



**BUILT TO PASS EVERY TEST,  
INCLUDING TIME.**

**Q CELLS**







# WORK HARD. WORK SMART. OR IDEALLY, DO BOTH.

If you want a system that will offset your household's electricity bills for the next 25 years – without the need or expense of a system upgrade – consider the advantages of installing a brand that's guaranteed to withstand the test of time.

Q CELLS has consistently 'raised the bar' in terms of solar energy research and cell performance, and is still unbeaten in terms of quality control. We sweat the small details because, over time, they become the big issues.

We know people choose solar power because they care about the environment. A system that needs to be scrapped before the end of its useful life would compromise everything we stand for.



## SIZE GIVES YOU PEACE OF MIND.

Q CELLS is a global brand, with an Australian base in Sydney and a nationwide network of trusted industry partners to offer service and support.

'Global' here is a positive on many levels, but chiefly, it means Q CELLS panels have been engineered to work in every climate on Earth. This makes them efficient, smart and tough. In other words, our panels can cope with a Canadian winter, an Australian summer or anything in-between.

With Q CELLS, you're choosing a brand with the technology to provide highly stable power production for decades.

They're tested, proven and guaranteed to perform so you can get on with life, and completely forget our panels are up on your roof... with only the pleasant surprise every time you open a power bill to remind you.

## WARRANTIES THAT GIVE YOU PEACE OF MIND TOO.

Q CELLS is completely devoted to the advancement of solar power technology. It's all we do. We're so confident in the power and performance of our product that we'll not only give you a 12-year panel warranty (20% longer than most), but one of the best 25-year linear (or long-term) performance guarantees on the market.

As warranties will only be honoured for as long as the company operates, it's important to choose a financially stable manufacturer with a solid reputation and proven track record – this can be tough in the often volatile photovoltaic industry.

Q CELLS is a flagship brand owned and backed by the Hanwha Group, a highly diversified FORTUNE® Global 500 company, that's been operating for over 60 years. Solar power is a key pillar of Hanwha's investment strategy.

We believe that clean, reliable solar power is absolutely key to a sustainable future... what we make and what we believe are completely aligned.

**AWARD WINNING**

BEST POLYCRYSTALLINE SOLAR MODULE 2013 & 2014

**SAFEST WARRANTY**

BACKED BY THE HANWHA GROUP

**NO. 1**

LARGEST SOLAR CELL MANUFACTURER



# WE THROW EVERYTHING AT R&D. BECAUSE THE WEATHER THROWS EVERYTHING AT US.

## TESTED BY THE WORLD'S HARSHTEST ENVIRONMENTS AND THE WORLD'S HARSHTEST TESTERS.

At Q CELLS, we don't just claim our panels are built to survive and thrive, we prove it.

Together with Germany's VDE Institute (among the world's most prominent independent testing organisations) we implemented the most comprehensive quality testing program in the solar industry sector.

This rigorous testing goes above and beyond the minimum standards that solar panels are required to meet for sale. The program tests samples from production continuously and independently, so there's no place to hide. Some manufacturers' prototype panels barely pass basic testing, which only ensures a product survives the first few years of operation.

We constantly subject our panels to the most punishing conditions within our own laboratory climate chambers and at our arduous outdoor testing facilities

worldwide. In addition to our internal testing, the industry-leading VDE Quality Tested Program is designed to ensure panels last beyond 25 years.



## WE DO OUR TESTING WHERE THE PANELS WILL BE TESTED.

Not all companies can take their panels to task in Saudi Arabia's desert sand storms, India's humid sub-tropics and in multiple testing sites around Australia, including at Alice Springs' Desert Knowledge Centre and in James Cook University's renowned Cyclone Testing Station in Queensland. Here, our panels survived the phenomenal pressures of a 1 in 500-year cyclone.

All this means that when you choose Q CELLS, you'll have complete peace of mind knowing that your solar system is fully tested to withstand the world's harshest conditions.

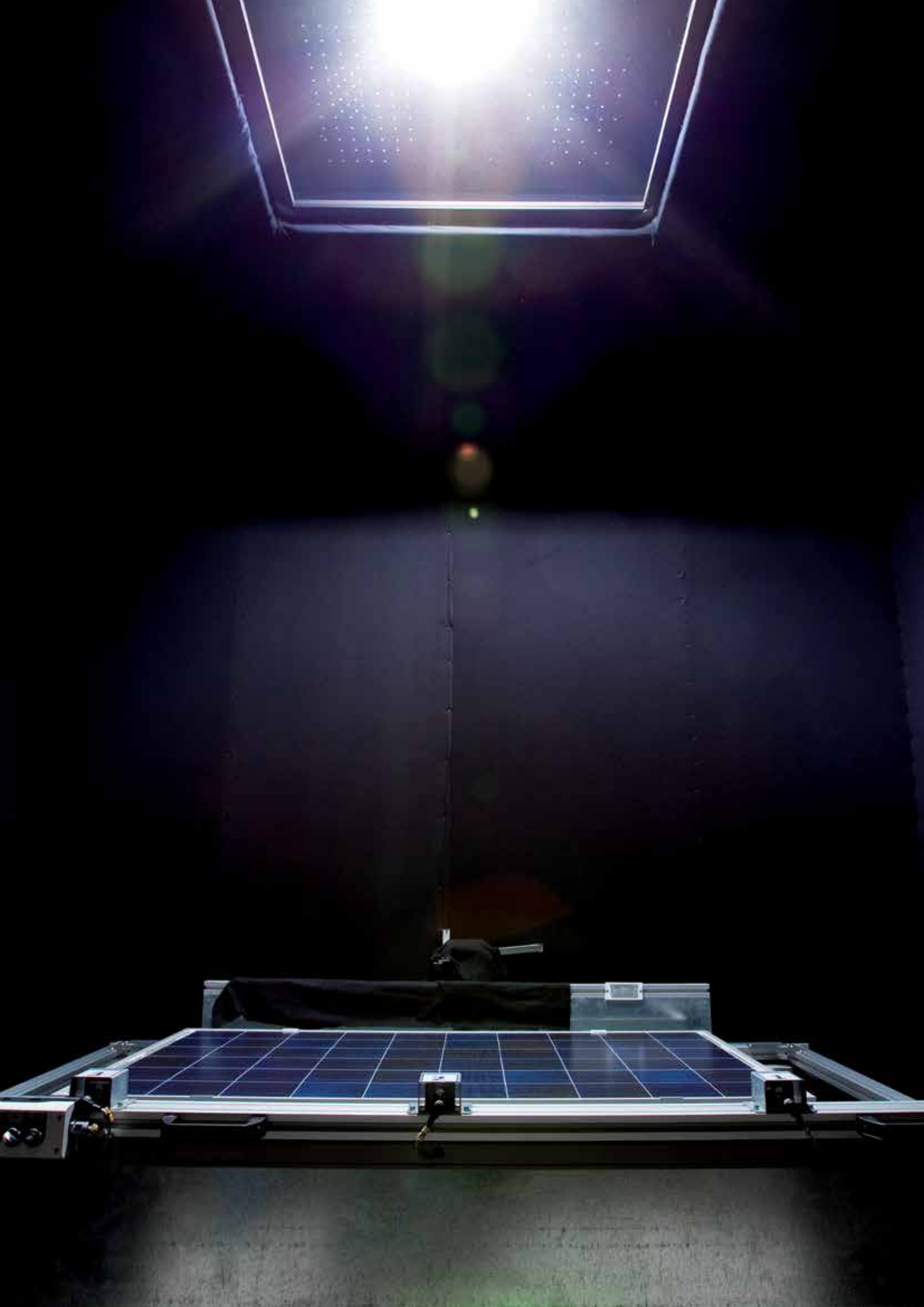
You can also install with confidence, knowing Q CELLS are backed by a

12-year product warranty and are guaranteed to continue to produce at least 83% of nominal power after 25 long years.

Furthermore, this 12-year warranty specifically covers Potential Induced Degradation (PID) and hot spots, which can cause significant power reduction or, even worse, serious safety issues like fires. Q CELLS specifically test for these issues to ensure none of our modules are affected - something no other manufacturer writes into their warranty.







# YOU CAN'T REST ASSURED IF WE REST ON OUR LAURELS.

## WE BELIEVE GOOD ENOUGH IS NEVER GOOD ENOUGH.

This way of thinking created the world's highest performing polycrystalline solar panel – detailed, methodical, and looking at every opportunity to enhance efficiency.

On the surface it can be difficult to tell one solar panel from another. That's why it's important to understand the research and technology that goes into the making of a solar panel and what sets a premium panel apart.

## PRACTICE MAKES PERFECT, RESEARCH MAKES PERFECTION.

Our industry leading technology enabled us to produce the world's highest performing polycrystalline solar panel. Our Q.PRO-G2 235Wp was awarded

Highest Performing Polycrystalline Solar Module for both 2013 and 2014 by the Photon Laboratory – a field endurance test that included 174 modules from 110 manufacturers, one of the largest industry testing programmes.



Our solar panels are designed to maximise energy production (yields) in the field, not just perform well under indoor lab conditions.

Therefore, every component of this panel has been optimised to make the most of any available sunlight in the real world. The protective glass outer layer is designed to minimise reflection and energy loss. The surface itself is

designed to minimise the build-up of dirt and grime that would decrease energy transfer. In short, it represents the industry's best practice.

And our performance is continuously recognised by the industry. Year on year Q CELLS has been awarded the "Top PV Brand" seal from the Bonn-based market research institute EuPD Research, to recognise the most positively perceived and widely used solar modules among European installers.



### Q.PRO-G4.1

This polycrystalline high performance module with performance classes up to 265W represents the latest evolutionary phase of the best polycrystalline solar module (according to the output test conducted by the acclaimed trade magazine PHOTON in 2013 and 2014). The Q.PRO-G4.1 provides excellent output values and maximum reliability.



### Q.PLUS-G4.1

The new high-performance module Q.PLUS-G4.1 is the ideal solution for all applications thanks to its innovative cell technology Q.ANTUM. The world-record cell design was developed to achieve high performances under real conditions - even with low radiation intensity and on clear, hot summer days. Power classes up to 285W.



powered by

**Q.ANTUM**







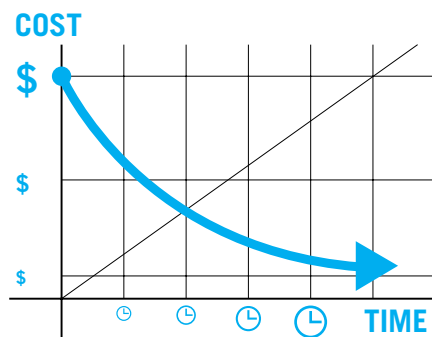
# WITH Q CELLS ON YOUR ROOF, YOUR POWER BILLS WON'T GO THROUGH IT.

## MORE POWER. GREATER RETURNS. FUELLED BY SUNLIGHT, AND BY DESIGN.

To minimise energy loss, wider spacing between the support frame and solar cells reduces the impact of collected dirt and dust, while Q CELLS' anti-reflection layer seals the one-piece corrosion resistant panel to minimise reflection by 50%.

Even in light levels equivalent to a dull and cloudy day, and when the sun is low in the sky, our solar panels will still achieve 98% of their rated nominal efficiency. Q CELLS are designed to capture light coming from low angles, to maximise power production throughout the day, or even in the middle of winter.

This means they're still working for you earlier in the morning, later in the afternoon and when the weather or other conditions aren't.



## LIKE ALL INVESTMENTS, YOU NEED TO LOOK AT THE RATE OF RETURN.

The solar installation on your roof will represent a significant investment.

How it performs, how well it has been installed, its ability to capture sun

throughout the entire day (and year) and the amortised cost of the system over the course of its projected life, will all have a bearing on your rate of return.

Do the job properly, pay for the right equipment – and the right advice – and you'll reap the rewards over time.

There's a checklist on the following page... yes, it's written by us and it demonstrates Q CELLS' superiority, but it's also a useful tool to understand what you're getting and the questions you need to ask to make an informed decision.

Every time you look at your power bills, you'll be glad you dug a little deeper.

## EFFICIENT SOLAR CELLS, METICULOUSLY MANUFACTURED.

Our entire production process is constantly monitored and optimised and every panel is subject to the most comprehensive quality inspection procedures.

Every solar cell is laser-marked with a unique data matrix, called a Tra.Q™ code which contains information about its place and date of production. Every photovoltaic cell is tracked throughout the entire production process and therefore guaranteed to be the real thing.

This enables us to track quality parameters to quickly identify and rectify any faults in production, and remove the cells with faults before they end up in your solar panel.

Since 2011, Q CELLS is the first and only solar panel manufacturer to have continually and successfully participated in the VDE Quality Tested Program, the internationally renowned independent German certification authority. This program completely raises the bar in comparison to standard solar panel

tests and ensures that your solar panel will not only perform well for its rated lifetime, but operate reliably and safely.



The Tra.Q code allows us to follow every step of the panel's journey from our manufacturing facility to your roof top.

## A TECHNOLOGY LEADER PUTTING PERFORMANCE AND SAFETY FIRST.

Our passion for research has turned Q CELLS into the industry's technology leader. Since 1999, we have established numerous product standards that set benchmarks for the industry to follow.

Q CELLS was the first company to develop solutions for common panel problems such as Hot Spots, which can cause module fire, and Potential Induced Degradation (PID), which causes power loss. Q CELLS Hot Spot Protect (HSP) increases safety and reliability and all modules are guaranteed to be Hot Spot free. Q CELLS' Anti PID Technology (APT) prevents Potential Induced Degradation at the cell level for secure yields without performance losses and all modules are also guaranteed to be PID free.





# THE CHECKLIST.

ASK THE RIGHT QUESTIONS, AND YOU'LL INSTALL THE RIGHT ANSWER.

**HOW LONG IS THE PRODUCT WARRANTY AND DOES IT COVER DEFECTS AND SPECIFIC FEATURES LIKE "PID" AND "HOT SPOTS"?**

Q CELLS have a 12-year product warranty and a superior 25-year performance warranty. And yes, we do cover PID and Hot Spots in our warranty.

**WHAT IS THE PANEL'S POWER PERFORMANCE WARRANTY?**

Q CELLS guarantees a maximum degradation of output of no more than 0.6% per year. Compare the percentage of nominal power after 25 years. This is the true test of a system's efficiency and return over time.

**LIVE NEAR THE COAST? DOES THE MANUFACTURER TEST FOR SALT MIST CORROSION?**

Q CELLS panels have been tested according to Severity Level 6, the highest level defined in the IEC testing standards.

**IS THE MANUFACTURER FINANCIALLY STABLE?**

Warranties don't mean a thing if the company is no longer operating. Hanwha Group is a FORTUNE® Global 500 company with over US\$125bn in assets. With resources spread across the globe, our company is continuing to grow in both expertise and size. We're here for the long term.

**DO THE PANELS PERFORM WELL UNDER CLOUDY OR LOW LIGHT CONDITIONS?**

Does a brochure simply claim "great low light performance" or back it up with hard data?

For reference a good panel sits at least 98% nominal efficiency at an irradiance of 200 watts per square metre. All Q CELLS panels achieve at least this.

**HAVE THE PANELS BEEN INDEPENDENTLY TESTED BY THE CYCLONE TESTING STATION AT JAMES COOK UNIVERSITY QLD?**

This testing is completed to a significantly higher standard than the International Electrotechnical Commission (IEC) testing – 10,000+ compression cycles verses three for IEC. Q CELLS panels have passed both of these testing regimes.

**DO THE MANUFACTURERS HAVE A CREDIBLE RESEARCH AND DEVELOPMENT DEPARTMENT?**

Q CELLS have one of the largest and most productive R&D programs in the world of solar energy, involving over 200 scientists and engineers in Germany and more across the globe.

**HOW FAR BEYOND MINIMUM QUALITY TESTING STANDARDS DOES THE MANUFACTURER GO?**

Q CELLS are all VDE Quality Tested, an industry-leading quality program fully recognised by the Clean Energy Council (CEC), the peak body representing Australia's clean energy sector.

**ARE THE PANELS TESTED TO COPE WITH LOCAL CONDITIONS?**

For instance, at the Desert Knowledge Australia Solar Centre (DKASC) in the Northern Territory as Q CELLS panels are. Remember to check the panels are the same as those you'll actually buy. Go to: [www.dkasolarcentre.com.au](http://www.dkasolarcentre.com.au)

**DOES THE PANEL MANUFACTURER HAVE AN OFFICE IN AUSTRALIA?**

Can you call them if you have any questions or issues? Q CELLS has a local head office in Sydney and a network of reliable affiliates spread across Australia. Call us if you have any questions.

**IF YOU HAVE ANY QUESTIONS WE WOULD BE DELIGHTED TO ASSIST. PLEASE DON'T HESITATE TO CONTACT US DIRECTLY OR, FOR MORE INFORMATION, YOU CAN VISIT OUR WEBSITE: [WWW.Q-CELLS.COM.AU](http://WWW.Q-CELLS.COM.AU)**



[www.talksolar.com.au](http://www.talksolar.com.au)  
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