

Prepared by: Sureserve**For:** Flat B 48 Palmerston Road,
London, N22 8RG**Quote #:**
Valid until:

Solar Energy System Proposal

Thank you for the opportunity to present your Solar Energy System Proposal.

Best Regards,
Justin Joseph

Sureserve Energy Services UK Limited

Recommended System Option

2.79_{kw}

System Size

£520

Estimated Annual
Electricity Bill Savings

£0

Total System Price

£0

Net System Price



Your Solution

Solar Panels

Hengdian Group DMEGC Magnetics

2.790 kW Total Module Power

6 x 465 Watt Panels (DM465G12RT-B48HBB)

1,886 kWh per year

Dura5

4.6 kWh of Usable Capacity

Duracell

1 x PD-5KWH-50V-2G

10 Year Warranty



DURACELL®
ENERGY

5G RHI Hybrid Inverter - 1PH DC (3-6kW)

3kW of Inverter Power

SOLIS

1 x RHI-3K-48ES-5G

5 -year Standard Warranty



For Clenergy's PV Mounting System, Splice for Standard Rail

Material: Main Parts-AL6005-T5, Screws- SUS304 Color: Silver
Anodized

4 x ER-SP-ST

Solar Pro Mounting Rail

CLENERGY SOLARPRO MOUNTING RAIL 3.6M

6 x ER-R-PRO3600

Clenergy Self-drilling Universal Wood Screw 14-11 x 70 Hex Head

Clenergy Self-drilling Universal Wood Screw 14-11 x 70 Hex Head
40 x ER-US-6.3-70-BW-BX

For Clenergy's PV Mounting System, Tile Interface for light to medium

Material: Roof Hook-SUS304, Bolts/Washer/Nuts/Spring-SUS304,
ezClip-AL6005-T5

20 x ER-I-PRO/01

Clenergy Pro Rail Cap Black

Clenergy Pro Rail Cap Black

8 x ER-CAP-PROB

Module-level PV Optimizer

Module-level PV Optimizer

6 x TS4-A-O

Universal Clamp 30-46mm with Grounding Black Anodised

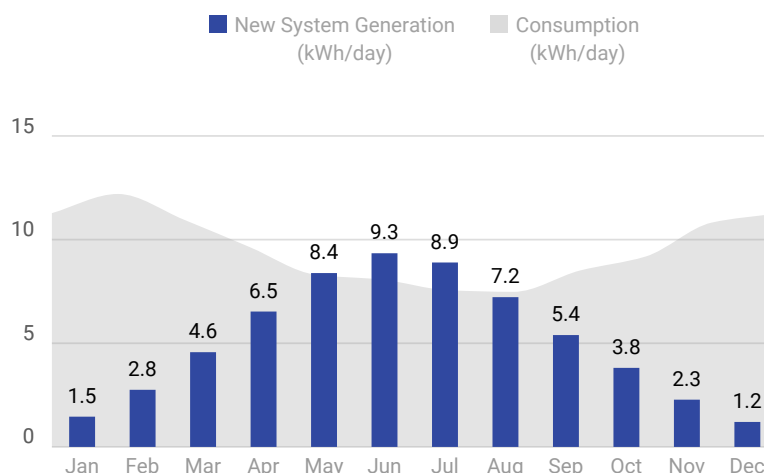
Universal Clamp 30-46mm with Grounding Black Anodised

16 x CLMC-U/30/46-G/BA

Warranties: 25 Year Panel Product Warranty, 30 Year Panel Performance Warranty, 5 Year Inverter Product Warranty, 10 Year Battery Product Warranty

System Performance

54%
Energy From Solar



System Performance Assumptions: System Total losses: 0%, Inverter losses: 0%, Optimizer losses: 0%, Shading losses: 4.4%, Performance Adjustment: 0%, Output Calculator: MCS. Panel Orientations: 3 panels with Azimuth 198 and Slope 49, 3 panels with Azimuth 18 and Slope 49.

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

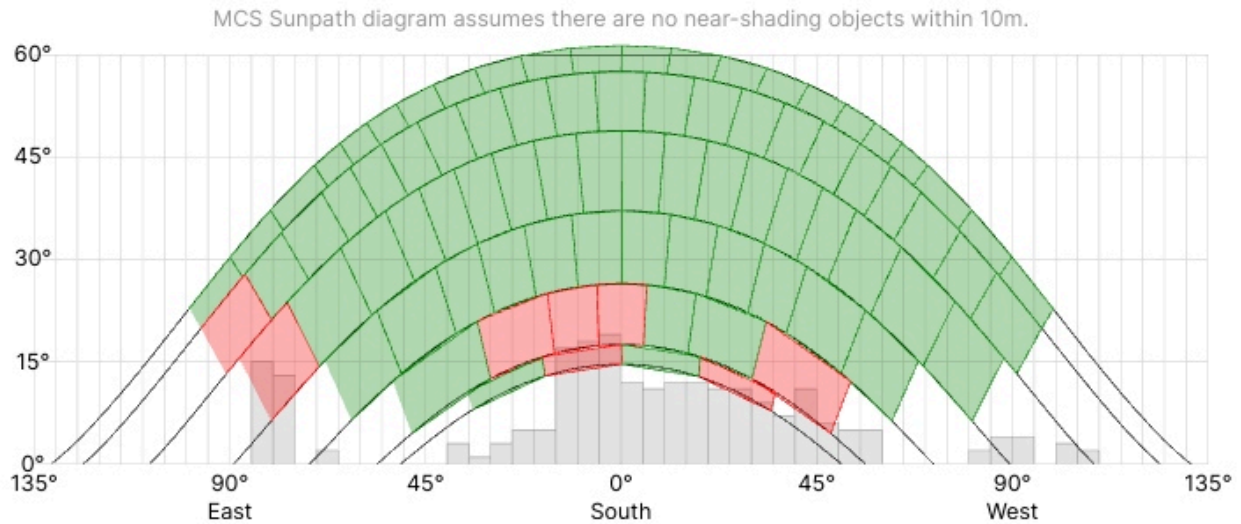
Installed capacity of PV system - kWp (stc)	2.790	kWp
Orientation of the PV system - degrees from South	Group 1: 3 panels with Orientation: 20 ° Group 2: 3 panels with Orientation: 160 °	°
Inclination of system - degrees from horizontal	Group 1: 3 panels with Tilt: 49° Group 2: 3 panels with Tilt: 49°	°
Postcode region	1	

B. Performance calculations

kWh/kWp (Kk) from table	Group 1: 959 Group 2: 455	kWh/kWp
Shade Factor (SF)	0.956	
Estimated annual output (kWp x Kk x SF)	1,886	kWh
C. Estimated PV self-consumption - PV Only		
Assumed occupancy archetype	In Half Day	
Assumed annual electricity consumption, kWh	3,500	kWh
Assumed annual electricity generation from solar PV system, kWh	1,886	kWh
Expected solar PV self-consumption (PV Only)	679	kWh
Grid electricity independence / Self-sufficiency (PV Only)	19.4	%
D. Estimated PV self-consumption - with EESS		
Assumed usable capacity of electricity energy storage device, which is used for self-consumption, kWh	4.60	kWh
Expected solar PV self-consumption (with EESS)	1,603	kWh
Grid electricity independence / Self-sufficiency (with EESS)	46.0	%
E. Additional benefits from PV and EESS		
EESS capacity not used for self-consumption	0.52	kWh
Total energy discharged per annum	3,358	kWh
Additional self-consumption for EV, heat pumps, diverters (only when present)	0.00	kWh

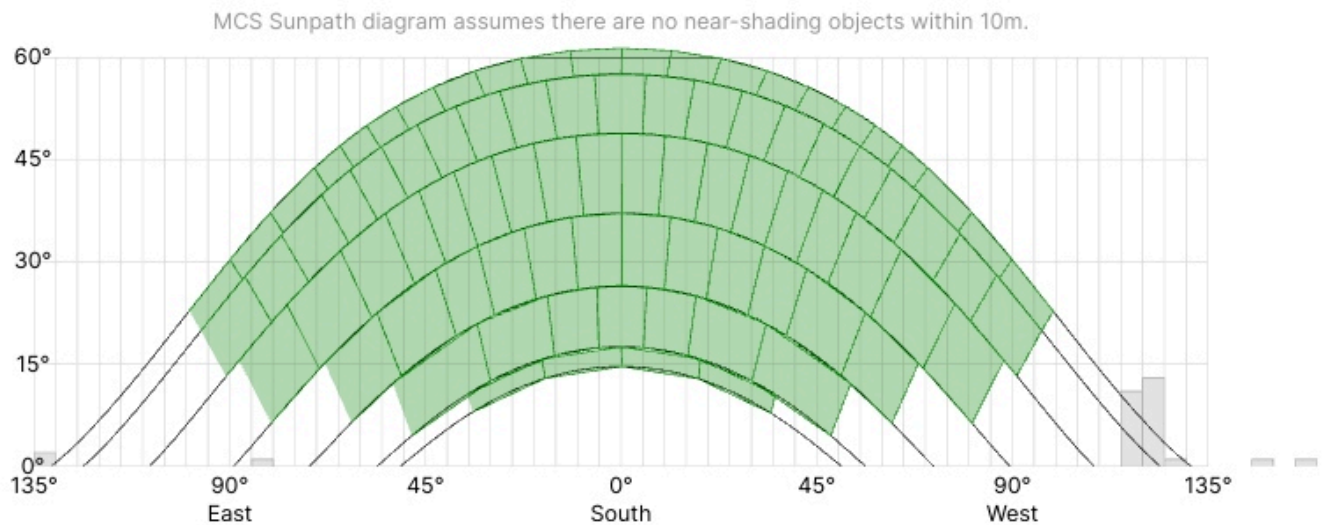
Sunpath Diagram

Disclaimer: The shade mask mapped onto the sunpath diagram is based off the field of view from a point in the center of the array. This means that the shade mask shown will only capture the shading experienced at the array center point, and will not reflect the shading casted onto other locations on the array.



Sunpath Diagram

Disclaimer: The shade mask mapped onto the sunpath diagram is based off the field of view from a point in the center of the array. This means that the shade mask shown will only capture the shading experienced at the array center point, and will not reflect the shading casted onto other locations on the array.



Environmental Benefits

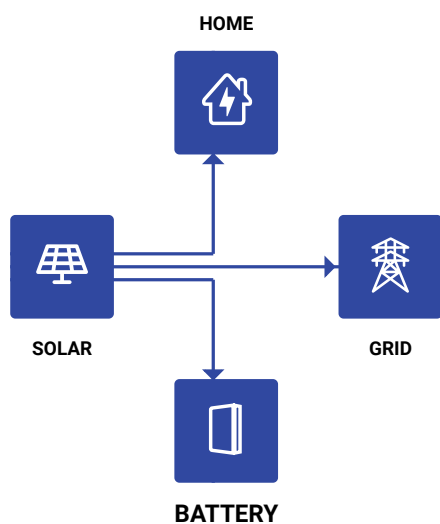
Solar has no emissions. It just silently generates pure, clean energy.



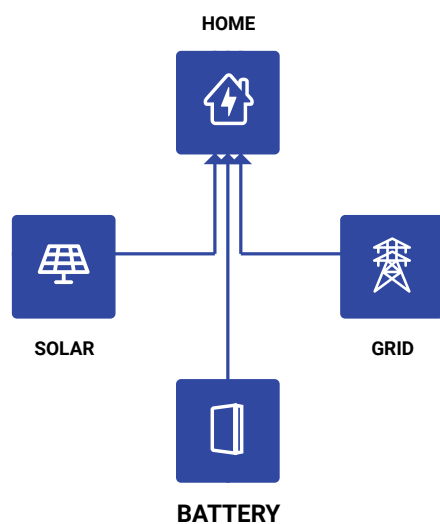
Each Year		Over System Lifetime		
54%	0.5 ^{tons}	14,275 ^{km}	92	10
Consumption Offset	of CO ₂ reduced per year	Car distance avoided (lifetime)	Trees planted	Long haul flights avoided

How your system works

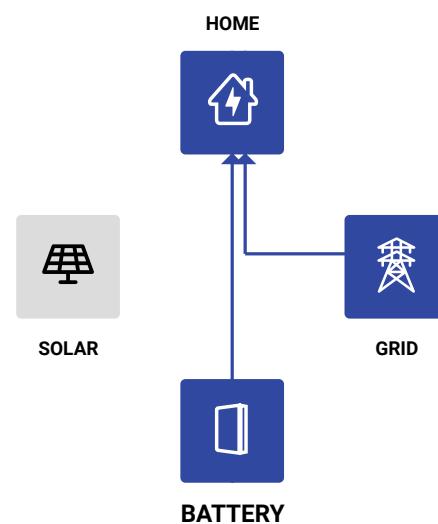
Generating Excess Solar



Partially Offset Usage

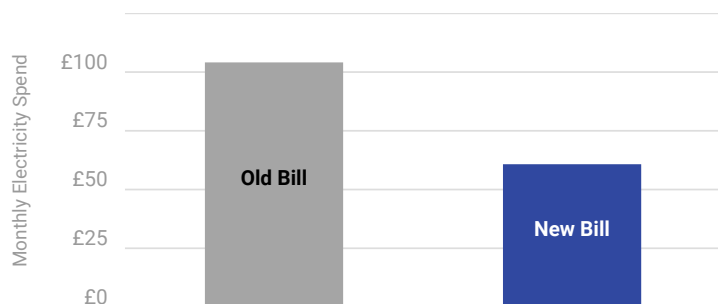


Night

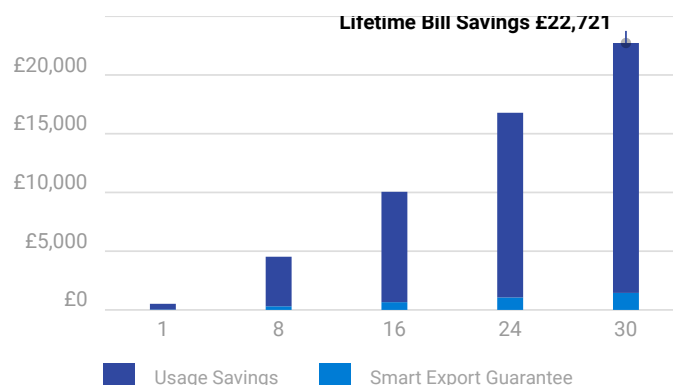


Electricity Bill Savings

First Year Monthly Bill Savings



Cumulative Bill Savings



Month	Solar Generation (kWh)	Net Grid Consumption before new system (kWh)	Electricity Imported after new system (kWh)	Electricity Exported after new system (kWh)	Export Credit (£)	Utility Bill before new system (£)	Utility Bill after new system (£)	Estimated Savings (£)
Jan	45	350	304	0	0	121	109	13
Feb	77	341	268	3	0	117	96	21
Mar	142	339	213	15	1	118	76	42
Apr	196	289	115	22	2	103	46	57
May	260	257	38	38	5	94	24	70
Jun	280	244	30	68	9	90	18	72
Jul	276	236	29	71	9	88	18	71
Aug	224	232	37	31	4	87	24	62
Sep	162	255	111	18	2	93	46	47
Oct	118	284	179	12	1	102	68	35
Nov	68	324	260	3	0	113	95	18
Dec	37	349	312	0	0	121	111	10

Rate not specified specified, using Octopus Flux N Scotland - Jan 26 based on location.

Your projected energy cost is calculated by considering a 2.7% increase in energy cost each year, due to trends in the raising cost of energy. This estimate is based on your selected preferences, current energy costs and the position and orientation of your roof to calculate the efficiency of the system. Projections are based on estimated usage of 3500 kWh per year, assuming Octopus Flux N Scotland - Jan 26 Electricity Tariff.

Your electricity tariff rates may change as a result of installing the system. You should contact your electricity retailer for further information.

Proposed Tariff Details - Octopus Energy Octopus Flux N Scotland - Jan 26

Energy Charges

Peak Import
4pm-7pm\Mon-Sun

£0.40 / kWh

Standard Import
5am-4pm\s&\s7pm-2am\Mon-Sun

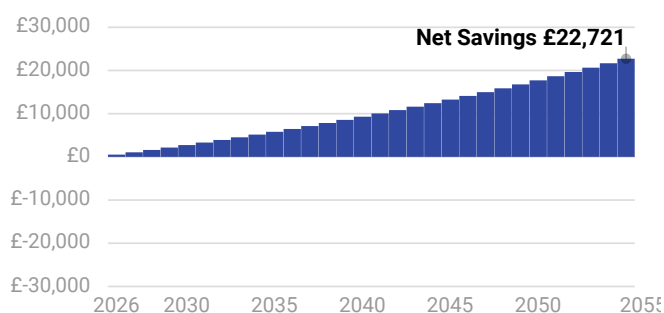
£0.28 / kWh

Flux Import <i>2am-5am\Mon-Sun</i>	£0.17 / kWh
Smart Export Guarantee	
Peak Export <i>4pm-7pm\Mon-Sun</i>	£0.29 / kWh
Standard Export <i>5am-4pm\Mon-Sun & 7pm-2am\Mon-Sun</i>	£0.10 / kWh
Flux Export <i>2am-5am\Mon-Sun</i>	£0.05 / kWh
Fixed Charges	
Standing Charge	£0.62 / day

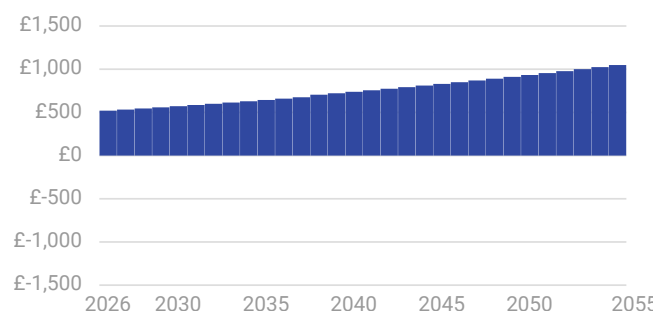
Net Financial Impact Cash

$$\begin{array}{rcl}
 \text{£22,721} & - & \text{£0} \\
 \text{Utility Bill Savings} & & \text{Net System Cost} \\
 & = & \text{£22,721} \\
 & & \text{Estimated Net Savings}
 \end{array}$$

Cumulative Savings From Going Solar



Annual Savings From Going Solar



Estimates do not include replacement costs of equipment not covered by a warranty. Components may need replacement after their warranty period. Financial discount rate assumed: 6.75%

Quotation

Payment Option: Cash

6 x Hengdian Group DMEGC Magnetics 465 Watt Panels (DM465G12RT-B48HBB)
1 x RHI-3K-48ES-5G (SOLIS)
1 x PD-5KWH-50V-2G (Duracell)
4 x ER-SP-ST, 6 x ER-R-PRO3600, 40 x ER-US-6.3-70-BW-BX, 20 x ER-I-PRO/01, 8 x ER-CAP-PROB, 16 x CLMC-U/30/46-G/BA, 6 x TS4-A-O

Total System Price	£0.00 Excluding £0.00 VAT
Purchase Price	£0.00 Including £0.00 VAT
No Deposit	£0.00

Price excludes Retailer Smart Meter should you want us to install your Smart Meter it will be an additional cost.
This proposal is valid until Aug 16 2026.

Quote Acceptance

I have read & accept the terms and conditions.

Signature

Name

Date



This proposal has been prepared by Sureserve Energy Services UK Limited using tools from OpenSolar. Please visit www.opensolar.com/proposal-disclaimer for additional disclosures from OpenSolar.

RHI-(3-6)K-48ES-5G

Solis Energy Storage Inverters



360 degree

Features:

- ▶ Uninterrupted power supply, 20ms reaction
- ▶ 5kW backup power to support more important loads
- ▶ With shifting and peak shaving capabilities friendly to grid
- ▶ Multiple working modes to make maximize self-consumption, increase benefit
- ▶ Higher charge-discharge efficiency, improving the economic benefits
- ▶ Compatible with lithium & lead-acid batteries, increased more choice in different markets
- ▶ Fanless design, long lifespan
- ▶ Intelligent BMS function, improving battery's reliability
- ▶ With high-frequency isolation technology, making system safer and long lifespan
- ▶ 24-hour fully intelligent energy management, Real-time grasp of PV plant status
- ▶ Remotely control & upgrade function, making digital power plant maintenance at your fingertips



Model:

RHI-3K-48ES-5G

RHI-3.6K-48ES-5G

RHI-4.6K-48ES-5G

RHI-5K-48ES-5G

RHI-6K-48ES-5G

Datasheet

Model Name	RHI-3K-48ES-5G	RHI-3.6K-48ES-5G	RHI-4.6K-48ES-5G	RHI-5K-48ES-5G	RHI-6K-48ES-5G
Input DC (PV side)					
Max. input power	7kW	7kW	8kW	8kW	8kW
Max. input voltage	600V				
Rated voltage	330V				
Start-up voltage	120V				
MPPT voltage range	90-520V				
Max. input current	11A/11A				
Max. short circuit current	17.2A/17.2A				
MPPT number/Max. input strings number	2/2				
Battery					
Battery type	Li-ion/Lead-acid				
Battery voltage range	42 - 58V				
Battery capacity	50 - 2000Ah				
Max. charging power	3kW	5kW			
Max. charge/discharge current	62.5A/62.5A	100A/100A			
Communication	CAN/RS485				
Output AC (Back-up)					
Rated output power	3kW	5kW			
Max. apparent output power	4kVA	6kVA			
Back-up switch time	<20ms				
Rated output voltage	1/N/PE, 220/230V				
Rated frequency	50/60Hz				
Rated output current	13A	22A			
THDv	2% (linear load)				
Output AC (Grid side)					
Rated output power	3kW	3.6kW	4.6kW	5kW	6kW
Max. apparent output power	3.3kVA	4kVA	4.6kVA	5.5kVA	6kVA
Rated grid voltage	1/N/PE, 220/230V				
Rated grid frequency	50/60Hz				
Rated grid output current	13A	15.7A	20.9A	21.7A	26.1A
Max. output current	15.7A	17.3A	23A	23.9A	26.1A
Power Factor	>0.99 (0.8 leading - 0.8 lagging)				
THDi	<2%				
Efficiency					
Max. efficiency	>97.5%				
EU efficiency	>96.8%				
Protection					
Ground fault monitoring	Yes				
Integrated AFCI (DC arc-fault circuit protection)	Optional				
DC reverse-polarity protection	Yes				
Protection class/Over voltage category	I/II				
General Data					
Dimensions (W*H*D)	333*505*249 mm				
Weight	17kg				
Topology	High frequency isolation (for battery)				
Operating ambient temperature range	-25 ~ +60°C				
Ingress protecton/ Pollution degree	IP65/PD3				
Cooling concept	Natural convection				
Max. operation altitude	2000m				
Grid connection standard	EN50438, G98, G99, AS4777.2:2015, VDE0126-1-1, IEC 61727, VDE N4105, CEI 0-21,CE				
Safety/EMC standard	IEC62040-1, IEC62109-1/-2, AS3100, NB/T 32004, EN61000-6-2, EN61000-6-3				
Features					
DC connection	MC4 connector				
AC connection	Quick connection plug				
Display	7.0"LCD color screen display				
Communication	RS485, Optional: Wi-Fi, GPRS				

Dura5

Stack or Wall-Mount Battery



Dura5

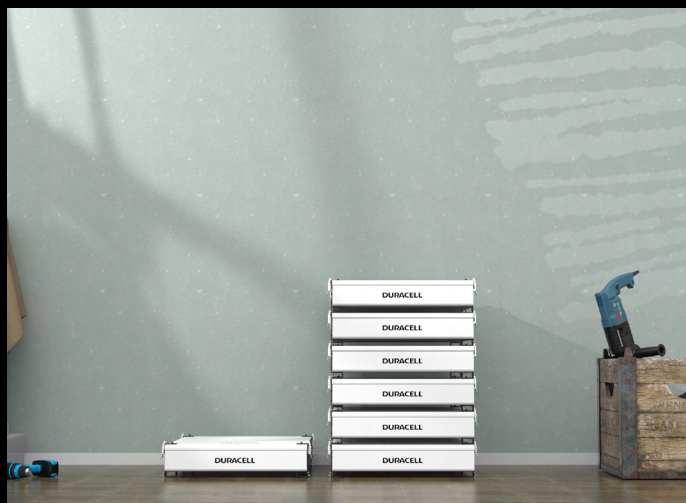
51.2V 100Ah LiFePO4

This 5.12kWh battery utilises the safest and highest performing chemistry; lithium iron phosphate.

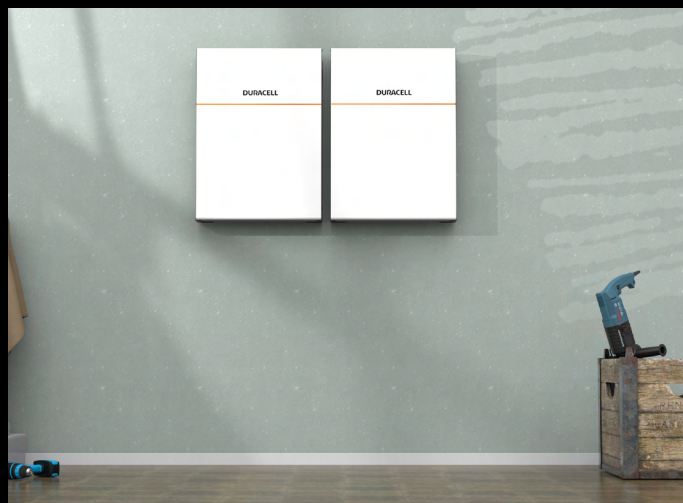
The Dura5 boasts a 10 year warranty and 1C operation allowing you to charge each battery by 100A.

Key Features

-  1C/1C charge and discharge
-  Plug-and-play (all cables included)
-  Master BMS autoselect
-  Modular up to 32 units (stacks of 16)
-  Module-level auto-balancing.
Add additional batteries at any time
-  10 Year warranty



Stack (16 x 2)



Wall-Mount

Dura5 5.12KWh LiFePO4 Technical Specification

Product	Dura5
Model No.	PD-5KWH-50V-2G
Battery module energy (kWh)	5.12kWh
Useable energy (kWh)	4.6kWh
Max output power (A)	100A
Peak output power (A)	110A
Nominal voltage (V)	51.2Vdc
Operating voltage range (single phase)	43.2V-56.8V
Dimensions (mm, W x D x H)	490 x 90 x 675mm
Weight (kg)	45±1kg
Installation	Stackable or Wall-mount
Operating temperature (°C)	-10°C~+55°C
Operating altitude	0-3000m (Derating above 2000m)
Environment	Indoor
Relative humidity	5%~95%
Cooling	Natural Convection
Display	LED Indicator
Cell technology	LiFePO4
Scalability	Max 32 Systems In Parallel Operation
Communication ports	CAN / RS485
Cycles	8000
Warranty	10 years

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