

EXPERTISE LEAD EXCELLENCE
Temco



AGM-GEL BATTERIES

A BRIEF INTRODUCTION OF TEMCO BATTERY

TEMCO series battery are designed with Absorbed Glass Mat technology, first class technical work force, modern management practices and most popular applications.

AGM Battery General Features:

Long life: Advanced technology and modern machines make GOOD batteries/Over 8~10 years Floating life/Completed Performance test/Corrosion resistance raise from High-tin alloy grid inside.

High over-discharge tolerance: Adopting dedicated ultra-fine glass fiber separators with high porosity and high wet-elasticity, combining with high-pressure tighten assembly technology, the battery has a high tolerance for super over-discharge. After 5 times of over-discharges which cause the short circuit, battery capacity restoration can reach more than 95%.

Super cycling ability: Special electrolyte additives, curing process at high temperature and high humidity are employed to delay the softening of active material in cycling, therefore the deep cycle endurance is improved efficaciously. Its cycle life in daily float charging can reach over 800 times as per the requirement of IEC60896-22-2004.

Excellent high-current performance: Tighten assembly is designed to reduce distance of battery plates, to improve the high current discharge performance.

Safety and Reliability: Our patented terminal sealing construction and the curing process of the adhesive at high temperature, ensure no acid leakage from the roots of terminals, and therefore ensure safe and reliable operation.

Variety of installation: With no free liquid electrolyte inside. Just batteries can be installed vertically as well as horizontally.

Battery designed life: 15years

Gel Battery Special Advantages:

Full recovery from deep discharge, even when the battery is not recharged immediately.

Ideal for repeat cycling daily use.

Excellent performance over long discharges

Good tolerance to higher temperature applications

Suitable where mains power is unstable

Zero stratification due to immobilized electrolyte

Reduced self-discharge

Limiting design protects the positive plates to greatly improve cycle life

Improved charge acceptance due to low internal resistance

High resistance to water loss with the right charging set up

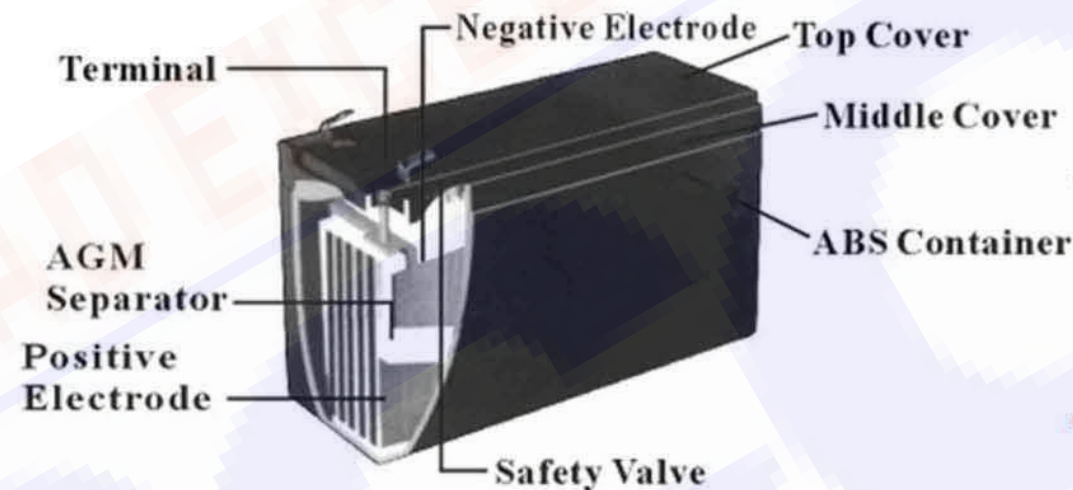
Ultra stable polymer separator with glass mat for increased performance

High resistance to shorting due to superior mechanical strength of the polymer separator

Increased tolerance to poor charging parameters

Can be discharged even when full recharge has not been achieved, without loss of battery capacity

Battery designed life: 20years



Terminal Type

<p>FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity</p>	<p>FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity</p>
<p>Brass Coated With Tin Torque: 3.9 ~ 5.4 N*m</p>	<p>Brass Coated With Tin; Threaded Insert 6mm STUD Torque: 3.9 ~ 5.4 N*m</p>
<p>Lead Torque: 3.9 ~ 5.4 N*m</p>	<p>Brass Coated With Tin; Threaded Insert 6mm STUD Torque: 3.9 ~ 5.4 N*m</p>
<p>Spring Steel Fully Collapsible</p>	<p>Toy Battery Connector H-Connector</p>

Typical Applications:

Switching system, DC power system
 Cable Television
 UPS System
 EPS System
 Emergency Lighting System
 Alarm System
 Control Equipments
 Geophysical Equipment
 Medical Equipment
 Portable Cine & Video Lights
 Power Tools
 Vending Machine
 Toys
 TV & Video Recorders
 Railway Signal
 Fire and Security System
 Telecommunications & Communication System
 Marine Equipment
 Power Station
 Aerospace and navigation
 Rail transit
 Military area
 Photovoltaic Solar Power Storage System
 Wind Energy Storage System
 Renewable Energy Storage System
 Solar Street Light System
 Solar Power Home System

Middle Size 24-250AH

Model	Normal Voltage	Rate Capacity(ah)				Dimension(mm)				Approx Weight	Terminal
	V	20HR (1.80V/Cell)	10HR (1.80V/Cell)	5HR (1.75V/Cell)	1HR (1.60V/Cell)	Length	Width	Height	Total Height	kg	Type
FM/12024	12	24	22.32	20.4	15.07	165	175	125	125	8	T3/T12
FM/12026	12	26	24.18	22.1	16.33	165	175	125	125	8.2	T3/T12
FM/12030	12	30	27.9	25.5	18.84	165	175	125	125	8.8	T12
FM/12033	12	33	30.69	28.5	20.8	195	130	162	166	11.5	T6/T12
FM/12035	12	35	32.55	29.75	21.98	195	130	162	166	12	T6/T12
FM/12038	12	39.5	38	32.7	23.2	197	165	170	170	12.2	T6/T12
FM/12040	12	40	38.5	33.1	23.5	197	165	170	170	12.5	T7
FM/12045	12	46.8	45	38.7	27.5	197	165	170	170	14.2	T6/T12
FM/12050	12	52	50	43	30.5	257	132	200	200	17	T6
FM/12055	12	57.2	55	47.3	33.6	228	138	205	226	18	T6/T9/T14
FM/12060	12	62.4	60	51.6	36.6	259	168	208	214	19	T6/T124
FM/12065	12	65	65	53.8	38.1	350	166	175	175	20	T6
FM/12070	12	72.8	70	60.2	42.7	350	166	175	175	21	T6
FM/12075	12	78	75	64.5	45.8	259	168	208	214	22.3	T6/T9
FM/12080	12	83.2	80	58.8	48.8	259	168	208	214	24	T6
FM/12090	12	93.6	90	77.4	54.9	306	168	210	235	27	T11
FM/12100	12	104	100	86	61	330	173	212	220	28	T11
FM/12120	12	124.8	120	103.2	73.2	408	172	237	237	32	T11
FM/12135	12	140.4	135	116.1	82.4	344	171	274	280	36	T11
FM/12150	12	156	150	129	91.5	482	170	241	241	41	T11
FM/12165	12	170.4	165	142.8	102.6	532	207	215	240	48	T11
FM/12180	12	187.2	180	154.8	109.8	532	207	215	240	52	T11
FM/12200	12	208	200	172	122	522	240	218	224	55	T11
FM/12220	12	229	220	198	140.1	521	269	203	203	59	T11
FM/12250	12	260	250	215	152.5	520	268	220	226	65	T11
FM/6036	6	36	33.48	30.6	22.61	161	87	163	169	5.5	T2/T3
FM/6060	6	62	60	51.6	36.6	185	112	205	205	9.1	T2/T3
FM/6100	6	104	100	86	61	195	170	206	212	15.6	T6
FM/6120	6	124.8	120	103.2	73.2	280	128	203	203	16.8	T6
FM/6150	6	156	150	129	91.5	260	180	247	253	21.2	T7
FM/6200	6	208	200	172	122	306	168	222	228	28.2	T8
FT/12055	12	60	55	48	34	227	106	223	225	17	T9
FT/12075	12	70	75	65	46.5	562	114	188	190	25	M8
FT/12100	12	110	100	87	62	506	110	224	239	31	T9
FT/12100	12	110	100	87	62	395	110	286	286	31	T9
FT/12150	12	165	150	131	93	551	110	287	287	45	T11
FT/12180	12	200	180	177	112	560	126	280	280	55	T11

Small Size 0.4-30AH

Model	Nominal Voltage	Rate Capacity(ah)				Dimension(mm)				Approx Weight	Terminal
		V	20HR (1.80V/Cell)	10HR (1.80V/Cell)	5HR (1.75V/Cell)	1HR (1.60V/Cell)	Length	Width	Height		
FM/12-0.8	12	0.8	0.74	0.68	0.5	96	25	62	62	0.35	/
FM/12-1.2	12	1.2	1.12	1.02	0.75	97	43	52	58	0.57	T1
FM/12-1.9	12	1.9	1.77	1.62	1.19	178	35	60	66	0.87	T1
FM/12-2	12	2	1.86	1.7	1.26	178	35	60	66	0.68	/
FM/12-2.3	12	2.3	2.14	1.96	1.44	178	35	60	66	0.96	T1
FM/12-2.8	12	2.8	2.6	2.38	1.76	132	33	98	104	1.18	T1
FM/12-2.9	12	2.9	2.7	2.47	1.82	79	56	99	105	1.1	T1
FM/12-3.2	12	3.2	2.98	2.72	2.01	134	67	60.5	66.5	1.35	T1
FM/12-4	12	4	3.72	3.4	2.51	195	47	70	76	1.6	T1
FM/12-4.5	12	4.5	4.19	3.83	2.83	90	70	101	107	1.6	T1
FM/12-5	12	5	4.65	4.25	3.14	151	53	93	99	1.74	T1/T2
FM/12-5.4	12	5.4	5	4.6	3.39	90	70	101	107	1.68	T1
FM/12-6	12	6	5.58	5.1	3.77	90	70	101	107	1.8	T1/T2
FM/12-6.5	12	6.5	6.05	5.53	4.08	151	65	94	99.5	1.95	T1/T2
FM/12-7	12	7	6.51	5.59	4.4	151	65	94	99.5	2.1	T1/T2
FM/12-7.2	12	7.2	6.7	6.12	4.52	151	65	94	99.5	2.15	T1/T2
FM/12-7.5	12	7.5	6.98	6.38	4.71	151	65	94	99.5	2.35	T1/T2
FM/12-8	12	8	7.8	6.63	4.9	151	65	94	99.5	2.38	T1/T2
FM/12-9	12	9	7.91	7.23	5.34	151	65	94	99.5	2.42	T1/T2
FM/12-12	12	12	11.6	10.2	7.54	151	98	95	101	3.6	T1/T2
FM/12-14	12	14	13.02	11.9	8.79	151	98	95	101	4.2	T1/T2
FM/12-15	12	15	13.95	12.75	9.42	181	77	167.5	167.5	4.56	Lead Terminal
FM/12-18	12	18	16.74	15.3	11.3	181	77	167.5	167.5	5.5	T3/T12
FM/12-20	12	20	18.6	17	12.56	181	77	167.5	167.5	5.78	T3
FM/6-0.5	6	0.5	0.47	0.43	0.31	57	14	50	52	0.1	/
FM/6-1	6	1	0.93	0.85	0.63	97	24	51.5	57.5	0.25	T1
FM/6-1.2	6	1.2	1.12	1.02	0.75	97	24	51.5	57.5	0.29	T1
FM/6-2	6	2	1.86	1.7	1.26	43	37	76	76	0.34	/
FM/6-2.8	6	2.8	2.6	2.38	1.76	66	33	97	104	0.57	T1
FM/6-3.2	6	3.2	2.98	2.72	2.01	134	34	60	66	0.67	T1
FM/6-4	6	4	3.72	3.4	2.51	70	47	100	106	0.69	T1/T4
FM/6-4.5	6	4.5	4.19	3.83	2.83	70	47	100	106	0.81	T1
FM/6-5	6	5	4.65	4.25	3.14	169	35	70	74	0.98	T1
FM/6-5.4	6	5.4	5.02	4.59	3.39	70	47	100	106	0.84	T1
FM/6-6	6	6	5.58	5.1	3.77	70	47	100	106	0.93	T1
FM/6-7	6	7	6.51	5.95	4.4	151	34	94	100	1.1	T1/T2
FM/6-7.2	6	7.2	6.7	6.12	4.52	151	34	94	100	1.2	T1/T2

FM/6-7.5	6	7.5	6.98	6.38	4.71	151	34	94	100	1.26	T1/T2
FM/6-7.8	6	7.8	7.25	6.63	4.9	151	34	94	100	1.28	T1/T2
FM/6-8.5	6	8.5	7.91	7.23	5.34	151	34	94	100	1.4	T1/T2
FM/6-10	6	10	9.3	8.5	6.28	151	51	94	100	1.57	T1/T2
FM/6-12	6	12	11.16	10.2	7.54	151	51	94	100	1.8	T1/T2
FM/6-13	6	13	12.09	11.05	9.16	108	70	140	140	2.24	T1/T2
FM/6-14	6	14	13.02	11.9	8.79	151	51	94	100	2.05	T1/T2
FM/6-20	6	20	18.6	17	12.56	157	83	125	125	3.21	T3
FM/4-0.4	4	0.4	0.37	0.34	0.25	35	22	40	45	0.06	/
FM/4-0.7	4	0.7	0.65	0.6	0.44	35	22	64	69	0.1	/
FM/4-1.2	4	1.2	1.12	1.02	0.75	35	22	92	97	0.15	/
FM/4-3.5	4	3.5	3.26	2.98	2.2	90	34	59	65	0.45	T1
FM/4-4.5	4	4.5	4.19	3.83	2.83	52.5	48	94	100	0.6	T1/T2
FM/4-5	4	5	4.65	4.25	3.14	91	50	74	74	0.66	T1/T2
FM/4-8	4	8	7.44	6.8	5.02	961	50	101	101	0.97	T2
FM/4-10	4	10	9.3	8.5	6.28	101.5	50	94	100	1.14	T2
FM/4-20	4	20	18.96	17	12.56	149	43	154	160	2.2	T2/T3

GFM Series

Model	Nominal Voltage	Rate Capacity(ah)				Dimension(mm)				Approx Weight	Terminal
		V	20HR (1.80V/Cell)	10HR (1.80V/Cell)	5HR (1.75V/Cell)	1HR (1.60V/Cell)	Length	Width	Height		
GFM/2100	2	105	100	85.5	60	170	72	205	212	6	T6
GFM/2150	2	157.5	150	128.3	90	170	98	205	212	8.5	T7
GFM/2200	2	210	200	171	120	170	110	328	350	12.7	T11
GFM/2300	2	315	300	256.5	180	170	150	328	350	19	T11
GFM/2400	2	420	400	342	240	210	175	330	350	25.7	T11
GFM/2500	2	525	500	427.5	300	240	175	330	350	28.5	T11
GFM/2600	2	630	600	513	360	300	175	330	350	32	T11
GFM/2700	2	735	700	598.5	420	300	175	330	350	38.1	T11
GFM/2800	2	840	800	684	480	410	175	330	350	45	T11
GFM/21000	2	1050	1000	855	600	475	175	330	350	57	T11
GFM/21200	2	1260	1200	1026	720	475	175	330	349	63.7	T11
GFM/21500	2	1575	1500	1282.5	900	403	354	339	349	90	T11
GFM/21800	2	1890	1800	1539	1080	403	354	339	349	101	T11
GFM/21200	2	2100	2000	1714	1200	490	350	339	349	118	T11
GFM/22500	2	2625	2500	2137.5	1500	490	350	339	349	132	T11
GFM/23000	2	3150	3000	2565	1800	709	350	337	349	170	T11

OPZS/OPZV Tubular Battery

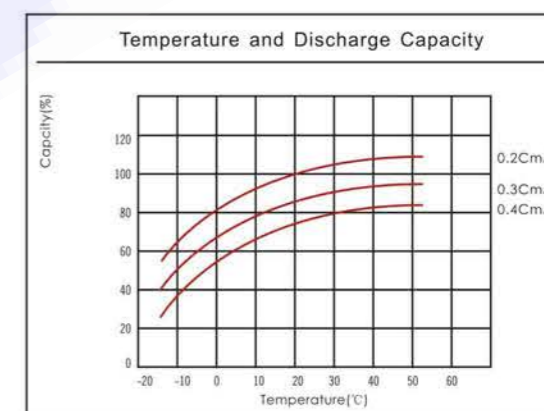
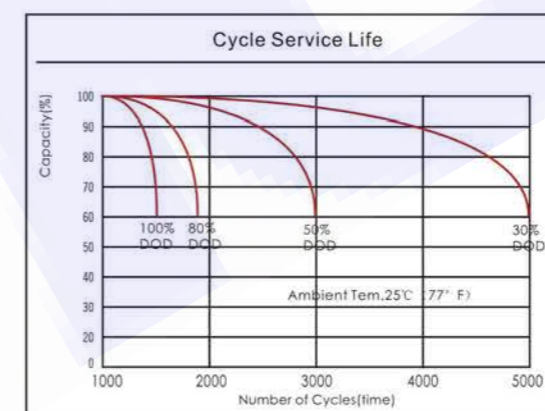
Model	Normal Voltage	Rate Capacity	Dimension(mm)				Weight	
	V	Ah	Length	Width	Height	Total Height	kg/dry	Pound
OPZS series								
2OPZS100	2	100	103	206	353	431	7.60	16.7
3OPZS150	2	150	103	206	353	409	9.80	21.6
4OPZS200	2	200	103	206	353	431	13.00	28.6
5OPZS250	2	250	124	206	353	431	15.00	33.0
6OPZS300	2	300	145	206	353	431	20.00	44.1
5OPZS350	2	350	124	206	471	547	22.00	48.5
6OPZS420	2	420	145	206	471	547	26.50	58.4
7OPZS490	2	490	166	206	471	547	29.00	63.9
6OPZS600	2	600	145	206	646	722	34.00	74.9
8OPZS800	2	800	191	210	646	722	48.00	105.7
10OPZS1000	2	1000	233	210	646	722	54.00	118.9
12OPZS1200	2	1200	275	210	646	722	62.00	136.6
12OPZS1500	2	1500	275	210	772	847	75.00	165.2
16OPZS2000	2	2000	399	210	772	847	103.00	226.9
20OPZS2500	2	2500	487	212	772	847	140.00	308.4
24OPZS3000	2	3000	576	212	772	847	160.00	352.4

Model	Normal Voltage	Rate Capacity	Dimension(mm)				Weight	
	V	Ah	Length	Width	Height	Total Height	kg/wet	Pound
OPZV Series								
4OPZV200	2	200	103	206	355	399	18.50	40.7
5OPZV250	2	250	124	206	355	399	23.00	50.7
6OPZV300	2	300	145	206	355	399	27.00	59.5
5OPZV350	2	350	124	206	471	512	29.00	63.9
6OPZV420	2	420	145	206	471	512	34.50	76.0
7OPZV490	2	490	165	206	471	512	39.50	87.0
6OPZV600	2	600	145	206	647	688	48.00	105.7
8OPZV800	2	800	191	210	647	688	64.50	142.1
10OPZV1000	2	1000	233	210	647	688	80.00	176.2
12OPZV1200	2	1200	275	210	647	688	94.00	207.0
12OPZV1500	2	1500	275	210	797	838	115.00	253.3
16OPZV1750	2	1750	397	212	772	813	156.00	343.6
16OPZV2000	2	2000	397	212	772	813	156.00	343.6
20OPZV2250	2	2250	487	212	772	847	194.00	427.3
20OPZV2500	2	2500	487	212	772	847	194.00	427.3
24OPZV3000	2	3000	576	212	772	813	230.00	506.6

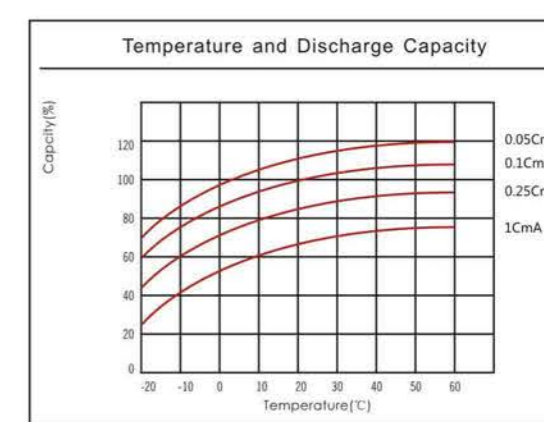
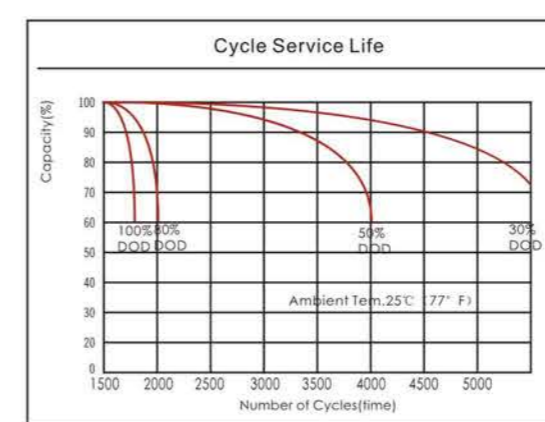
Electrical Vehicle Battery

Model	Capacity	Volt	Dimension(mm)			Weight
	Ah/20hr	V	Length	Width	Height	Kg
6-DG-120	120	12	362	172	275	23
6-DG-140	140	12	362	172	275	26
6-DG-160	160	12	362	172	275	29.5
Model	Ah/2hr	V	Length	Width	Height	Kg
6-DZM-7	7	12	151	65	94	2.6
6-DZM-9	9	12	151	65	110	3.1
6-DZM-12	12	12	151	99	101	4.4
6-DZM-14	14	12	151	99	116	5.55
6-DZM-20	20	12	182	77	170	7.1
6-DZM-22	22	12	165	125	175	9.8

OPZS/OPZV Characteristics Curve



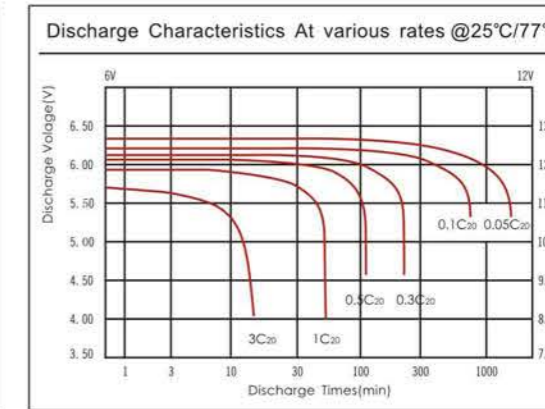
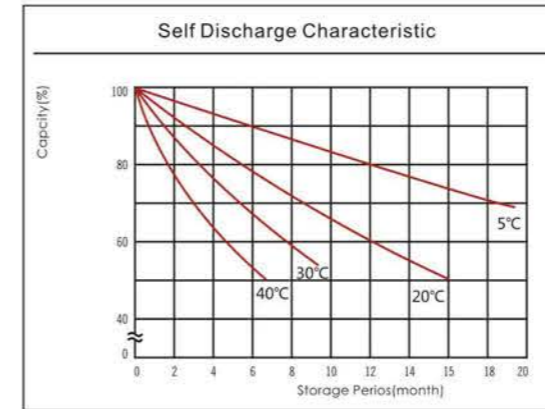
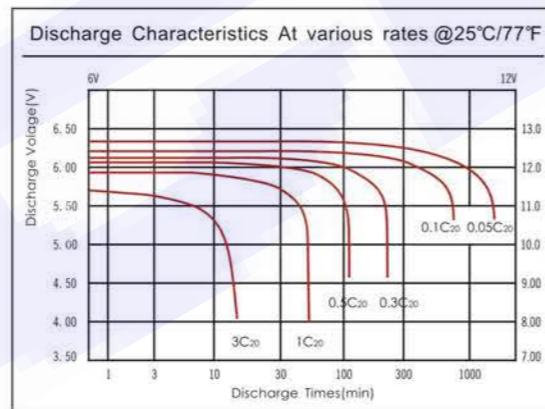
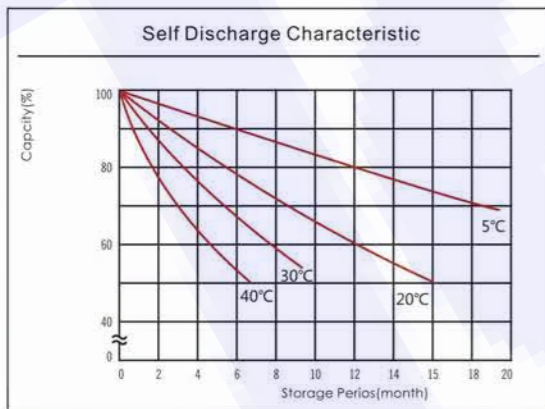
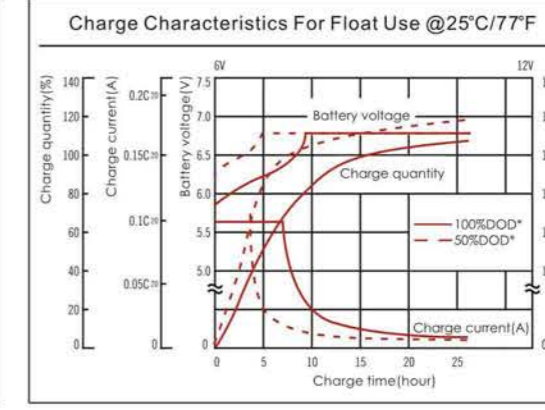
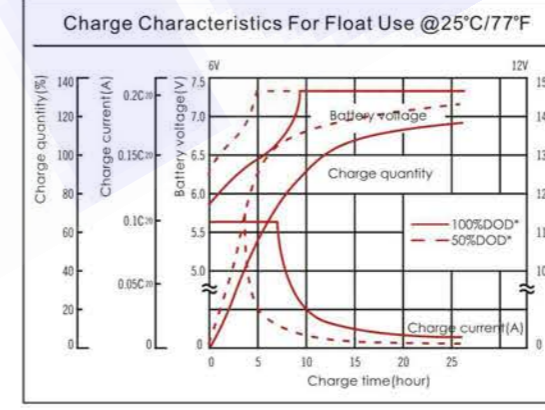
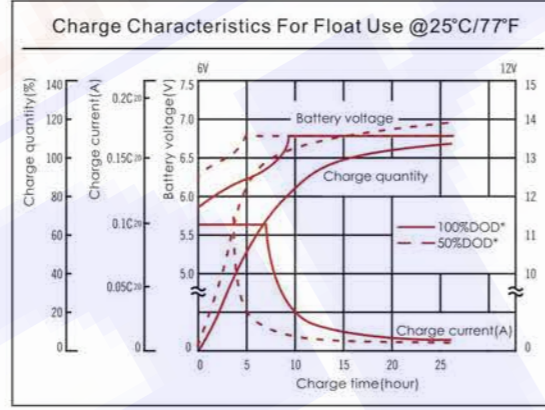
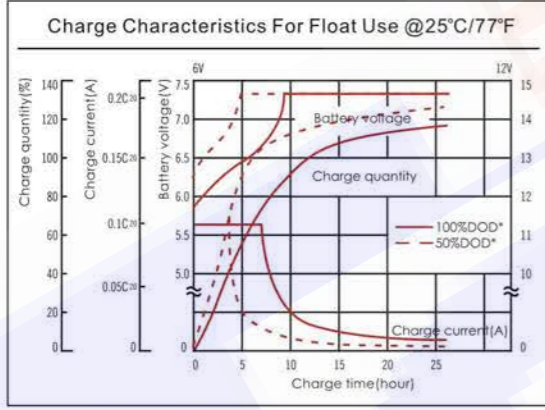
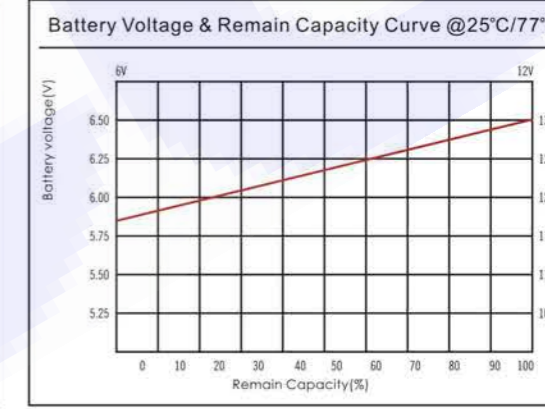
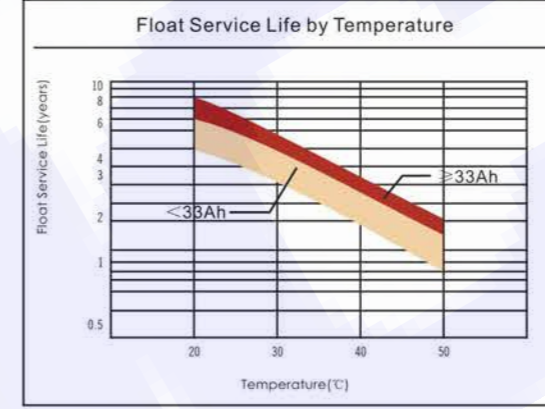
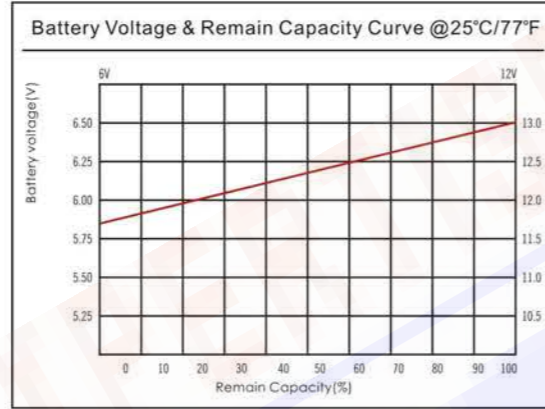
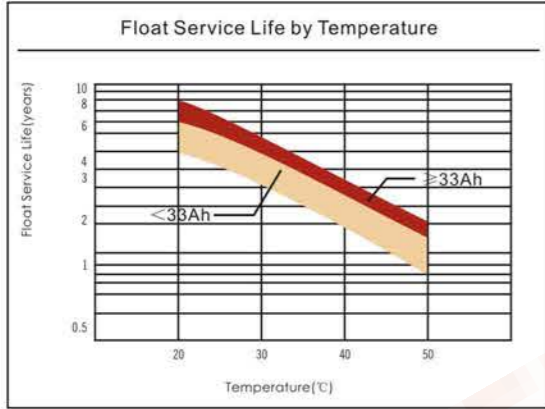
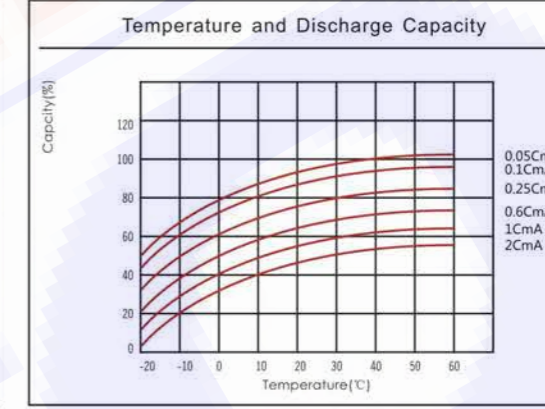
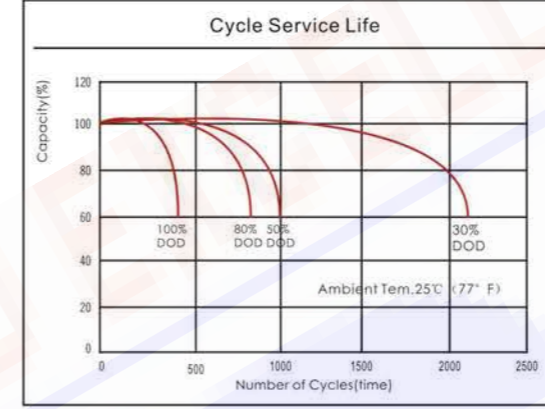
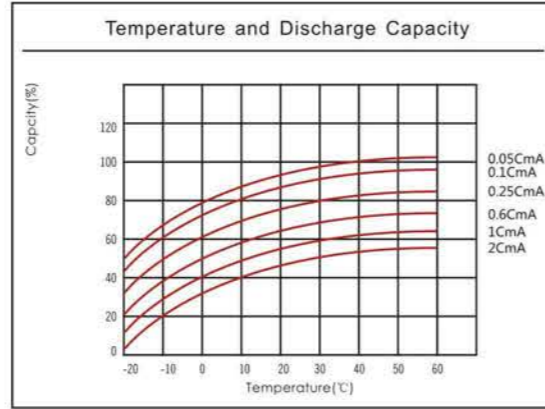
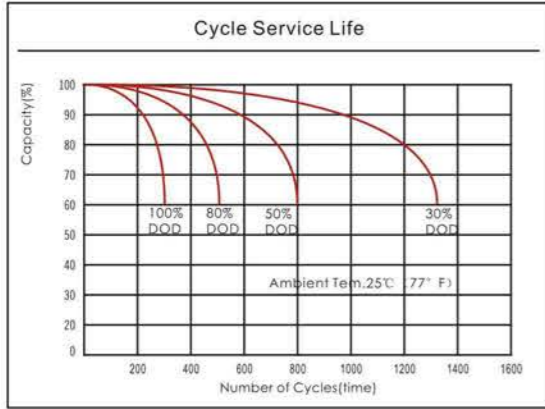
OPZS



OPZV

AGM Characteristics Curve

GEL Characteristics Curve



Production Line



1. Casting Plate

2. Powder

2. Pasting



4. Assembling

5. Filling

6. Charging



7. Packing

8. Logistics Center

9. Loading



Lab

Quality Control

Environmental Protection

Battery Photo-Deep Cycle



UPS Battery



AGM Battery



Solar Battery



Gel Battery



Rickshaw Battery



EV Battery



Front Terminal Battery



OPZS Battery



OPZV Battery

12V LIFEPO4 BATTERY PACK SERIES PRODUCT

FOR LEAD-ACID BATTERY REPLACEMENT



12V100Ah



12V150Ah



12V200Ah
12V315Ah

SPECIFICATION

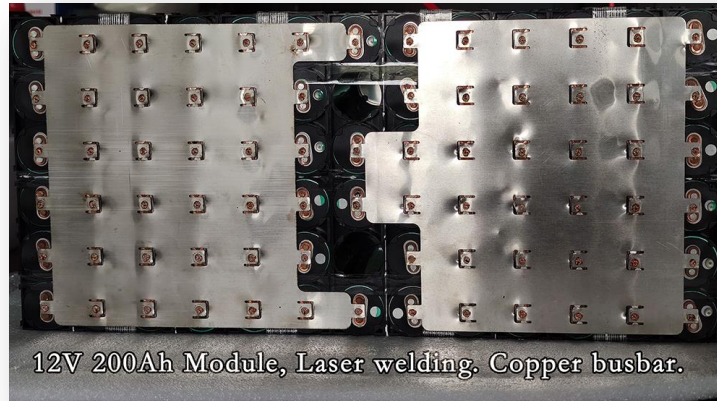
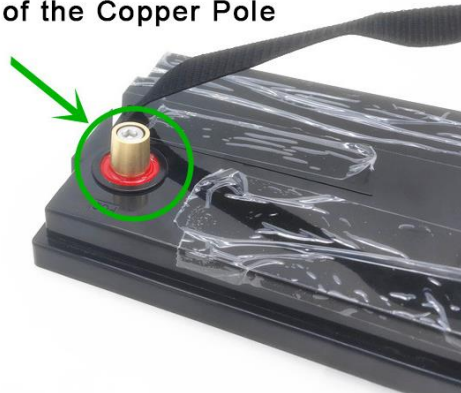
Item	12V100Ah	12V150Ah	12V200Ah	12V315Ah
Nominal Voltage	12.8V			
Nominal Capacity	100Ah	150Ah	200Ah	315Ah
Energy	1280Wh	1920Wh	2560Wh	4032Wh
Charge Voltage	14.4V			
Discharge Cut-off voltage	10V			
Max. Charge Current	50A	100A (Limited by BMS)		
Max. Discharge Current	100A	100A (Limited by BMS)		
Dimension(mm)	L331xW174xH216mm	L485xW170xH241mm	L521xW238xH218mm	
Weight	11.5kg	18kg	24kg	32kg
Working Temp. Range	Charge: 0°C--45°C / Discharge: -20°C--60°C			
Cycle life	2000 cycles ≥80% initial capacity			

ASSEMBLY PROCESS



•High temperature resistance, high strength ABS material

New Design of the Copper Pole



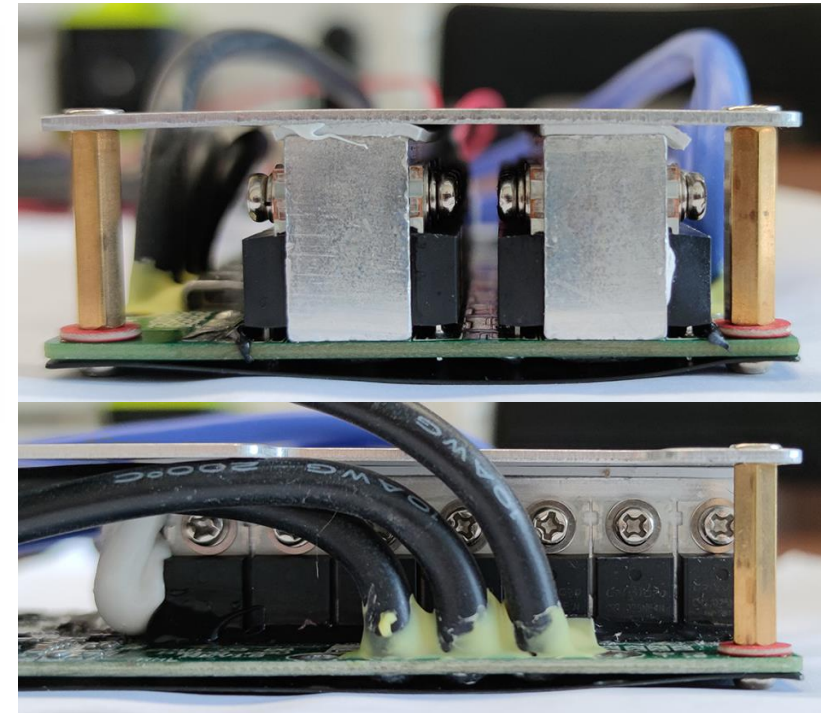
12V 200Ah Module, Laser welding, Copper busbar.

Nickel plated copper busbar



BMS: 100A Charge and Discharge Current

100A continuous current
charge and discharge BMS

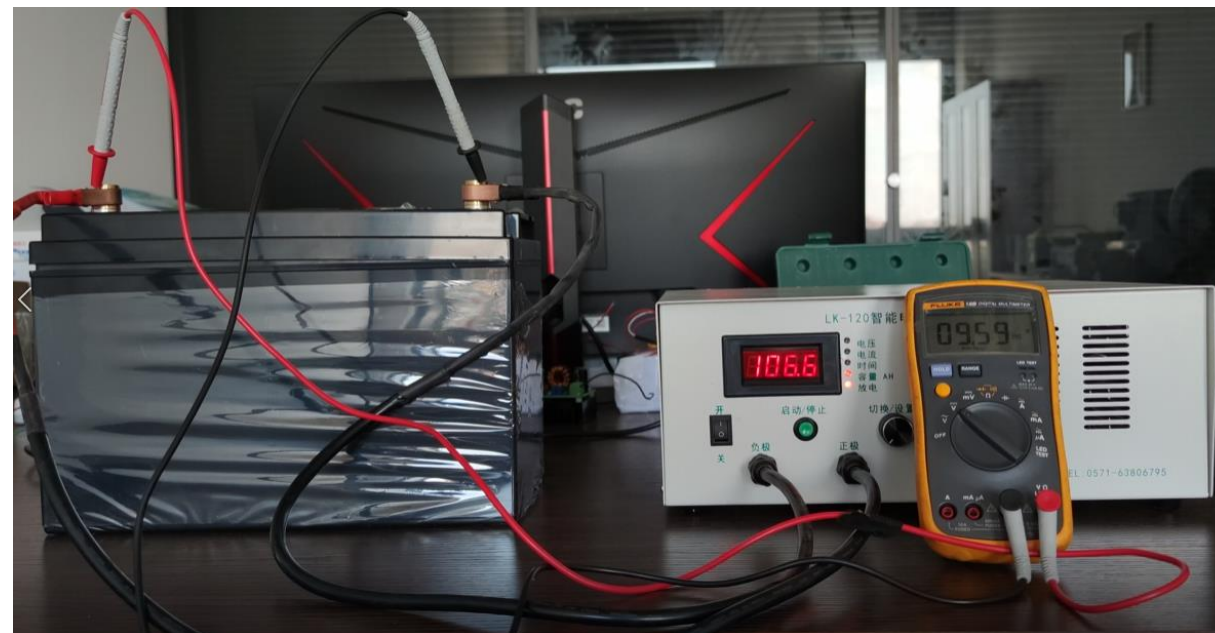


14 pairs of big current MOSFET.
Large aluminum area for heat dissipation.

CAPACITY TEST(12V100AH)



After full charge and standing for 1 day, The voltage is 13.9V before discharge. Discharge current 25A.

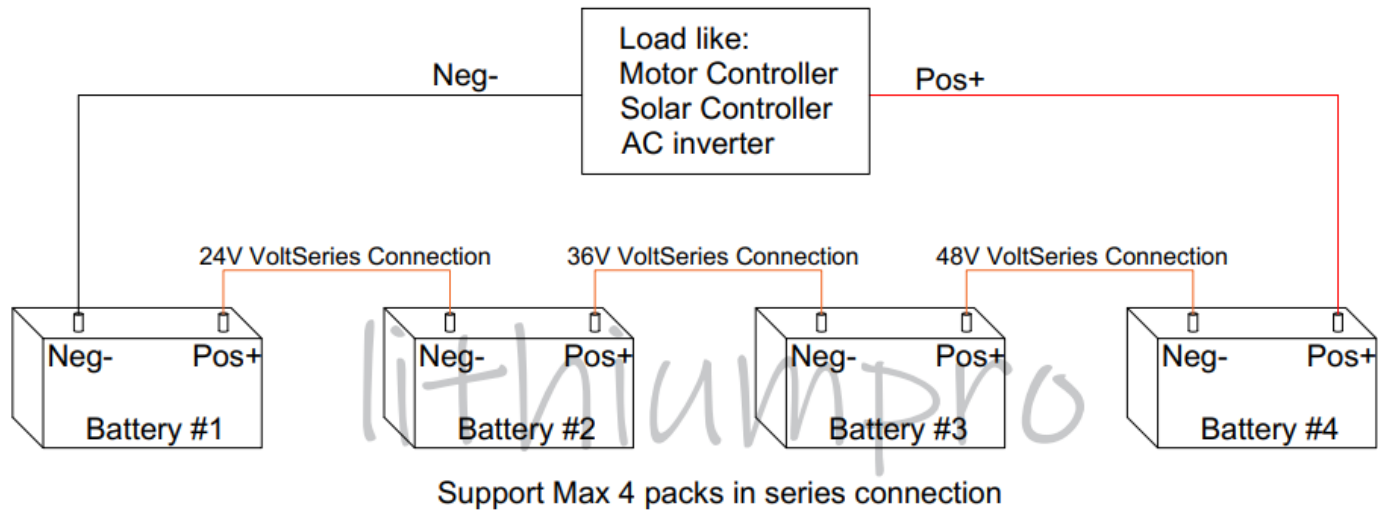


The BMS cut-off the discharge at 9.59V. The capacity is 106.6Ah

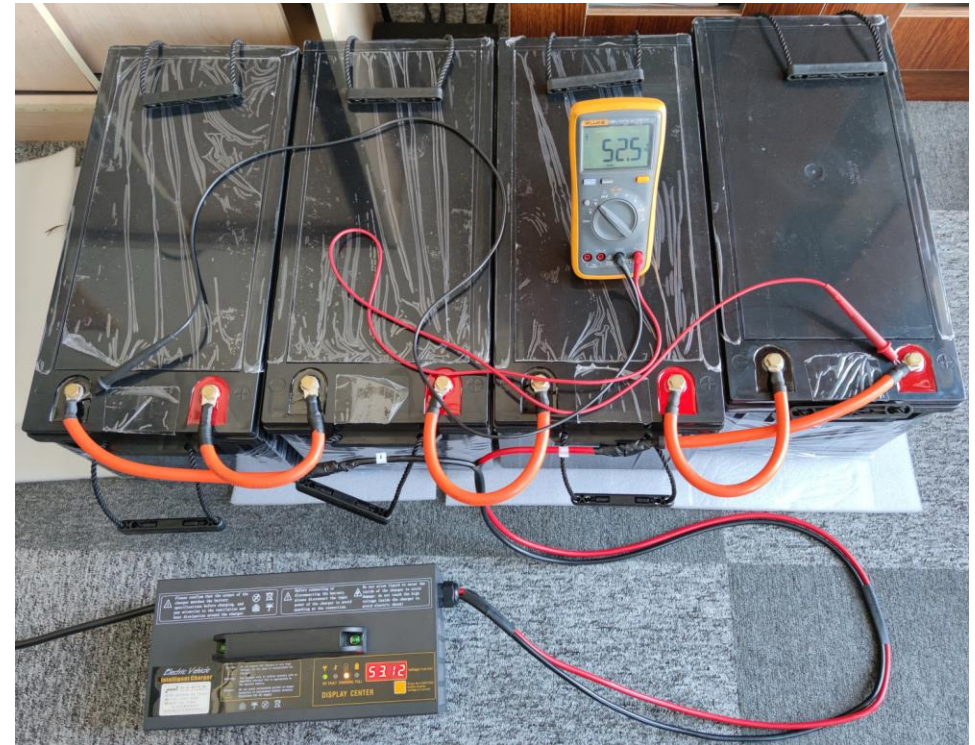


After two hours discharge, the voltage drop to 12.87V, the capacity is 54.29Ah.

CONNECTION



2 packs in series connection to 24V
3 packs in series connection to 36V
4 packs in series connection to 48V



APPLICATIONS



Solar Energy Storage

As a power bank to storage the energy from solar panel and supply the electric to the load.

Using for the electric boat, home use solar system.



Traction Power

As a power to drive the electric vehicle, electric boat and any other motor.

Using for electric scooter, tricycle and small electric vehicle. Good for the outboard motor of the small boat.

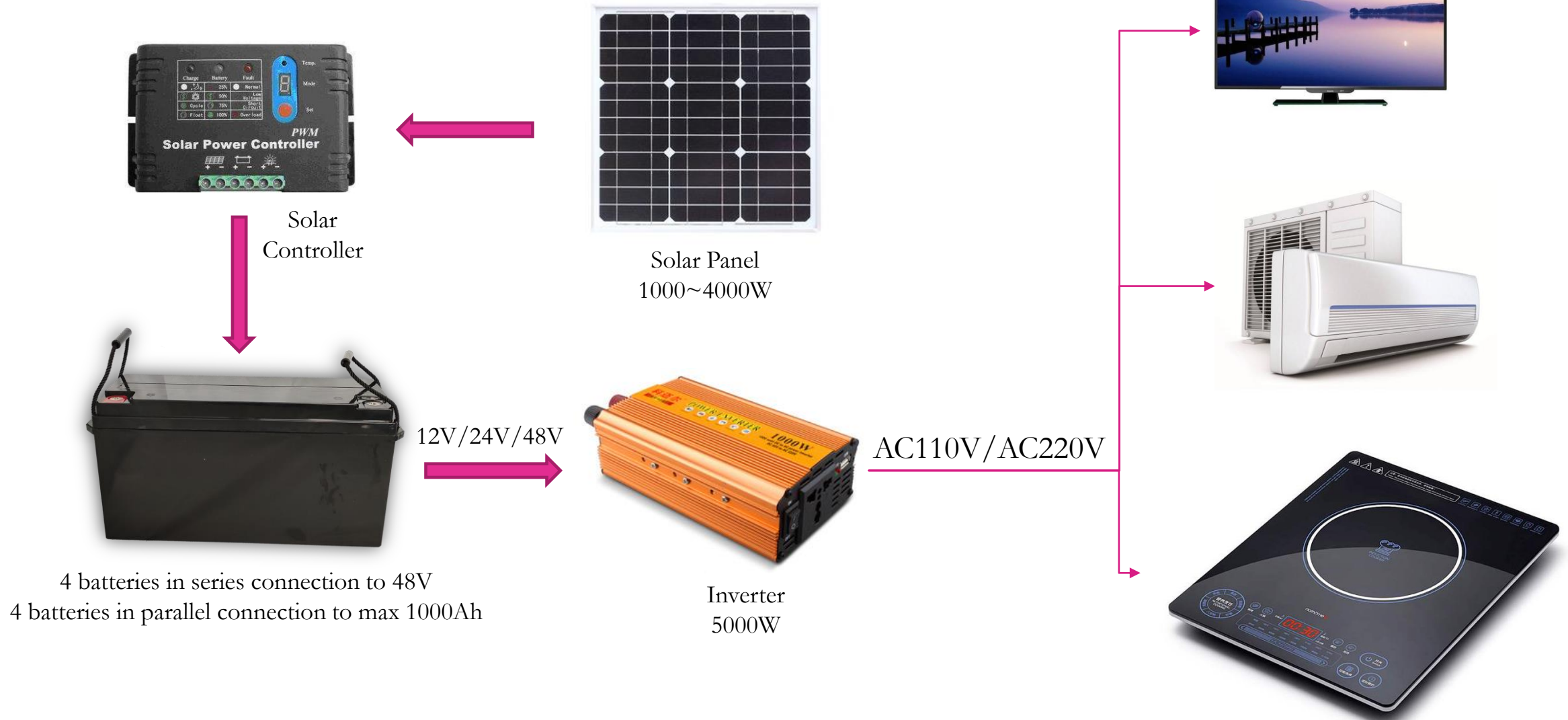


Portable Power

Outdoor power supply

Supply the electric to the load by DC-DC or DC-AC

SOLAR ENERGY STORAGE



TRACTION POWER



Electric Scooter



Electric Forklift



Electric Tricycle



Electric Carrier



Electric Boat



Outboard Motor



PORTABLE POWER



USB-PD



USB



12V/24V/48V



AC110V/220V

DC/DC



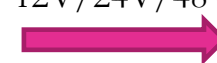
Charger

Charge



Battery

12V/24V/48V



CUSTOM-MAKE TERMS

1. The 4 models battery pack we listed is the standard produce. If not meet your demand, We accept the battery pack custom-make.

Battery custom-make item(not limited to below)

Voltage	Capacity(Energy)	Discharge current(Power)	Dimension	Communication(CAN,485)	Brand, Label
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2. The custom-make MOQ >100 units.

3. Delivery time: 10 days for the standard battery(<5 unit). 35 days for the custom-make battery.
According to the order quantity if bulk purchase.

4. Charge, inverter, solar panel, DC/DC if need, we can provide or give recommendation.