



# VTL12-300CW (12V314Ah) VTL SERIES LiFePO4 Battery

## VTL Series Introduction

VTL Series Lithium Batteries are designed for high-demand applications, including RVs, marine, solar systems, electric golf carts, and other environments where reliable, high-performance power is essential. Lithium iron phosphate technology (LiFePO<sub>4</sub>) offers a safe and lightweight solution, providing higher efficiency and longer lifespan compared to traditional lead-based batteries. Our BMS allows for the highest performance range while protecting the battery with multiple safety features. The cells are supported with steel bracing inside the pack to ensure there are no negative effects from vibration. Connect to the Valiant One App to access real-time battery monitoring, performance insights, and everything you need to get the most out of your Valiant battery.

Long  
Life

Lithium Iron  
Phosphate

Deep  
Cycle



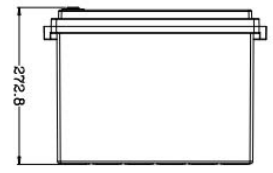
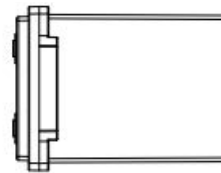
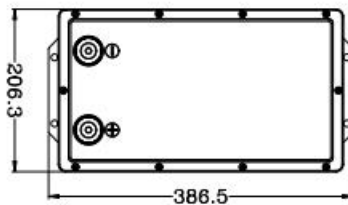
## Applications

- RV
- Marine
- Solar/Wind Systems
- Electric Golf Cart
- Scissor Lifts

## Dimensions & Weight



Bluetooth



- Length: 387±1mm Width: 206±1mm Height: 273±1mm
- Weight: 27.0±0.1kgs

## Technical Specifications

|                            |                                  |                                                          |
|----------------------------|----------------------------------|----------------------------------------------------------|
| Electrical Characteristics | Nominal Voltage                  | 12.8V                                                    |
|                            | Nominal Capacity                 | 314Ah                                                    |
|                            | Energy                           | 4019.2Wh                                                 |
|                            | Terminal                         | M8                                                       |
|                            | Lab Tested Cycle Life            | >8000 cycles 80%DOD                                      |
|                            | Estimated Real World Cycles      | >6000 cycles                                             |
|                            | Months Self Discharge            | <3%                                                      |
|                            | Efficiency of Charge             | 100% @ 0.2C                                              |
|                            | Efficiency of Discharge          | 96~99% @ 0.5C                                            |
| Standard Charge            | Charge Voltage                   | 14.6V±0.2                                                |
|                            | Recommended Charge Current       | 90A                                                      |
|                            | Max. Charge Current              | 200A                                                     |
|                            | Charge Cut-off Voltage           | 14.6V±0.2                                                |
| Standard Discharge         | Continuous Current               | 100A                                                     |
|                            | Max continuous discharge current | 200A                                                     |
|                            | Discharge Cut-off Voltage        | 10V                                                      |
| Environmental              | Charge Temperature               | -30 °C to 45 °C (-22F to 113F) @60±25% Relative Humidity |
|                            | Discharge Temperature            | -20 °C to 60 °C (-4F to 140F) @60±25% Relative Humidity  |
|                            | Storage Temperature              | 0 °C to 40 °C (32F to 104F) @60±25% Relative Humidity    |
|                            | Water Dust Resistance            | IP21                                                     |
| Mechanical                 | Cell & Method                    | Prismatic Cell, 4S1P                                     |
|                            | Case                             | ABS                                                      |
|                            | Dimensions (in./mm.)             | 387*206*273mm/15.24*8.11*10.75Ins                        |
|                            | Weight (lbs./kg.)                | Approx: 27.0kgs/59.52lbs                                 |
|                            | Gravimetric specific energy      | 148.86WH/KG                                              |
|                            | Bluetooth                        | YES                                                      |
|                            | LCD display                      | YES                                                      |
|                            | Heating function (optional)      | YES                                                      |

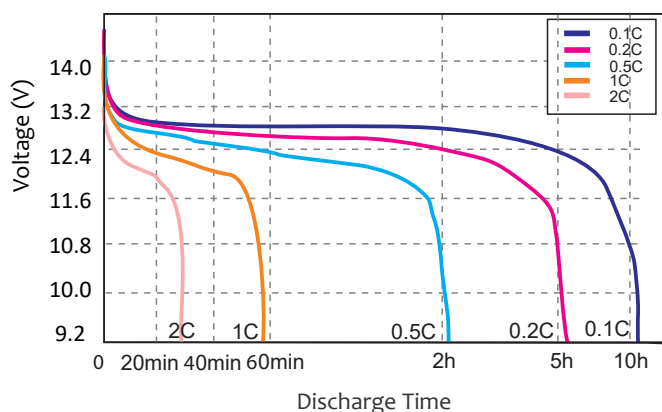


### BMS Specifications

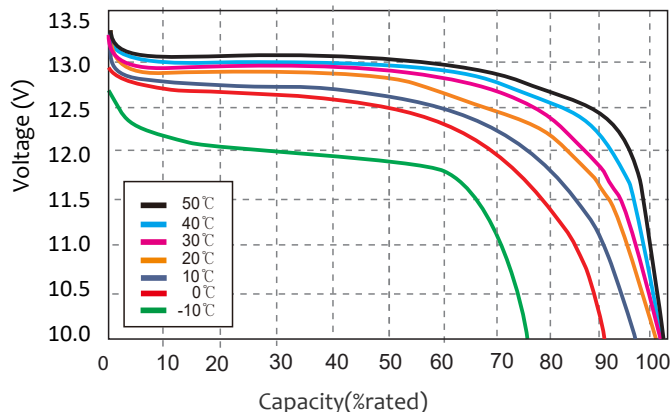
- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Temperature protection
- Cell Voltage balance function
- Short detection function

### Performance Characteristics (Data test from 4 Series Cell)

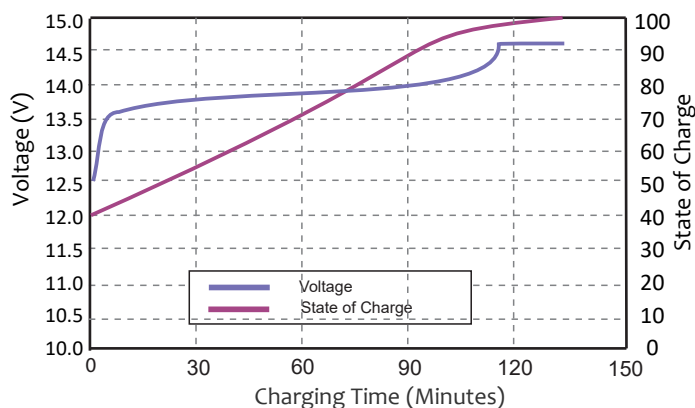
#### Different Rate Discharge Curve (25°C)



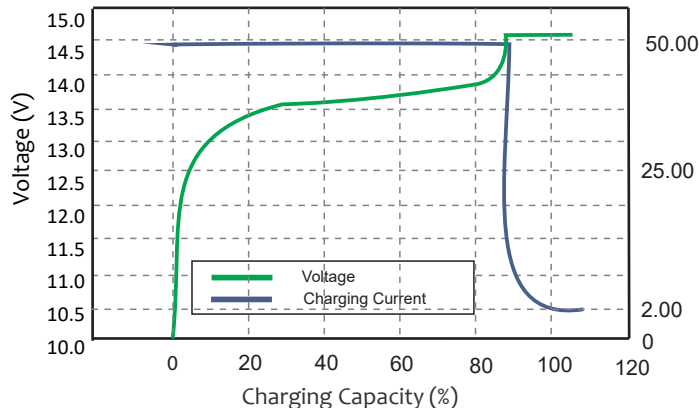
#### Different Temperature Discharge Curve At 0.5c



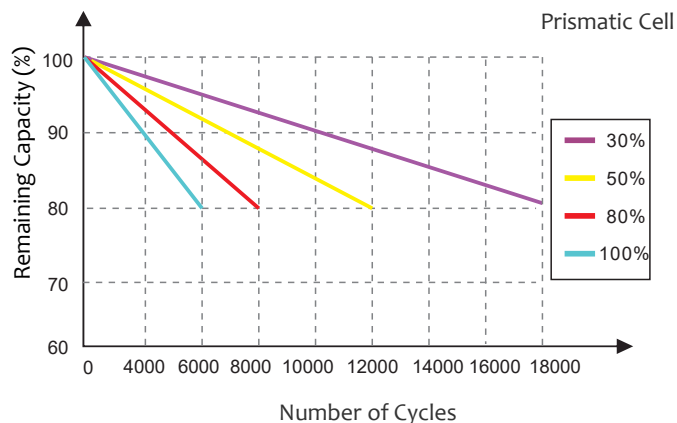
#### State Of Charge Curve At 0.5c (25°C)



#### Charging Characteristics At 0.5c (25°C)



#### Cycle Life Curve At 1c According DoD



#### Self Discharge Characteristics Curve

