



# SHANGHAI GREEN TECH CO., LTD.

QUALITY MANAGEMENT SYSTEM: INDUSTRIAL ISO9001-2015 MILITARY GJB9001B-2009

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## PRODUCTS CATALOGUE



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## GRAPHENE SUPER CAPACITORS



GTCAP design and produce advanced graphene super capacitors and capacitor energy storage module system, with big energy density, large power, long life, wide temperature range and low self-discharge.

GTCAP Graphene super capacitor compare with other energy storage parts:

Items	GTCAP Graphene Supercap	Lead acid battery	Li-ion battery
Operate Temperature Range	<b>-40°C~+70°C</b>	0°C~+45°C	-25°C~+60°C
Cycle Life	<b>&gt;50,000 times</b>	300~500 times	1000~2000 times
Energy Density	<b>75Wh/kg</b>	40Wh/kg	150Wh/kg
Power Density	<b>500W/kg</b>	150~400W/kg	315W/kg
Maintenance	<b>Free</b>	Often with high cost	Often with high cost
Recharge time	<b>Within 10 min</b>	8~12 hrs	6~8 hrs
Risk of Explosion	<b>None</b>	None	Yes
Risk of Burning	<b>None</b>	None	yes
Electrode Materials	<b>Active carbon</b>	Lead oxide	Li oxide and carbon materials
Electrolyte Materials	<b>Organic solvent</b>	Sulfuric acid solution	Organic solvent
Cost	<b>0.4~0.9USD/wh</b>	0.2USD/Wh	0.75USD/Wh
Spider Diagram			

### Graphene Super Capacitor Cells

Cells					
Part Number	GTEG-2R7-153UN3566	GTEG-2R7-903UT60138	GTEG-2R7-104UT66161	GTEG-2R7-154UT66161	GTEG-2R7-164UT66161
Capacitance	15000F/4.5Ah	90000F/25Ah	100000F/30Ah	150000F/40Ah	160000F/45Ah
Optimum Working Voltage	2.7V~1.5V	2.7V~1.5V	2.7V~1.5V	2.7V~1.5V	2.7V~1.5V
Energy Storage	10Wh	58Wh	69Wh	92Wh	103Wh
Operate Temperature	-40°C~+65°C	-40°C~+65°C	-40°C~+65°C	-40°C~+65°C	-40°C~+65°C
Max. Recharge Current	10A	150A	180A	240A	270A
Cycle life (100% DOD)	30000 times	50000 times	50000 times	50000 times	50000 times
Size	35*66mm	60*138mm	66*161mm	66*161mm	66*161mm
Weight	120g	800g	1200g	1250g	1255g

Cold Starting	Solar Power	Telecom Station	Military
			
<p>Burst Power Provide</p> <p>Discharge capacity <math>\geq 70\%</math> x initial capacity at <b>-20°C</b></p> <p>Discharge capacity <math>\geq 53\%</math> x initial capacity at <b>-40°C</b></p> <p>Recharge capacity <math>\geq 92\%</math> x initial capacity at <b>-20°C</b></p> <p>Recharge capacity <math>\geq 68\%</math>* initial capacity at <b>-40°C</b></p>	<p>50000 times cycle life or &gt;30 years</p> <p>Low ESR increase solar power efficiency</p> <p>Maintenance free</p> <p>Wide temperature range</p>	<p>High reliability</p> <p>50000 times cycle life or &gt;30 years</p> <p>Good performance</p> <p>Maintenance free</p> <p>Wide temperature range</p>	<p>High reliability</p> <p>Safety</p> <p>Incombustible</p> <p>Inexplosive</p> <p>50000 times cycle life or &gt;30 years</p>

GTCAP Graphene super capacitor widely use in UPS,engine cold starting,solar street light,solar power system,telecom base station,military,automotive,AGV,forklift and so on.



Cells technology: 10 min fast charge, wide temperature range, 30 years life

BMS technology: Bidirectional high precision balanced, safety

Pack technology: heat and electricity management, high efficiency and safety.

Item	Operate Voltage	Module Capacity	Energy Storage	Max. Recharge Current	Module Weight	Module Size
12V/25Ah	13.5V~8V	16000F/25Ah	290Wh	150A	6.5kg	220x140x180mm
16V/25Ah	16.2V~9.6V	13000F/25Ah	348Wh	150A	7.5kg	220x140x180mm
13.5V/40Ah	13.5V~8V	26000F/40Ah	460Wh	160A	16kg	500x220x230mm
16V/40Ah	16.2V~9.6V	21000F/40Ah	550Wh	160A	11kg	250X150X250mm
24V/25Ah	27V~16V	8000F/25Ah	580Wh	50A	9.6kg	400X300X80mm
24V/60Ah	27V~16V	20000F/60Ah	1380Wh	120A	23kg	800X300X80mm
24V/40Ah	27V~16V	13000F/40Ah	920Wh	160A	18kg	350X200X230mm
48V/25Ah	48.6V~28.8V	5000F/25Ah	1000Wh	150A	25kg	400x270x190mm
48V/40Ah	54V~32V	6500F/40Ah	1840Wh	200A	30kg	350x300x250mm



Cells technology: 10 min fast charge, wide temperature range, 30 years life

BMS technology: Bidirectional high precision balanced, safety

Pack technology: heat and electricity management, high efficiency and safety.

**GTCAP provide capacitor energy storage system design and customization.**

Item	Operate Voltage	Module Capacity	Energy Storage	Max. Recharge Current	Module Weight	Module Size
48V/80Ah	54V~32V	13000F/80Ah	3.6KWh	400A	60Kg	350x300x550mm
48V/160Ah	54V~32V	26000F/160Ah	7.3KWh	800A	130kg	350x300x1100mm
56V/120Ah	64V~38V	16000F/120Ah	6.6KWh	600A	140kg	800x500x350mm
72V/120Ah	86V~52V	12000F/120Ah	8.8KWh	600A	180kg	1010X500X350mm
110V/40Ah	130V~77V	2700F/40Ah	4.4KWh	200A	100kg	1010X250X350mm