



VLEG5120A

BATTERY

SPECIFICATION

Overview

VLEG 5120A lithium iron phosphate(LFP) battery module is specially designed for golf cart by Zetara. This battery module adopts an ABS shell which can be used 24/7. It has outstanding advantages of being waterproof, Bluetooth capabilities, heating features, impact resistance, good insulation performance, easy installation and maintenance-free. Battery module integrates intelligent BMS, which offer great advantages in terms of safety, cycle life, balancing and smart control.



Battery Module Features



Simple

Easily installation and capacity expansion,
Maintenance-free (15Y design life).



Intelligent

Real-time monitoring & control, Passive balance,
Bluetooth display, Low-temp heating.



Safe

LFP cell & system safety design.



Performance

High energy density, Excellent service life & Wide
operation temperature range.

Battery Module Specification

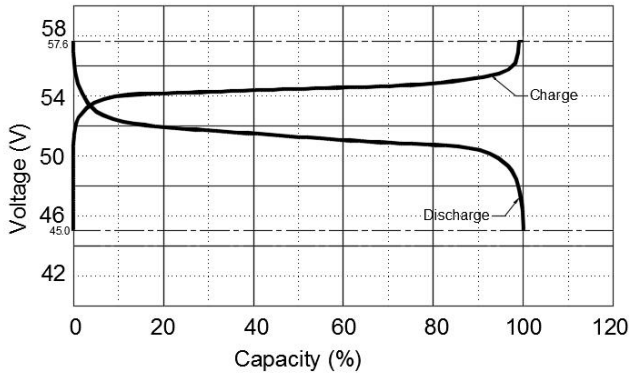
Model	VLEG 5120A
Basic Parameter	
Rated Voltage [V]	51.2
Rated Capacity [Ah]	100
Rated Energy [Wh]	5120
Operation Parameter	
Voltage Range [V]	44.8~56.0
Cut-off Voltage [V]	44.8
Recommend Charge Voltage [V]	56.0~57.0
Recommend Charge Current [A]	30
Max Charge Current [A]	100
Max Discharge Current [A]	150
Physical Parameter	
Dimension: W*D*H [mm]	460*320*247
Weight [kg]	43±0.5
Display Method	Bluetooth/LED
Environment Parameter	
Humidity [%]	5-95% RH
Charge Temperature Range [°C]	-20-45 (<0°C, start heating)
Discharge Temperature Range [°C]	-20-55
Storage Temperature Range [°C]	-20-45
Service Life	
Cycle Life	> 6000 (0.5C@ 25°C ,80%DOD)
Design Life [Year]	15
Certification	
Safety & Certification	UL1973
Transportation	UN38.3

BMS Parameters

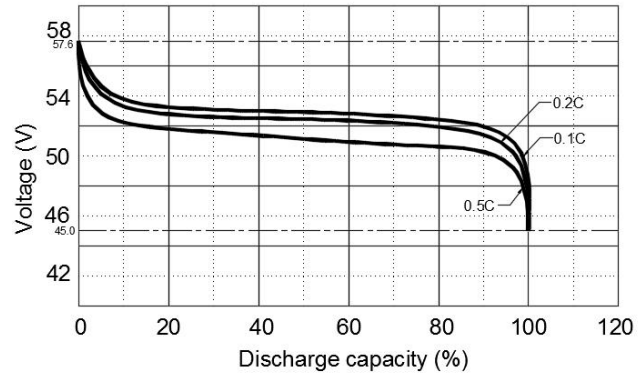
Item	VLEG 5120A	Remark
Charge		
Cell Over-voltage protection [V]	3.8	Recovery @ 3.45V
Module Over-voltage protection [V]	60.0	Recovery @ 55.2V
Over-current protection 1 [A]	>102	Delay 1 0 s
Over-temperature- protection [°C]	<-5 or >70	Recovery @ >0 or <60
Discharge		
Cell low-voltage protection [V]	2.3	Recovery @ 3.1V
Module low-voltage protection [V]	44.8	Recovery @ 48.0V
Over-discharging current 1 [A]	>160	Delay 60s, Recovery in 60s
Over-discharging current 2 [A]	>350	Delay 10s, Recovery in 60s
Short circuit [A]	>889	384us
Temperature protection [°C]	<-20 or >75	Recovery@ >-10 or <65
Other Function		
PCB Temp protection [°C]	>105	Recovery @ <80
Cell balance [mA]	130mA	Passive balance
Temperature accuracy [%]	3%	Measuring range -30~150°C
SOC accuracy [%]	5%	Integral calculation
Power consumption	≤300uA	Sleep mode
	≤20mA	Operating mode
Communication ports	CAN, RS485	Can be customized to match the devices

Battery Performance Curve

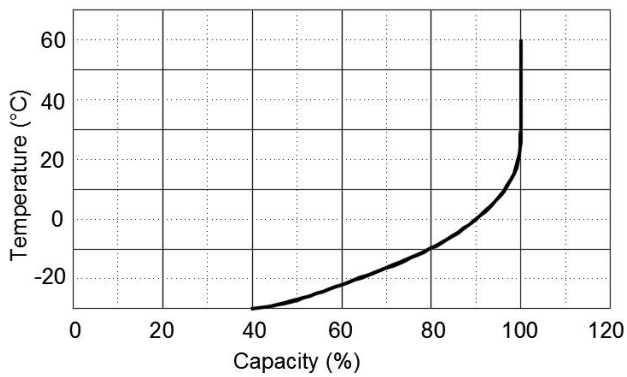
Charge & Discharge curve with 0.5C @ 25°C



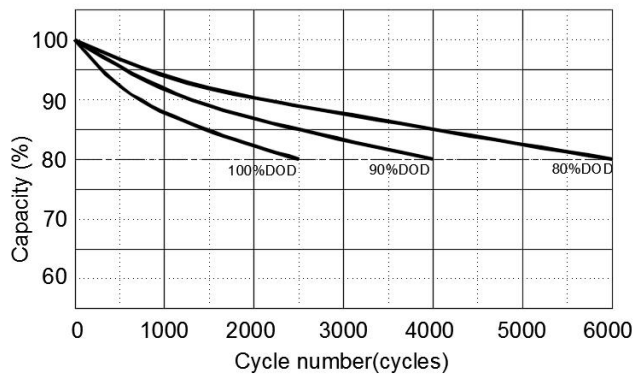
Discharge performance with different rate @ 25°C



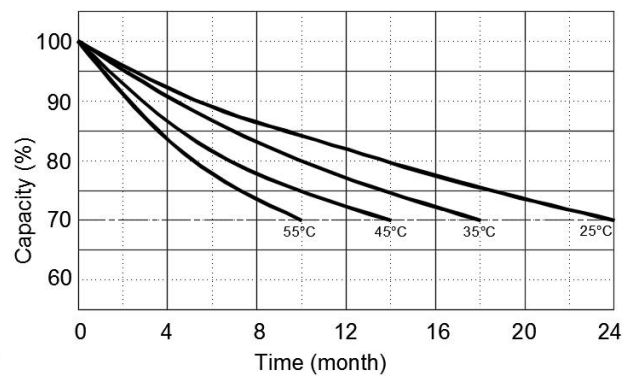
Discharge capacity with different temperature @ 0.5C



Cycle life with DOD @ 0.5C, 25°C



Self-discharge @ different temperature



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