



SDA10-4820

**Lithium-ion battery system
for telecommunication**



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shoto



Make full use of internet platform

Big Data cloud storage

Service for customers worldwide

With market share ranking first in the mainstream of China's telecom operators for many years and have get the net certificate in many regions around the world and sell to 127 nations and districts in five continents.

Shoto firmly promote green low-carbon career and always fulfill the concept of “new energy, circularity and high-tech”, to manage from the five link key aspects: design, development, green purchasing, system management, recycling, energy conservation and emissions reduction to create green model for the industry, to create a green life for human beings and store a green future for the earth.

Pursue the perfection

To build up a strong and sustainable enterprise

Shoto has owned several honors such as “National environment friendly enterprise”, “National key high-tech industry group”, “ China's top 100 electronic information enterprises ”,“ Global 500 new energy enterprises”.

Explore actively

To find an ever-increasing energy new world

- Communication
- Possess all series of energy storage solutions and provide firm green energy security;
- Telecom
- Becoming the core of constructing the future smart grid center;
- Power
- New clean and efficient power energy, to provide endless power for the social development;
- Recycling
- Take the lead in building circulation industry chain, make renewable energy, restore a healthy earth.

Converge global industry experts and unite research institutes

Collaborate with customers to develop the world's leading energy storage systems

The establishment of the Chinese Academy of Sciences in cooperation with the establishment of the Advanced Energy Development Research Center, academicians workstation, post-doctoral research station, state-level enterprise technology center have take on the 863 and other national research projects and research and develop the world forward-looking high-end new energy projects.

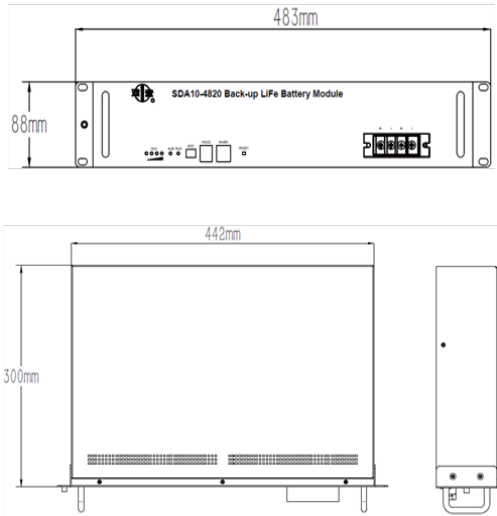
Application Scenarios

- Telecommunication
- UPS
- Renewable energy

Product Certificates

- ☑ ISO9001
- ☑ ISO14001
- ☑ CE
- ☑ UL
- ☑ TÜV

size



The SDA-4820 series uses new LiFePO₄ technology, this reliable SHOTO product is safe, durable and easy to install in any new or existing telecom sites; especially suitable for outdoor cabinets.

Key advantages

- High energy density: more energy with less weight and footprint.
- High charge currents (short charge period)
- High discharge currents
- Long battery life (up to three times the battery life of a conventional battery)
- High efficiency between charging and discharging
- Higher continual power available
- Wide operating temperature
- Predictable end of life due BMS controller

Passion for Storage
and Green Energy

Technical Parameters

Item		Parameters
1. Performance Parameter		
Nominal voltage		48V
Rated capacity		20Ah (Cs , 0.2C to 40V at 25 °C)
Operating voltage range		40V-56.4V
Charging voltage		56.4V
Charging current (current-limiting)		5A
Discharge current (Maximum)		20A
Discharge cut-off voltage		40V
Dimensions	Width	442mm
	Height	88mm
	Depth	300mm
Weight		About 13.8 kg
2. Function Description		
Installation method		Rack mounted / Wall mounted
Communication interface		RS232 / RS485
Indicator state		ALM / RUN / SOC
Parallel communication		Maximum support for 16 sets of parallel
Terminal stud		M6
Alarm and protection		Over voltage, under voltage, short circuit, overload, over current, over temperature, low temperature protection, etc.
3. Working Condition		
Cooling mode		Automatic cold and hot
Altitude		≤4000m
Humidity		5%-95%
Operating temperature	Charge	-5 °C ~+45 °C
	Discharge	-20 °C ~+50 °C
Recommended operating temperature	Charge	+15 °C ~+35 °C
	Discharge	+15 °C ~+35 °C
	Storage	-10 °C ~+35 °C

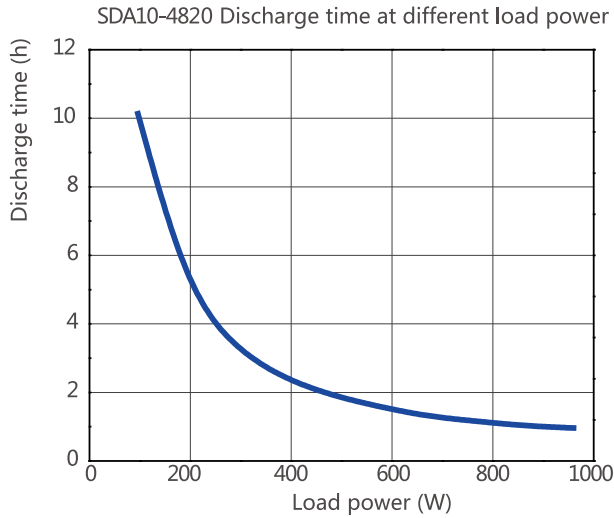
SDA10-4820 series Constant Current Discharge Characteristics (25℃,77℉)

Voltage	Current/A									
	0.1C	0.2C	0.3C	0.4C	0.5C	0.6C	0.7C	0.8C	0.9C	1C
46.5V	9.35	4.60	2.86	1.99	1.50	1.17	0.90	0.77	0.52	0.34
45.0V	9.89	4.77	3.10	2.24	1.75	1.44	1.17	1.03	0.85	0.77
43.5V	10.02	4.87	3.14	2.29	1.80	1.49	1.22	1.09	0.96	0.87
42.0V	10.10	4.95	3.22	2.36	1.85	1.54	1.26	1.13	0.99	0.91
40.0V	10.16	5.05	3.32	2.44	1.92	1.60	1.32	1.18	1.04	0.97

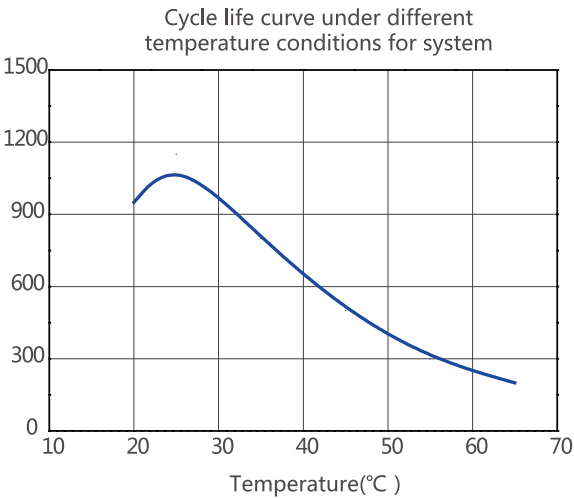
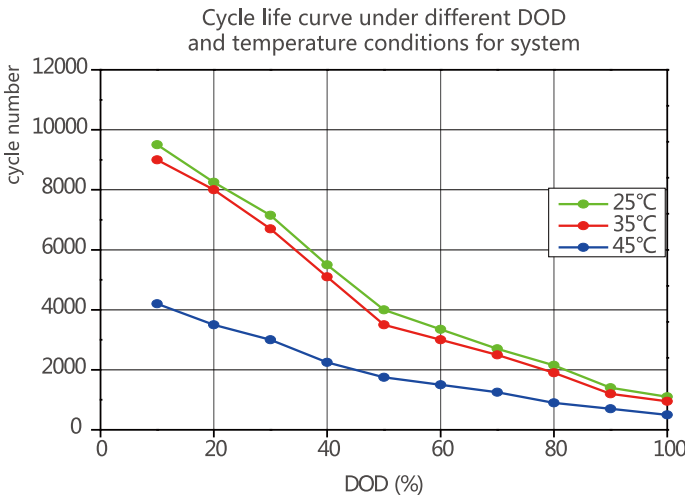
SDA10-4820 Constant Power Discharge Characteristics (25℃,77℉)

Voltage	Power/W									
	96	192	288	384	480	576	672	768	864	960
46.5V	9.32	4.56	2.82	1.97	1.49	1.15	0.88	0.75	0.51	0.34
45.0V	9.86	4.74	3.07	2.23	1.74	1.42	1.16	1.01	0.84	0.77
43.5V	9.99	4.84	3.10	2.27	1.79	1.47	1.20	1.07	0.94	0.86
42.0V	10.07	4.91	3.18	2.34	1.84	1.52	1.24	1.11	0.97	0.91
40.0V	10.13	5.02	3.28	2.42	1.91	1.58	1.30	1.16	1.02	0.96

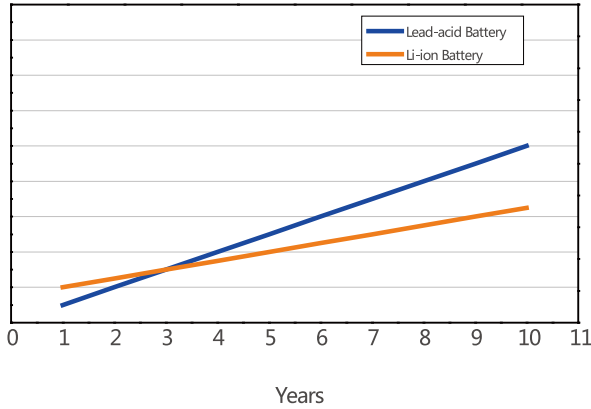
Discharge Curves



Cycle Life Curves



The TCO curve of different battery



Calendar life curve of battery design at different temperatures

