Partial Charge Carbon Solar Battery PCC-230

Nominal Voltage DC	12V (6 cells)
Certification	UL1989
Cycle Life @ 50% DOD	3000 (7+ years Off-Grid, 12 years On Grid)
Amp Hour Capacity (to 10.5V)	230Ah @ 24hr
Operating Temperature	Discharge: -40F (-40C) to +160F (71C) Charge: -10F (-23C) to +140F (60C) Optimal: +68F (20C) to +80F (27C)
Max Charge/Discharge Continuous Current	140A (100A Recommended)
Peak Current Output	230A
Float Voltage (77F/25C)	13.3V
Absorb Voltage (77F/25C)	14.2V (1 hour)
PSoC Equalization Voltage (77F/25C)	14.2V (3 hours) every 90 days
Optimal Partial PSoC	50-99% SoC
Internal Resistance	Approx 3mOhm
Self Discharge	Can be stored for 6 months @ 77F (25C) before freshening charge suggested.
Temp-Compensation	5mV/C per cell
Weight	160 lb / 72.6 kg
Dimensions H x D x W	12.7 x 22 x 6.1in (320 x 559 x 154mm)
Warranty	5 years
Terminal Hardware	M8 Bolt 160 in-lbs (18 N-m)
Accessories	Interconnect bar & terminal covers

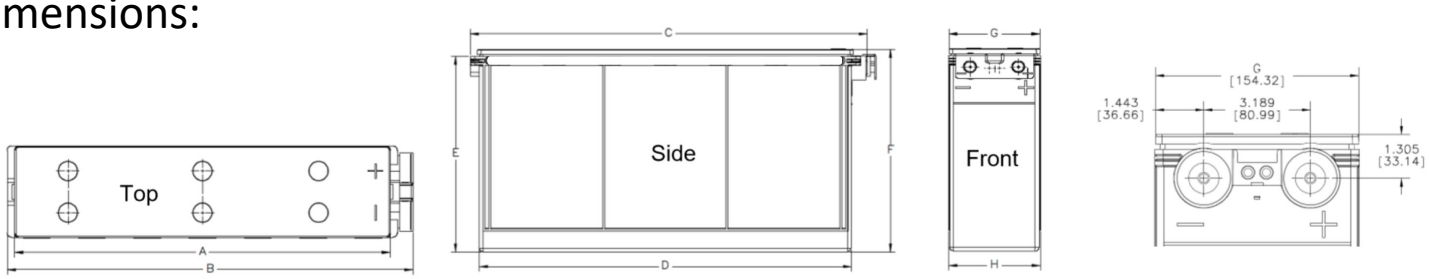
Applications

- Battery Backup
- Off Grid
- Time of Use
- Self Consumption
- Grid Zeroing

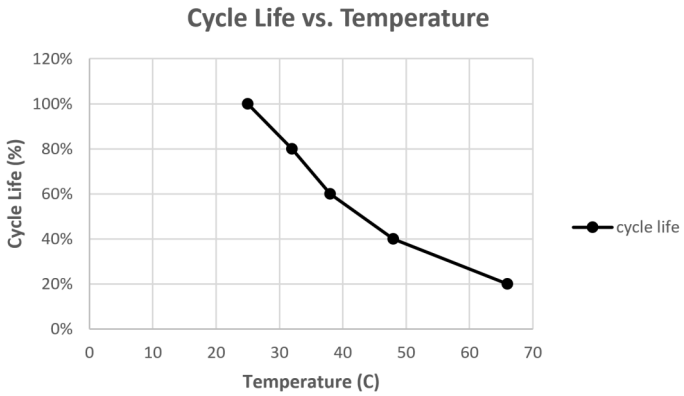
Key Features

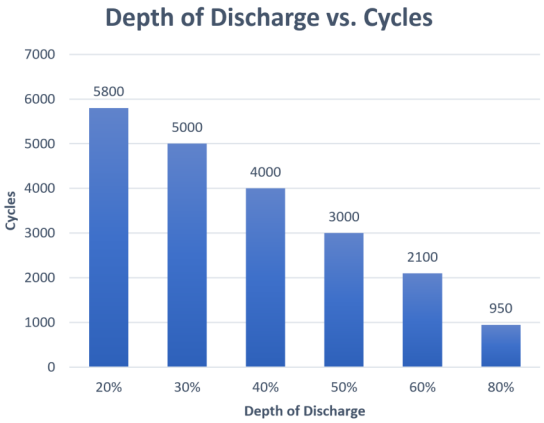
- High Energy Efficiency: 98%
- Low Internal Resistance: 3mOhm
- Low-Self Discharge
- Long PSoC Cycle Life: 3000
- High Rate Discharge
- 5yr Warranty
- No Watering Required

Dimensions:



A		B		C		D	
in	mm	in	mm	in	mm	in	mm
20.3	516.9	22.0	558.5	21.5	546.5	20.2	512.2
E		F		G		H	
in	mm	in	mm	in	mm	in	mm
12.2	310.8	12.7	322.1	6.1	154.3	6.0	152.7

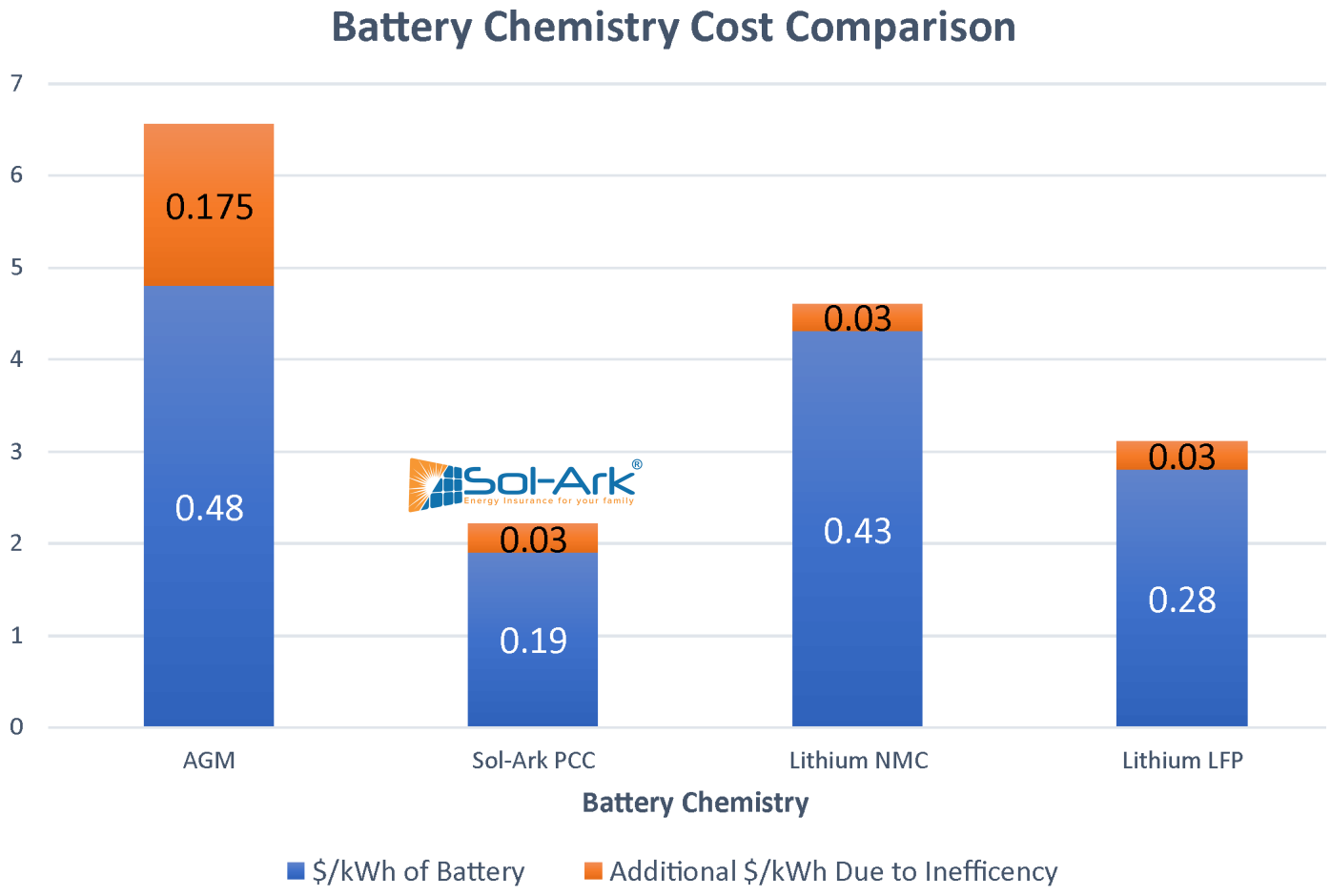




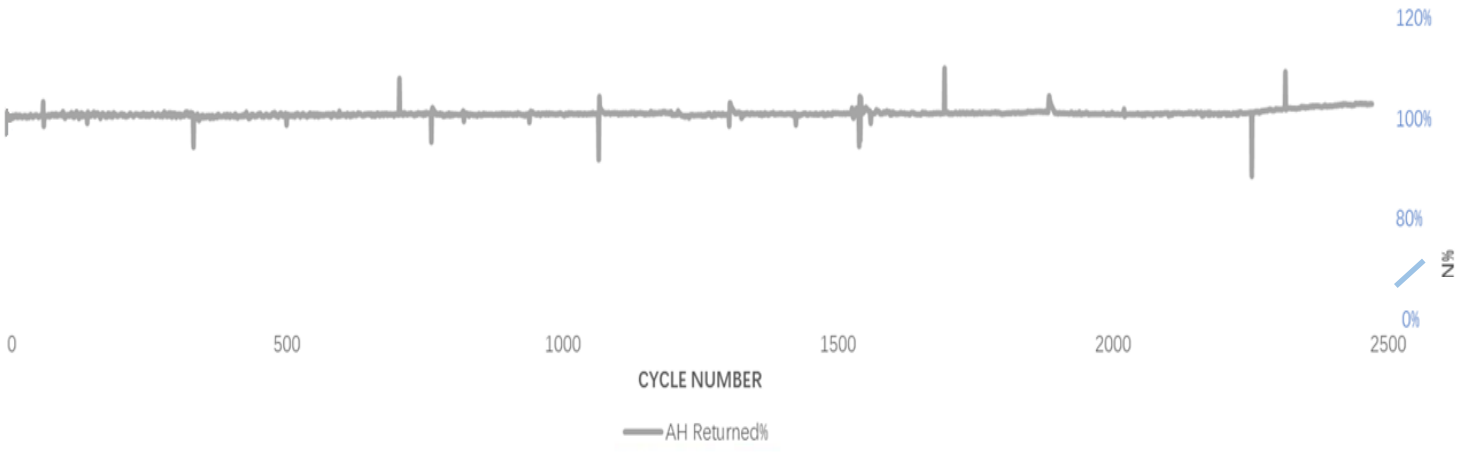
	Lead Acid (thick plate)			Lithium		
	Wet	AGM	PCC AGM	LFP	LiOn / NMC	Li Polymer
Round Trip Efficiency	80%	88%	98%	98%	98%	98%
Round Trip Losses w/ Sol-Ark	20%	12%	2%	2%	2%	2%
10KWh Cost (MSRP)	$1,600	$1,800	$2,100	$8,500	$6,500	$4,500
Off Grid Real World Cycles 50% DoD	1300	750	2400	6000	3000	1500
Off Grid Years @ 50% DoD	3.6	2.1	6.6	16.4	8.2	4.1
On Grid Years	9	7	12	15	12	9
Cost Per KWh Cycle	$0.25	$0.48	$0.18	$0.28	$0.43	$0.60
Cost of Oversizing 10KW PV @ $4/W	$8,000	$4,800	$800	$800	$800	$800

Good for Emergency Backup

Good for Daily Cycling

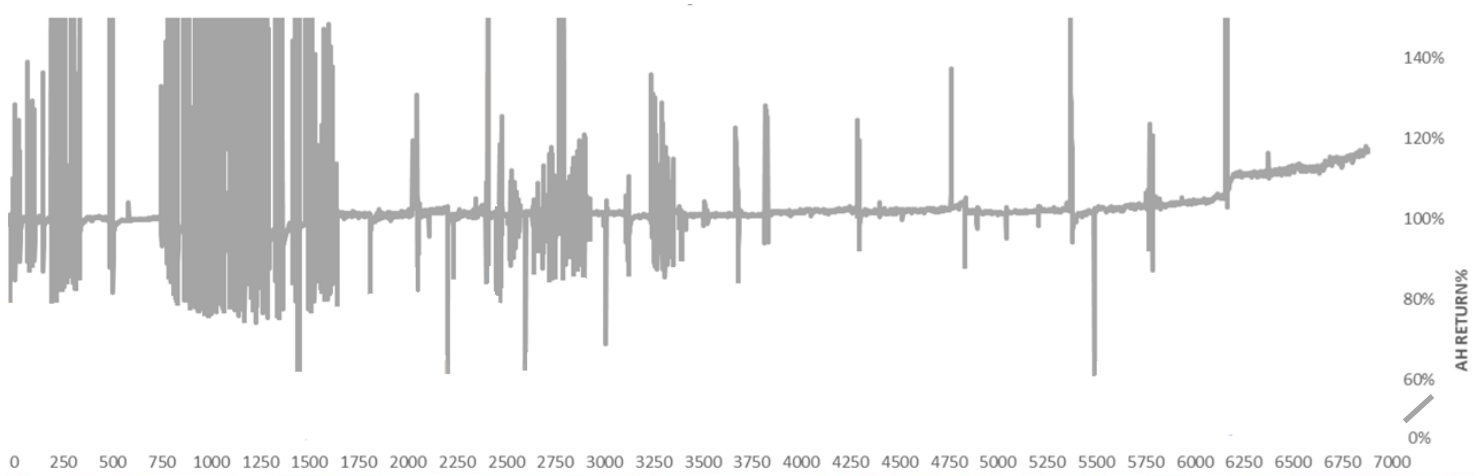


AH Input / AH Output



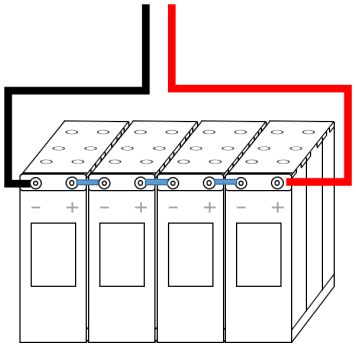
99% round trip efficiency is maintained for over 2300 cycles.

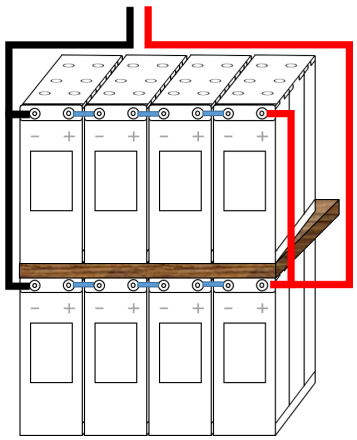
Energy Input / Energy Output vs. Cycles



The batteries recover their efficiency after being heavily used and undercharged for the first 1700 cycles.

Example 48V Configurations





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