GREEN TECH

BETTER ENERGY BETTER LIFE

ULTRA LONG LIFE • FAST CHARGE • SAFEST

Graphene Supercapacitor Battery Manufacturer and Energy Storage System Provider

BATTERY CELL

Breaking through energy storage technology, changing future energy landscape

www.greenteche.com

Smart Energy Strategy

Safety

Fast Charge

Long Life

Extreme Temperature

Smart BMS

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GREEN TECH

WHO WE ARE?

Shanghai Green Tech Company is an advanced capacitors manufacturer and graphene super capacitor energy storage system innovator with over 20 years of experience in the design, development, and production of super capacitors. Since 1998, we provided super capacitors and graphene super capacitor energy storage system products and solutions to over 1000 customers around the world. It is the state-certified new and high-tech enterprise in the new energy storage industry.

Today, the world runs on critical infrastructure and technology i.e. planes, hospitals, factories, data centers, vehicles, the electrical grid, industrial, consumer electronics, tele-communications.

These are things people depend on every day and the companies behind them depend on us to help solve some of the toughest power & storage challenges globally. At Green Tech, we're dedicated to improve people's lives and the environment with power & Storage systems that are more reliable, efficient, safe and sustainable.

We offer significant competitive advantages including delivery and production capabilities optimized to suit each individual customer inventory requirements, and global engineering teams experienced in developing new-to-market product solutions especially designed to fulfill customer's unique application requirements.

UN38.3 CE RoHS CEI0-21

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Development

1998

Factory Founded
The first military capacitor production line founded

2002

Green Tech team bought the military factory from government

2005

The first supercapacitor product was successfully developed and the cycle life reached 1 million times.

2010

Large-capacity supercapacitors were successfully developed and mass production was realized.

2014

Supercapacitor products were successfully applied to fast-charging buses and wind turbine pitch control system

2015

The high energy density graphene supercapacitor battery was successfully developed, which has an ultra-long cycle life and can realize fast charging and discharging.

2018

The new product will have an energy density of more than 100, which can completely replace the traditional battery.

2019

The company was rated as a national high-tech enterprise.

2020

Our products have passed the international battery safety standard test, which further proves that our products are very safe.

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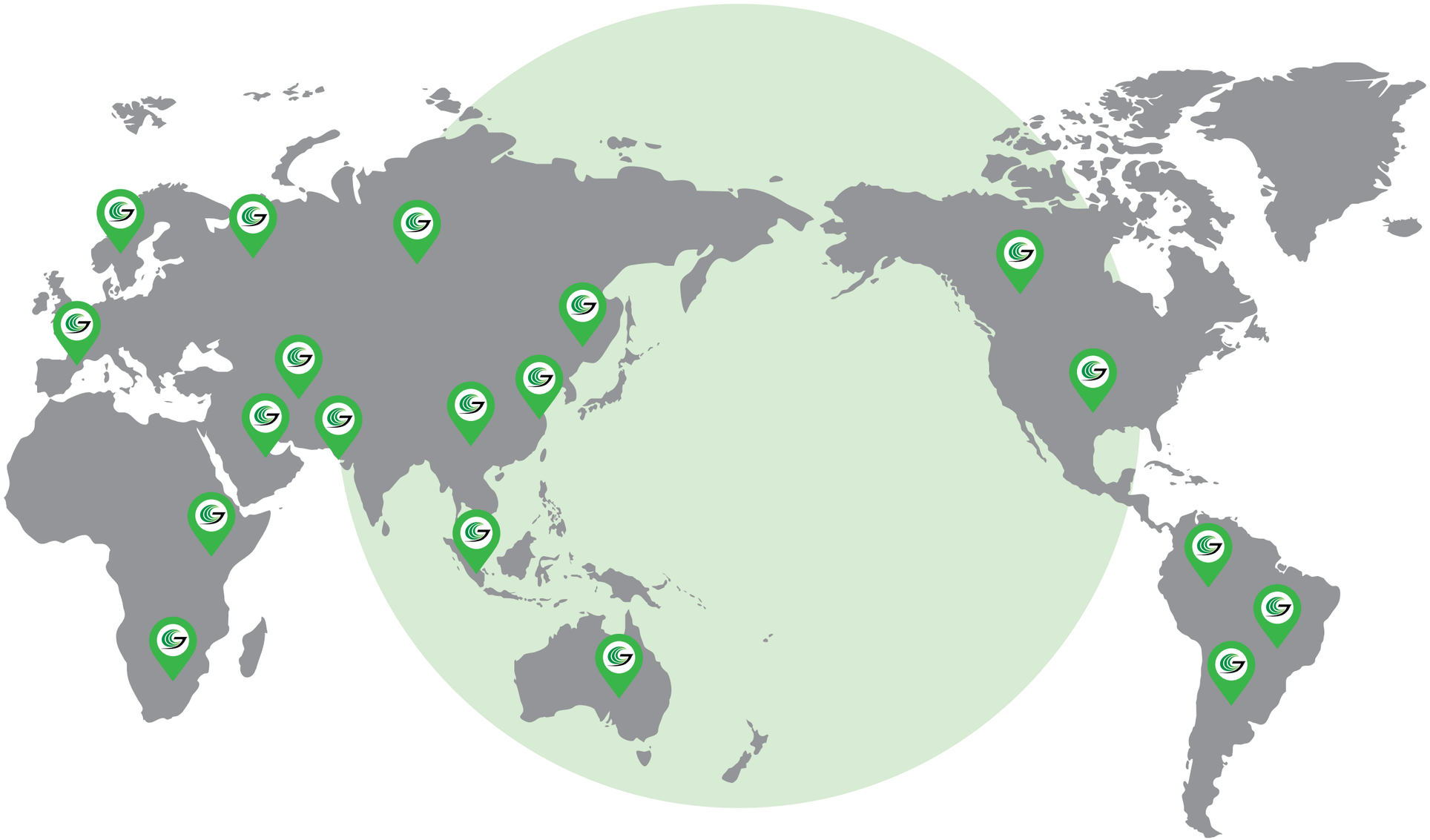
Global Market

Green Tech Energy works with partners globally to bring the right solutions to market, manufactured both locally and overseas allowing Green Tech Energy to service the ever growing global demand for battery storage.



Vertical Integration

Green Tech vertical integration strategy extends from core battery chemistry, including cathode and anode materials, electrolyte, and membrane separators, to application technologies including battery management systems(BMS)andother power electronics.

By integrating the process from raw material to system assembly, Green Tech is able to provide customized solutions with reduced project development time and controllable costs. Vertical integration also allows us to control product quality from top to bottom with our high standards.

- Material Technology Know-How
- Reduced Project Development Time
- Efficient Quality Control
- Cost Effective

Production Procedure

Green Tech R&D Target

Green Tech set its R&D target of “safer, lower cost, longer life and more enironmentally friendly”.

Green Tech innovative hybrid technology offers exceptional long life, high depth of discharge, safety & energy efficiency. Our Intelligent Battery Management Software provides utmost safety and performance even in most harsh conditions.

R&D target

- Reduce the levelized cost of energy under 0.02USD
- Longer life time up to 25years
- Higher round trip efficiency >98%
- Easier installation
- Remote controllable
- Smarter system management

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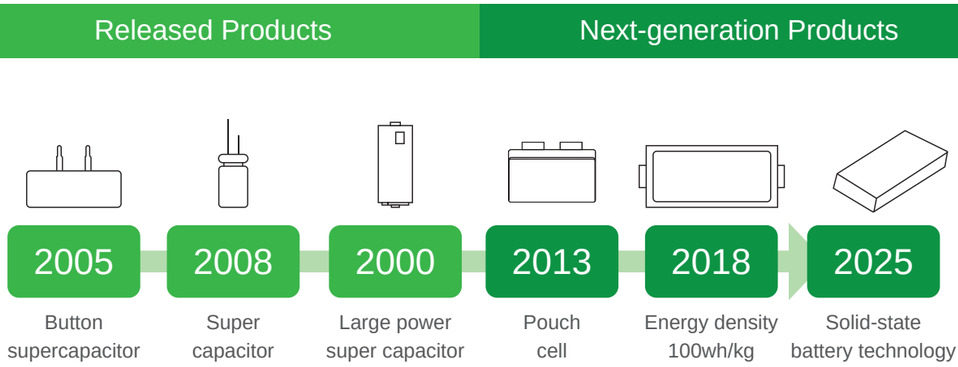
R&D Product Roadmap

Future Product Plans

- 10-15 minute ultra-fast charging, long life and lower cost.
- Improving energy density



Technology strategy

- Insist on the "fast charging, long life, high safety" three leading technology
- Master four core technologies of battery materials (anode and cathode, diaphragm and electrolyte)
- Intelligent lean manufacturing technology
- 10-15 minute ultra-fast charging,long life and Uninflammable with improved energy density

R&D

Battery Material Development

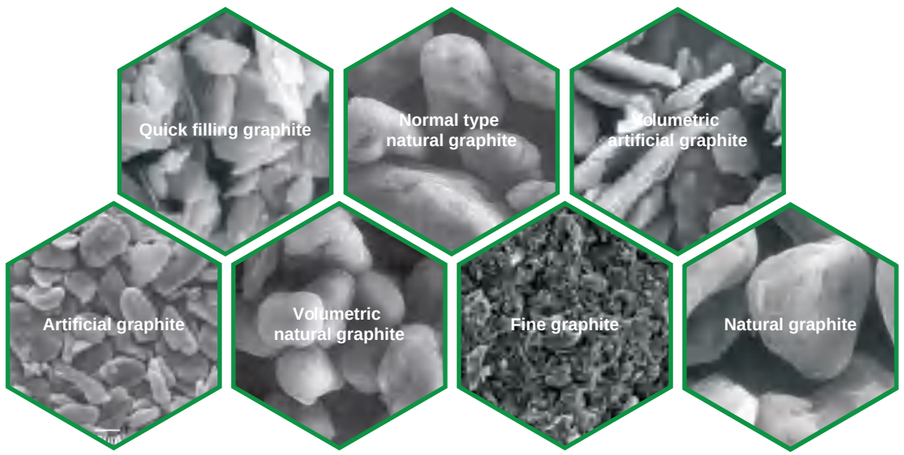
Cell Development

Battery System Development

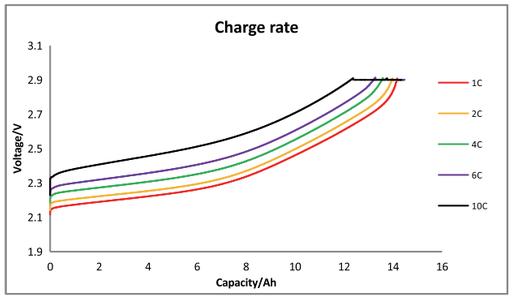
Green Tech has its material, cell and product R&D centers in Japan, U.S. and Germany.

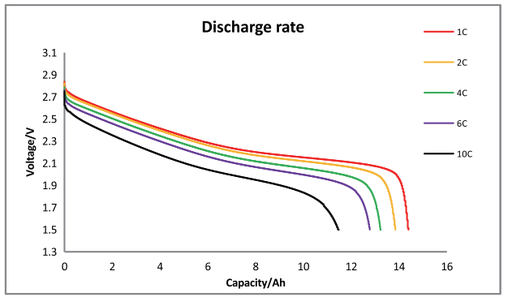
Green tech focuses on material and product development in its own R&D center, and ensures all the products pass the complete and qualified tests before outgoing. Meanwhile, Green tech also enhances the close cooperation with Japan, US and Germany scientific research institutions to lead this field ahead.

Cathode Material For Graphene Ultracapacitor Batteries

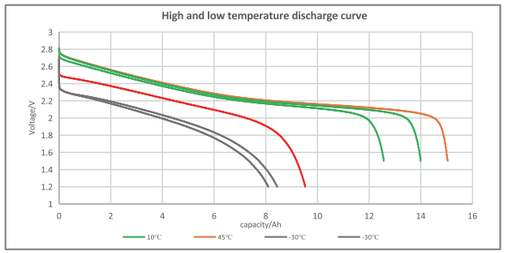


EG Series Test Result





Discharge temperature (° C)	Capacity (Ah)	Test C/capacity at 25 ° C(%)
-20	9.54	67.63%
25	14.10	100.00%
45	15.25	108.13%



Uninflammable Electrolyte

Uninflammable

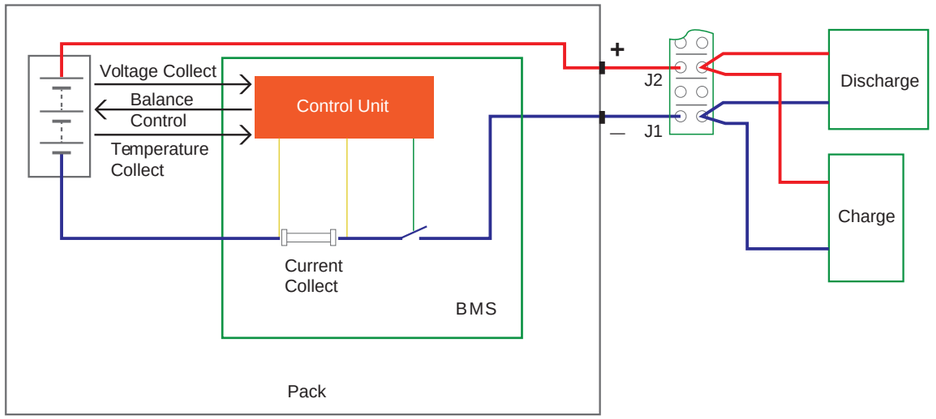
10-15 minute fast charge

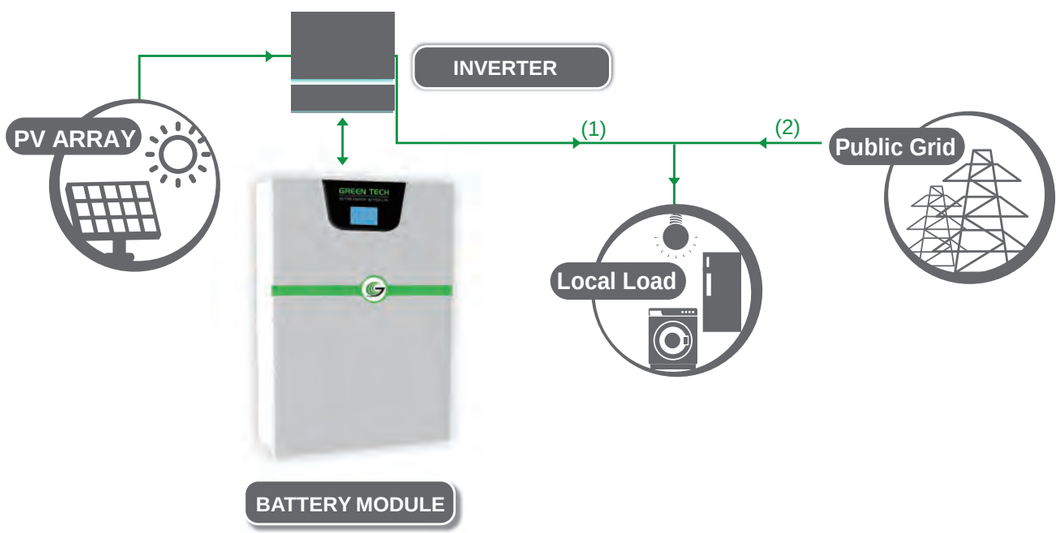
Long cycle life

Green Tech electrolyte is not only Uninflammable, but also ensures fast charging within 10-15 minutes with a long cycle life.

Smart Manage System

- The interface of charge and discharge is integrated.
- The cell voltage and module temperature is detected by BMS.
- Support fast charging and discharging.
- Active monitoring of the system.
- Smart action when protection function activated.





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Cell Performance

Products Series	EG Series	EM Series	EF Series
Cell Cycle Life (Projected)	Up to 50,000 times	Up to 20,000 times	Up to 10,000 times
Charge Temperature Range	-40℃ ~ +65℃	0℃ ~ +50℃	0℃ ~ +50℃
Discharge Temperature Range	-40℃ ~ +65℃	-20℃ ~+60℃	-20℃ ~ +55℃
Max. Rate of Charge	Up to 10C	Up to 3C	Up to 2C
Max. Rate of Discharge	Up to 6C	Up to 6C	Up to 2C
Cells Energy Density (Wh/kg)	Up to 92	Up to 220	Up to 160
Thermal Runaway	No Risk	No Risk	No Risk

Green Tech developped series cells with different performance, above listed some best parameters for reference.To avoid excessive design and save the cost, we will recommend suitable cells and design the system according to customers' requirement details.

PACK Production

>> PACK production line includes automatic sortig, stacking, laser welding, AGV flexible assembly and other fully

>> automated/semi-automatic equipment, which increase production efficiency and ensures the product quality.

Production and Quality Control

Cell Production

Automatic proportioning system, double-sided coating equipment, pole pieces of high-speed;

cutting equipment, automatic assembly line, in the junction measurement surface density, viscosity testing equipment are adopted during production process;

ABB robot, KUKA robot and spider hand, lead a significant reduction in the number of operators;

Intelligent MES management system can automatically generate manufacturing, quality control, equipment maintenance data and the battery product bar code retrospective management, timely feedback abnormalities and guide the production management;

Production line strictly controls the humidity and cleanliness.

Capwall series

Applications

- Residential solar ESS
- Back up power supply
- Grid peak-valley balance
- wind energy storage system
- UPS
- Electric power systems
- Home appliances

Safest & Reliable

Long lifespan

Fast response

Capitalization

Elegant design

Smart Home

Capwall series

GREEN TECH

PERFORMANCE SPECIFICATIONS			
Part Number	GTEM-48V5.5K-W	GTEM-48V10K-W	GTEM-48V15K-W
Energy Storage	5.5KWh	10KWh	15KWh
Nominal Voltage	48V/DC	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58.8V/DC	58.8V/DC
Discharge Cut-off Voltage	39.2V/DC	39.2V/DC	39.2V/DC
ESR/AC @1KHz 50% SOC	<10mΩ	<8mΩ	<6mΩ
Max. Continuous Charge Current	100A	200A	100A
Max. Continuous Discharge Current	100A	200A	100A
Power/Energy	0.926	1.01	0.34
Round Trip Efficiency*[1]	96.3%	96.5%	97.2%
Charge Temperature	0°C ~ +55°C		
Discharge Temperature	-20°C ~+60°C		
Self-discharge Rate	2% per month		
Recommended Depth of Discharge	⩽ 90%		
Maximum Depth of Discharge	100%		
Cooling Method	Natural cooling		
Mounting Options	Wall/floor		
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle, cell's voltage		
COMPLIANCE INFORMATION			
Certificate Options	IEC62619,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS		
CONVENTIONAL PARAMETERS			
Dimensions(WxDxH)	470x545x194(mm)	470x792x194(mm)	700x925x194(mm)
Weight	50Kg	65Kg	110Kg
Operating Humidity	0~90% RH Non-condensing		
Environmental Protection	IP20		

Capwall series

Applications

- Residential solar ESS
- Back up power supply
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- wind energy storage system
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PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-48V15K-W2	GTEM-400V14.4K-W
Energy Storage	15.2KWh	14.4KWh
Nominal Voltage	48V/DC	400V/DC
Maximum Charge Voltage	58.8V/DC	453V/DC
Discharge Cut-off Voltage	39.2V/DC	292V/DC
ESR/AC @1KHz 50% SOC	<30mΩ	<100mΩ
Max. Continuous Charge Current	200A	35A
Max. Continuous Discharge Current	200A	35A
Power/Energy	0.68	0.97
Round Trip Efficiency*[1]	96.8%	98.2%
Charge Temperature	0°C ~ +55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	2% per month	
Recommended Depth of Discharge	⩽ 90%	
Maximum Depth of Discharge	100%	
Cooling Method	Natural cooling	
Mounting Options	Wall/floor	
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle, cell's voltage	
COMPLIANCE INFORMATION		
Certificate Options	IEC62619,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	700x845x194(mm)	700x840x194(mm)
Weight	95Kg	115Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP20	

Capess series

Applications

- Household back-up power supply
- Miro-grid energy storage
- Solar power ESS
- Telecom tower station power supply
- UPS / Commercial / Industrial
- Wind energy storage system
- Data center back-up power

- Safest & Reliable
- Long lifespan
- High energy density
- Modular
- Fast response
- Capitalization

PERFORMANCE SPECIFICATIONS			
Part Number	GTEM-48V3600-E	GTEM-48V5500-E	GTEM-48V7400-E
Energy Storage	3.6KWh	5.59KWh	7.46KWh
Nominal Voltage	48V/DC	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58.8V/DC	58.8V/DC
Discharge Cut-off Voltage	39.2V/DC	39.2V/DC	39.2V/DC
ESR/AC @1KHz 50% SOC	<15mΩ	<10mΩ	<8mΩ
Max. Continuous Charge Current	100A	100A	100A
Max. Continuous Discharge Current	100A	100A	100A
Power/Energy	1.38	0.926	0.67
Round Trip Efficiency*[1]	95%	97.8%	97.5%
Charge Temperature	-0°C ~+55°C		
Discharge Temperature	-20°C ~+60°C		
Self-discharge Rate	2% per month		
Recommended Depth of Discharge	⩽ 90%		
Maximum Depth of Discharge	100%		
Cooling Method	Natural cooling		
Shell Material	Metal & ABS plastic		
Monitoring Data	System voltage,current,temperature, SOC,SOH,cycle,cell′s voltage		
COMPLIANCE INFORMATION			
Certificate Options	IEC62619,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS		
CONVENTIONAL PARAMETERS			
Dimensions(WxDxH)	475x465x177(mm)	471x465x177(mm)	471x565x177(mm)
Weight	32Kg	42Kg	51kg
Operating Humidity	0~90% RH Non-condensing		
Environmental Protection	IP20		

Capess series

Applications

- Household back-up power supply
- Miro-grid energy storage
- Solar power ESS
- Telecom tower station power supply
- UPS / Commercial / Industrial
- Wind energy storage
- Data center back-up power supply

Safest & Reliable

Long lifespan

High energy density

Modular

Fast response

Capitalization

PERFORMANCE SPECIFICATIONS			
Part Number	GTEF-48V3000-E	GTEF-48V6000-E	GTEF-48V7600-E
Energy Storage	3.0KWh	6.0KWh	7.6KWh
Nominal Voltage	48V/DC	48V/DC	48V/DC
Maximum Charge Voltage	57.6V/DC	57.6V/DC	57.6V/DC
Discharge Cut-off Voltage	44.8V/DC	44.8V/DC	44.8V/DC
ESR/AC @1KHz 50% SOC	<15mΩ	<10mΩ	<8mΩ
Max. Continuous Charge Current	60A	100A	100A
Max. Continuous Discharge Current	100A	100A	100A
Peak Current(3s)	110A	110A	110A
Power/Energy	0.98	0.926	0.67
Charge Temperature	0°C ~+55°C		
Discharge Temperature	-10°C ~ +60°C		
Self-discharge Rate	2% per month		
Recommended Depth of Discharge	⩽ 90%		
Maximum Depth of Discharge	100%		
Cooling Method	Natural cooling		
Shell Material	Metal & ABS plastic		
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle, cell's voltage		
COMPLIANCE INFORMATION			
Certificate Options	IEC62619,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS		
CONVENTIONAL PARAMETERS			
Dimensions(WxDxH)	446x485x133(mm)	446x500x250(mm)	446x550x250(mm)
Weight	28Kg	52Kg	62Kg
Operating Humidity	0~90% RH Non-condensing		
Environmental Protection	IP20		

Caprack series

Applications

- Household back-up power supply
- Miro-grid energy storage
- Solar power ESS
- Peak Shaving
- UPS / Commercial / Industrial
- Back-up power supply

Safest & Reliable

Long lifespan

High energy density

Modular

Fast response

Perfect compatibility

Caprack series

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PERFORMANCE SPECIFICATIONS	
Part Number	GTEM-400V14.4K-R
Energy Storage	14.4KWh
Nominal Capacity	36Ah±5%
Nominal Voltage	400Vd.c.
Maximum Charge Voltage	453.6Vd.c.
Discharge Cut-off Voltage	291.6V/d.c.
ESR/AC @1KHz 50% SOC	<200mΩ
Max. Continuous Charge Current	50A
Max. Continuous Discharge Current	50A
Real Power, max continuous	12kw
Max. Energy Density	72.9Wh/kg
Max. Power Density	120W/kg
Communication Protocol	CAN
Recommended Depth of Discharge	⩽ 90%
Maximum Depth of Discharge	100%
Charge Temperature	0°C ~+55°C
Discharge Temperature*1	-20°C ~+60°C
Shell Material	Metal & ABS plastic
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell's voltage
COMPLIANCE INFORMATION	
Certificate Options	IEC62619:2017,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS
CONVENTIONAL PARAMETERS	
Dimensions(WxDxH)	520x732x653(mm)
Weight	165Kg±5Kg
Operating Humidity	0~90% RH Non-condensing
Environmental Protection	IP20 Indoor

Caprack series

Applications

- Household back-up power supply
- Miro-grid energy storage
- Solar power ESS
- Peak Shaving
- UPS / Commercial / Industrial
- Grid voltage stabilization
- Back-up power

Safest & Reliable

Long lifespan

High energy density

Modular

Fast response

Perfect compatibility

PERFORMANCE SPECIFICATIONS	
Part Number	GTEM-400V50K-R
Energy Storage	50.3KWh
Nominal Voltage	400V/DC
Maximum Charge Voltage	453.6V/DC
Discharge Cut-off Voltage	302.4V/DC
ESR/AC @1KHz 50% SOC	<100mΩ
Max. Continuous Charge Current	120A
Max. Continuous Discharge Current	120A
Configuration	108S6P
Round Trip Efficiency*1	98%
Self-discharge Rate	2% per month
Recommended Depth of Discharge	⩽ 90%
Maximum Depth of Discharge	100%
Charge Temperature	0°C ~+55°C
Discharge Temperature	-20°C ~+60°C
Cooling Method	Natural cooling
Shell Material	Metal & ABS plastic
Parallel connection optional	Up to 4sets (400V 200KWh)
Monitoring Data	System voltage,current,temperature, SOC,SOH,cycle,cell′s voltage
COMPLIANCE INFORMATION	
Certificate Options	IEC62619:2017,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS
CONVENTIONAL PARAMETERS	
Dimensions(WxDxH)	560x732x1308(mm)
Weight	385Kg
Operating Humidity	0~90% RH Non-condensing
Environmental Protection	IP20

EG series

Applications

- Peak loading shaving
- Grid frequency stabilization
- Grid voltage stabilization
- Heave crane machinery
- Industry power compensation
- Charging station power supplier

Safest & Reliable

Long lifespan

High energy density

Modular

Fast response

Perfect compatibility

PERFORMANCE SPECIFICATIONS	
Part Number	GTEG-700V28K-R
Energy Storage	28KWh
Nominal Capacity	40Ah
Nominal Voltage	700V/DC
Maximum Charge Voltage	856.8V/DC
Discharge Cut-off Voltage	550.8V/DC
ESR/AC @1KHz 50% SOC	<100mΩ
Max. Continuous Charge Current	200A
Max. Continuous Discharge Current	200A
Discharge rate	5C
Max. Continuous Output Power	140KW
Charge Temperature*1	-20°C ~+60°C
Discharge Temperature*2	-40°C ~+60°C
Self-discharge Rate	2% per month
Maximum Depth of Discharge	100%
Cooling Method	Natural cooling
Environmental Protection	Indoor
Terminal	Large power energy storage terminals
Parallel Connection	Up to 4sets (3 subsystem,max. Power 420KW)
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell´s voltage
COMPLIANCE INFORMATION	
Certificate Options	IEC62619:2017,IEC62040, EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, RoHS, UN38.3, MSDS
CONVENTIONAL PARAMETERS	
Dimensions(WxDxH)	520x732x1904(mm)
Weight	580Kg
Operating Humidity	0~90% RH Non-condensing
Environmental Protection	IP65

EG series

Applications

- Refrigeration house forklift
- Golf carts
- Electric Rickshaws
- Electric ATV
- Forklifts
- AGV

- Safest & Reliable
- Long lifespan
- Fast rechargeable
- Low self-discharge
- Fast response
- Low maintenance

PERFORMANCE SPECIFICATIONS		
Part Number	GTEG-24V4180-F	
Energy Storage	4.18KWh	---
Nominal Capacity	182Ah	±5% @25°C
Nominal Voltage	24V	---
Absolute Maximum Voltage	28V	---
Cut-off Voltage (discharging)	18V	
Configuration	10S13P	---
Pack resistance	< 10 mΩ	@ 1KHz AC，50% SOC
Continuous Charge Current	150A	---
Continuous Discharge Current	150A	---
Peak Discharge Current	300A	10s
Recommended Depth of Discharge	90%	---
Maximum Depth of Discharge	100%	---
Operating Temperature Discharge	-30°C ~+55°C	---
Operating Temperature Charge	-30°C ~+55°C	---
Storage Humidity	25% ~ 95%RH	---
Operating Humidity	0 – 90% RH	---
Storage Temperature	-20°C ~40 °C	SOC>30%，one full charge needed per two months
Cooling Method	Natural cooling	---
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	650*195*600(mm)	
Weight	225Kg (Counterweight according to customer requirements)	
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP55	

EM series

Applications

- Forklifts
- Golf carts
- Electric Rickshaws
- Electric Motorcycle
- Electric ATV
- AGV

Safest & Reliable

Long lifespan

Fast rechargeable

Low self-discharge

Fast response

Low maintenance

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PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-48V21K-F	GTEM-48V32K-F
Energy Storage	21KWh	32KWh
Rated Voltage	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58V/DC
Discharge Cut-off Voltage	37.8V/DC	40V/DC
ESR/AC @1KHz 50% SOC	<50mΩ	<50mΩ
Max. Continuous Charge Current	420A	300A
Max. Continuous Discharge Current	420A	300A
Cut-off Current (charging)	4A	4A
Peak Discharge Current (3s)	800A	500A
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	3% per month	
Maximum Depth of Discharge	100%	
Cooling Method	Natural cooling	
Monitoring Data	Module voltage,SOC	
Indicator light display	Capacity %	
Environmental Protection	Customized	
Series-Parallel Connection	Not allowed	
Storage Conditions	-20°C ~+40°C / 5% ~ 95%RH SOC>30%，one full charge needed per two months	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	840x480x546(mm)	965x670x700(mm)
Weight	240Kg	960Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP65	

EM series

Applications

- Forklifts
- Golf carts
- Electric Rickshaws
- Electric Motorcycle
- Electric ATV
- AGV

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GREEN TECH

PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-24V5000-F	GTEM-72V15.5K-F
Energy Storage	5.0KWh	15.5KWh
Rated Voltage	24V/DC	72V/DC
Maximum Charge Voltage	29V/DC	84V/DC
Discharge Cut-off Voltage	20V/DC	56V/DC
ESR/AC @1KHz 50% SOC	<10mΩ	<50mΩ
Max. Continuous Charge Current	250A	150A
Max. Continuous Discharge Current	250A	150A
Peak Discharge Current (10s)	300A	300A
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	3% per month	
Recommended Depth of Discharge	⩽ 90%	
Maximum Depth of Discharge	100%	
Cooling Method	Natural cooling	
Monitoring Data	System voltage,current,temperature,SOC,cell´s voltage	
Parallel Connection	Not Allowed	
Series-Parallel Connection	Not allowed	
Indicator light display	Capacity %	
Storage Conditions	-20°C ~+40°C 25% ~ 95%RH SOC>30%，one full charge needed per two months	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	645x565x245(mm)	740x540x320(mm)
Weight	190Kg	240Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP65	

EM series

Applications

- Golf carts
- Electric Rickshaws
- Electric ATV
- Forklifts
- AGV

Safest & Reliable

Long lifespan

Fast rechargeable

Low self-discharge

Fast response

Low maintenance

GREEN TECH

PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-48V3600-G	GTEM-48V4500-G
Energy Storage	3.6KWh	4.53KWh
Rated Voltage	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58.8V/DC
Discharge Cut-off Voltage	39.2V/DC	39.2V/DC
ESR/AC @1KHz 50% SOC	<20mΩ	<30mΩ
Max. Continuous Charge Current	200A	200A
Max. Continuous Discharge Current	200A	200A
Cut-off Current (charging)	4A	4A
Absolute Peak Current 3s	300A	400A
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	2% per month	
Recommended Depth of Discharge	⩽ 90%	
Maximum Depth of Discharge	100%	
Cooling Method	Natural cooling	
Storage Conditions	-20°C ~+40°C 25% ~ 95%RH SOC>30%，one full charge needed per two months	
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell′s voltage	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	720x355x252(mm)	793x355x252(mm)
Weight	55Kg	55Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP65	

EM series

Applications

- Golf carts
- Electric Rickshaws
- Forklifts
- Electric tools
- Industry machine
- Electric ferry
- Electric sightseeing vehicle
- AGV

- Safest & Reliable
- Long lifespan
- Fast rechargeable
- Low self-discharge
- Fast response
- Low maintenance

GREEN TECH

PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-48V6500-G	GTEM-48V8500-G
Energy Storage	6.5KWh	8.5KWh
Nominal Capacity	130Ah	171Ah
Rated Voltage	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58.8V/DC
Discharge Cut-off Voltage	39.2V/DC	39.2V/DC
ESR/AC @1KHz 50% SOC	<15mΩ	<15mΩ
Max. Continuous Charge Current	200A	200A
Max. Continuous Discharge Current	200A	200A
Absolute Peak Current 3s	300A	300A
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	2% per month	
Recommended Depth of Discharge	⩽ 90%	
Maximum Depth of Discharge	100%	
Indicator light display	Capacity %	
Cooling Method	Natural cooling	
Storage Conditions	-20°C ~+40°C 25% ~ 95%RH SOC>30%，one full charge needed per two months	
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell's voltage	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	950x400x252(mm)	1124x400x256(mm)
Weight	75Kg	82Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP65	

EM series

Applications

- Electric Motorcycle
- Electric Rickshaws
- Golf carts
- Electric ATV
- Forklifts
- AGV
- UPS

Safest & Reliable

Long lifespan

Fast rechargeable

Low self-discharge

Fast response

Low maintenance

GREEN TECH

PERFORMANCE SPECIFICATIONS		
Part Number	GTEM-48V1800-M	GTEM-48V3300-M
Energy Storage	1800Wh	3300Wh
Rated Voltage	48V/DC	48V/DC
Maximum Charge Voltage	58.8V/DC	58.8V/DC
Discharge Cut-off Voltage	39.2V/DC	39.2V/DC
ESR/AC @1KHz 50% SOC	<12mΩ	<10mΩ
Max. Continuous Charge Current	30A	50A
Max. Continuous Discharge Current	80A	80A
Absolute Peak Current 3s	100A	100A
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+60°C	
Self-discharge Rate	3% per month	
Recommended Depth of Discharge	⩽ 90%	
Maximum Depth of Discharge	100%	
Indicator light display	Capacity %	
Cooling Method	Natural cooling	
Storage Conditions	-20°C ~+40°C 25% ~ 95%RH SOC>30%，one full charge needed per two months	
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell′s voltage	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017 EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	230x180x300(mm)	230x180x430(mm)
Weight	15.5Kg	24Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP66	

EF series

Applications

- Forklifts
- Golf carts
- Electric Rickshaws
- Electric ATV
- AGV
- UPS

- Safest & Reliable
- DoD up to 100%
- Fast rechargeable
- Low self-discharge
- Fast response
- Low maintenance

PERFORMANCE SPECIFICATIONS		
Part Number	GTEF-80V47K-F	GTEF-80V80K-F
Energy Storage	47.5KWh	79.8KWh
System Nominal Capacity	600Ah	1008Ah
Rated Voltage	80V/DC	80V/DC
Maximum Charge Voltage	90V/DC	90V/DC
Discharge Cut-off Voltage	70V/DC	70V/DC
ESR/AC @1KHz 50% SOC	<50mΩ	<50mΩ
Max. Continuous Charge Current	150A	150A
Max. Continuous Discharge Current	300A	300A
Peak Discharge Current (10s)	500A	500A
Output Terminal	REMA	REMA
Charge Temperature	0°C ~+55°C	
Discharge Temperature	-20°C ~+55°C	
Self-discharge Rate	3% per month	
Recommended Depth of Discharge	5%~90%	
Maximum Depth of Discharge	100%	
Cooling Method	Natural cooling	
Storage Conditions	-20°C ~+40°C 25% ~ 95%RH SOC>30%，one full charge needed per two months	
Monitoring Data	System voltage,current, temperature, SOC,SOH,cycle,cell′s voltage	
COMPLIANCE INFORMATION		
Certificate Options	EN 62133:2013, EN 55032:2015+AC:2016, EN 55035:2017, EN 61000-3-2:2014, EN 61000-3-3:2013, UN38.3	
CONVENTIONAL PARAMETERS		
Dimensions(WxDxH)	1025x710x784(mm)	1140x985x600
Weight	1280Kg	1580Kg
Operating Humidity	0~90% RH Non-condensing	
Environmental Protection	IP54	

GLOBAL PROJECTS











After-sales Service

>> With rich management experience, efficient after-sales service management organization;

>> Experienced, responsive and conscientious service team;

>> Improve the effective service management system;

>> The spare parts warehouse in the factory center as the core, the secondary spare parts warehouse in the regional service station and the tertiary spare parts warehouse in the customer concentration area as the auxiliary spare parts guarantee;

>> The GPRS remote terminal platform is established to conduct remote monitoring and fault prediction of battery operation data.

SHANGHAI GREEN TECH CO., LTD.

Tel: +86-21-5031 0528

Mail: info@greenteche.com

https://www.greenteche.com

Add: No. 71 Luda Road,

Pudong New District Shanghai 200131, China