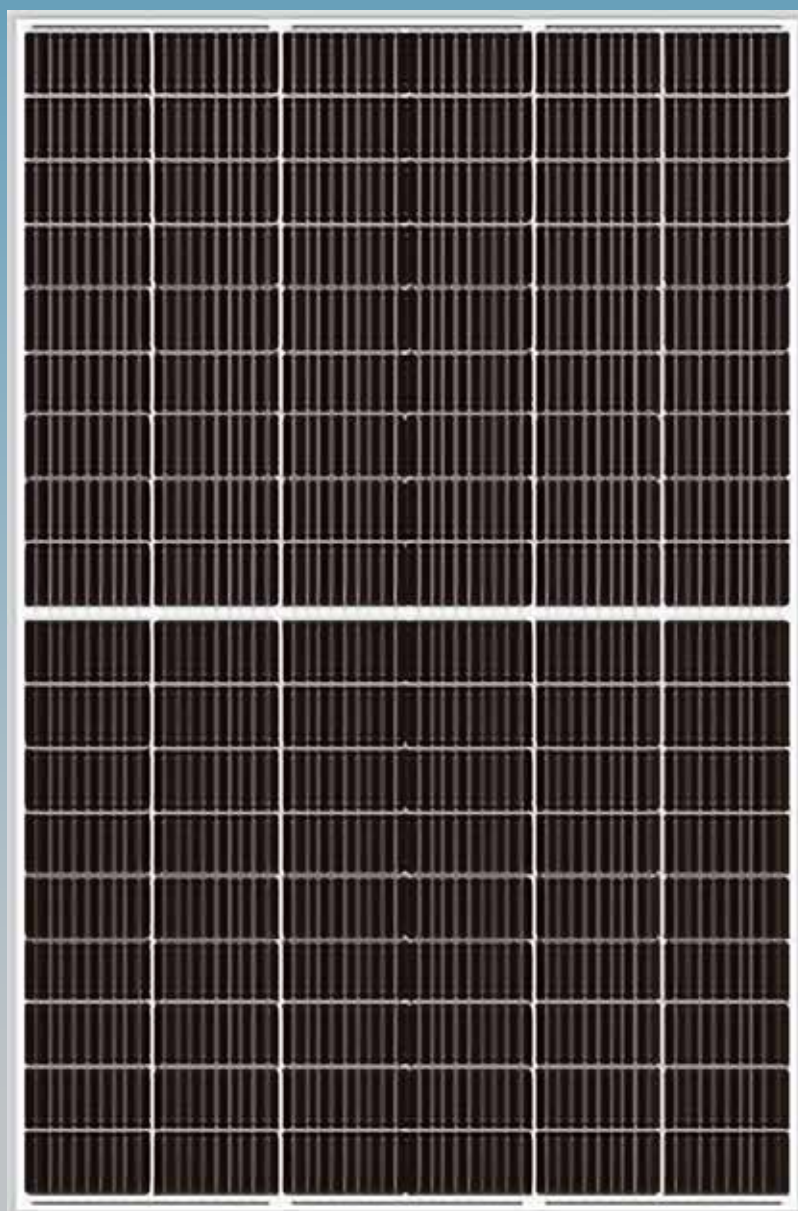


ARCA
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**PANNELLI
FOTOVOLTAICI**

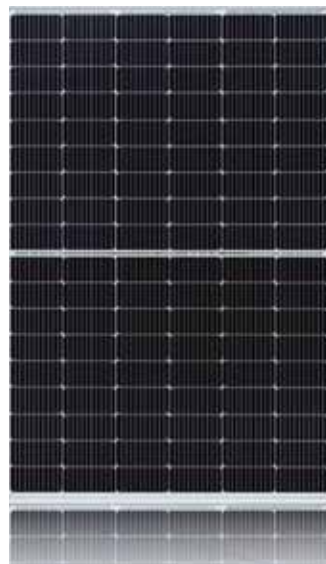
APRILE 2023

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400-410W

Modulo Alta Efficienza celle Half-Cut
Silicio Monocristallino PERC



Tecnologia con celle Half-Cut
Nuovo disegno
Minori livelli di corrente interna
Minori perdite interne per Rs



Speciale progetto garantisce
temperature molto basse
in caso di Hot-Spot



Reazione al fuoco
(Reazione al fuoco Classe 1)



Esente da PID
(Test di Power Induced Degradation
effettuato nei laboratori TUV)



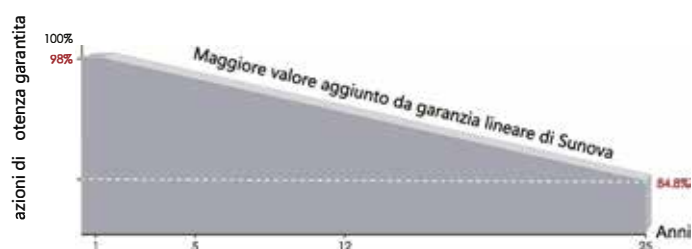
Resistenza a corrosione
da Nebbia Salina
(Certificato IEC61701)



Tripla EL Test garantisce
importante riduzione di
microcrack nel modulo

Gli indicatori sotto riportati, evidenziano la qualità del prodotto!

Garanzia decadimento Lineare



Certificazioni



Assicurazione sulle prestazioni



15 Anni

Garanzia sul Prodotto

25 Anni

Garanzia decadimento Lineare sulla Potenza

0.55%

Decadimento/Anno di potenza durante 25 anni di vita

SS-410-54MDH 108 cells

Caratteristiche Elettriche

Modello	SS-400-54MDH		SS-405-54MDH		SS-410-54MDH	
	STC	NOCT	STC	NOCT	STC	NOCT
Potenza Massima – P_{mp} (W)	400	298	405	302	410	305
Tensione a vuoto – V_{oc} (V)	37.18	34.95	37.33	35.09	37.68	35.42
Corrente di cc – I_{sc} (A)	13.39	10.85	13.44	10.89	13.59	11.01
Tensione a Pot. max – V_{mp} (V)	31.42	29.22	31.55	29.35	31.84	29.61
Corrente a Pot. max – I_{mp} (A)	12.74	10.21	12.84	10.29	12.88	10.31
Efficienza del Modulo	20.5%		20.7%		21.0%	
Tolleranza sulla Potenza (W)	(0,+5)					
Tensione Massima di sistema (V)	1500					
Sovracorrente Massima (A)	25					
Temperatura di esercizio (°C)	-40~+85 °C					

STC: Irraggiamento 1000W/m², Temperatura celle 25°C, Massa d'aria AM1,5 secondo EN60904-3.

NOCT: Irraggiamento 800W/m², Temperatura ambiente 20°C, Velocità vento 1 m/s

Caratteristiche strutturali

Dimensioni Modulo (AxLxP)	1724 x 1134 x 30 mm
Peso	21.5 kg
Numero di Celle	108 Celle
Celle	Celle mono-cristalline PERC 182x91mm
Vetro frontale	Temperato Anti Riflesso/3.2mm; alta trasmittanza
Cornice	Lega di alluminio anodizzato/Colore Nero
Scatola di giunzione	IP68,3Diodi bypass
Cavi (lunghezza/sezione)	300mm/4mm ²
Connettori	MC4 Compatibili
Carico meccanico	Lato frontale: 5400 Pa / Lato posteriore: 2800 Pa
Impatto alla grandine	25 mm di diametro alla velocità di 23m/s

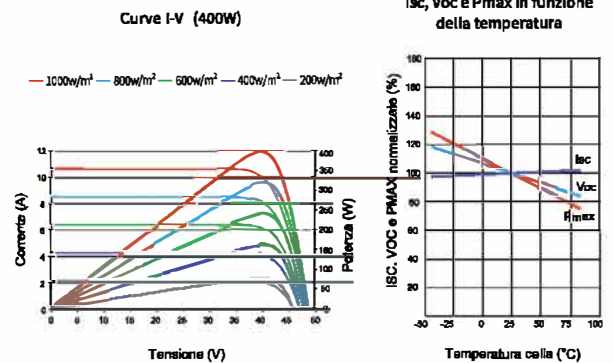
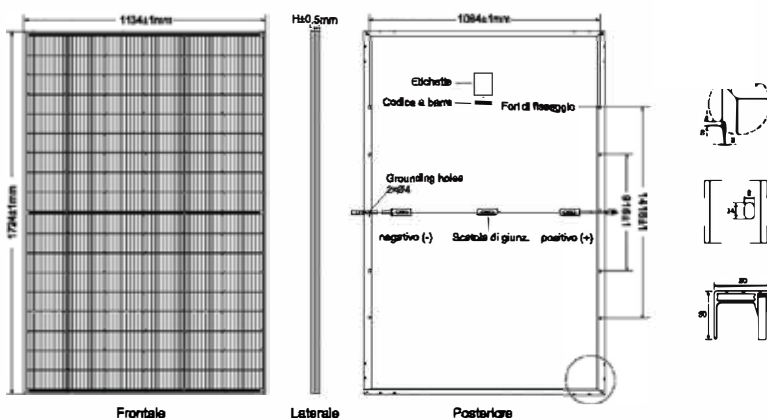
Caratteristiche Termiche

Coefficiente di temperatura (P_{max})	-0.35 %/°C
Coefficiente di temperatura (V_{oc})	-0.27 %/°C
Coefficiente di temperatura (I_{sc})	+0.05 %/°C
Temp. Nominale di esercizio Cella (NOCT)	45±2 °C

Caratteristiche di spedizione

Container	40HQ
Quantità/pallet	36
Pallets/container	26
Quantità/container	936

Dimensioni (mm)



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540-555W

Modulo Alta Efficienza celle Half-Cut
Silicio Monocristallino PERC



Tecnologia con celle Half-Cut
Nuovo disegno
Minori livelli di corrente interna
Minori perdite interne per Rs



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Reazione al fuoco
(Reazione al fuoco Classe 1)



Esente da PID
(Test di Power Induced Degradation
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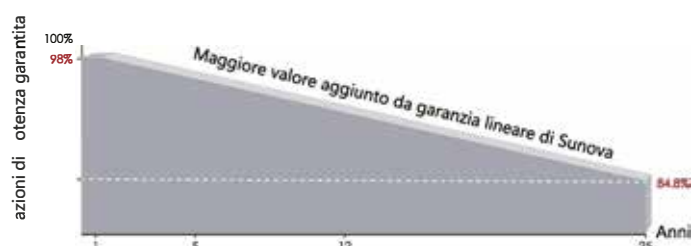
Resistenza a corrosione
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Gli indicatori sotto riportati,
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Garanzia decadimento Lineare



Certificazioni



Assicurazione sulle prestazioni



15 Anni

Garanzia sul Prodotto

25 Anni

Garanzia decadimento Lineare sulla Potenza

0.55 %

Decadimento/Anno di potenza durante 25 anni di vita

ELECTRIC CHARACTERISTICS

Model of modules	SS-540-72MDH		SS-545-72MDH		SS-550-72MDH		SS-555-72MDH	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	540	402	545	406	550	410	555	414
Open-circuit voltage — V_{oc} (V)	49.42	46.65	49.51	46.74	49.60	46.82	49.68	46.93
Short-circuit current — I_{sc} (A)	13.85	11.19	13.94	11.27	14.04	11.35	14.13	11.42
Maximum power voltage — V_{mp} (V)	40.71	38.11	40.76	38.19	40.83	38.25	40.89	38.32
Maximum power current — I_{mp} (A)	13.27	10.56	13.38	10.64	13.48	10.73	13.58	10.81
Module efficiency — η_m (%)	20.9%		21.1%		21.3%		21.5%	
Power tolerance (W)	(0,+5)							
Maximum system voltage (V)	1500							
Maximum rated fuse current (A)	25							
Current operating temperature (°C)	-40~+85 °C							

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

STRUCTURAL CHARACTERISTICS

Module dimensions (L*W*H)	2278 x 1134 x 35 mm (89.69 x 44.65 x 1.38 inch)
Weight	27.6 kg (60.85 lbs)
Number of cells	144 cells
Cell	PERC Monocrystalline 182x91 mm (7.17 x 3.58 inch)
Glass	Tempered, 3.2 mm AR, High transmittance, Low iron
Frame	Anodized aluminum alloy
Junction box	IP68
Output wire	4.0 mm ² , wire length:300mm/customized
Connector	MC4 Compatible
Mechanical load	Snow load: 5400 Pa / Wind load: 2400 Pa

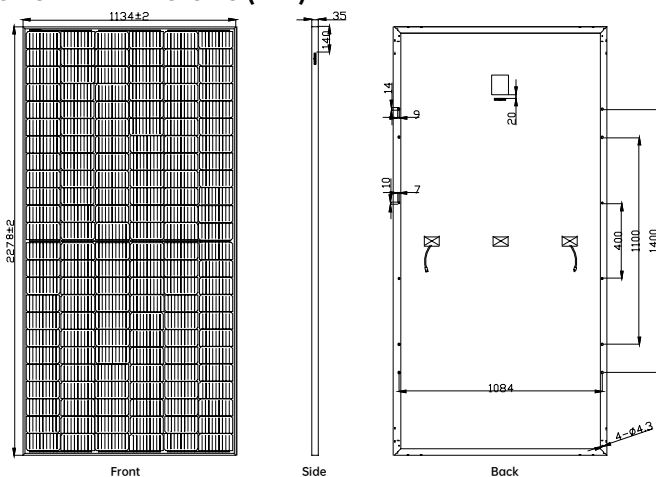
TEMPERFORMANCE RATINGS

Temperature coefficient (P_{max})	-0.35 %/°C
Temperature coefficient (V_{oc})	-0.27 %/°C
Temperature coefficient (I_{sc})	+0.048 %/°C
Nominal operating cell temperature	45 ± 2 °C

PACKAGING CONFIGURATION

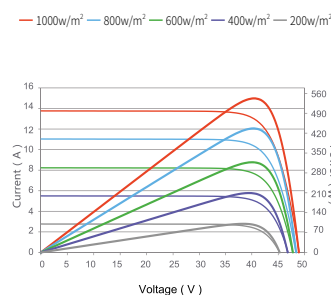
Container	40HQ
Quantity/pallet	31
Pallets/container	20
Quantity/container	620

MODULE DIMENSIONS (MM)

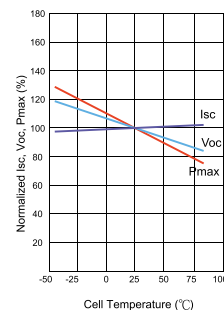


* The unmarked tolerance is ±1mm
Length shown in mm

Current-Voltage & Power-Voltage Curves (540W)



Temperature Dependence of I_{sc} , V_{oc} , P_{max}





Hybrid Inverter

Low Voltage Single Phase

SUNOVA-S 3600/5000/6000D

- Colorful touch LCD, IP65 protection degree.
- DC couple and AC couple to retrofit existing solar system.
- Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel.
- Max. charging/discharging current of 190A.
- 6 time periods for battery charging/discharging.
- Support storing energy from diesel generator.

Solar-Bat6.1

Low Voltage Battery

- Cobalt Free Lithium Iron Phosphate (LFP) Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.
- Support high discharge power. IP65, natural cooling, wide temperature range: -20°C to 55°C .
- Modular design, easy to expand, Max. 32 units in parallel, Max. capacity of 196kWh. Suited to residential and commercial applications for increasing the selfconsumption ratio.
- Battery module auto networking, Automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.
- Use environmental protection materials, the whole module non-toxic, pollution-free.
- Flat design, wall-mounted, saving installation space.

Hybrid Inverter

Model	SUNOVA-S 3600D	SUNOVA-S 5000D	SUNOVA-S 6000D
Battery Input Data			
Battery Type	Lead-acid or Lithium-ion		
Battery Voltage Range (V)	40~60		
Max. Charging Current (A)	90	120	135
Max. Discharging Current (A)	90	120	135
External Temperature Sensor	√		
Charging Curve	3 Stages / Equalization		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
PV String Input Data			
Max. DC Input Power (W)	4680	6500	7800
Rated PV Input Voltage (V)	370(125~500)		
Start-up Voltage (V)	125		
MPPT Voltage Range (V)	150-425		
Full Load DC Voltage Range (V)	300-425		
PV Input Current (A)	13+13		
Max. PV I _{sc} (A)	17+17		
No. of MPP Trackers	2		
No. of Strings per MPP Tracker	1		
AC Output Data			
Rated AC Output and UPS Power (W)	3600	5000	6000
Max. AC Output Power (W)	3690	5500	6600
AC Output Rated Current (A)	18/17.2	25/23.9	30/28.7
Max. AC Current (A)	16.4/15.7	22.7/21.7	27.3/26.1
Max. Continuous AC Passthrough (A)	35		40
Peak Power (off grid)	2 time of rated power, 10 S		
Power Factor	0.8 leading to 0.8 lagging		
Output Frequency and Voltage	50/60Hz; L/N/PE 220/230Vac (single phase)		
Grid Type	Single Phase		
Total Harmonic Distortion (THD)	<3% (of nominal power)		
DC current injection	<0.5% In		
Efficiency			
Max. Efficiency	97.60%		
Euro Efficiency	96.50%		
MPPT Efficiency	99.90%		
Protection			
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection		
Output Over Voltage Protection	DC Type II/AC Type III		
Certifications and Standards			
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 021, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150		
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		
General Data			
Operating Temperature Range (°C)	-40~60°C, >45°C derating		
Cooling	Natural cooling		
Noise (dB)	<30 dB		
Communication with BMS	RS485; CAN		
Weight (kg)	20.5		
Size (mm)	330W x 580H x 232D		
Protection Degree	IP65		
Installation Style	Wall-mounted		
Warranty	5 years		

* The technical parameters contained in this datasheet may deviate slightly, Sunova Solar does not guarantee that they are completely accurate. Varying optional data could be for different regions or prices. Please contact commercial people for confirmation. Due to continuous innovation, research and development and product improvement, Sunova Solar reserves the right to adjust the information in this datasheet at any time without prior notice. The customer should obtain the latest version of datasheet when signing the contract and make it an integral part of the binding contract signed by both parties. The Chinese (or other language) translation files of this datasheet are for reference only. If there is any inconsistency between the English version and the Chinese version (or other language versions), the English version shall prevail.

Solar-Bat6.1

Model	SUNOVA SOLAR - BAT 6.1	
Main Parameter		
Battery Chemistry	LiFePO4	
Capacity (Ah)	120	
Scalability	Max.32 pcs in Parallel(196kWh)	
Nominal Voltage (V)	51.2	
Operating Voltage(V)	43.2~57.6	
Energy (kWh)	6.14	
Usable Energy (kWh) ^[1]	5.53	
Charge/ Discharge Current (A)	Recommend ^[2]	60
	Max. ^[2]	100
	Peak(2mins,25°C)	150
Other Parameter		
Recommend Depth of Discharge	90%	
Dimension (W/H/D, mm)	475*720*145 (Without Base, depth of 161mm with Hanging Board)	
Weight Approximate(kg)	58	
Master LED Indicator	5LED(SOC:20%~SOC100%) 3LED (working, alarming, protecting)	
IP Rating of Enclosure	IP65	
Operating Temperature	Charge:0 ~ 55°C / Discharge:-20°C~ 55°C	
Storage Temperature	0°C~ 35°C	
Humidity	5%~95%	
Altitude	≤ 2000m	
Cycle Life	≥ 6000(25°C ±2°C ,0.5C/0.5C,70%EOL)	
Installation	Wall-Mounted, Floor-Mounted	
Communication Port	CAN2.0, RS485	
Warranty Period ^[3]	10 years	
Energy Throughput ^[3]	20MWh@70%EOL	
Certification	UN38.3, IEC62619, CE, CEI 0-21	

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

[2]The current is affected by temperature and SOC.

[3]The Warranty is due whichever reached first of warranty period or life cycle power.

Introduction

This series lithium iron phosphate battery is one of new energy storage products developed and produced by Sunova , it can be used to support reliable power for various types of equipment and systems.This series is especially suitable for application scene of high power, limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more, BMS can balance cells charging and discharging to extend cycle life.Multiple batteries can connect in parallel to expand capacity and power in parallel for larger capacity and longer power supporting duration requirements.

ARCA OGGI

3 Stabilimenti produttivi

80 Agenzie

1 Unità logistica di 9.000 mq per assicurare disponibilità di materiale con rapidità di consegna

420 Servizi tecnici sul territorio italiano

37 Paesi nel mondo in cui Arca è presente

CALDAIE MURALI A GAS
CALDAIE A LEGNA
CALDAIE A LEGNA-PELLET
AUTOMATICHE
GENERATORI ARIA CALDA
A PELLET
STUFE A PELLET
IMPIANTI SOLARI
RISCALDAMENTO A
PAVIMENTO
CONDIZIONATORI



ARCA
caldaie

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