

## DIYPOW 12V 50Ah LiFePO4 LITHIUM BATTERY

Optional:  
**Bluetooth®**  
 LCD Display

Crafted out of Lithium Iron Phosphate (LiFePO4) technology, this is a battery built to last. With 2,000+ recharge cycles (and up to 7,000 under ideal charging conditions) ,which can provides 5 X the lifespan than your typical SLA battery. Built in smart BMS,which can realize Bluetooth function and battery level display optional. The battery can support 8 units parallel connection.



### SPECIFICATIONS

Nominal Voltage	12.8V
Rated Capacity	50AH
Stored energy	640Wh
Cycle life@100%DOD	2000 Cycles
Approx. Weight	7kg
Internal Resistance	≤55mΩ
Recommend continuous charge current	≤ 12A
Recommend continuous discharge current	≤ 25A
Max. Continuous charge Current	50A
Max. Continuous discharge Current	50A
Charge Cut-off Voltage	14.6V
Discharge Cut-Off Voltage	10.8V
Dimensions	L229xW138xH208mm
Parallel Connection	Up to 8 batteries
Operating Temperature Range	
Charge	4°F (-20°C) to 113°F (45°C)
Discharge	4°F (-20°C) to 140°F (60°C)
Recommended	59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	≤3%/month
Life Expectancy (years)	15 years @25° C in 80%DOD
Self Discharge	Approx. 2% per month @ 25° C
Long Term Storage	Charge every 6 months
Short Circuit Protection	Automatically recover after removal of short
Terminal Type	Female Copper Insert M8 (M8/mm)



### COMPLIED STANDARD

- ✓ IEC 62133
- ✓ UL 1642
- ✓ ISO9001
- ✓ ISO14001
- ✓ UN38.3

### INTELLIGENT BMS FUNCTION

- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Short detection function
- Temperature detection function
- Balance function

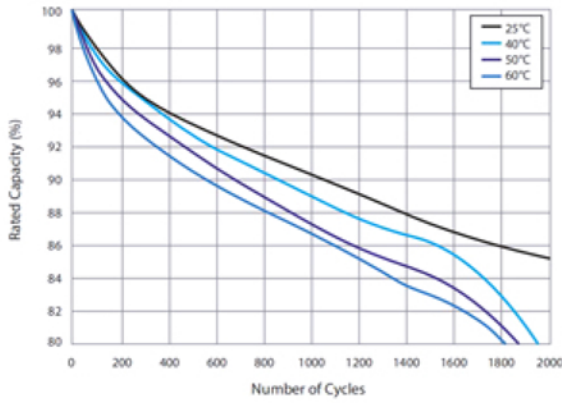
### BLUETOOTH® ENABLED

Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from APP.

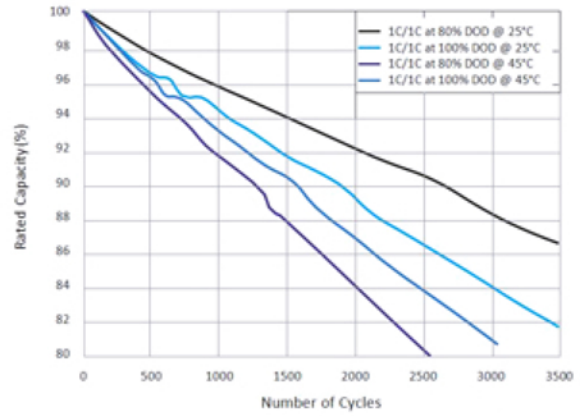
### APPLICATIONS

AMR    AGV    Wind    Mobility    Data Center    Transport    Sports & Recreation    SOLAR

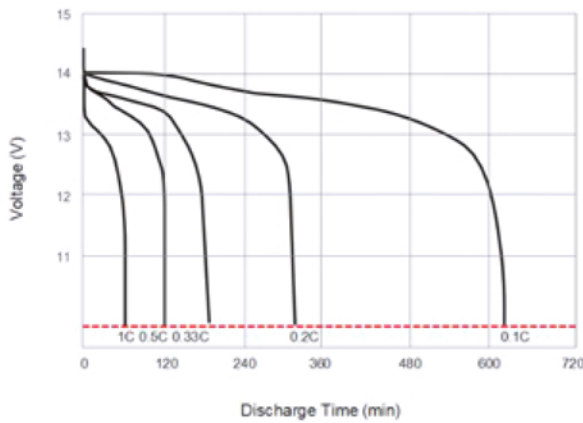
**100% DOD Cycle Curves at Different Temperatures**



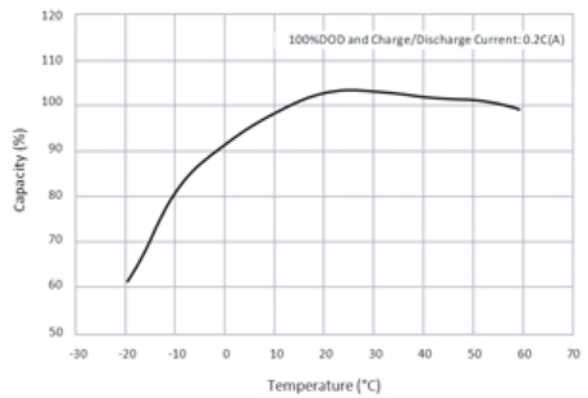
**1C Cycle Curves at Different DOD&Temperatures**



**Discharge Time in Relation to Discharge Rate (25°C)**



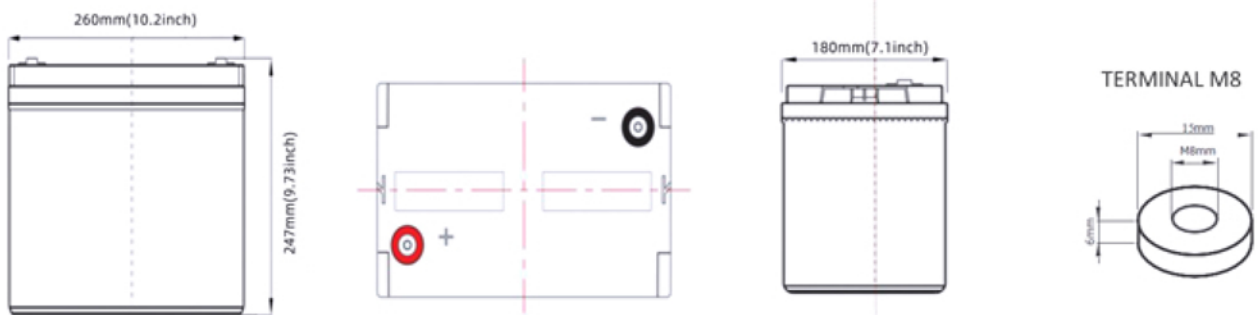
**Temperature Effect in Relation to Battery Capacity**



**BENEFITS OF LITHIUM**

Lithium offers several performance benefits versus its sealed lead acid (SLA) equivalent. A lithium battery's capacity is independent from the discharge rate and provides constant power throughout its discharge. The degradation of a lithium battery at a high temperature is significantly reduced in comparison to SLA. Lithium has ten times the cycle life as SLA at room temperature. Even at an elevated temperature, lithium still has increased cycle life over SLA at room temperature. Lastly, Lithium charging follows a similar charging profile as SLA, Constant Current Constant Voltage (CC/CV). However, lithium can be charged faster, without the need for a maintenance float charge.

**BATTERY DIMENSIONS**



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