SR-200-48 LiFePO4 Household Energy Storage Battery Pack Specification

1. Scope

This specification applies to MingHong Technology Co., Limited, design and development of the battery, it is the basis of product design, production and inspection. The role of understanding the quality of the product and the correct method of use.

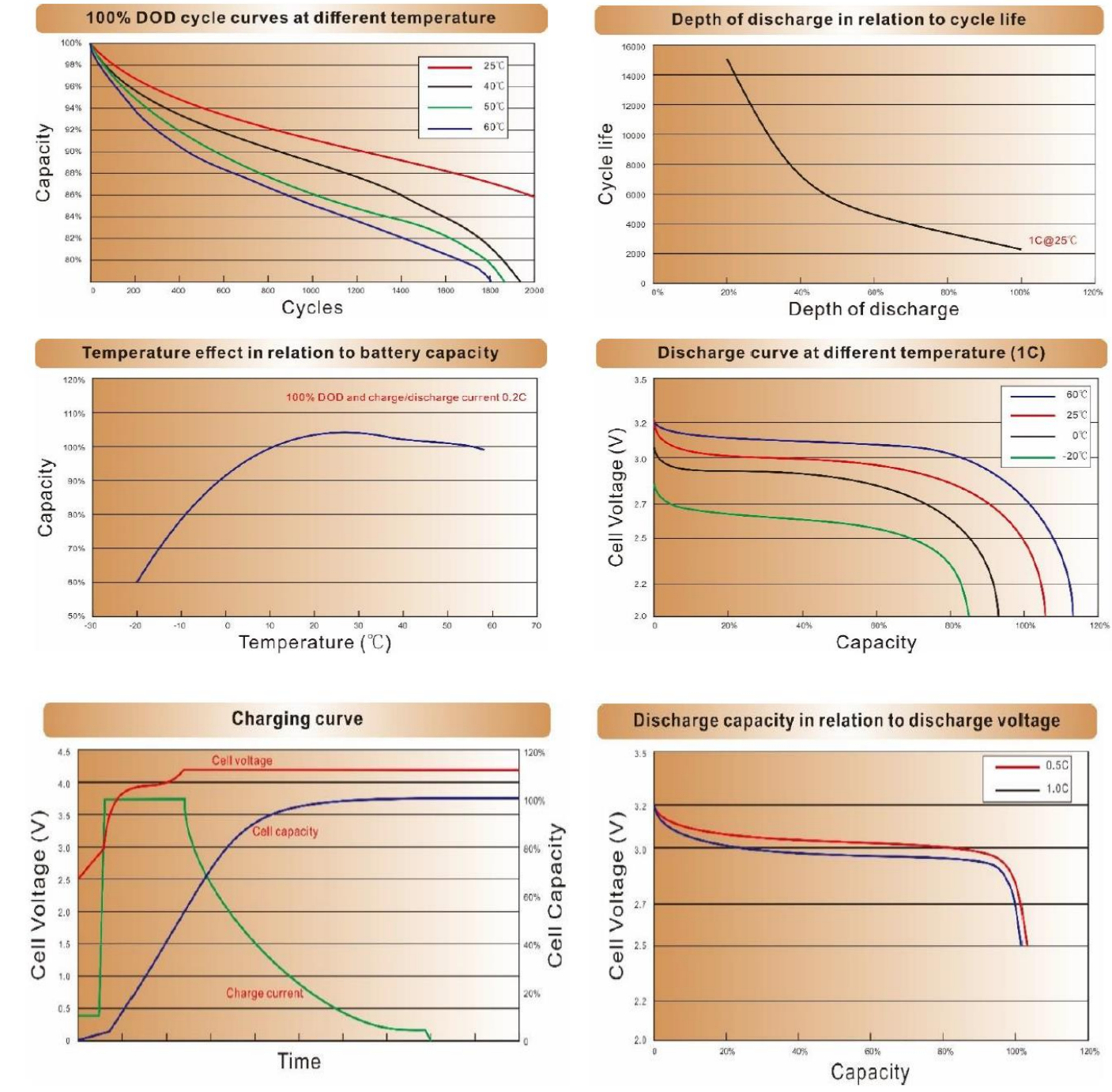
2. Product photo

3. Normal Parameters

No.	Item for Battery System	General Parameter	Remark
1	Model No#	SR-200-48	
2	Nominal Voltage	51.20V	
3	Standard Capacity For Battery System	200AH	
4	Energy	10.24KWH	
5	Cycle Life	≥6000 cycles @80% DOD	
6	Period Warranty	5 years	
7	Short Circuit Protection	Yes	
8	Size (L*W*H)	442*560*244mm	
9	Limited Charge Voltage	58.40V ±0.1V	
10	Floating Charge Voltage	55.20V ±0.1V	
11	Standard Charge Current	Constant current 0.2C, Constant Voltage 58.4V, 0.01C cut-off	CC/CV
12	Max. Charge Current	75.0A	

13	Cut-off Voltage		44.80V	
14	Max. Continuous Discharge Current		150.0A	
15	Operating Temperature	Charge	0~45℃, 45~85%RH	
		Discharge	-10~55℃, 45~85%RH	
16	Weight		Approx. 80 Kg	
17	Full voltage difference battery pack		≤ 20mV	Standard charging
18	IP grate		IP41	

4. Battery Standard Performance Summary Chart



5. Cell Electrochemistry Characteristics Test

5.1 Electrochemistry Characteristics

No.	Item	Feature	Measurement
1	Discharge	Discharge	(A) After standard charging, laying the

	performance under normal temperature	capacity/standard capacity×100%(A)0.2C ≥100%(B)0.5C ≥90%	battery0.5~1.0h, then discharging at 0.2C to ending voltage, recording the discharging time. (B) After standard charging, rest 5 minutes, then0.5C discharge to ending voltage.
2	Storage charge under room temperature	Resting capacity ≥Standard capacity *80%	After standard charged, on-hold for 28 days, discharged with 0.2C to ending voltage, then measure the residual capacity of battery, and examine the recover capacity with 0.2C/0.2C.
3	Testing for cycle life	Capacity≥ Standard capacity *80%	After charged with 0.2C current, then discharged with 0.2C to ending voltage. On-hold for 10mins, hence as above testing features are to cycle for 1000 times.
4	Storage performance	On-hold for 1 month. Capacity≥92%	After standard charged, under 25℃±5℃, on-hold for 1 month, then discharged with 0.2C to ending voltage, and measure residual capacity of battery.

5-2. Environmental Characteristics

No.	Item	Feature	Measurement
1	Discharge at high temperature	≥100min	After standard charging, laying the battery 2h at55±2℃, then discharging at 0.2C to ending voltage, recording the discharging time.
2	Discharge at low temperature	≥180min	After standard charging, laying the battery 16h at-10±2℃, then discharging at 0.2C to ending voltage, recording the discharging time.

5.3 Safe performance

No.	Item	Feature	Measurement
1	Over-charge performance	No fire, No exploding, No smoking obtained	After standard charge, the battery shall be charged at 0.1C, 58.4V for 8.0hour.
2	Over-discharge performance	No fire, No exploding, No smoking obtained	After discharged to the cut-off voltage, the battery shall be subjected to a short-circuit condition with a load of resistance less than 30Ωfor 24 hour.
3	Short-circuit performance under room temperature	No fire, No exploding, No smoking obtained	After standard charged, put the cell/battery into the explosion-proof with glass cover to short the positive and the negative for the battery (the total impedance is less than 100mΩ) for1 hour

6. Protection Circuit

6.1 Electrical Characteristics

No.	Parameter	Specifications	Criterion
1	Over Charge Protection	Protect voltage	3.65V±25mV /cell
		renew voltage	3.60V±25mV /cell
2	Over Discharge Protection	Protect voltage	2.7V±50mV /cell
		Renew voltage	2.8V±0.1V /cell
		Protect last time	600mS±100mS (Max)
3	Over Current Protection	Protect current	160.0 A
		Protection delay	500MS
		Max continuous discharge current	150.0 A

		Delayed recovery	60S
4	Short Circuit Protection	Protect condition	Exterior short circuit
		Protect last time	200-400μS（MAX）
		Protect relieve condition	Switch off short circuit
5	Supply Current	Inner circuit consumption	≤80μA
6	Internal Resistance in normal Operation	Main loop electrify resistance	B-P- RDS ≤40mΩ

7. Transportation:

Battery should shipped by container, prevent severe vibration, pressing, squeezing and exposing to the sun and rain during the transportation, ship by bus, train, ship and plane and so on.

8. Storage:

Item		**Criteria**
Storage Temperature	Short period less than 1 month	-10~45℃
	Long period less than 3 month	-10~35℃
	Long period more than 3 month	0~30℃
Relative Humidity		≤75%RH
Charged		About 40%~60% charged state

The batteries should be stored at room temperature, charged to about 30%~50% of capacity. We recommend that batteries be charged about once per 1 month to prevent over discharge.

9. Period of Warranty:

The period of warranty is 5 year from the date of shipment. MSN Battery guarantees to give a replacement in case of cells with defects proven due to manufacturing process instead of the customer abuse and misuse.

10. Warning!!!

10.1. Never throw the battery into water, keep it under dry, shady and cool circumstance when not use.
10.2. Never keep the battery beside high temperature source examples: fire, heating machine and etc.
10.3. Never throw the battery into fire or heating machine.
10.4. Never connect the positive and negative of battery with metal.
10.5. Never ship or store the battery together with metal6. Never knock, throw or trample the battery.