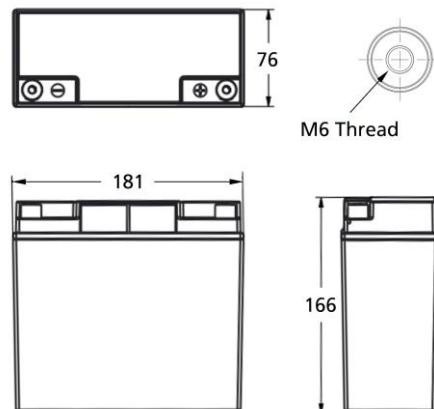


## Technical Information

The ALLION AL1220BT Lithium-iron battery is a high performing 12V Deep Cycle battery with Bluetooth technology and a capacity of 20Ah (Amp Hours). Suitable for sport & leisure applications, the ALLION range of Lithium batteries are much lighter than comparable lead acid batteries and can last up to 4 times as long. ALLION LiFePO4 batteries are safe and dependable thanks to the integrated Battery Management System (BMS). The IP54 rating means that these batteries should be protected from direct exposure to water and dust.

## Features and Benefits

- Up to 4x longer life compared to lead acid batteries
- More usable capacity & greater efficiency
- Lightweight
- Faster recharging
- IP54 rated case
- IEC 62619 certification

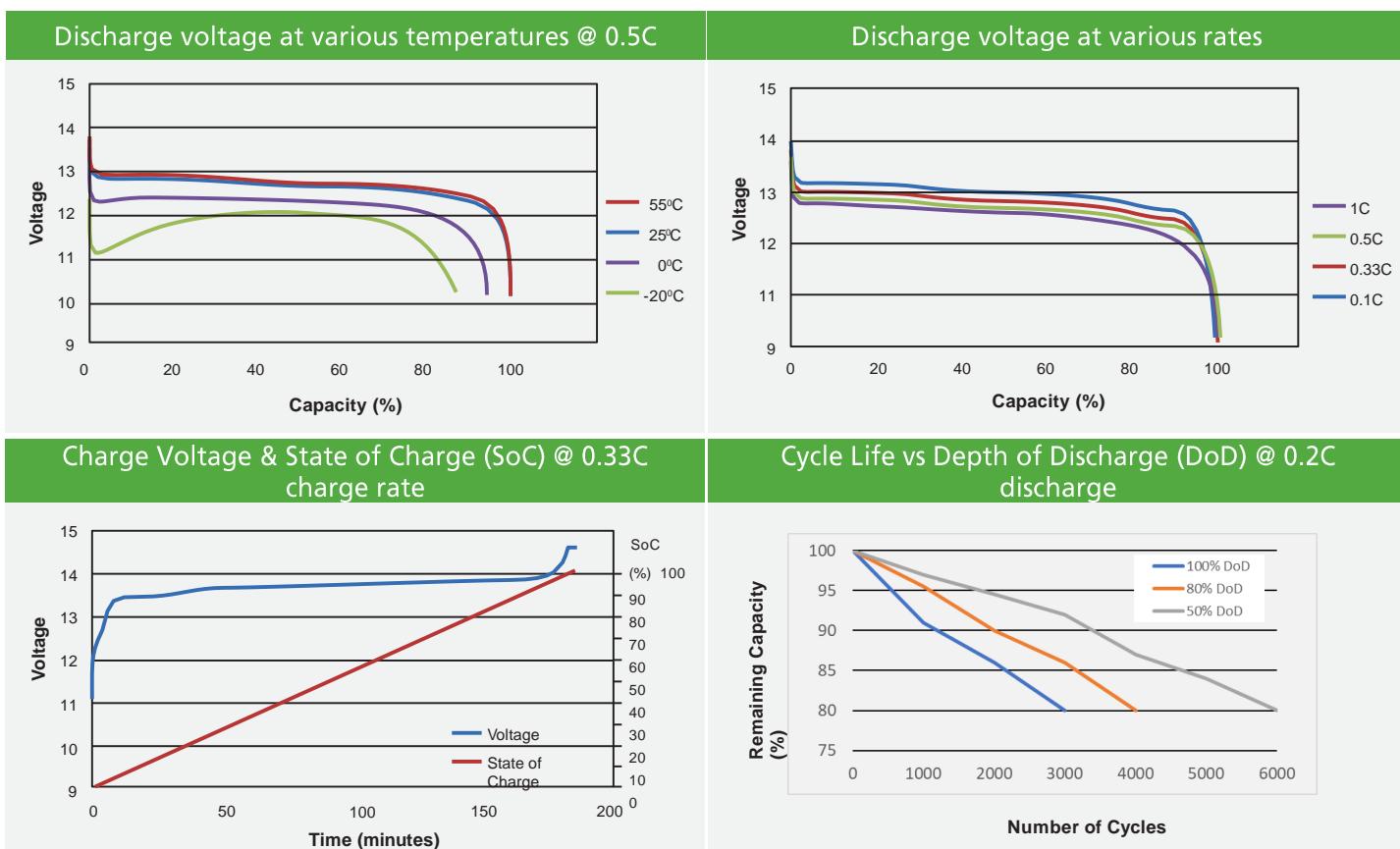


## Applications

RV, Sport & Leisure  
Industrial Equipment  
Solar

Characteristic	Specification	
Nominal Capacity	20Ah	
Nominal Energy	256Wh	
Nominal Voltage	12.8V (4S4P)	
Internal Impedance	$\leq 60\text{m}\Omega$ @ 1kHz AC	
Nominal Charge Voltage	14.6V	
Float Charge Voltage (for stand-by use)	13.6V	
Maximum charge current	20A	
Recommended charge current	$\leq 10\text{A}$	
Maximum discharge current	20A	
Discharge cut-off voltage	9.5V - 10.5V	
Dimensions (L x W x H), $\pm 2\text{mm}$	181mm x 76mm x 166mm	
Nominal Weight	3kg	
Bluetooth Connectivity	Yes, via ALLION App	
Operation Temperature	Charge	$0^\circ\text{C}$ to $+45^\circ\text{C}$
	Discharge	$-20^\circ\text{C}$ to $+60^\circ\text{C}$
Self-discharge	Residual Capacity	$\leq 3\%$ /month, $\leq 15\%$ /year
	Recover Capacity	$\leq 1.5\%$ /month, $\leq 8\%$ /year
Storage Environment	$\leq 1$ month	$-20^\circ\text{C}$ to $+60^\circ\text{C}$ , 5% to 75% RH
	$\leq 3$ months	$-10^\circ\text{C}$ to $+45^\circ\text{C}$ , 5% to 75% RH
	Recommended	$+15^\circ\text{C}$ to $+35^\circ\text{C}$ , 5% to 75% RH

Characteristic		Specification
High Voltage ( $V_{max}$ )	High voltage protection	$3.75V \pm 0.03V$ per cell
	Reset voltage	$3.60V \pm 0.04V$ per cell
	Reset trigger	Below reset voltage
Low Voltage ( $V_{min}$ )	Low voltage protection	$2.50V \pm 0.05V$ per cell
	Reset voltage	$2.80V \pm 0.05V$ per cell
	Reset trigger	Begin charging
Overcurrent ( $I_{max}$ )	Maximum charge current protection	$22A \pm 2A$
	Charge current protection reset	Auto reset after 60s
	Maximum discharge current protection	$28A \pm 2A$ for 15s
	Discharge current protection reset	Charge or auto reset after 60s
	Short circuit protection	Do not short circuit the battery.
Temperature	Over temperature protection	Protect $65 \pm 5^{\circ}C$ , Reset $50 \pm 5^{\circ}C$
	Under temperature protection	Protect $-10 \pm 5^{\circ}C$ , Reset $0 \pm 5^{\circ}C$
	MOSFET over temperature protection	Protect $103 \pm 10^{\circ}C$ , Reset $75 \pm 10^{\circ}C$



**Parallel & Series Connection:**

- Parallel connection of up to 4 batteries is supported.
- For series connection, up to 4 batteries can also be connected but CAUTION must be taken. Individual battery voltages must all be kept within a 0.2V range (a battery balancer is recommended)
- Combinations of Parallel and Series are not supported. Failure to comply may void warranty.

**Product Safety****1. Storage & Transport**

The battery must be charged using the Standard Charge Process every 6 months if not in use.  
Do not drop the battery.

Maximum stacking quantity (height) is 6 batteries.  
The battery must be kept upright at all times.

**2. Product Warnings**

Please read and follow the handling instructions before use. Improper use may cause heat, fire, rupture, damage or capacity deterioration of the battery. The manufacturer is not responsible for any accidents caused by misuse or poor maintenance.

- Do not store or use battery near heat source.
- Do not install in vehicle engine bay.
- Do not expose battery to direct sunlight for extended periods.
- Do not connect battery to high voltage.
- Do not place battery in water or fire.
- Always check polarity before connecting the battery.
- Do not short circuit battery.
- Do not expose the battery to impact or crushing force.
- Do not install or connect this battery with different battery types.
- Protect battery from high temperatures. High temperatures may result in fire or loss of battery function and service life.
- Do not allow the battery to remain discharged. Re-charge battery when discharged.
- Use the correct battery charger for this battery.
- If battery emits an unusual odor, becomes hot or the case has distorted, stop using the battery immediately
- If eyes or skin are exposed to liquid leaking from the battery, rinse it with clean water and seek medical advice immediately.
- Do not disassemble the battery.