



Premium Quality Guaranteed



# OpalSolar

*Mining Sunshine*





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## About OpalSolar

OPAL Solar is a premium Tier 1 product on the basis of the local support, independent quality control, independent factory acceptance testing, and local technical support in Australia.

OPAL Solar is locally supported through Solar Juice Pty Ltd, the leading supplier of PV products in the Australian market. As a majority owned entity of US listed Solar Power Inc. (SOPWB:OTC) with a market capitalisation of ~ 1 Billion USD, you can be assured that OPAL Solar is a trusted brand that does not compromise on quality.



## Experience

OpalSolar's founders have been involved in solar energy for almost twenty years and we learned a thing or two a long the way about how to do it right. Our experience makes all the difference when it comes getting truly high quality solar products at great prices.

## Quality

Our solar panels only come from independently verified Tier 1 suppliers who are the absolute best in the business and whom we regularly visit for inspection. The remaining equipment is sourced from a range of carefully selected suppliers allowing us to match the best products to the application, every single time. Our range is constantly being refreshed too, as the latest technologies hit the market.



## Warranty

We search the world for the best performing and best value manufacturers and forge long term partnerships. We demand quality and support from them all, back every product we sell with genuine warranties and have offices and warehouses across Australia.

## Range

We know what great solar products look like, buy them in bulk and carefully select local companies to supply and install for you. OpalSolar can supply complete systems and a wide range of solar products to suit every application under the sun.

# About SPI

SPI Solar (SPI) is a global turnkey developer and EPC contractor for large-scale solar energy facilities (SEF). We offer a unique approach to designing, engineering and constructing very high-quality, efficient and sustainable photovoltaic (PV) solar systems for commercial and utility applications.

SPI produces its world-class SEFs from concept through creation, and beyond. Our SPI Guardian™ operations and management (“O&M”) services are derived from our commitment to quality and experience designing and building world-class systems to ensure a lifetime of world-class performance.



## SPI Projects

The Gelliwern Farm solar project, located in south Wales, commenced construction in the first quarter of 2015 and was connected to the grid in March 2015. The Gelliwern Farm solar project is eligible to receive Renewables Obligation Certificates (“ROCs”) at 1.4 ROCs/MWh for 20 years under the UK’s Renewables Obligation (“RO”) scheme.

Previously, SPI announced on June 9, 2015 its entry into a definitive agreement for the sale of the entire issued share capital of Solar Park Developments 3 Ltd (“Grange Farm”), which was also sold to a fund managed by BlackRock. This transaction was completed on June 30, 2015.

“We are pleased to announce the closing of our second UK transaction with BlackRock in recent months,” commented Xiaofeng Peng, Chairman of SPI. “With this transaction, SPI has further solidified its reputation as a leading provider of bankable solar power solutions in the UK market and globally.”

Rory O’Connor, Managing Director at BlackRock, added, “We are very pleased to work again with SPI and close on this investment in the Gelliwern Farm solar project, adding to BlackRock’s significant investment programme in the UK renewables sector.

 [Click here for more information](#)

**BLACKROCK®**

BlackRock, Inc is a multinational investment management corporation based in NYC. Founded in 1988, BlackRock is the world’s largest asset manager with over \$4.77 trillion in assets under management.

 [Click here for more information](#)

### Twentieth Century Fox Studios

Location: Los Angeles, CA

Installation Type: SkyMount® and traditional mounting

Size 230 kilowatts

The Twentieth Century Fox Film Corporation’s first system was successfully installed in 2011 and in 2012 SPI was engaged to design and install a second system adding an additional 230 kilowatts to the 158 kilowatts of on-site production capacity already in place.



Gelliwern Farm solar project  
6.24 MWh - approx 25000 panels  
United Kingdom



## 1 Material Inspection



The raw material used to produce the solar modules is inspected by a quality expert. Every batch is monitored to make sure the quality is outstanding.

**Cells**  
**Raw materials**

## 2 Process Monitoring



### EL testing before and after encapsulation

Electroluminescence testing, or simply EL testing, detects issues that would not be visible otherwise. Degradation or small cracks can be seen.



### Flash testing

The PV module is exposed to a flash of light which simulates sunlight. It is then measured the output performance of the panel.



### Random optical check

The modules are visually inspected to detect any issues.

## 3 Functionality Check



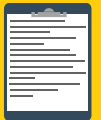
The solar module needs to be manufactured in accordance with the guidelines provided in the user manual. All functions are checked at this stage.

## 4 Module Packaging



All modules produced, after passing the quality tests, are then properly packed and identified through labels.

## 5 Quality Report



Any faults or defects have now been detected and a report is made with the results. Faults are not tolerable.



OSM250P6-60-S | OSM255P6-60-S | OSM260P6-60-S  
Multicrystalline Silicon Module

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### Working Conditions

Maximum System Voltage	DC 1000V (IEC)
Operating Temperature	-40 °C ~+ 85°C
NOCT	47 ± 2°C

### Electrical Parameters

	250W	255W	260W
Nominal Maximum Power (Pm)	250W	255W	260W
Optimum Operating Voltage (Vmp)	29.6V	29.8V	30.0V
Optimum Operating Current (Imp)	8.45A	8.56A	8.67A
Open Circuit Voltage (Voc)	37.9V	38.1V	38.4V
Short Circuit Current (Isc)	9.13A	9.25A	9.36A
Module Efficiency	15.37%	15.67%	15.98%
Power Tolerance		0~+5W	

STC: Irradiance 1000W/m<sup>2</sup>, Temperature 25°C, AM=1.5

### Mechanical Parameters

Cell(mm)	Poly 156x156
Weight(kg)	18.5
Dimensions (LxWxH) (mm)	1640x992x35
No. of Cells and Connections	60 (6x10)
Frame Colour	Silver
Junction Box	IP67
Packaging Configuration	30 Per Pallet

### Temperature Coefficients

Temp. Coefficient - Power ( $\gamma$ Pm)	-0.48%/°C
Temp. Coefficient - Open Circuit Current ( $\beta$ Voc)	-0.33%/°C
Temp. Coefficient - Short Circuit Current ( $\alpha$ Isc)	+0.02%/°C



# Warranty

Solar Juice Pty Ltd ("Solar Juice") warrants its Photovoltaic Solar modules' (MODULES) performance starting from the date of sale to the original customer installing (for their own use) the MODULES ("Customer") or starting at the latest 6 months after date of models dispatch from the Solar Juice factory, whichever occurs earlier (the "Warranty Commencement Date").

## 1. Limited Product Warranty – Ten year repair or replacement

Solar Juice warrants that under normal application, usage, and installation and service conditions, the MODULES together with the factory-assembled DC connectors and cables are free from any defects in materials and workmanship for a period of one hundred and twenty (120) months from the Warranty Commencement Date. Solar Juice will, at its own discretion, verified by an independent testing agency that will be option, either repair or replace the malfunctioning or in operative MODULES.

This limited Product Warranty does not warranty a specific power output at or during any time frame, which shall be exclusively covered under Section 2 of this Warranty here in after ("Limited Peak Power Warranty")

## 2. Limited Peak Power Warranty- Limited Remedy

Solar Juice warrants that for a period of twenty-ve years starting from the Warranty Commencement Date (the "Warranty Period"), loss of power output against the minimum "Peak Power at STC" as specified on the label of the MODULES (hereinafter "Nominal Power") when measured at Standard Test Conditions (STC) for the product(s) shall not exceed:

(1) For Mono Products: 3 % for the 1st year and 0.708% per year thereafter from the 2nd to the 25th year of the warranty period; with a power; output standing at 80.008% of the Nominal Power at the end of the 25th –year of the warranty period.

(2) For Poly Products 2.5 % for the 1st year and 0.7% per year thereafter from the 2nd to the 25th year of the warranty period; with a power output ending at 80.7% of the Nominal Power at the end of the 25th -year of the Warranty Period.

Within the period of twenty ve (25)-year warranty period from the Warranty Commencement Date, should any qualified MODULE sold by Solar Juice exhibit a loss of power as verified by Solar Juice, and at its sole discretion is due to MODULES' defects in materials or workmanship.

Solar Juice will, at its sole option and discretion, either (1) make up such loss in power by providing to Customer(s) additional MODULES; or (2) repair or replace contract entered between Solar Juice and the Customer.

The remedies set forth herein are the sole and exclusive remedies Solar Juice is bound to provide under the limited Peak Power Warranty. CAVEAT:

The Shipping Charges for any allegedly defected MODULES shall be borne by the Customers making such claims in advance. Should the independent testing agency confirm that such led defected are to be covered under this Warranty by Solar Juice, the shipping charges advance by the Customers may be reimbursed by Solar Juice against the original proof of expenditure.

## 3. Exclusions and limitations

(a) Warranty claims from any Customers shall be led in writing to Solar Juice or its authorized distributors within the applicable warranty period and not beyond the last day of the applicable period of time as stated above.

(b) The Limited Product Warranty and Limited Peak Power Warranty shall not apply to MODULES which have been subject to:

- Misuse, abuse, neglect, vandalism or accident;
- Alteration, improper installation or accident;
- Repair or modification that does not strictly follow the manufacturer's instructions or non-observance of Solar Juice maintenance instructions;
- Power failure, electrical spikes or surges, lightning, flood, fire, accidental breakage or other events outside Solar Juice control

(c) The Limited Product Warranty and Limited Peak Power Warranty do not cover any costs associated with installation, removal or re-installation of MODULES and (except as explicitly set forth in the last paragraph of the section 5) Customs clearance or any other costs for return of the MODULES.

(d) Warranty claims will not be honoured if the type or serial number of Solar Juice MODULES have been altered, removed or made illegible without written authorisation from Solar Juice.

(e) The following statement applies to Customers that are dened "Consumers" within the meaning of Australian Consumer Law.

"Our goods come with guarantees that cannot be excluded under Australian Consumer Law. The Customer is entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. The Customer is also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure"

## 4. Limitation of Warranty Scope

This Warranty as set forth herein is expressly in lieu of and excludes all other expressed or implied warranties, including but not limited to warranties of merchantability and of fitness for particular purpose, use, or application, and all other obligations or liabilities on the part of Solar Juice, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by Solar Juice. Solar Juice shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for others loss or injury resulting from any cause whatsoever arising out of or related to the MODULES, including, without limitation, any defects in the MODULES or from use or installation.

Under no circumstances shall Solar Juice be liable for incidental, consequential or special damages, loss of use, loss of profits, loss of production, and loss of revenues), howsoever caused..

The aforementioned alleged losses by Customers are specially and without limitation excluded from responsibility of Solar Juice. Solar Juice's aggregate liability, if any, in damages or otherwise, shall not exceed the invoice value as paid by the Customer, for the single unit of MODULES.

## 5. Obtaining Warranty Performance

If the Customer has a justified claim covered by this warranty, an immediate written notification shall be directly made to Solar Juice by means of registered letter to the address of Solar Juice listed hereunder, or, sending a notification via e-mail to the email account of Solar Juice listed hereunder. Together with the notification, the Customer should enclose the evidence of the claim with the corresponding serial number of the MODULES and the date on which the MODULE have been purchased. An invoice with clear indication of the purchase date, purchase price, module type, stamp or signature of Solar Juice or its distributors should also be submitted as part of the preliminary evidence.

If the MODULES are to be returned to Solar Juice for inspection, repair or replacement by Solar Juice shall provide the Customer with a Return Merchandise Authorisation (RMA). Solar Juice will not accept the return of any MODULES without such RMA. In connection with both the Limited Product Warranty and limited Peak Power Warranty, Solar Juice may reimburse customer for reasonable, customary and documented transportation charges by sea freight for both return of the MODULES and reshipment of any repaired or replacement MODULES, as long as such cost reimbursement is authorised by Solar Juice Customer Service Department in advance.

## 6 Transferability

This warranty is extended to the original end-user purchaser, and is also transferable to any subsequent owner of the location or holder of the product long as the MODULES remain at their original installed location and upon satisfactory proof of succession or assignment.

## 7 Severability

If a section, provision or clause of this warranty, or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such shall not affect and shall leave all others sections, provision, clauses or applications under this warranty severable, and therefore validly binding.

## 8 Dispute Resolution

In case of any dispute in terms of warranty- claims, reputable international testing institute such as PL Berlin, TÜV SÜD or Intertek, UL, shall be entrusted by both parties upon mutual consent in order to provide third party verification and advice. Unless otherwise agreed all Fees and expenses shall be borne by the party that demanded such verification procedure.

Further dispute over the claim shall be submitted to dispute resolution as stipulated in the main sales contract to which this warranty is a part and subject to the applicable jurisdiction agreed by the parties in the sales contract.

## 9 Various

The repair or replacement of the MODULES or the supply of additional MODULES does not lead to a new commencement of warranty terms, nor shall the original terms of this warranty be extended. Any replaced MODULES shall become the property of Solar Juice.

In event that Solar Juice has discontinued producing the MODULE in question at the time of the claim, Solar Juice can at its own option deliver different type of MODULE different in size, colour, shape, power or brand.

## 10. Force Majeure

Solar Juice shall not be responsible or liable to the Customer whatsoever or any thirdparty arising out of any non-performance or delay in performance of any terms and conditions of the sales including this warranty, due to causes of natural disasters such as, flood, blizzard, hurricane, thunder, acts of god, changes of public policies, terrorism, war , strikes, unavailability of suitable and sufficient labour or materials and other events which are out of control of Solar Juice.

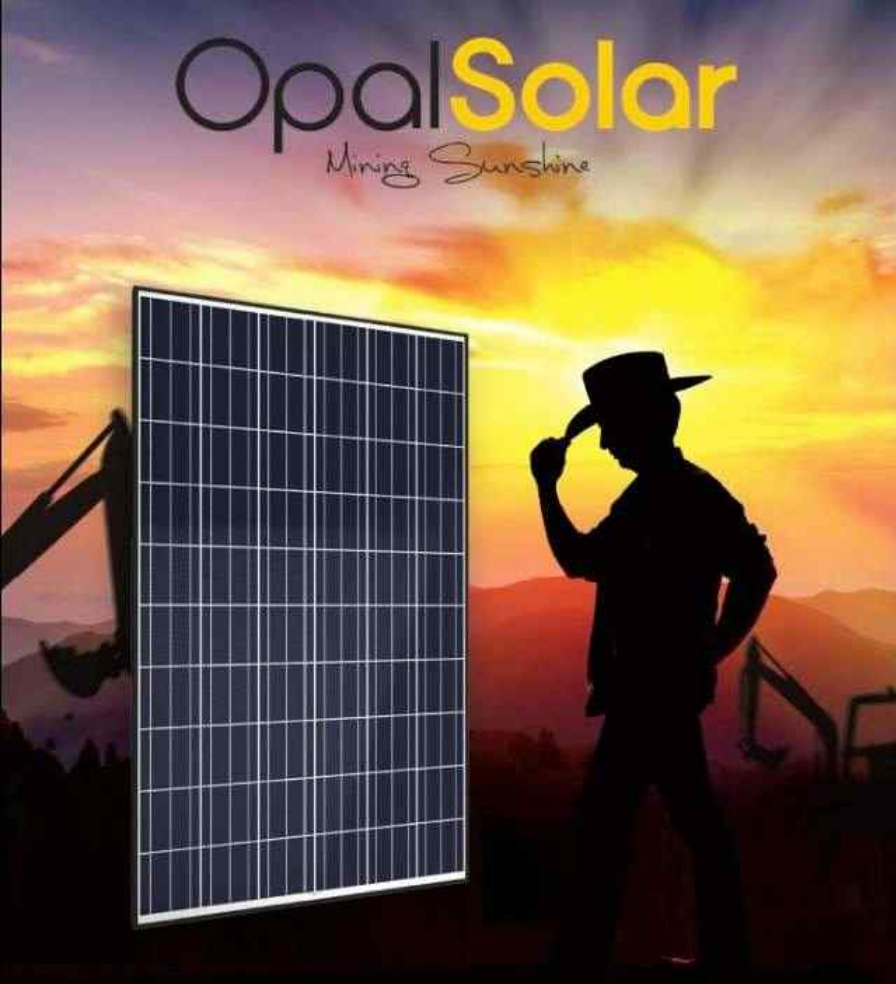
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## Energy is Precious

Every Australian knows that we have legendary solar energy potential. In fact, there is fifteen times more energy available in that sunshine, than every other form of energy we know including coal, gas, oil and uranium, and it's more affordable than ever before.

Our solar energy potential is around ten thousand times more than our annual energy consumption, and we want to make more use of it with you.

OpalSolar is also dedicated to the healthy growth of solar energy in Australia and we work closely with industry associations to make sure that standards are kept high and solar support is kept strong. We want to help build a strong solar industry that delivers quality, workmanship and support.

## Australian Installations



Werombi NSW  
100 kW system  
Date of install – January 2015



Highfields QLD  
7kW system  
Date of install – September 2014



Jannali NSW  
4.85kW system  
January 2015



Girraween NSW  
25 kW system  
June 2014





## NRL Bulldogs' partnership

### Opal Solar Join Des Hasler as Coaches Partner

Research showing the Canterbury-Bankstown Bulldogs to be the most watched NRL team in Australia on free-to-air television has prompted leading solar energy company, Opal Solar, to sign on as the Coaches sponsor for the next two seasons, through until the end of 2016.

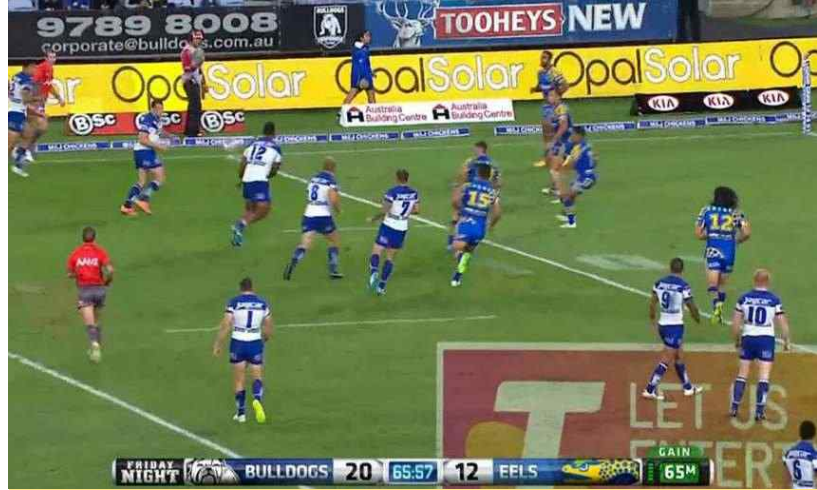
As the official Solar Energy partner of the Bulldogs, this sponsorship will provide exposure and awareness to millions of Australians who are yet to make the switch to cleaner, greener renewable energy, and particularly the Opal Solar range.

Australians are at the forefront of adopting solar power with 1 in 5 households now using a technology that will provide a more sustainable future for current and future generations. The Bulldogs see this exciting opportunity to partner with one of the leading solar providers in Australia to promote greater awareness around renewable energy.

Opal Solar was launched in 2014, having been designed in Australia, for Australian conditions.

Coach Des Hasler said it was important to focus on making a positive difference to the environment.

"The need to minimise our carbon footprint is obviously something that we're all aware of and I'm pleased to promote a product like Opal Solar that will help provide a more sustainable future for generations to come," said Hasler.



Andrew Burgess, Co-founder/Sales Director of Solar Juice, hopes the partnership with the Bulldogs will prompt more people to consider renewable energy as an option: "The Bulldogs partnership gives us the best platform in Australian sport to reach out and let people know what we do. Solar Juice has supplied more than one million solar panels and 100 thousand inverters throughout Australia."

"We are excited to be associated with such an iconic team and in particular Coach Des Hasler. We are looking forward to being part of the Bulldogs family for many years to come," Burgess said.

Chief Executive Raelene Castle is keen to be involved with a company such as Opal Solar: "Any company that is working towards making the environment a better place is a company that we're pleased to be associated with," Castle said. "It'll be good to work with Opal Solar over the next two years to enable them to get the best out of the Partnership with the Club."



**OpalSolar** Official Solar Energy Partner



Don't worry, our warranty has got you covered

## Ten year repair or replacement

We make sure that Opal Solar panels are free from any defects for a period of 10 years

## Peak Power Warranty

Within 25 years, we make sure that your Opal Solar module doesn't present loss of power

