

**Prepared by:**  
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**For: Phil and Pam**  
The Stables, upper waterside farm,  
Holmbridge

Quote #: 6235280  
Valid until: 7th March 2025



## Enviromental energy Solar PV Proposal

Dear Phil and Pam,

As discussed, please find here details of or proposed solar photovoltaic system.

Once you've had a chance to peruse, please let me know your thoughts.

We can modify as required and then proceed to a final proposal once we have a final system that meets your approval

With thanks.

**Duncan**

## Recommended System Option

9.6 kW  
System Size

8,028 kWh  
Estimated Annual  
Solar Generation

£21,763  
Net System Price



## Your Solution

### JAM 72D40 LB

9.600kW of Solar Power

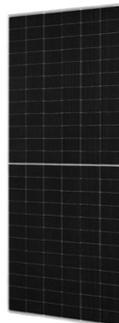
16 x JAM72D-40-600-LB-TS-MC4

600 Watt panels

12 Year Product Warranty & 30 Year Linear  
Performance Warranty

8,028kWh per year

**JA SOLAR**



### Inverter

**Sunsynk**

8.8 kW Total Inverter Rating

1 x SUNSYNK-8K-SG01LP1

### Sunsynk W-Series 10.64kWh Battery

10.6kWh of Battery Storage

**Sunsynk**

1 x SUNSYNK-W10.6

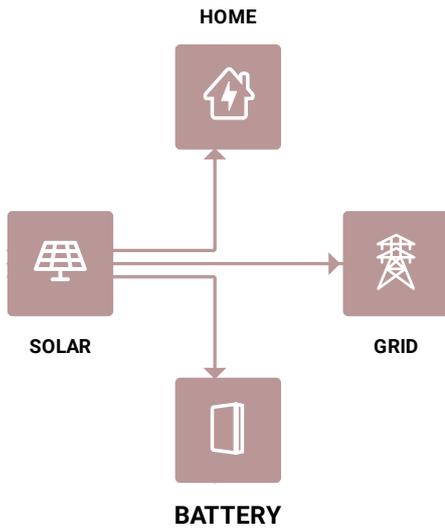


SUN  SYNK®

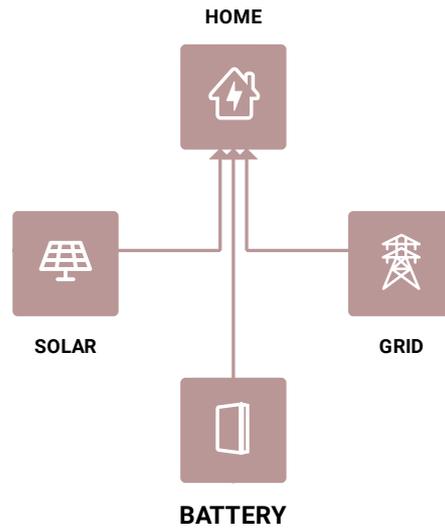
Warranties: 12 Year Panel Product Warranty, 30 Year Panel Performance Warranty

## How your system works

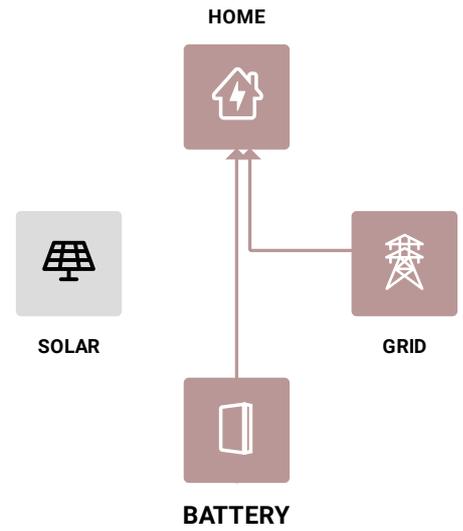
### Generating Excess Solar



### Partially Offset Usage

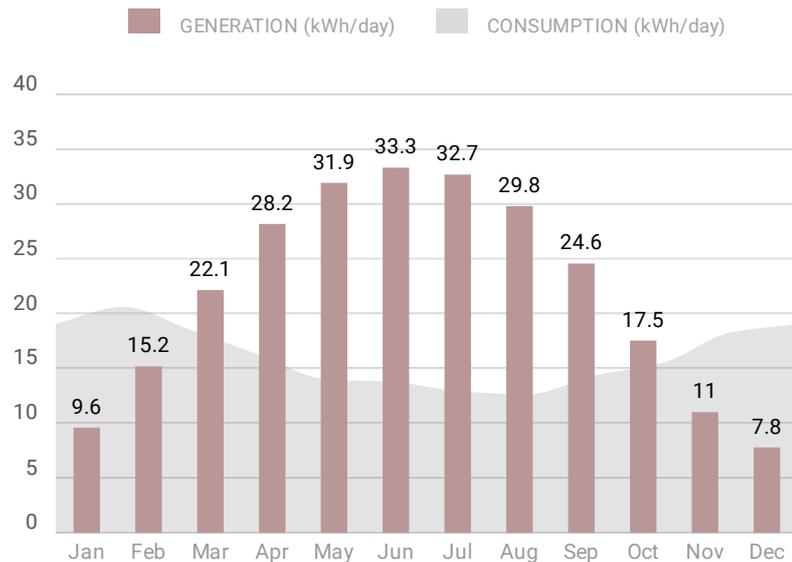


### Night



## System Performance

**136%**  
Energy From Solar



**62%**  
Self-consumption

**38%**  
Export to grid

System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 25.0%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 16 panels with Azimuth 180 and Slope 35.

The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidance only. It should not be considered as a guarantee of performance.

The solar PV self-consumption has been calculated in accordance with the most relevant methodology for your system. There are a number of external factors that can have a significant effect on the amount of energy that will be self-consumed.

Shading will be present on your system that will reduce its output to the factor stated. This factor was NOT calculated using the MCS shading methodology, but we can confirm that the system as quoted, taking into account the shading present, will deliver at least 90% of the energy (in kWh) as set out in this performance estimate.

This system performance calculation has been undertaken using estimated values for array orientation, inclination, or shading. Actual performance may be significantly lower or higher if the characteristics of the installed system vary from the estimated values.

Important Note: The energy performance and benefits of EESS is impossible to predict with certainty due to the numerous functions a system can be programmed to perform. This estimate is based upon the standard MCS procedure and is given as guidance only. It should not be considered as a guarantee of performance.

[EESS capacity not used for self consumption] Storage capacity of the battery - assumed usable capacity of battery [Total energy discharged per annum] Assumed usable capacity of battery x 730 [Additional self consumption] Estimated annual output (Section B) x self consumption rate with battery as a % (no higher than 95%) - Expected solar PV self-consumption (with EESS) (Section D)

A. Installation data		
Installed capacity of PV system - kWp (stc)	9.600	kWp
Orientation of the PV system - degrees from South	Group 1: 16 panels with Orientation: 0 °	°
Inclination of system - degrees from horizontal	Group 1: 16 panels with Tilt: 35°	°

Postcode region	11	
<b>B. Performance calculations</b>		
kWh/kWp (Kk) from table	Group 1: 892	kWh/kWp
Shade Factor (SF)	0.750	
Estimated annual output (kWp x Kk x SF)	8,028	kWh
<b>C. Estimated PV self-consumption - PV Only</b>		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	5,915.00	kWh
Assumed annual electricity generation from solar PV system, kWh	8,028	kWh
Expected solar PV self-consumption (PV Only)	0.00	kWh
Grid electricity independence / Self-sufficiency (PV Only)	0.00	%
<b>D. Estimated PV self-consumption - with EESS</b>		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	9.54	kWh
Expected solar PV self-consumption (with EESS)	5,007.74	kWh
Grid electricity independence / Self-sufficiency (with EESS)	85.0%	%
<b>E. Additional benefits from PV and EESS</b>		
EESS capacity not used for self-consumption	1.06	kWh
Total energy discharged per annum	6964.20	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

## Environmental Benefits

Solar has no emissions. It just silently generates pure, clean energy.



## Daily Energy Flows



This proposal has been prepared by enviromental energy ltd using tools from OpenSolar. Please visit [www.opensolar.com/proposal-disclaimer](http://www.opensolar.com/proposal-disclaimer) for additional disclosures from OpenSolar.

**Please do note. DNO Application .**

**For installations above 4KW (Over a 3.6KW inverter / 16Amps per phase )**, we can apply to the DNO (District electrical network operator) under the small scale generation procedure to double the output to 8KW / 32 Amps. This can allow 14KW of panel generation This can be processed by EEL for a fee of £95.00 Please provide your Full MPAN no.

**For larger scale applications** a full application is required is required. This takes 6 weeks minimum. Whatever they will charge a design fee which is typically around £250.00 to £650.00. They will not confirm until after the design is done and due for payment!. If you decide to proceed with works They may also inform us if they need to upgrade their supply and will provide a quotation if so, payable pre installation. This can be processed by EEL for a fee of £300 .00

**Permissions:**

For most roof mounted PV installs planning is a permissive development if panels flat on roof . Ground mounts normally need planning permission . Listed and conservation zone buildings should double checked by client prior to acceptance as conditions vary.

The quote assumes clients existing electrical system used to supply this installation is safe and fit for purpose (Network earthing etc) If not, we will do a detailed test on the system before we start the install, and recommend and price any additional work required. We can not connect the photovoltaics to a system found unsafe

Although we will try our best at pre install survey to fully assess risks , If while working in the property our engineers find asbestos or other risks, we may have to modify design or the client may need to contact a specialist asbestos or other assessor to ensure the safety of operative before work in that area can continue.

It is the responsibility of the client to ensure all permission and approvals are in place and accepting this quote by paying the deposit is confirmation of this. EEL can assist with advice and applications as instructed

We recommend before proceeding you contact your insurance to ensure the new installation is covered and they have no special additional requirements. This is especially true with battery storage, and you should ensure your fire extinguishers and systems are suitable and appropriate before our installation. We have found, among others, the fire protection shop to offer up to date, good advice. See: <https://www.fireprotectionshop.co.uk/fire-extinguishers/type/lithium-ion-battery/>

## DEEP BLUE 4.0

**Mono**

600W n-type Bifacial Double Glass  
High Efficiency Mono Module  
JAM72D40 575-600/LB Series

### Introduction

Power by the latest SMBB n-type solar cell, half-cell configuration, these modules have higher output power, lower LID, better weak illumination response, and better temperature coefficient.



Higher power generation  
better LCOE



n-type with very Lower LID



Better weak illumination response



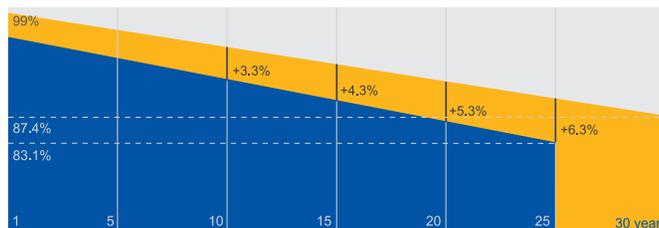
Better Temperature Coefficient

### Superior Warranty

- 12-year product warranty
- 30-year linear power output warranty

1% 1st-year Degradation

0.4% Annual Degradation  
Over 30 years



■ n-type Bifacial Double Glass Module  
Linear Performance Warranty

■ Standard Module Linear  
Performance Warranty

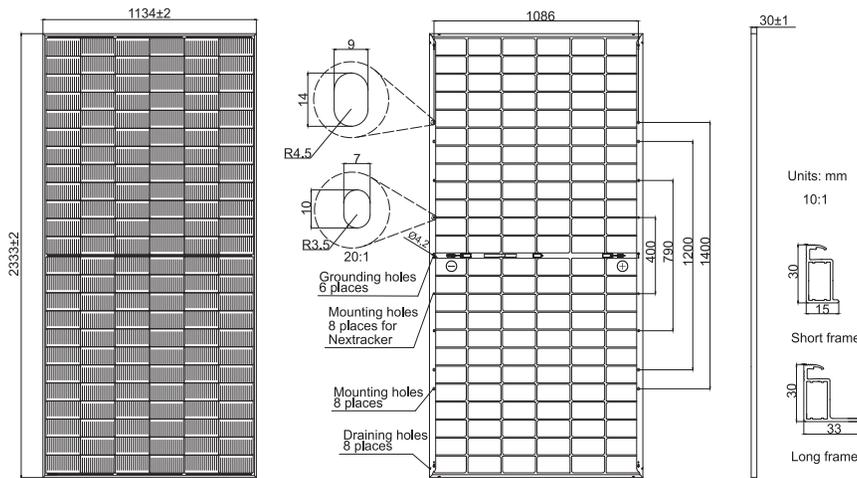
### Comprehensive Certificates

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing



**MECHANICAL DIAGRAMS**

**SPECIFICATIONS**



Cell	Mono-16BB
Weight	32.5kg
Dimensions	2333±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm <sup>2</sup> (IEC), 12 AWG(UL)
No. of cells	144(6×24)
Junction Box	IP68, 3 diodes
Connector	QC 4.10-351/ MC4-EVO2A
Cable Length (Including Connector)	Portrait: 200mm(+)/300mm(-); 800mm(+)/800mm(-)(Leapfrog) Landscape: 1300mm(+)/1300mm(-)
Front Glass/Back Glass	2.0mm/2.0mm
Packaging Configuration	36pcs/Pallet, 720pcs/40HQ Container

Remark: customized frame color and cable length available upon request

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM72D40 -575/LB	JAM72D40 -580/LB	JAM72D40 -585/LB	JAM72D40 -590/LB	JAM72D40 -595/LB	JAM72D40 -600/LB
Rated Maximum Power(Pmax) [W]	575	580	585	590	595	600
Open Circuit Voltage(Voc) [V]	51.40	51.60	51.80	52.00	52.20	52.40
Maximum Power Voltage(Vmp) [V]	42.88	43.06	43.24	43.41	43.59	43.76
Short Circuit Current(Isc) [A]	14.16	14.23	14.29	14.35	14.42	14.48
Maximum Power Current(Imp) [A]	13.41	13.47	13.53	13.59	13.65	13.71
Module Efficiency [%]	21.7	21.9	22.1	22.3	22.5	22.7
Power Tolerance	0~+5W					
Temperature Coefficient of Isc( $\alpha_{Isc}$ )	+0.046%/°C					
Temperature Coefficient of Voc( $\beta_{Voc}$ )	-0.260%/°C					
Temperature Coefficient of Pmax( $\gamma_{Pmp}$ )	-0.300%/°C					
STC	Irradiance 1000W/m <sup>2</sup> , cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

**ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO**

**OPERATING CONDITIONS**

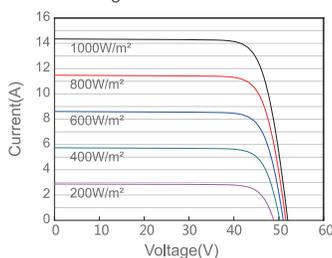
TYPE	JAM72D40 -575/LB	JAM72D40 -580/LB	JAM72D40 -585/LB	JAM72D40 -590/LB	JAM72D40 -595/LB	JAM72D40 -600/LB	Operating Conditions
Rated Max Power(Pmax) [W]	621	626	632	637	643	648	Maximum System Voltage 1500V DC
Open Circuit Voltage(Voc) [V]	51.40	51.60	51.80	52.00	52.20	52.40	Operating Temperature -40°C~+85°C
Max Power Voltage(Vmp) [V]	42.88	43.06	43.24	43.41	43.59	43.76	Maximum Series Fuse Rating 30A
Short Circuit Current(Isc) [A]	15.30	15.36	15.43	15.50	15.57	15.64	Maximum Static Load,Front* 5400Pa(112 lb/ft <sup>2</sup> ) Maximum Static Load,Back* 2400Pa(50 lb/ft <sup>2</sup> )
Max Power Current(Imp) [A]	14.48	14.55	14.61	14.68	14.74	14.81	NOCT 45±2°C
Irradiation Ratio (rear/front)	10%						Bifaciality** 80%±10%
							Fire Performance UL Type 29

\*For NexTracker installations, maximum static load please take compatibility approve letter between JA Solar and NexTracker for reference.

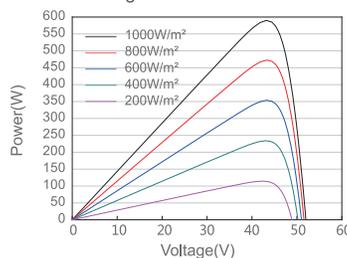
\*\*Bifaciality=Pmax,rear/Rated Pmax,front

**CHARACTERISTICS**

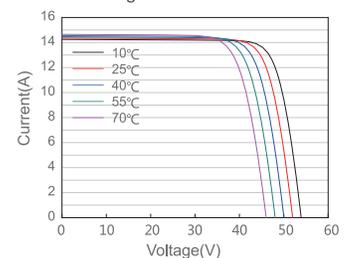
Current-Voltage Curve JAM72D40-590/LB



Power-Voltage Curve JAM72D40-590/LB



Current-Voltage Curve JAM72D40-590/LB





# SUNSYNK-W10.6



## DATASHEET

[www.sunsynk.com](http://www.sunsynk.com)  
[sales@sunsynk.com](mailto:sales@sunsynk.com)  
[customerservices@sunsynk.com](mailto:customerservices@sunsynk.com)

Model		SUNSYNK-W10.6
Main Parameter		
Battery Chemistry		LiFePO <sub>4</sub>
Capacity (Ah)		208
Scalability		Max. 32 pcs in parallel (340kWh)
Nominal Voltage (V)		51.2
Operating Voltage (V)		43.2~57.6
Energy (kWh)		10.64
Usable Energy (kWh) <sup>1</sup>		9.58
Charge/Discharge Current (A)	Recommend <sup>2</sup>	104
	Max. <sup>2</sup>	Charge: 200 / Discharge: 240
	Peak (2mins,25°C)	Discharge: 300
Other Parameter		
Recommend Depth of Discharge		90%
Dimension (W x H x Dmm)		610 x 760 x 200 (doesn't include terminals, circuit breaker, hanging boards and pedestal)
Weight (kg)		101
Master LED Indicator		5 LED (SOC 20%~100%)
		2 LED (working, protecting)
IP Rating of Enclosure		IP65
Working Temperature		Charge: -10°C ~ +55°C Discharge: -20°C ~ +55°C
Storage Temperature		0°C ~ +35°C
Humidity		5% ~ 95%
Altitude		≤2000m
Cycle Life		≥6000 (25±2°C,90%DOD,0.5C/1C,70%EOL)
Installation		Wall-Mounted (supports 19-inch standard cabinet)
Communication Port		CAN2.0, RS485
Life Cycle Power During Warranty Period <sup>3</sup>		32MWh@70%EOL
Certification		IEC62619, CE, UK, CEC, UN38.3

<sup>1</sup> DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25° C. System usable energy may vary due to system configuration parameters.

<sup>2</sup> The current is affected by temperature and SOC.

<sup>3</sup> The warranty is due whichever reached first of warranty period or energy throughout.

DC 2P 250A Circuit Breaker



Wi-Fi RS232 Port





## CONTACT US

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