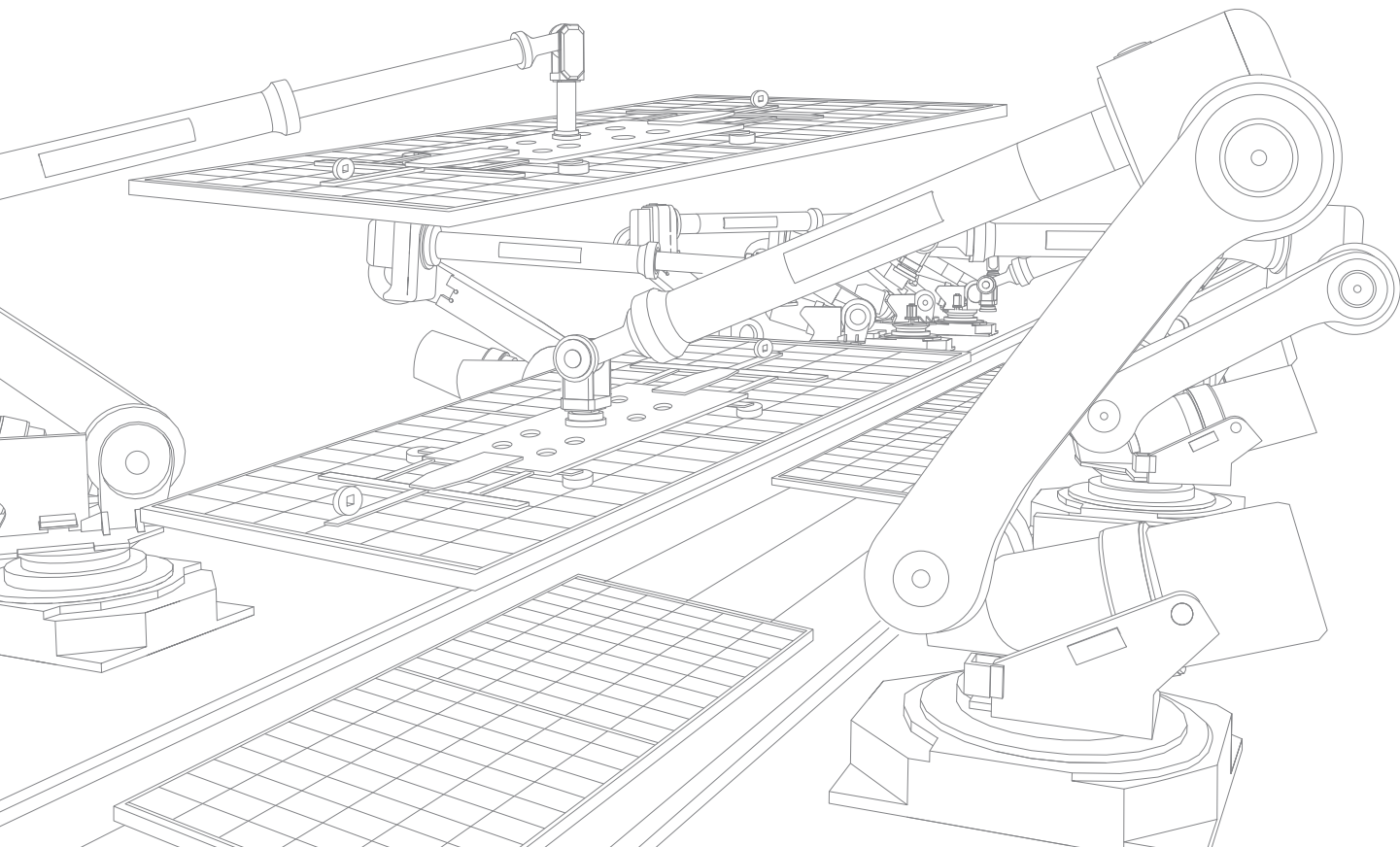
TOP Performer honored by Kiwa PVEL 10 times



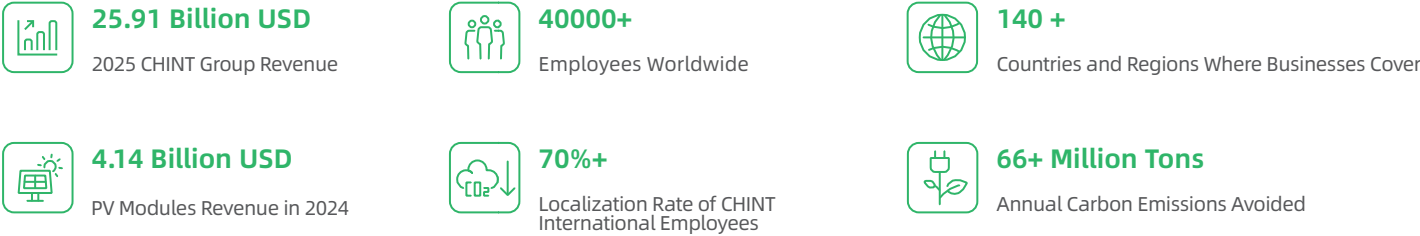
Overall Highest Achiever by RETC



Group-level Platinum Rating by EcoVadis



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Founded in 1984, CHINT Group Co., Ltd. (hereinafter referred to as "CHINT") is a global leading smart energy solutions provider. Over the past 40 years since its establishment, CHINT has always focused on industry and brand building, deeply implemented the strategy of "Industrialization, Technologization, Internationalization, Digitalization and Platformization", and formed three major segments of "Green Energy, Intelligent Electric and Smart Low-carbon" and two major platforms of "CHINT International Platform and Sci-tech Innovation Incubation Platform", and endeavored to build up "211X" Management Capabilities, including Intelligent Electric and New Energy Industry Cluster Capabilities, Regional Localization Capability, Middle and Backstage Integration Capability, and Innovation Incubation Capability. Its business covers more than 140 countries and regions, with 4 global R&D centers, 6 international marketing regions, over 25 domestic and international manufacturing bases, and a global workforce of over 40,000 employees. In 2025, CHINT's operating revenue reached USD 25.91 billion, and CHINT has been listed among the Top 500 Chinese Enterprises for more than 20 consecutive years. CHINT Electric (stock code: 601877) is the first A-share listed company in China with LV electrical appliances as its main business.

CHINT continuously strengthens its "One Cloud & Two Nets" strategy, with "CHINT Cloud" as the carrier of intelligent technology and data applications and takes the lead in building the Energy Internet of Things (EIoT) and Industrial Internet of Things (IIoT) platforms, striving to be the explorer, advocator, and practitioner in the world of low-carbon development. With the "Green Energy, Smart Network, Load Reduction, and New Storage" service systems, CHINT sets up a platform-based enterprise, and builds a regional smart energy industry ecosystem. It provides a total energy solutions package for public institutions, industrial, commercial, and end users to achieve energy conservation, carbon reduction, and accelerate the energy transition.





Under the CHINT Group, Astronergy is an intelligent manufacturing enterprise focusing on photovoltaic cells and modules. Founded in 2006, it is one of the earliest private enterprises in China to set foot in the photovoltaic field. It has the capacity to design and manufacture various cutting edge technology solar products for the markets.

Committed to being the most competitive photovoltaic module supplier worldwide, Astronergy sets its mission to create a sustainable and net-zero carbon world with solar power. Focusing on R&D, production and sales of high-efficiency crystalline silicon PV cells and PV modules, Astronergy has continuously launched the ASTRO series high-efficiency, high-quality, high-performance modules.

Both its bifacial and monofacial ASTRO series modules using

large-size wafers could be perfectly applied in various scenarios of utility-scale power stations, commercial & industrial (C&I) PV systems and residential PV systems.

With business footprints in over 140 countries and regions, Astronergy has established intelligent manufacturing bases at Haining in Zhejiang, Yancheng in Jiangsu, Jiuquan in Gansu, Songyuan in Jilin, Fengyang in Anhui, Yiwu in Zhejiang, Yanchi in Ningxia, Yueqing in Zhejiang, Fuyang in Zhejiang, Yibin in Sichuan, in Thailand and in Turkey. It has also set up branch companies and sales centers in countries like Germany, Spain, the Netherlands, Poland, the United States, Canada, Brazil, Australia, Singapore, Japan, and Thailand, achieving great sales performance of Astronergy PV products in international mainstream markets of Europe, North America, Latin America, and Asia Pacific.



170 GW+
Total Global Shipments*



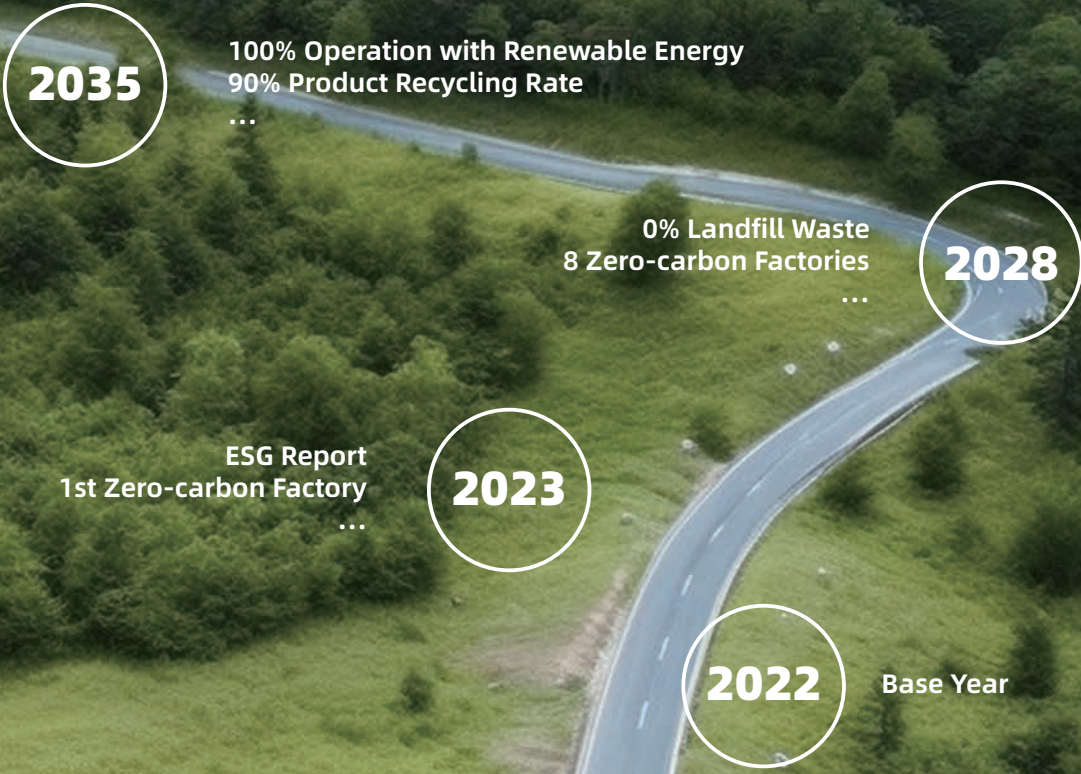
TOP 4
n-type TOPCon Product Shipment Worldwide



140 +
Business Covered Countries

*Data Updated December, 2025

ZERO BY 2050
Full Value Chain Carbon Neutrality

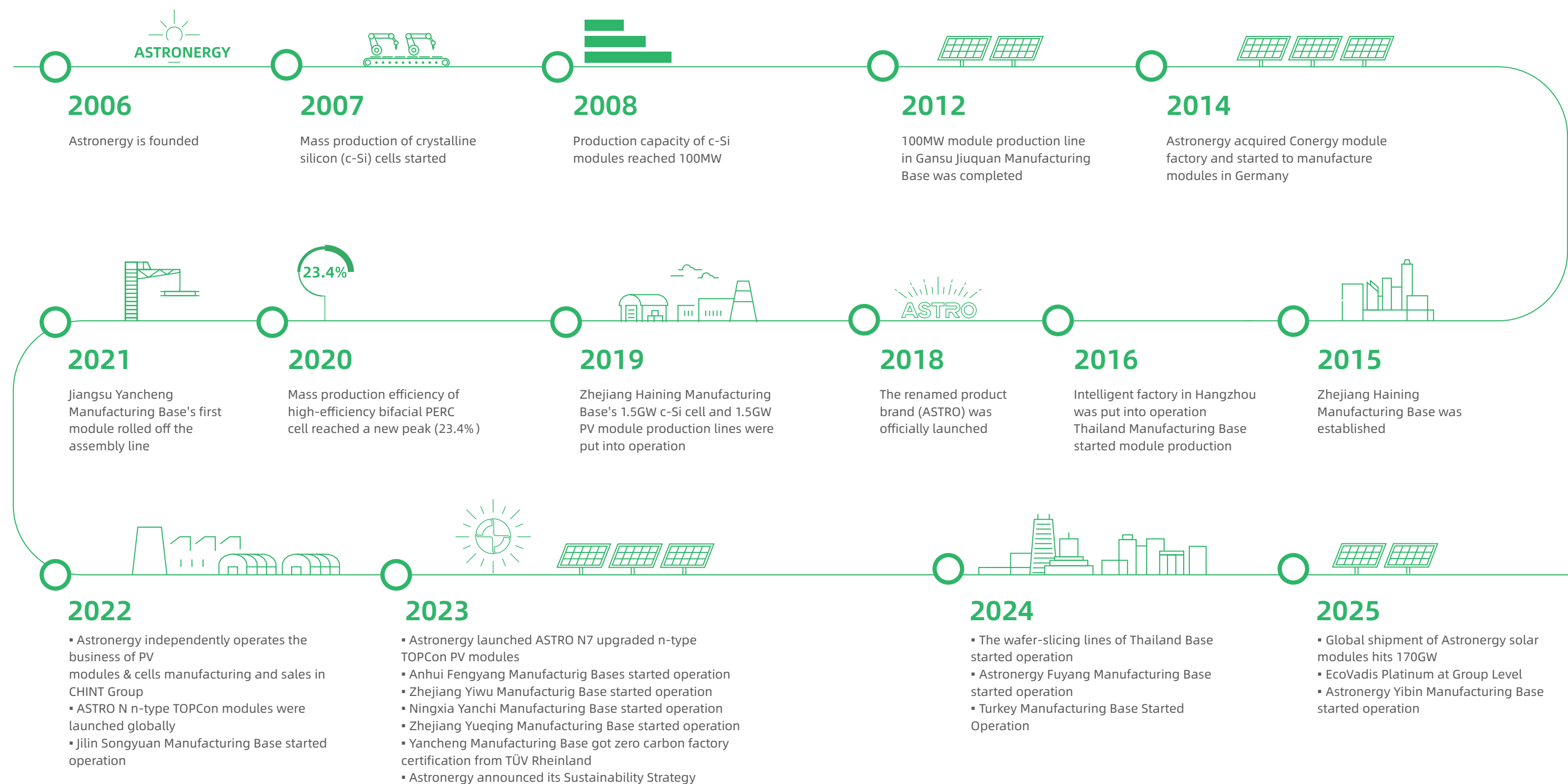


Globalization

Astronergy product sales footprint covers more than 140 countries around the world. And it has set up branches in the United States, Germany, Australia, Canada, Singapore, Thailand, Japan and other countries to help the process of globalization and win the full trust of customers and good reputation in the industry with credibility.



Milestones



Brand Value



For 10 years, Astronergy has been honored by Kiwa PVEL as "TOP Performer" among module manufacturer



Astronergy has won 9 awards of "All Quality Matters" from TÜV Rheinland



For a long time, Astronergy has been listed as the world's Tier 1 PV Module Maker by BloombergNEF



TOP 10 PV Modules Suppliers released by S&P Global



No. 1 in "China's Top 100 Private Enterprises with Social Responsibility" in 2022



No. 40 in "2025 China's Top 500 Private Enterprises"



No. 235 in "2021 Top 500 Chinese Enterprises"



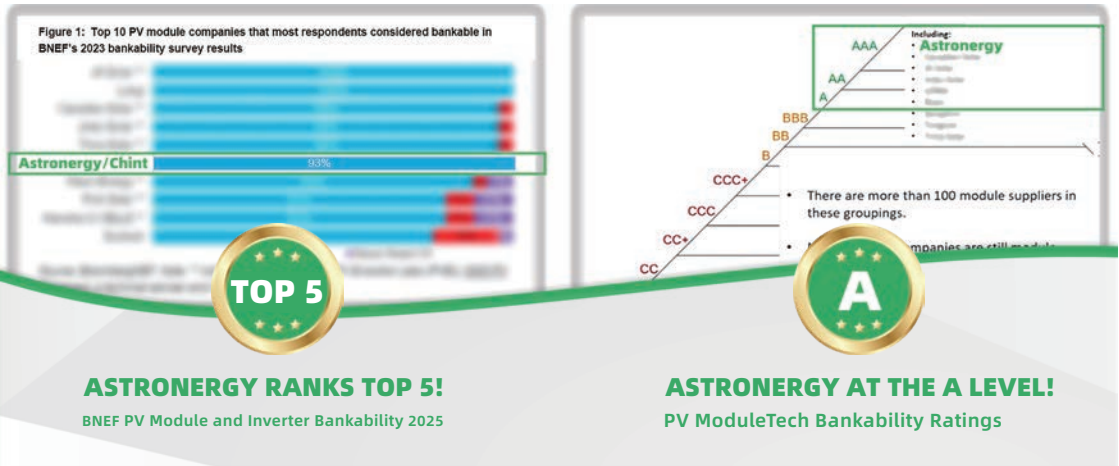
China Industry Award



China Charity Award

Bankability

Astronergy has secured Top 5 among all module manufacturers in the 2025 BloombergNEF PV Module and Inverter Bankability report, which is a reflection of the trust our customers place in our bankability, reliability, performance and commitment to the energy transition. And Astronergy has been rated “A” for multiple consecutive quarters in the PV ModuleTech bankability ratings report.



Intelligent Manufacturing

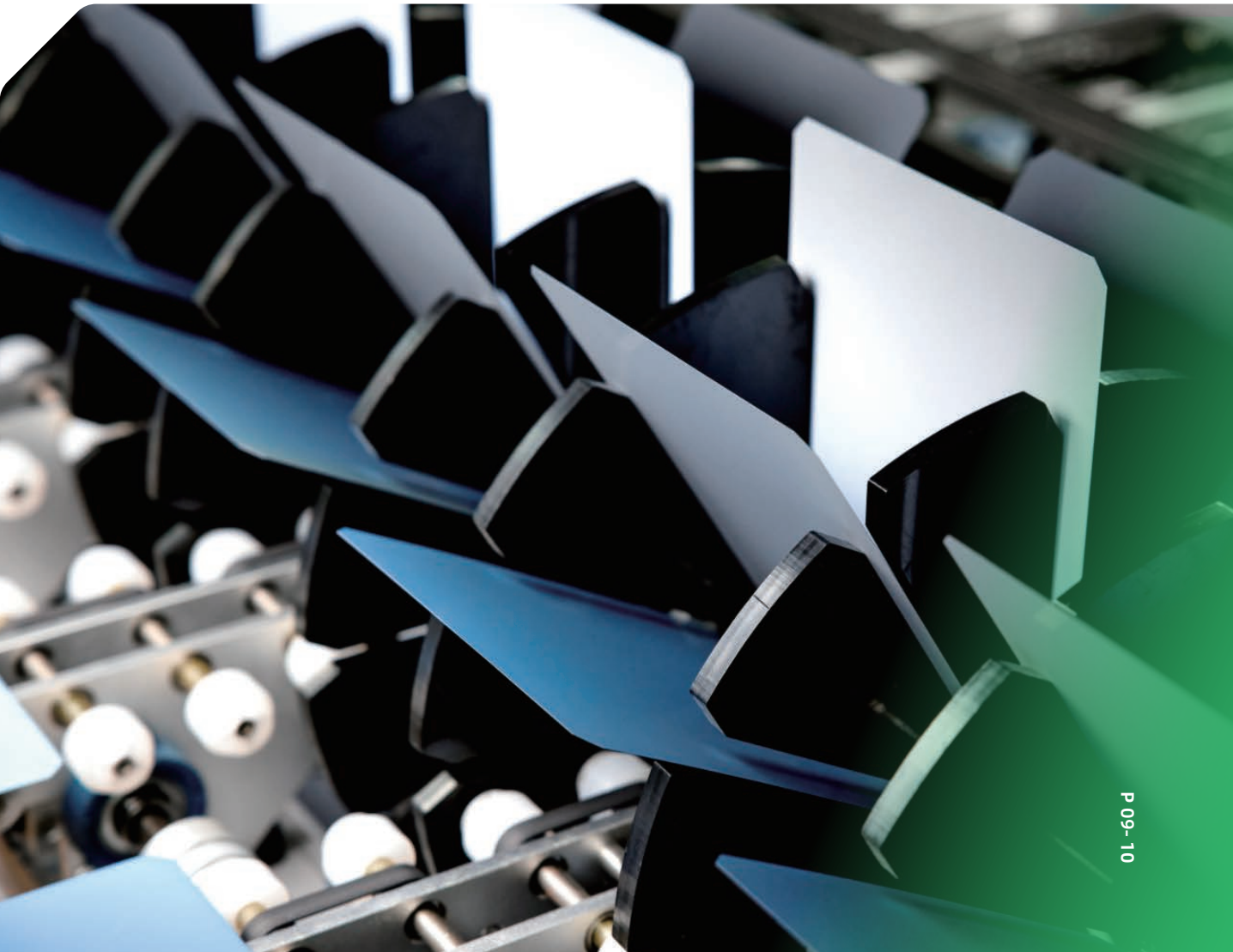
 **Pioneer and Explorer of Smart Manufacturing in PV Industry**
Astronergy builds the first PV “Intelligent Manufacturing” transparent factory

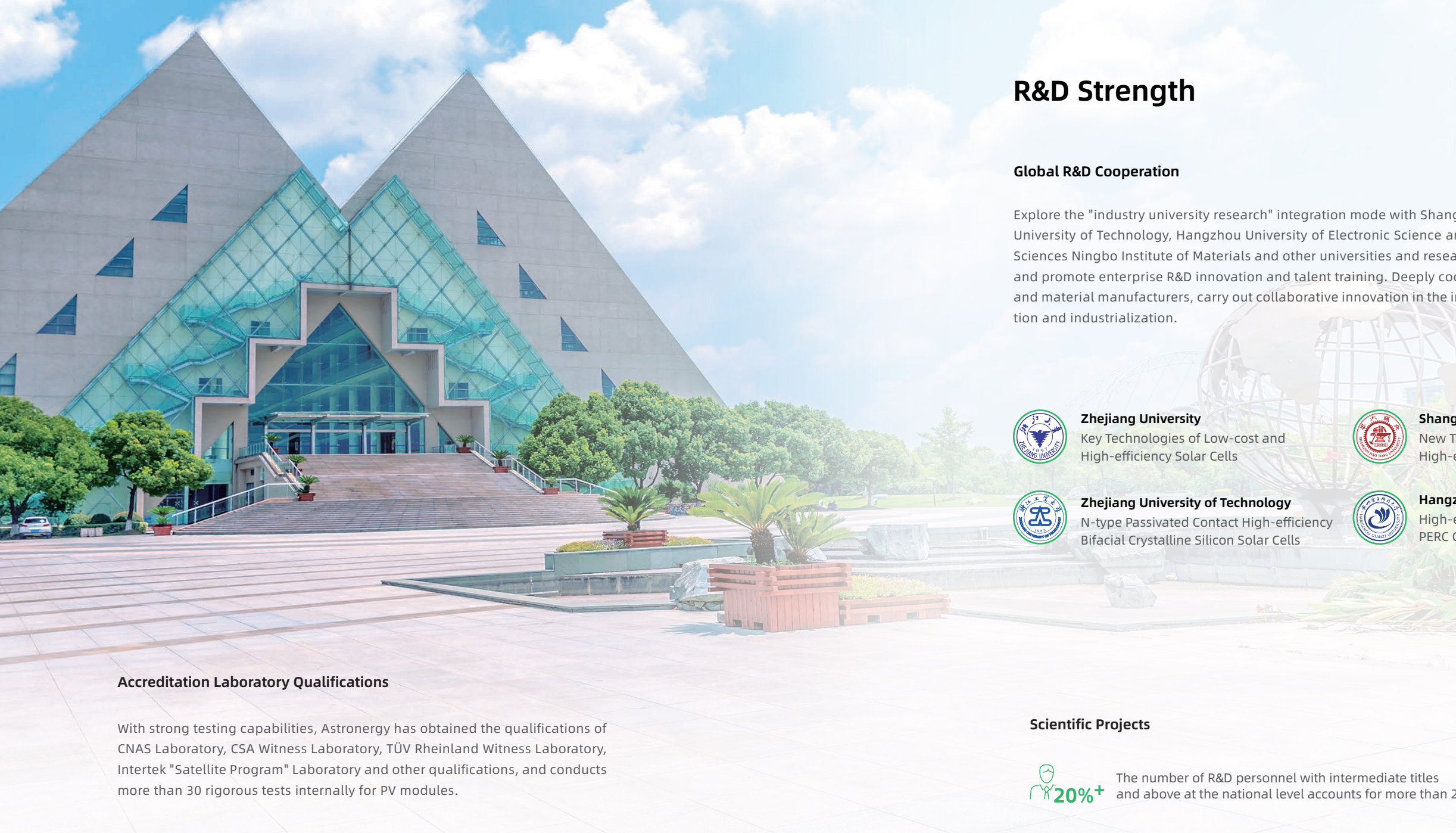
With the automatic production line and highly information-integrated production mode, Astronergy enables the monitoring and traceability in the production process from raw materials to finished products and maintains its leading position in smart manufacturing.

- 

1st to Achieve AI Automatic Detection of EL Defects
- * Supported by Big Data
 - * Localization of Production Equipment
 - * Fully Automated Production
- * AI Quality Detection
 - * Automatic Monitoring of the Entire Process
 - * Automatic Batching by Unmanned Vehicles
- 

Outstanding in Intelligent Manufacturing
- * Sino-German Intelligent Manufacturing Demonstration Base
 - * Intelligent Photovoltaic Pilot Demonstration Enterprise





R&D Strength

Global R&D Cooperation

Explore the "industry university research" integration mode with Shanghai Jiao Tong University, Zhejiang University, Zhejiang University of Technology, Hangzhou University of Electronic Science and Technology, New South Wales, Chinese Academy of Sciences Ningbo Institute of Materials and other universities and research institutions, integrate global innovation resources, and promote enterprise R&D innovation and talent training. Deeply cooperate with domestic and foreign frontline equipment and material manufacturers, carry out collaborative innovation in the industrial chain, and promote industry material innovation and industrialization.



Zhejiang University

Key Technologies of Low-cost and High-efficiency Solar Cells



Shanghai Jiao Tong University

New Tunnel Passivated High-efficiency Solar Cell & Module Technology



Zhejiang University of Technology

N-type Passivated Contact High-efficiency Bifacial Crystalline Silicon Solar Cells



Hangzhou Dianzi University

High-efficiency Monocrystalline PERC Cell Technology



UNSW SYDNEY

Hydrogen Passivation Project

Accreditation Laboratory Qualifications

With strong testing capabilities, Astronergy has obtained the qualifications of CNAS Laboratory, CSA Witness Laboratory, TÜV Rheinland Witness Laboratory, Intertek "Satellite Program" Laboratory and other qualifications, and conducts more than 30 rigorous tests internally for PV modules.

Scientific Research Achievements

527 Utility Model Patents

127 Invention Patents

17 Appearance Design Patents

Scientific Projects



20%+ The number of R&D personnel with intermediate titles and above at the national level accounts for more than 20%



Launched 2 Provincial-Level Frontier Innovation Projects (From 2023 to 2024)

Talent Declaration



Zhejiang Core Energy's Key Cooperative R&D Projects



Jiaxing Leading Team on Innovation



Haining Demonstration Project on Collaborative Innovation

Our Products __ n-type TOPCon Ultra-High Power PV Modules

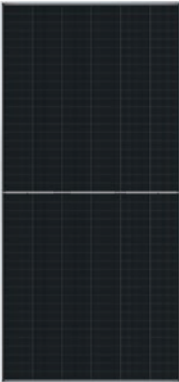
ASTRO N series products adopt n-type TOPCon solar cell technology, featured advanced technologies such as SMBB/ZBB, non-destructive cutting, high-density encapsulation, etc., to achieve advantages such as high power, high efficiency, high reliability, high power generation per watt, low BOS cost and LCOE. Products of the series are suitable for multiple application scenarios, such as utility-scale power plants, commercial and industrial distributed power plants, and residential rooftops and balconies.

15/25 Years
Product
Warranty

30 Years
Linear Power
Output Warranty

≤1.0%
First-year
Power Degradation

≤0.35% / ≤0.4%
Annual Power
Degradation



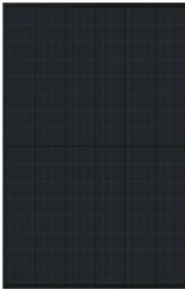
ASTRO N7 Pro
670W
TOPCon 5.0+/Quarter-cut Design
ZBB Tech/Rectangular Wafer

Application Scenarios:
Utility-scale Power Stations and Distributed Power Stations



ASTRO N7 3.0 / ASTRO N7
655W/640W
TOPCon 5.0/TOPCon 4.0+/Rectangular Wafer
ZBB/SMBB Tech/ Light Redirecting Film

Application Scenarios:
Utility-scale Power Stations and Distributed Power Stations



ASTRO N7s 3.0
475W / TOPCon 5.0 / Rectangular Wafer
ZBB Tech

Application Scenarios:
Residential Rooftop Solar Power Systems



ASTRO N8
745W/ TOPCon 5.0 / 210 Wafer
SMBB Tech

Application Scenarios:
Utility-scale Power Stations





Applied Cases **Utility-Scale PV Power Stations**



154.4MW Döllen Solar Farm
 Germany

150MW Covatillas 1, 5 & 6 Solar Park
 Spain

70MW Italy Rovigo Solar Park
 Italy

21MW Mangaturoto Solar Farm
 New Zealand

310MW Kubuqi Sand-Solar Hybrid Project
 China

18MW Japan Nagano Solar Park
 Japan

3MW Depot Park-Sacramento, CA
 USA

70MW Utility-scale Project
 China

1000MW Tacheng Multi-Energy Complementary Project
 China

81MW SOL DO FUTURO Solar Park
 Brazil

79MW Dominica Soco Solar Park
 Dominican Republic

Applied Cases Distributed Rooftop PV Power Stations



