

# THE SECRETS BEHIND A GOOD PV MODULE

HOW TO SELECT A GOOD PV MODULE ?

CONSUMER BOOK



# A-SUN BENEFITS

WE BUILD THE ENTIRE PRODUCT



## 1 FROM CELLS TO MODULES

Being vertically integrated allows us to guarantee a High Quality Standard on our PV Panels. We select and control each single cell and each module, all under TUV Rheinland and ISO9001 Certified criteria.

## 2 LATEST PV TECHNOLOGY

Fully Automatic German Machineries, for perfection. Over 50 automatic and human controls along the manufacturing process. On top, TUV Rheinland ensures our Quality Control on each production.

## 3 HIGH EFFICIENCY CELLS

First grade silicon cells with the highest purity are labeled as HEC+ to ensure the Output Warranty for the longest period. Only A-grade cells with a minimum power output on Flash-test control are selected.

## 4 BEST WARRANTIES + INSURANCE

**If something goes wrong during the 25 Years?** Our Warranties are covered by the 3rd largest insurance company in the World (CHUBB) for damages and financial losses. So relax and enjoy the Sun.

## 5 CUSTOMER SERVICE

Our experienced London - based team is dedicated to support our clients needs and to respond to any questions or inquires, in order to advise you with the best solution for your Solar projects.

**A-SUN** is a photovoltaic manufacturer with 10 years of experience in the PV industry, working with high profile partners with a long history.

With a total production capacity of **200MW for silicon cells**, and **400MW for PV modules**, **A-SUN** is one of the **largest** and most **reliable** factories in the world.



# HIGH EFFICIENCY

HIGH YIELD, SAFE AND STRONG



We created a range of photovoltaic modules, in Monocrystalline and Polycrystalline, with outstanding advantages.



High efficiency  
cell plus



Low light  
Performance



Temperature  
Resistance



Positive  
Tolerance



Light weight

## DID YOU KNOW?

Our products are certified for installations in coastal climates, withstanding **SALT mist corrosion** IEC 61701. Also, they meet the requirement of the **AMMONIA resistance certification** IEC 62716, proving they can be used in a corrosive environment such as livestock sheds where the ammonia rate can be high.

# DESIGN

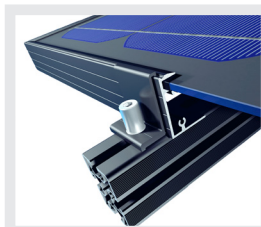
## FULL BLACK MODULES



The FULL BLACK LINE is the most amazing module since Photovoltaic exists. Why choose between esthetic and efficiency, when you can get both.

*“ the FULL BLACK panel is a good deal ! I still produce high output without giving an industrial look to my beautiful cottage.*

Mr James



### DID YOU KNOW?

And with the Full Black mounting system it looks even nicer!  
Ask for A-SUN SYSTEM

### Three essential features

- Highest cells efficiency
- Long-life resistance back sheet for an ever-lasting aesthetic
- Perfect look for BIPV or residential



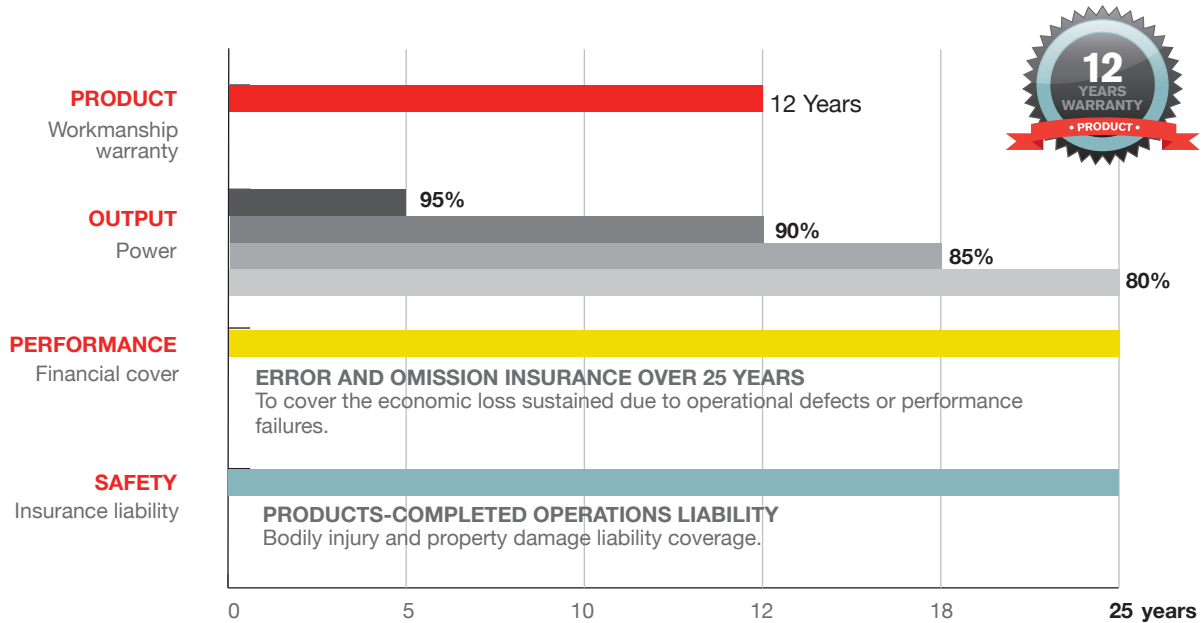


# WARRANTY

## DOUBLE INSURANCE

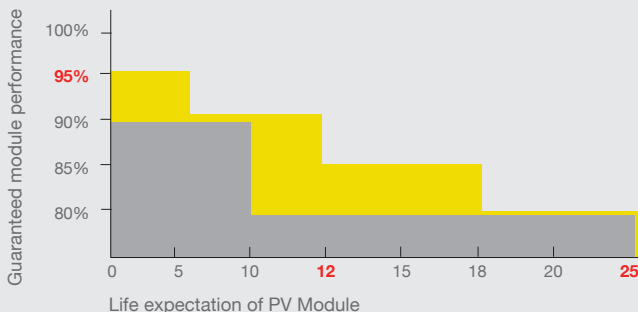
The PV module manufacturer A-SUN delivers every module with strong warranties and an insurance policy by **CHUBB** Group of Insurance Companies. All our products are covered for 12 Years on workmanship and

the Output Performances for 25 Years. They also include an Insurance Liability and a Financial Cover if the panels do not perform, as they should. We supply you with **4 LEVELS OF WARRANTIES.**



**CHUBB is the Top 3 Insurance Company in the World.** For more than 125 years, the Chubb Group of Insurance Companies has been delivering exceptional property and casualty insurance products and services to businesses and individuals around the world.

## COMPARISON



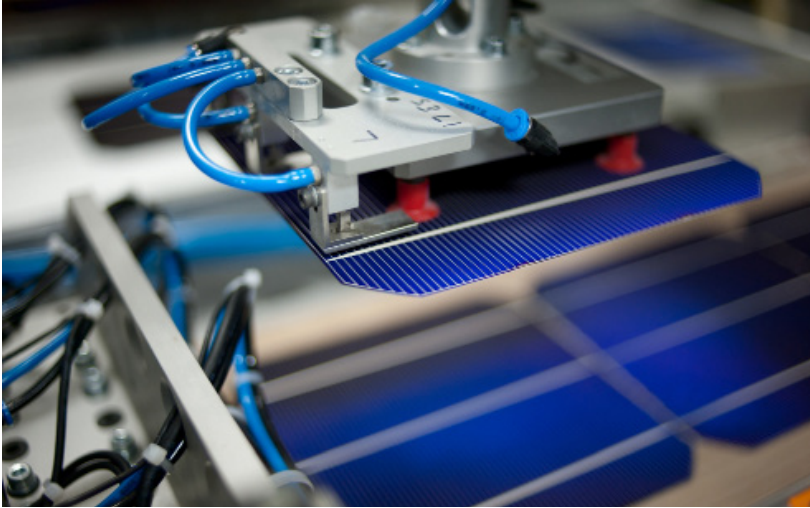
● A-SUN power output warranty  
● Other power output warranty

Over 25 years, A-SUN warranties are recognized to offer you the best: reliability and efficiency for your PV system, but also for your own safety and for your property,

**THAT'S BETTER THAN "FAMOUS" BRANDS.**

# DURABILITY

## SELECTING THE BEST MATERIALS



Factory ISO-certified



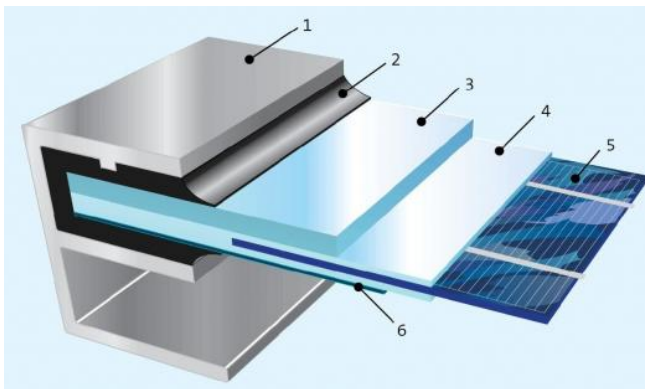
Grade Cells type A



TUV Rheinland  
Periodic inspection

We manufacture our own cells, to ensure quality and competitive cost. We select each cell and assemble every single module on our own site. We closely work with Inspection Laboratories to control along the production process and before shipment, because **WE LIKE TO DO THE RIGHT THINGS PERFECTLY.**

Over the years, we developed a strong partnership to ensure consistency in our supply chain. Thus, we are only working with High Profile companies with a strong background and with dedication to quality and service, **AS MUCH AS WE ARE.**



1 Anodised Alu Frame

2 Silicon Gel

**DOW CORNING**



3 Glass Micro - structured

**SAINT-GOBAIN**



4 EVA

**BRIDGESTONE**



5 Cells

**JA SOLAR**



6 Backsheet TPT

**KREMPEL GROUP**



+ JUNCTION BOX with Diode by pass  
MC4 Connectors





# RELIABILITY

## QUALITY MANAGEMENT SYSTEM



MCS certified



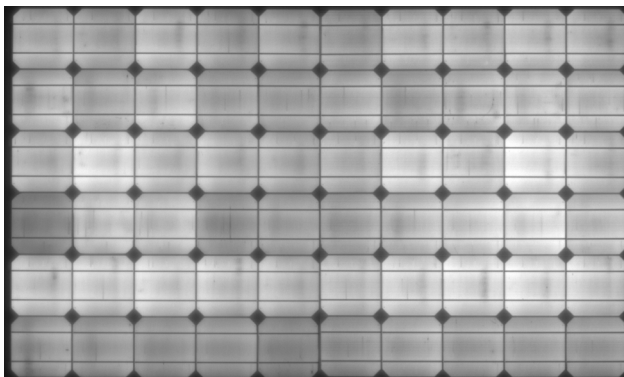
Qualified IEC 61215  
Safety tested IEC 61730



IEC certified

A-SUN Modules are Certified for **EUROPE**: IEC 61215, IEC 61730, CE, TUV and MCS. The major accredited Testing Laboratories certified our products into their own facilities, respecting the strictest regulations and approving the quality of our products, **TO BE STAMPED "SEHR GUT"**.

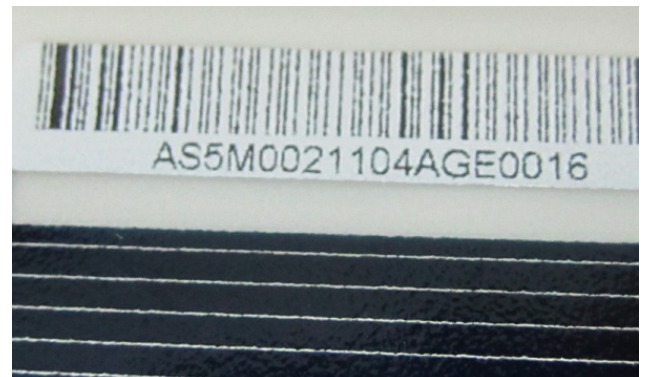
There are two essential tests to check quality and to record traceability on every panel: **Flash Test and Electroluminescence Test**. Only 5% of the Manufacturers have the facilities to do it, **YES, WE HAVE.**



### ELECTROLUMINESCENCE TEST

- Test to control Micro-crack and quality of Cells
- Done automatically on every module
- Before and after lamination

IF THE MODULE FAILS, IT'S REJECTED.



### FLASH TEST

- Test to control exact Output of the module
- Done on every module
- Tracking number for a better traceability

FOR EACH DELIVERY, A FULL QC REPORT.

# CHALLENGE

## TO CREATE A BETTER PRODUCT

Everyday, we challenge ourselves to design, to produce and to deliver better products. Always with the same goal: respect our clients and the environment.



### R&D - INNOVATION

The most efficient module is ever to come yet! Yes, because our engineers work hard to keep improving the performances of our products and find ways to deliver the most efficient silicon cells and modules.

Our goal is to obtain stellar products and services within tight time frames, at a cost that represents the best possible value to our customers.

**NO WORRIES, WE ARE ALREADY AT THE ULTIMATE YET.**

### RESPONSIBILITY

Our Code of Conduct requires to ensure safe working conditions, to establish and maintain environmentally responsible manufacturing processes. Over the years, A-SUN has developed an entire ecosystem of suppliers who support our business operations. We're committed to creating and ensuring high standards of social responsibility, and we insist on business partners

**WHO SHARE OUR VISION OF A BETTER WORLD.**

### SERVICE

Because we build the entire product — from cells to assembling to the full system — we also take care of its delivery. A-SUN can provide expert technical and commercial support. Get the technical support and details on our products by contacting us via phone or e-mail.

**THERE IS ALWAYS SOMEONE TO TAKE CARE OF YOU.**



# PERFORMANCE

## RESULTS BEYOND EXPECTATIONS

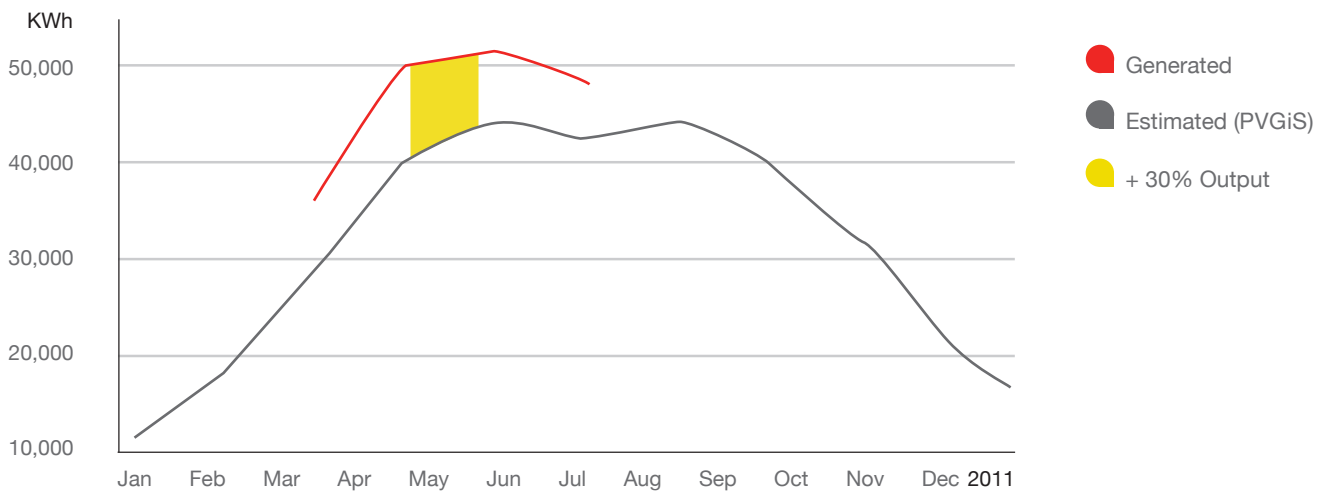
Not convinced yet? Have a look to the monitoring results we received from our UK clients.

JB WHEATON LOGISTICS Somerset, United Kingdom

- System size: 396 kWp
- Commissioned date: March 2011
- A-SUN 190W monocrystalline, silver color
- German brand inverters

“ Our PV System generated 30% more income than our initial Business Plan. It’s very good, considering weather conditions have not been fantastic.

JB Wheaton’s owner





# REFERENCES

## LARGE SYSTEMS



### THE FIRST LARGE SCALE PV SYSTEM IN UK

Based on our experience in European countries, and thanks to our UK partners, A-SUN modules were selected for the first large scale PV system in the United Kingdom.



### THE SECOND LARGEST PV SYSTEM IN UK

Not only the first, but also the second Largest PV Array, with more than 1.2 MWp system.



# REFERENCES

## SMALL SYSTEMS

BRECKNELL WILLIS

SIZE 200 kWp

1,000 PANELS

ASUN-200 Mono

But also: schools,  
Farms and SME's  
July 2011



### COMMERCIAL

Companies and Landlords like to invest their money wisely and safely. That is why hundreds of companies and farmers chose A-SUN, for their reliability and competitive cost.

BEERHAN FARM

SIZE 3.99 kWp

21 PANELS

ASUN-190 Mono

Over 10,000 systems  
installed on domestics  
Since April 2010



### RESIDENTIAL

Everyday, hundreds of professional installers around the country rely on A-SUN because they can offer: high yield, safe and strong products. And, with our **FULL BLACK line**, they can suggest an aesthetic solution.





Size 1 MWp - May 2011  
Coombe Farm - UK

[WWW.A-SUN.CO.UK](http://WWW.A-SUN.CO.UK)

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