

# TECHNICAL SHEET

## AVENTURA 12V 400Ah



### Technical Specifications

#### ELECTRICAL SPECIFICATIONS

Voltage	12.8 volt
Capacity	400 Ah
Capacity @ 20A discharge rate	1230 min
Stored energy	5120 Wh
Auto-Discharge	<3% per month
Maximum series / parallel connections	4 / 4

Note: a mix of series and parallel connections is not supported

#### TEMPERATURE and STORAGE SPECIFICATIONS

Charge temperature	0° to 45 °C
Charging low temperature disconnect/reconnect (BMS)	-0 °C / 10 °C
Discharge temperature range	-30 to 60 °C
Discharge low temperature disconnect / reconnect	-30 °C / -20 °C
Storage temperature range	-10 to 50 °C
Storage voltage range	13.1V to 13.4V

#### CHARGE SPECIFICATIONS

Recommended Charge Current	5 A - 80 A (14.6V - 80A)
Maximum charging current	150 A (205 A for 1s)
Recommended charging voltages	14.2 V - 14.6 V (Bulk) 13.6 V (Float)
Charging high voltage disconnect	15.4 V (2s)
Charging High voltage reconnect	14.4 V
High temperature disconnect / reconnect	55 °C / 50 °C

#### COMMUNICATIONS SPECIFICATIONS

Bluetooth	Dongle BT require (accessory)
Communication ports	SMBUS / RS485
LCD screen with battery voltage displayed	NO
Volthium CAN Hub Communication (VECAN)	Compatible

#### DISCHARGE SPECIFICATIONS

Continuous Discharge Current	200A (& <b>250A</b> @ 75min)
Discharge low voltage disconnect	10 V (3s)
Discharge low voltage reconnect	12 V
Short circuit protection	Yes
High temperature disconnect / reconnect	65 °C / 60 °C

#### AUTOHEATING SPECIFICATIONS (Optionnal)

Operation range of self-heating function	-35° à 11 °C
Charging current required to activate	12 A
Charging current required when heating	7 A
Manual activation of heating function possible	YES

#### NUMBER OF CYCLES / DEPTH OF DISCHARGE

30% DOD	8200 < cycles
80% DOD	6000 < cycles
100% DOD	3500 < cycles

Battery State Of Health (SOH) verified to be **83.6%** after **3500 cycles** of 100% DOD @ 1C

#### MECHANICAL SPECIFICATIONS

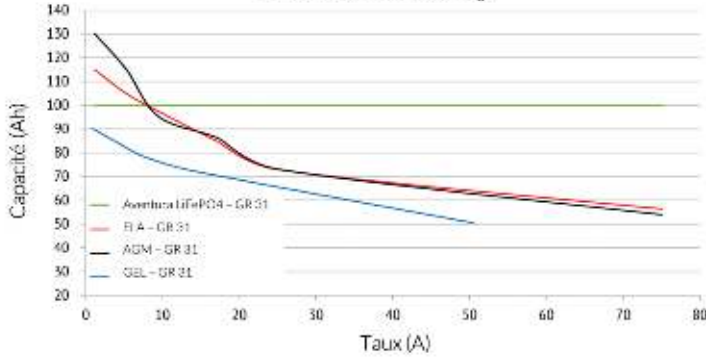
Dimensions (Length x Width x Height)	520 x 268 x 244 mm 20.47 x 10.55 x 9.6 po
Weight	104 lbs. / 47 KG
Terminal type	M8
Terminal torque requirement	8~10 nm / 6~8 ft/lb
Battery format	ABS 8D

#### CERTIFICATIONS

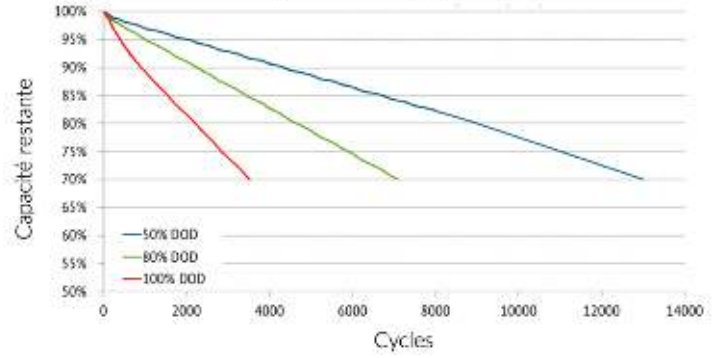
Internal cell assembly	4S4P
Certifications	Full Pack Assembly : UL1973   Cells : UL1642 / UL1973 / UL9540A / IEC62619 / IEC62660
Shipping Classification	UN 3480   CLASS 9
Cell type	SquareCell - LiFePO4 - 3.2V102Ah - Grade A+

## Technical specifications 2

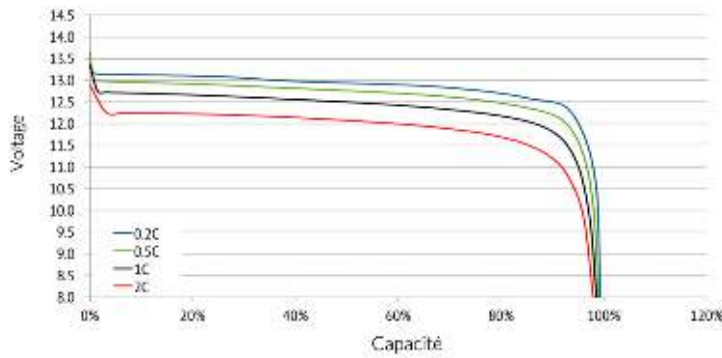
Aventura (LiFePO4) vs Plomb-Acide  
En fonction du taux de décharge



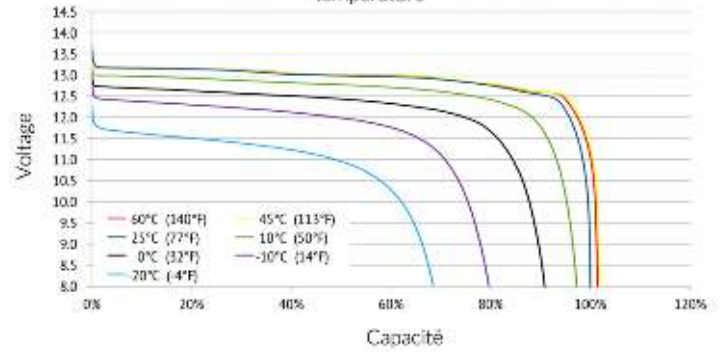
Cycles de charges vs Taux de décharge (DOC)  
Décharge 0.5C / Charge 0.5 @ 25°C (77°F)



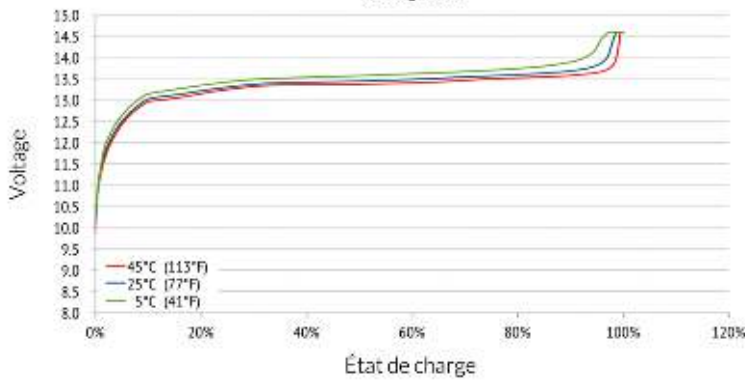
Caractéristique de décharge (V) en fonction du taux



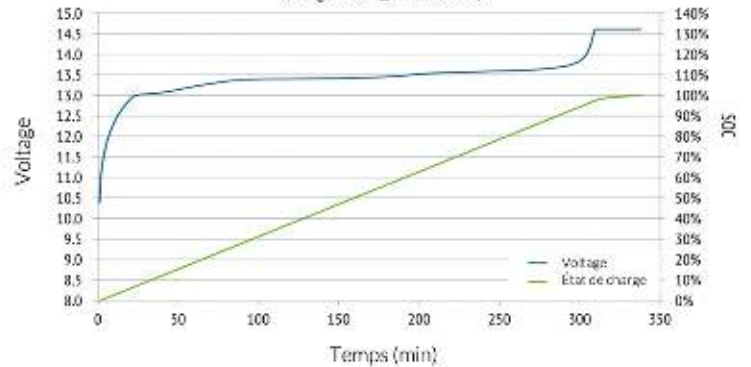
Caractéristique de décharge (V) en fonction de la température



Caractéristique de charge en fonction de la température -  
Charge 0.2C



Charge (V) et État de charge (SOC)  
Charge 0.2C @ 25°C (77°F)



## Technical specifications 3

No	Discharge Test @ 250A						
	Time	15mins	30mins	45mins	60mins	75mins	80mins (BMS OT protection)
2	Voltage (V)	12.71	12.66	12.65	12.6	12.46	12.38
3	Capacity (AH)	63	125	188	250	312	328
4	Cell temp.	49	51	53	54	54	54
5	BMS temp.	50.9	59.1	65.5	69.7	73	75
6	Top heat sink temp.	45.2	51.5	54.8	57.5	58.5	59
7	Postive power cable temp.	60.2	65	68	70.6	74.5	75
8	Terminal temp.	47.2	51.7	53.2	55.6	75.7	58.2

