



Nanjing Torphan Tech co., Ltd.

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TORPHAN
RELEABLE SAFETY
EFFICIENCY BATTERY



Company Profile

Nanjing Torphan Tech Co., Ltd. focuses on providing customers with efficient, reliable and safe lithium energy storage systems, lithium Motive batteries, and environmentally friendly & smart new energy management solutions. Torphan aims to improve the customers' experience in terms of safety, efficiency, low consumption, and stability through independent research & development and innovation.

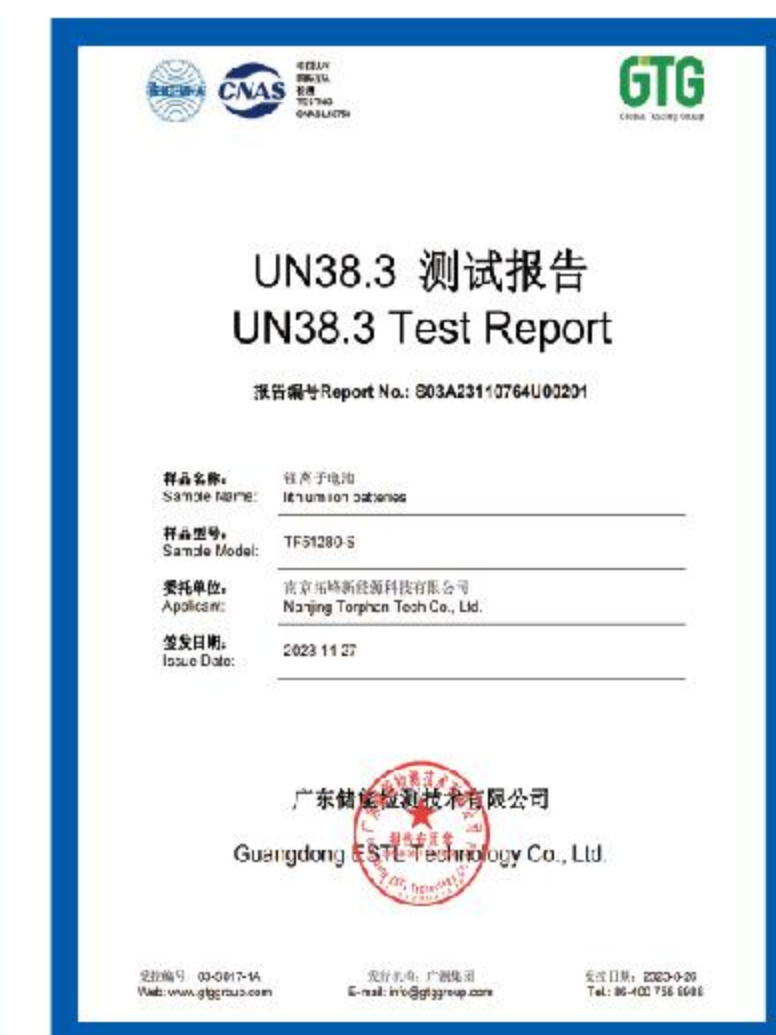
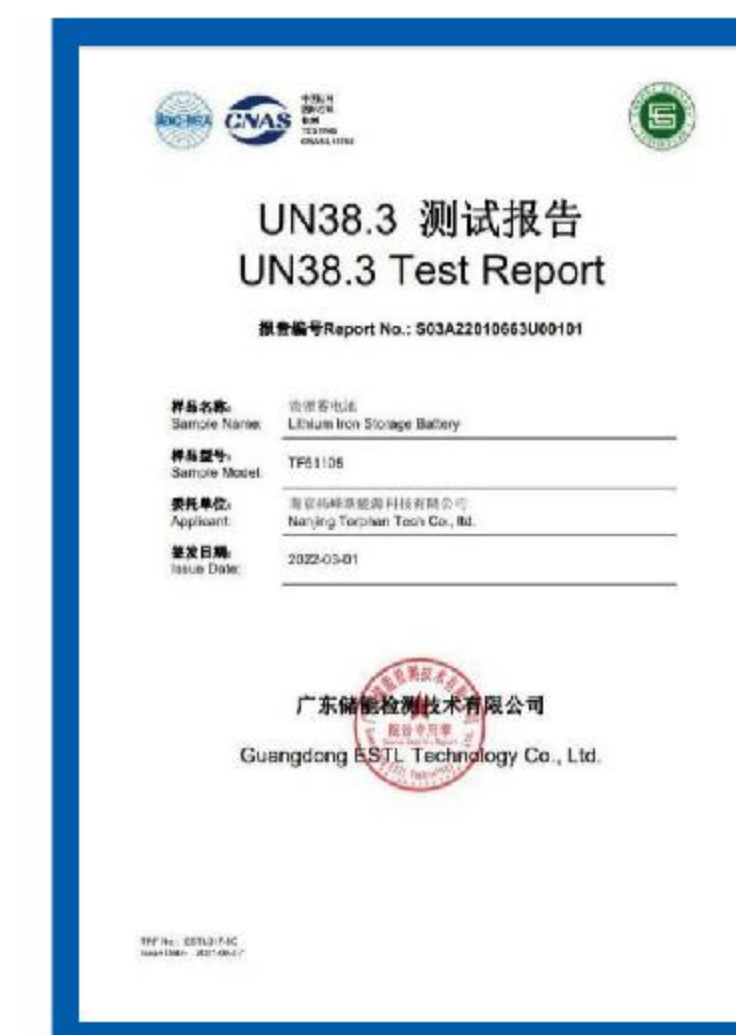
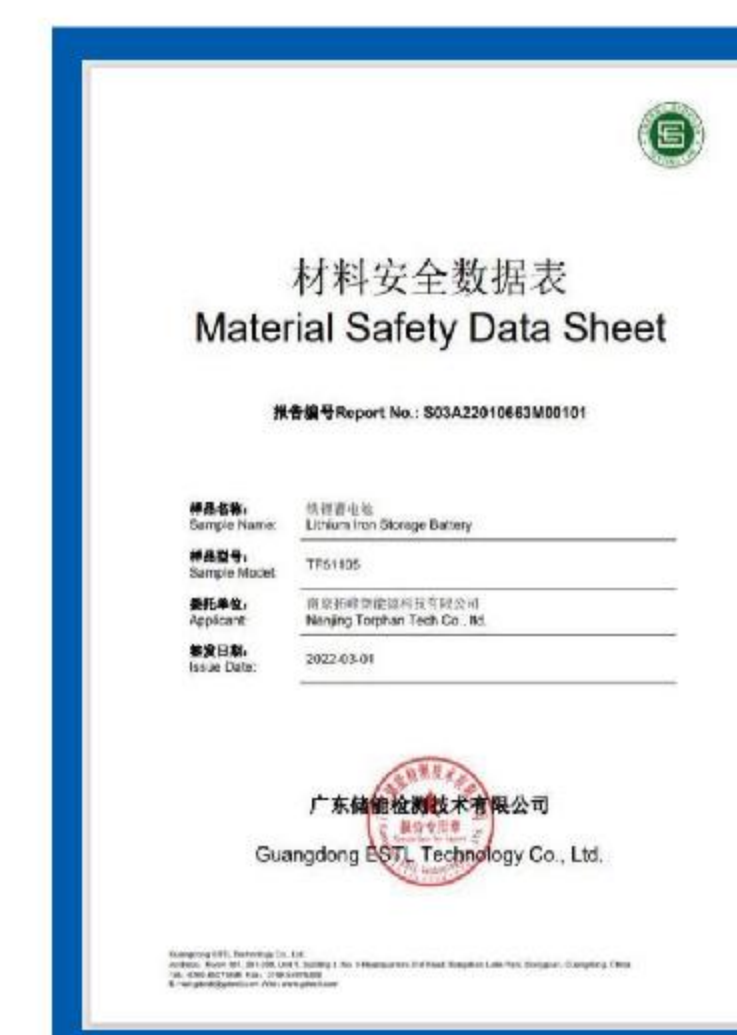
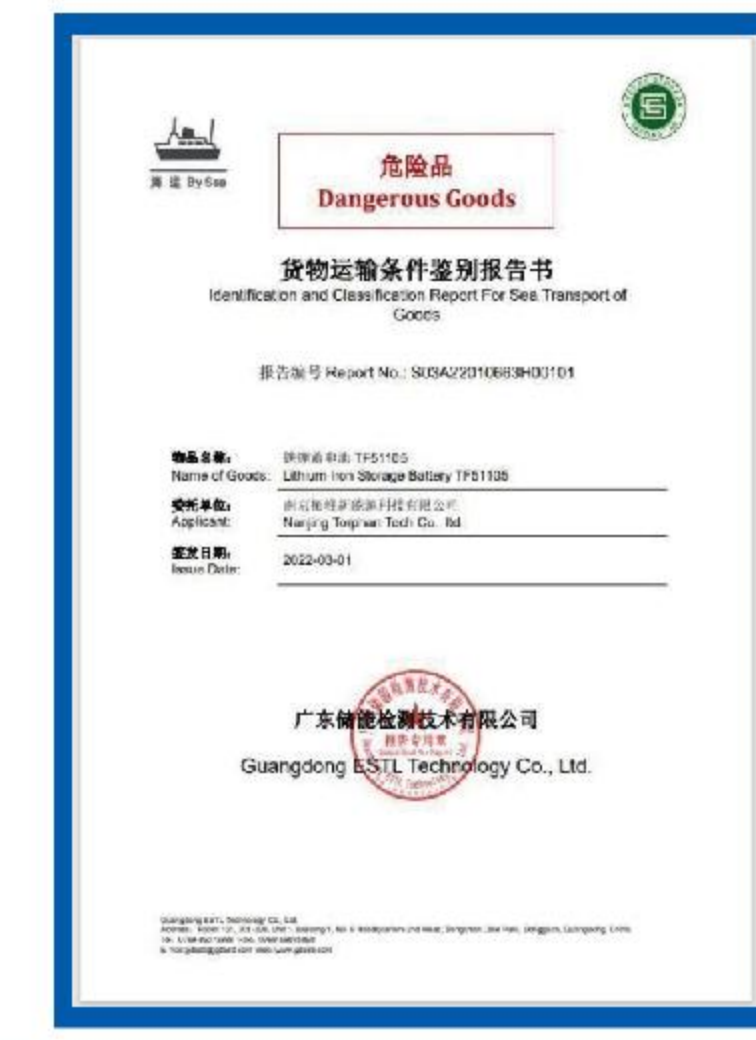
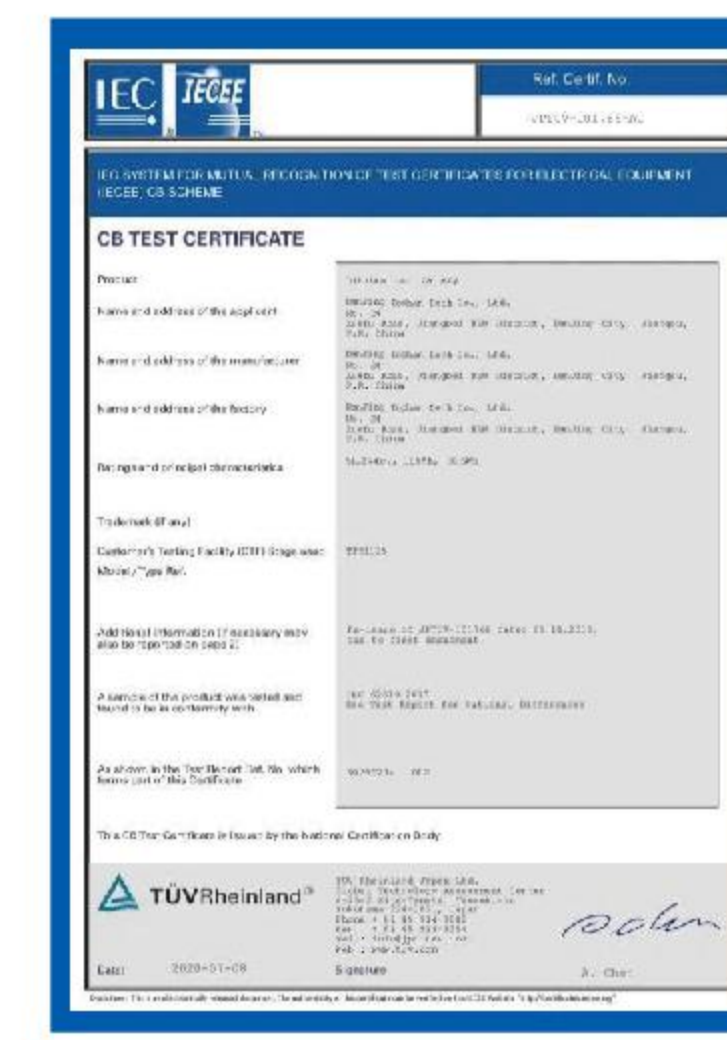
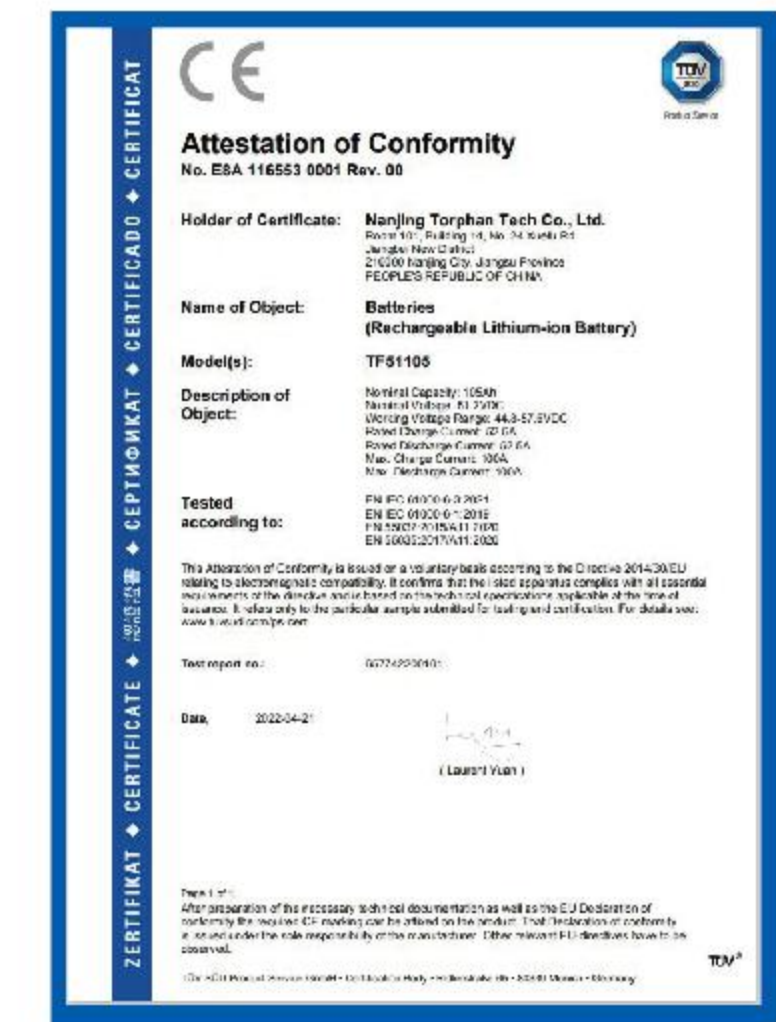
Torphan has a professional team of design, production and sales. Since 2007, Torphan's core technical team has been committed to the development of high-quality lithium battery systems. After continuous improvement and optimization, the efficient, reliable and safe lithium battery system is developed and designed.

With the business philosophy of building the world with integrity and win-win cooperation, and quality first, service first as the corporate guidelines, Torphan produce advanced, and sophisticated products and provide great after-sales service for customers around the world, hoping to create an environmental and smart energy ecosystem.

Up to present, Torphan Li battery has been approved by UL/IEC and has been used in more than 50 countries and regions in the world, serving thousands of households and industrial&commercial units and getting more and more good feedbacks.



Certificate





Lithium Iron Battery Modules



Model	TF51100-U-HV	TF51280-R-HV
Rated Voltage	51.2V	51.2V
Rated Capacity	5.12KWh	14.3KWh
Using Energy	4.6KWh	12.9KWh
Working Voltage Range	44.8~57.6V	44.8~57.6V
Max Working Current	50A	140A
Peak Current (15s)	60A	200A
DOD	90%	90%
Size (L*W*H)	483*550*133mm/19*21.65*5.24mm	500*740*230mm
Weight	49Kg±1Kg	108Kg±1Kg
Cycle Life	>6000 times, 25℃@0.3C	>6000 times, 25℃@0.5C
Charge Temperature	0 ~ 50℃	0 ~ 50℃
Discharge Temperature	-20 ~ 60℃	-20 ~ 60℃
Single String Quantity (pcs)	16	16
Communication	CANbus, RS485	CANbus, RS485
Safety Standard	IEC 62619, UN38.3, CE, UL	IEC 62619, UN38.3, CE, UL

High Volt Control Unit (Master Box)

Model	TF1000-51100-U-HV	TF1000-51280-R-HV
Max Voltage	1000V	1000V
Max Current	100A	200A
Size (L*W*H)	483*550*133mm	500*740*230mm
Weight	16Kg±1Kg	20Kg±1Kg
Charge Temperature	0 ~ 50℃	0 ~ 50℃
Discharge Temperature	-20 ~ 60℃	-20 ~ 60℃
Communication	CANbus, RS485	CANbus, RS485



Power Wall



Model	TF51100-M-LV	TF51280-M-LV
Rated Voltage	51.2V	51.2V
Rated Capacity	5.3Kwh	14.3Kwh
Using Energy	4.8Kwh	12.9Kwh
Working Voltage Range	44.8~57.6V	44.8~57.6V
Max Working Current	50A	100A
Peak Current (15s)	60A	120A
DOD	90%	90%
Size (L*D*H) mm	500*262*500	700*250*1100
Weight (Kg)	49Kg±1Kg	108Kg±1Kg
Cycle Life	>6000 times, 25℃	>6000 times, 25℃
Charging Temperature	0 ~ 50℃	0 ~ 50℃
Discharging Temperature	-20 ~ 60℃	-20 ~ 60℃
Communication	CANbus, RS485	CANbus, RS485
Parallel Quantity (pcs)	6	6



Stackable Lithium Ion Batteries

48V Stackable Lithium Ion Batteries



Model	TF51100-S-LV	TF51280-S-LV
Rated Voltage	51.2V	51.2V
Rated Capacity	5.1KWH	14.3KWH
Using Energy	4.6KWH	12.9KWH
Working Voltage Range	44.8~57.6V	44.8~57.6V
Max Working Current	50A	100A
Peak Current (15s)	60A	120A
DOD	90%	90%
Size (L*W*H) mm	580*425*180	780*500*230
Weight (Kg)	49Kg±1Kg	122Kg±1Kg
Cycle Life	>6000 times,25℃	>6000 times,25℃
Charging Temperature	0 ~ 50℃	0 ~ 50℃
Discharging Temperature	-20 ~ 60℃	-20 ~ 60℃
Communication	CANbus ,RS485	CANbus ,RS485
Connecting	Parallel	Parallel
Parallel Quantity	2-8pcs	2-4 pcs
Compatible Master Box	TF1000-51100-S-LV	TF1000-51280-S-LV

Master Box

Model	TF100-51100-S-LV	TF100-51280-S-LV
Max Voltage	100V	100V
Max Current	400A	400A
Size (L*W*H) mm	580*425*180	780*500*230
Weight	30Kg	30Kg
Charge Temperature	0℃ ~ 50℃	0℃ ~ 50℃
Discharge Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃
Communication	CANbus ,RS485	CANbus ,RS485



Stackable Lithium Ion Batteries

High Volt Stackable Lithium Ion Batteries

Model	TF51100-S-HV	TF51280-S-HV
Rated Voltage	51.2V	51.2V
Rated Capacity	5.1KWh	14.3KWh
Using Energy	4.6KWh	12.9KWh
Working Voltage Range	44.8~57.6V	44.8~57.6V
Max Working Current	50A	100A
Peak Current (15s)	60A	120A
DOD	90%	90%
Size (L*W*H)) mm	580*425*180	780*500*230
Weight	49Kg±1Kg	122Kg±1Kg
Cycle Life	>6000 times,25℃	>6000 times,25℃
Charging Temperature	0℃ ~ 50℃	0℃ ~ 50℃
Discharging Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃
Communication	CANbus	CANbus
Connecting	Series	Series
Series Quantity	3-16PCS	3-16PCS
Compatible Master Box	TF1000-51100-S-HV	TF1000-51280-S-HV

Master Box

Model	TF1000-51100-S-HV	TF1000-51280-S-HV
Max Voltage	1000V	1000V
Max Current	100A	200A
Size (L*W*H) mm	580*425*180	780*500*230
Weight	30Kg	30Kg
Charge Temperature	0℃ ~ 50℃	0℃ ~ 50℃
Discharge Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃
Communication	CANbus ,RS485	CANbus ,RS485



Stackable ESS Low Voltage

Stackable ESS (Low Voltage)





51.2V Voltage

Stackable low-volt batteries
for max system capacity



Professional

High efficiency
High safety
High reliable



Easy Installation

Flexible configuratio,plug and
play set-up,built-in fuse
protction



Remote Monitoring

Monitor your system
remotely via smartphone
app or web portal.



Model							TFESS5KW10KWh-LV	TFESS5KW15KWh-LV	TFESS5KW20KWh-LV	TFESS5KW25KWh-LV	TFESS5KW30KWh-LV	
PV												
Maximum PV Open-circuit Voltage							500Vdc					
PV Operation Voltage Range							120-500Vdc					
MPPT Voltage Range							120-450Vdc					
MPPT Quantity							1					
Maximum PV Input Power							5000W					
Charge Current Range Of Solar Energy (settable)							0-80A					
AC Input												
Input Voltage							220/230Vac (170Vac-280Vac) ±2%/(90Vac-280Vac) ±2%, or 110/120Vac (90Vac-140Vac)					
Efficiency							>95%					
Bypass							10ms					
AC Output												
Rated Output Power (KW)							5KW					
Rated Output Voltage (Vac)							230Vac (200/208/220/240Vac Settable) or 120Vac (100/105/110Vac Settable)					
Power Factor							1					
Batteries												
Capacity		10KWh		15KWh		20KWh		25KWh		30KWh		
Nominal Voltage							51.2V					
Depth of Discharge (DOD)							90%					
Working Temperature							0℃ ~+50℃ (charge), -10℃ ~+55℃ (discharge)					
General												
Communication Interface							CANbus/RS485/RS232/4G					
Environmental Temperature							-10℃~60℃					
Design Life							> 10years (25℃/77F)					
Maximum Altitude							<4000m					
Relative Humidity							10%~90%					
Installation Mode							stack					
Protection Degree							IP21					
Overload/short- circuit Protection							Breaker					
Charge Short-circuit Protection							Blown fuse					
Dimension(W*D*H)mm		630*470*690		630*470*920		630*470*1150		630*470*1380		630*470*1610		
Weight		125Kg		175Kg		225Kg		275Kg		325Kg		



■ Industrial and Commercial Energy Storage

Features

- Master BMS support Modbus RTU, CANBUS;
- Dry contactor communication;
- BMS support neutral connection (+&- Vdc);
- Internal & External power supply dual back-up;
- Smart charge and discharge protecting circuit;
- Automatic Insulation Detection;
- Pre-charge circuit;
- Multi-level protection;
- Operation Reliability 99.999%.



■ Power Cube 300V

Model	TF307100-HV-PC	TF307280-HV-PC
Rated voltage	307.2V	307.2V
Rated Capacity	30.7KWh	86KWh
Using Energy	27.6KWh	77.4KWh
Working Voltage Range	268.8~345.6V	268.8~345.6V
Max Working Current	50A	100A
Peak Current (15s)	60A	120A
DOD	90%	90%
Size (L*D*H)	350*600*2200mm	600*800* 2200mm
Weight	400Kg±5Kg	750Kg±5Kg
Cycle Life	>6000 times,25℃	>6000 times,25℃
Charging Temperature	0℃ ~ +45℃	0℃ ~ +45℃
Discharging Temperature	-20℃ ~ +55℃	-20℃ ~ +55℃
Communication	CANbus/RS485/RS232	CANbus/RS485/RS232
Safety Standard	IEC 62619, UN38.3, CE	UN38.3, CE

■ Power Cube 600V

Model	TF665100-HV-PC	TF665280-HV-PC
Rated voltage	665.6V	665.6V
Rated Capacity	66.5KWh	186.3KWh
Using Energy	59.9KWh	167.7KWh
Working Voltage Range	582.4~748.8V	582.4~748.8V
Max Working Current	50A	100A
Peak Current (15s)	60A	120A
DOD	90%	90%
Size (L*D*H)	700*600*1900mm	1100*800* 1900mm
Weight	750Kg±5Kg	1200Kg±5Kg
Cycle Life	>6000 times,25℃	>6000 times,25℃
Charging Temperature	0℃ ~ 45℃	0℃ ~ 45℃
Discharging Temperature	-20℃ ~ 55℃	-20℃ ~ 55℃
Communication	CANbus/RS485/RS232	CANbus/RS485/RS232
Safety Standard	IEC 62619, UN38.3, CE	UN38.3, CE

■ Container Energy Storage System

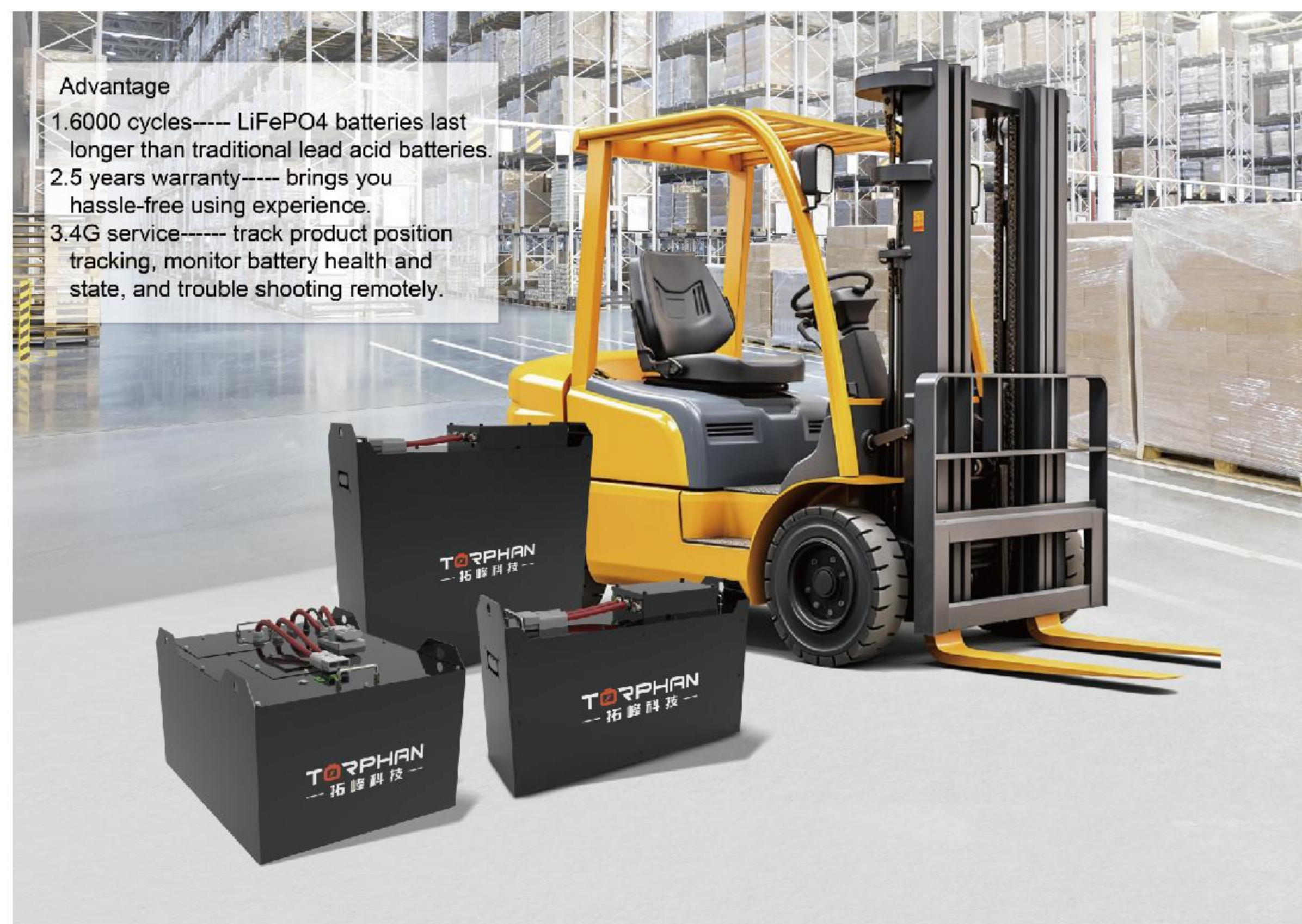
- High degree of system integration, integrated battery management system, PCS, temperature control system, fire control system, access control system, data monitoring system, AC and DC power distribution, lighting system, etc.
- Customizable design to meet different customer needs.
- Third-level BMS system architecture, safe and reliable.
- The charging mode includes pre-charging, constant-current charging, constant-volt charging.
- The energy storage system has perfect functions of communication, monitoring, management, control, early warning and protection. It operates continuously and safely for a long time. It can detect the running state of the system through the upper computer. It has abundant data analysis ability and emergency power supply function.



Model	TF50KW/100KWh-Air Cooling-A	TF100KW/215KWh-Air Cooling-A	TF100KW/215KWh-Air Cooling-B
Battery Capacity	100KWh	215KWh	215KWH
Battery Working Voltage Range	582.4~748.8V	582.4~748.8V	582.4~748.8V
Cooling	Air	Air	Air
BMS Communication Interface	RS485/CAN	RS485/CAN	RS485/CAN
PV Side Parameters			
PV Input volt Range			200~850V
MPPT			1 or 2
Max DC current			100A
AC Side Parameters			
Rated AC Power	50KW	100KW	100KW
Max AC Power	50KW	100KW	100KW
Rated Current	360A	722A	722A
Max Output Current	400A	800A	800A
DC Current Component	< 0.5 %	< 0.5 %	< 0.5 %
THDI	< 3 %	< 3 %	< 3 %
Rated AC Output Voltage	400V	400V	400V
AC Output Voltage Range	320V-460V	320V-460V	320V-460V
Rated Frequency	50/60Hz	50/60Hz	50/60Hz
Frequency Range	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz
PF	1lagging-1leading	1lagging-1leading	1lagging-1leading
Transformer	No	No	No
General Information			
Protection Degree	IP65	IP65	IP65
Fire Fighting System	Yes	Yes	Yes
Running Time (Full Power)	3-4h	5-6h	5-6h
Working Temperature	-20°C~+55°C	-20°C~+55°C	-20°C~+55°C
Dimension (W*D*H)	10 ft container	10 ft container	170*120*210cm
Weight	8000Kg	10000Kg	10000Kg
Pcs Communication Mode	RS485, CAN, TCP/IP	RS485, CAN, TCP/IP	RS485, CAN, TCP/IP
Pcs Communication Protocol	Modbus RTU, Modbus TCP, IEC104	Modbus RTU, Modbus TCP, IEC104	Modbus RTU, Modbus TCP, IEC104
Pcs Unit Cooling Mode	Forced air	Forced air	Forced air
Battery Unit Cooling Mode	Air conditioning cooling	Air conditioning cooling	Air conditioning cooling
Max Altitude	4500 m (derated above 3000m)	4500 m (derated above 3000m)	4500 m (derated above 3000m)
Relative Humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing



Lithium Forklift Battery



Advantage

- 1.6000 cycles----- LiFePO4 batteries last longer than traditional lead acid batteries.
- 2.5 years warranty----- brings you hassle-free using experience.
- 3.4G service----- track product position tracking, monitor battery health and state, and trouble shooting remotely.

Model	Li-Power 25230	Li-Power 25280	Li-Power 25460	Li-Power 25560	Li-Power 25690	Li-Power 25840
Rated Voltage	25.6					
Rated Capacity	230Ah	280Ah	460Ah	560Ah	690Ah	840Ah
System Energy	5.8Kwh	7.1Kwh	11.7Kwh	14.3Kwh	17.6Kwh	21.5Kwh
Working Volt Range (Vdc)	22.4~28.8					
Depth of Discharge	90%					
Recommend Use SOC Range	20%- 100%					
Max Charge Current	100A	100A	200A	200A	200A	200A
Max Constant Discharge Current	100A	140A	200A	200A	200A	200A
Pulsh Current 10s	230A	280A	460A	500A	500A	500A
Charge Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Discharge Temperature Range	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃
Storage Temperature Range	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃
Size (L*W*H) mm (Customize Available)	690*226*443/ 620*208 *443	690*226*443	810*260*750	810*260*750	760*325*770	760*325*770
Weight (Customize Available)	75Kg/65Kg	90Kg	160Kg	180Kg	230Kg	280Kg

Model	Li-Power 38230	Li-Power 38280	Li-Power 38460	Li-Power 38560	Li-Power 38690	Li-Power 38840
Rated Voltage	38.4Vdc					
Rated Capacity	230Ah	280Ah	460Ah	560Ah	690Ah	840Ah
System Energy	8.8Kwh	10.7Kwh	17.6Kwh	21.5Kwh	26.4Kwh	32.2Kwh
Working Voltage Range	33.6~43.2Vdc					
Depth of Discharge	90%					
Recommend Use SOC Range	20%- 100%					
Max Charge Current	100A	140A	200A	200A	200A	200A
Max Constant Discharge Current	100A	140A	200A	200A	200A	200A
Pulsh Current 10s	200A	280A	400A	500A	500A	500A
Charge Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Discharge Temperature Range	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃
Storage Temperature Range	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃
Size (L*W*H) mm (Customize Available)	532*230*940	532*230*940	800*580*400	800*580*400	800*800*400	800*800*400
Weight (Customize Available)	110Kg	150Kg	200Kg	250Kg	340Kg	400Kg



Model	Li-Power 51230	Li-Power 51280	Li-Power 51460	Li-Power 51560	Li-Power 51690	Li-Power 51840
Rated Voltage	51.2Vdc					
Rated Capacity	230Ah	280Ah	460Ah	560Ah	690Ah	840Ah
System Energy	11.7Kwh	14.3Kwh	23.5Kwh	28.6Kwh	35.3Kwh	43Kwh
Working Voltage Range	44.8~57.6Vdc					
Depth of Discharge	90%					
Recommend Use SOC Range	20%- 100%					
Max Charge Current	100A	140A	200A	200A	200A	200A
Max Constant Discharge Current	100A	140A	200A	200A	200A	200A
Pulsh Current 10s	200A	280A	400A	500A	500A	500A
Charge Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Discharge Temperature Range	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃
Storage Temperature Range	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃
Size (L*W*H) mm (Customize Available)	572*340*490	735*340*490	800*580*400	800*730*400	800*800*400	1000*800*400
Weight (Customize Available)	158Kg	174Kg	230Kg	300Kg	390Kg	450Kg

Model	Li-Power 73230	Li-Power 73280	Li-Power 73460	Li-Power 73560	Li-Power 73690	Li-Power 73840
Rated Voltage	73.6Vdc					
Rated Capacity	230Ah	280Ah	460Ah	560Ah	690Ah	840Ah
System Energy	16.9Kwh	20.6Kwh	33.8Kwh	41.2Kwh	50.7Kwh	61.8Kwh
Working Voltage Range	64.4~82.8Vdc					
Depth of Discharge	90%					
Recommend Use SOC Range	20%- 100%					
Max Charge Current	100A	140A	200A	200A	200A	200A
Max Constant Discharge Current	100A	140A	200A	200A	200A	200A
Pulsh Current 10s	230A	280A	400A	500A	500A	500A
Charge Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Discharge Temperature Range	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃
Storage Temperature Range	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃
Size (L*W*H) mm (Customize Available)	970*540*390	945*650*400	945*650*390	1000*800*400	970*480*620	970*650*620
Weight (Customize Available)	140Kg	180Kg	345Kg	410Kg	480Kg	580Kg

Model	Li-Power 80230	Li-Power 80280	Li-Power 80460	Li-Power 80560	Li-Power 80690	Li-Power 80840
Rated Voltage	80Vdc					
Rated Capacity	230Ah	280Ah	460Ah	560Ah	690Ah	840Ah
System Energy	18.4Kwh	22.4Kwh	36.8Kwh	44.8Kwh	55.2Kwh	67.2Kwh
Working Voltage Range	70~90Vdc					
Depth of Discharge	90%					
Recommend Use SOC Range	20%- 100%					
Max Charge Current	100A	140A	200A	200A	200A	200A
Max Constant Discharge Current	100A	140A	200A	200A	200A	200A
Pulsh Current 10s	230A	280A	400A	500A	500A	500A
Charge Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Discharge Temperature Range	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃	-20℃~55℃
Storage Temperature Range	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃	-30℃~60℃
Size (L*W*H) mm (Customize Available)	950*540*400	970*540*400	980*630*400	980*800*400	970*480*620	970*650*620
Weight (Customize Available)	160Kg	200Kg	365Kg	450Kg	500Kg	620Kg

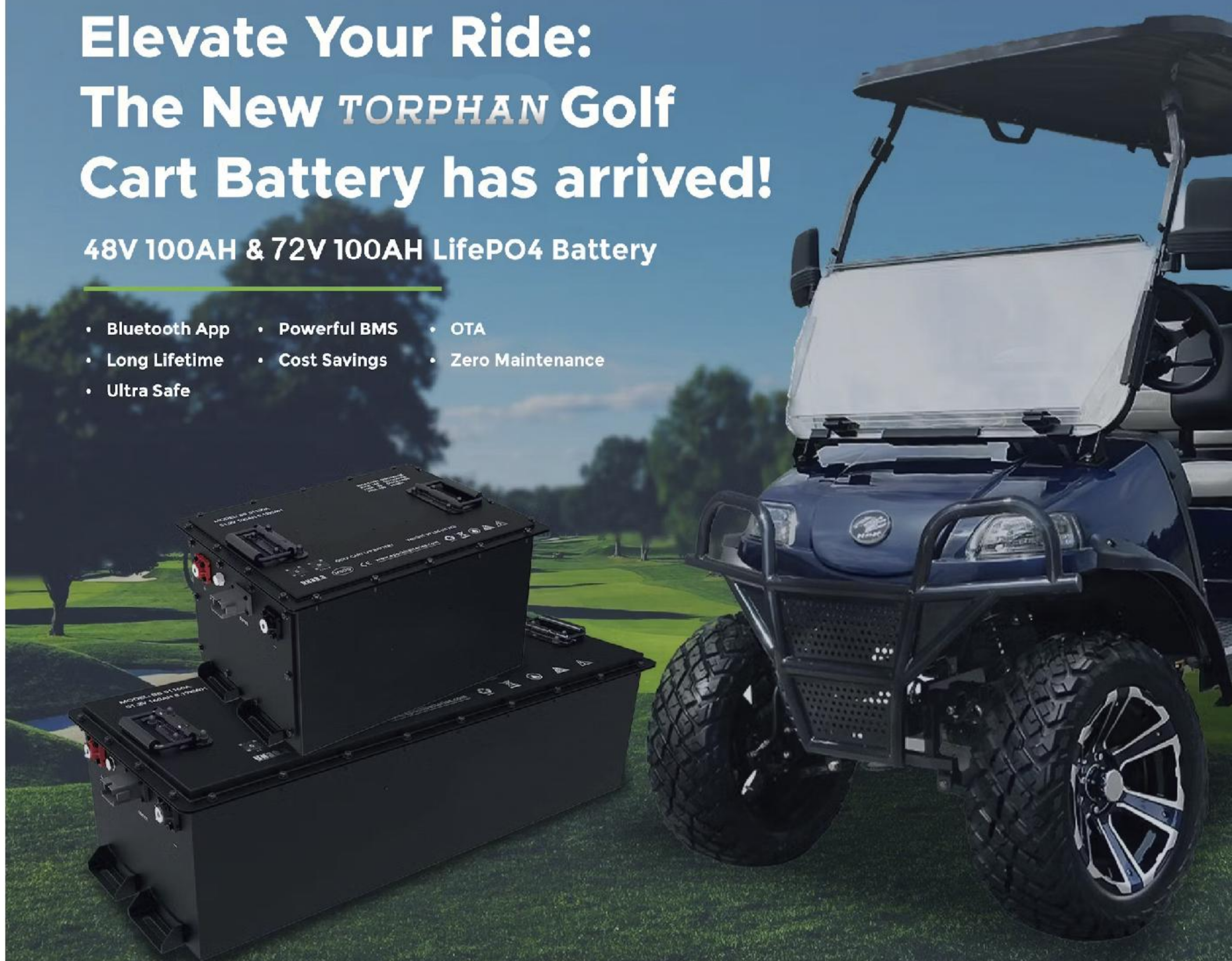


Lithium Golf Cart Battery

Elevate Your Ride: The New **TORPHAN** Golf Cart Battery has arrived!

48V 100AH & 72V 100AH LifePO4 Battery

- Bluetooth App
- Long Lifetime
- Ultra Safe
- Powerful BMS
- Cost Savings
- OTA
- Zero Maintenance





Model	TF36100	TF4850	TF48100	TF48105	TF72100
Rated Voltage	36V (38.4V)	48V (51.2V)	48V (51.2V)	48 V (51.2 V)	72V (76.8V)
Nominal Capacity	100Ah	50Ah	100Ah	105Ah	100Ah
Using Energy	3.45kwh	2.3kwh	4.6kwh	4.8kwh	6.9kwh
Working Voltage Range	33.6V-43.2V	44.8V-57.6V	44.8V-57.6V	44.8V-57.6V	67.2V-86.4V
Max Working Current	50A	25A	50A	50A	50A
Peak Current (15s)	100A	50A	100A	100A	100A
DOD	90%				
Siz (L*W*H) mm	385*338*245 mm	460*334*247 mm	565*330*255 mm	565*330*255 mm	740*320*246 mm
Weight (Kg)	34Kg	33Kg	45Kg	45Kg	72Kg
Cycle Life	>6000 times, 25℃				
Charging Temperature	0~50℃				
Discharging Temperature	-20~60℃				
Communication	CANbus, RS485				
Safety Standard	MSDS, CE, UN38.3, RHOS				
Packing	UN Pack				
Warranty	5 years				

■ Project Cases



• Container Energy Storage System •



• Household Energy Storage System •



• Motive Lithium Ion Batteries •

■ Why Torphan

Torphan Focus on Lithium ion batteries and energy storage system

- Customized solution— your idea, our production!
 - Plug & Play — seamless integration and compatibility with inverters and forklift!
 - Factory to Dealer&contractor —support , training and service!
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- ※ Torphan offers various Lithium Ion Batteries for energy storage system and nearly every make and model of electric industrial trucks.
 - ※ Torphan offers a full line of Torphan Chargers. These chargers are 100% compatible with our lithium batteries.
 - ※ Torphan engineers can help you upgrade your existing system to be used with Torphan Li-ion Batteries.
 - ※ Torphan customize the battery communication, power connector and charging profile.
 - ※ Torphan provide publicity material and technical training to help you get market.