

## ROBUSTE LITHIUM BATTERY LR48100

48V100AH-4U | 4.8 KWH



- More than 6000 cycles with 80% usable capacity |
- Compact design, suitable for your home environment |
- Modular design, customers can choose capacity matching |
- Compatible with most hybrid inverters on the market |
- Easy to install, Minimize installation costs and time |

### PRODUCT INFORMATION

**Robuste 48V100AH-4U** is an ideal solution for residential storage applications, with standard 48V/100AH specification, up to 80% usable capacity and 5 years warranty\*. The battery is one of the best-selling Lithium-ion batteries on the market globally. This Robuste 4.8kWh 48V100AH model can be used in many homes and businesses. It's reliable, affordable, slim and easy to install.

### MAIN SPECIFICATIONS

BATTERY CELL SPECIFICATION			
Item	General Parameter		Remark
Rated Capacity	Typical	100 Ah	Standard Discharge (0.2 C <sub>5</sub> A) after Standard Charge
	Minimum	100 Ah	
Nominal Voltage	3.2 V		Operation Voltage
Internal Impedance	≤ 0.65 mΩ		Internal resistance measured at AC 1 KHz after 50% charge. The measure uses the new batteries within one week after shipment and cycles less than 5 times
Dimension	Thickness	49.3 mm	Cell Dimensions
	Width	115.6 mm	
	Height	173.9 mm	
Weight	2 kg		± 2%
Standard Charge	Constant Current	0.33 C <sub>5</sub> A	Charging Time: 3.5h
	Constant Voltage	3.65 V	
	0.02 C <sub>5</sub> A Cut-Off		
Rapid Charge	Constant Current	1 C <sub>5</sub> A	Charge Time: 1.5 @ ≥ 10°C
	Constant Voltage	3.65 V	
	0.01 C <sub>5</sub> A Cut-Off		
Standard Discharge	Constant Current	0.33 C <sub>5</sub> A	Discharging Time: 3h
	End Voltage	2.5 V	
Maximum Discharge Current	Constant Current	2 C <sub>5</sub> A	100 A @ ≥ 0°C
	End Voltage	2.5 V	
Volumetric Specific Energy	295 Wh/L		± 2%
Gravimetric Specific Energy	139 Wh/Kg		± 2%



BATTERY PACK SPECIFICATION			
Item	General Parameter		Remark
Combination Method	15S1P		-
Rated Capacity	Typical	100 Ah	Standard Discharge after Standard Charge (package)
	Minimum	98 Ah	
Factory Voltage	49.0 V - 51.0 V		Operation Voltage
Voltage at End of Discharge	42.0 V		Discharge Cut-Off Voltage
Charging Voltage	53.3 V		-
Internal Impedance	≤ 80 mΩ		Internal resistance measured at AC 1 KHz after 50% charge. The measure uses the new batteries within one week of shipment and cycles less than 5 times
Standard Charge	Constant Current	20 A	Charge Time: 6h
	Constant Voltage	54.75 V	
	0.02 C <sub>5</sub> A Cut-Off		
Limiting Current	20 A		-
Standard Discharge	Constant Current	20 A	-
	End Voltage	42 V	
Maximum Continuous Charge Current	100 A		T≥10°C
Maximum Continuous Discharge Current	100 A		T≥10°C
Operation Temperature Range	Charge	0~45°C	60±25%R.H. Bare Cell
	Discharge	-20~55°C	
Storage Temperature Range	Less than 12 months	-10~35°C	60±25% R.H. at the shipment state
	Less than 3 months	-10~45°C	
	Less than 7 days:	-20~65°C	
Dimensions	442 x 450 x 177 mm		Including Case
Weight	53 Kg		± 2% Including Case

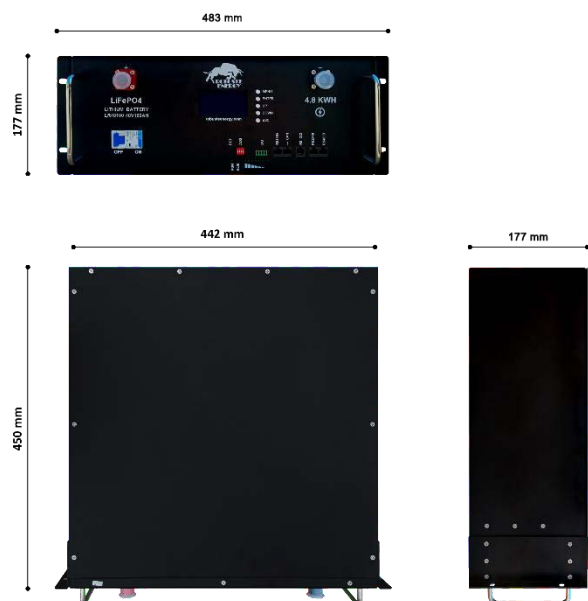
## BATTERY MANAGEMENT SYSTEM

The BMS is designed for 15/16 series lithium batteries.

The BMS has the following functions:

- Overcharge protection
- Over discharge protection
- Over current protection
- Short circuit protection
- Temperature detection
- Over temperature protection
- Current balance function
- Communication function
- Alarm function
- SOC detection function
- Storage of battery usage history

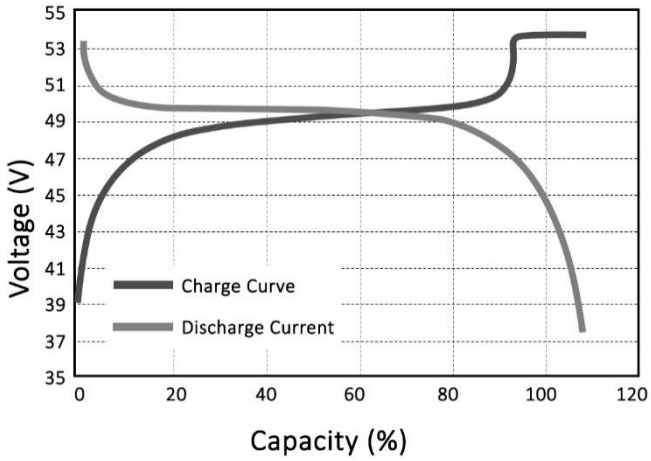
## BATTERY DIMENSIONS



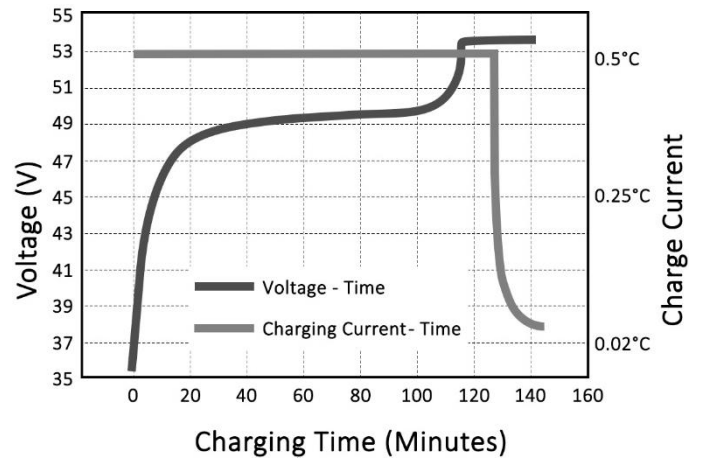


## CHARGE AND DISCHARGE CURVES

### CHARGE AND DISCHARGE CURVE @ 0.5C 25°C

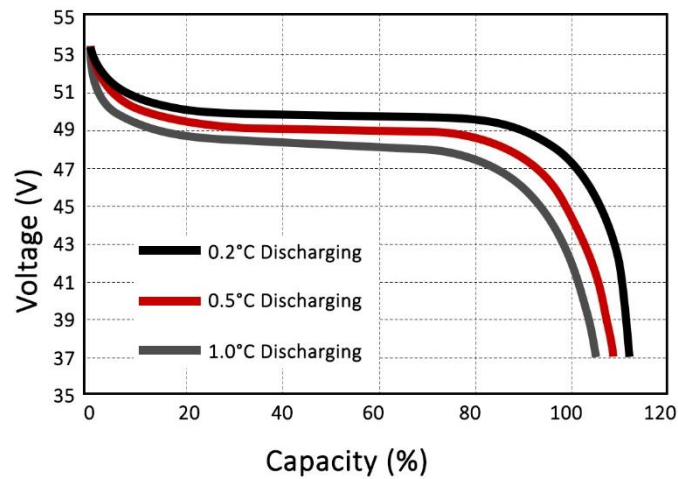


### CHARGING CHARACTERISTICS @ 0.5C 25°C

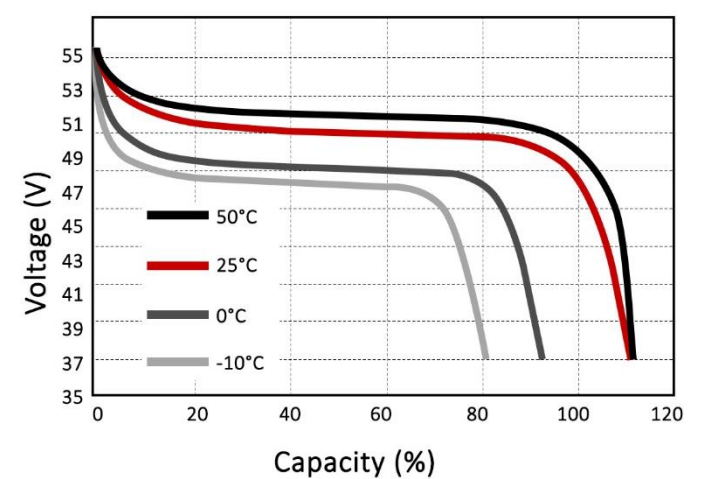


## DIFFERENT CURRENT / TEMPERATURE DISCHARGE CURVES

### DIFFERENT RATE DISCHARGE CURVE @ 25°C

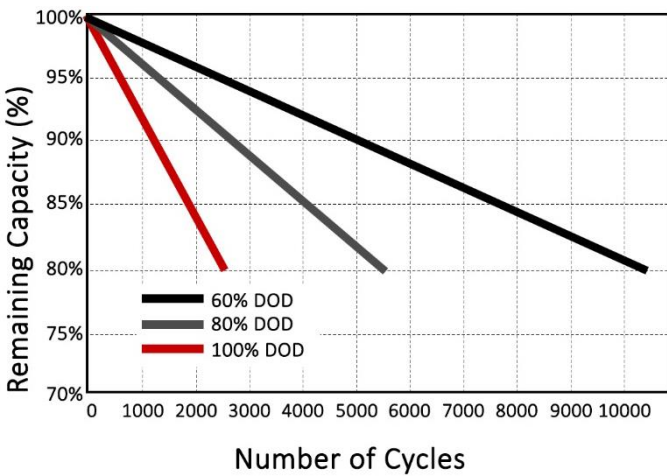


### DIFFERENT TEMPERATURE DISCHARGE CURVE @ 0.5C



## CYCLE LIFE CURVES

### DIFFERENT DISCHARGE DEPTH LIFE CURVES @ 25°C 0.5C



### DIFFERENT DISCHARGE DEPTH LIFE CURVES @ 40°C 0.5C

