



SDA10-4810

**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.

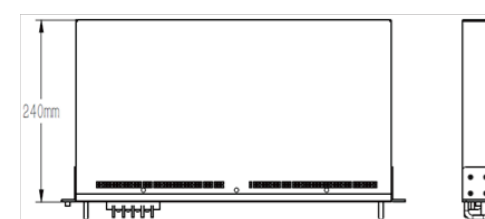
Application Scenarios

- Telecommunication
- UPS
- Renewable energy

Product Certificates

- ☑ ISO9001
- ☑ ISO14001
- ☑ CE
- ☑ UL
- ☑ TÜV
- ☑ UN38.3

size



The SDA-4810 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

Technical Parameters

| Item | Parameters | |
|--------------------------------------|--|--------------|
| 1. Performance Parameter | | |
| Nominal voltage | 48 V | |
| Rated capacity | 10Ah (C _s , 0.2C to 40V at 25°C) | |
| Operating voltage range | 40V-56.4V | |
| Charging voltage | 56.4V | |
| Charging current (current-limiting) | 2A | |
| Discharge current (Maximum) | 12A | |
| Discharge cut-off voltage | 40V | |
| Dimensions | Width | 442mm |
| | Height | 44mm |
| | Depth | 240mm |
| Weight | About 7.5 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 | M4 | |
| 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 |

Passion for Storage
and Green Energy

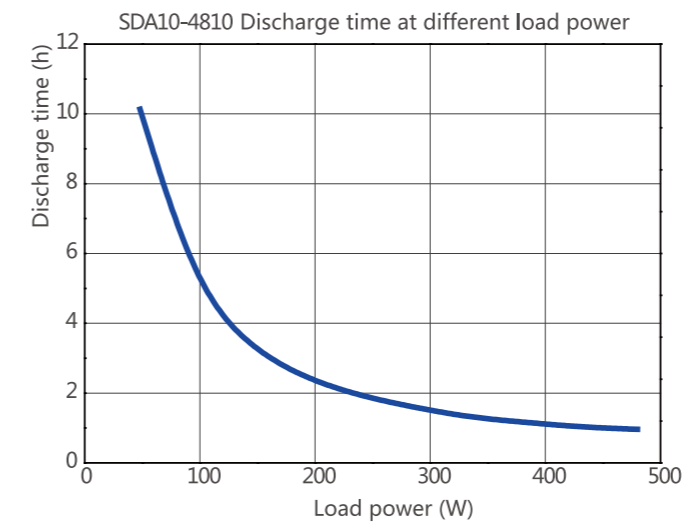
SDA10-4810 series Constant Current Discharge Characteristics (25°C,77°F)

| 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 |

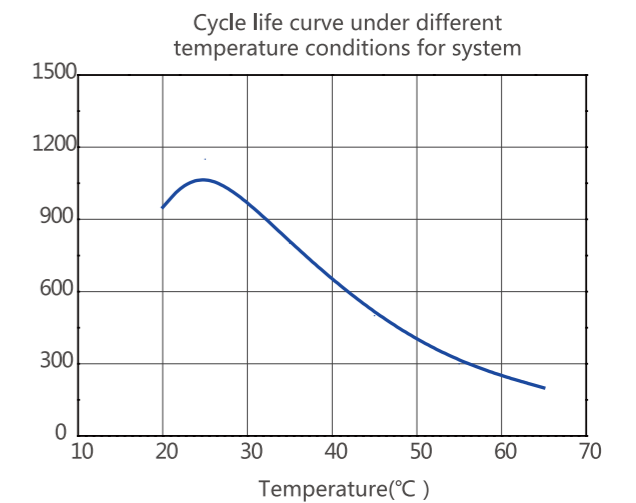
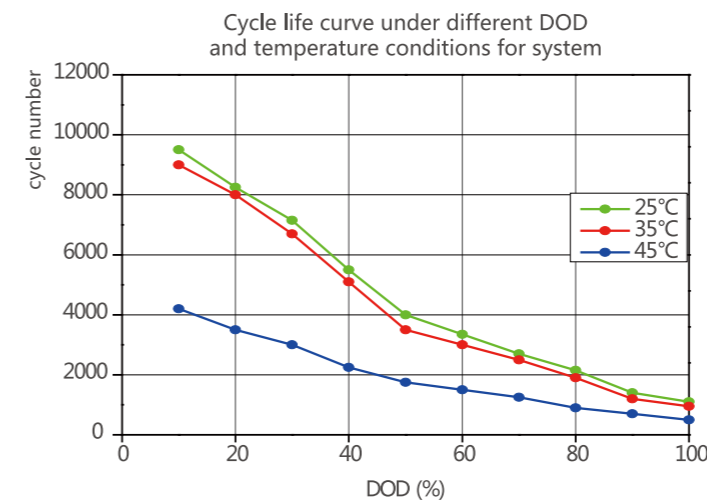
SDA10-4810 Constant Power Discharge Characteristics (25°C,77°F)

| Voltage | Power/W | | | | | | | | | |
|---------|---------|------|------|------|------|------|------|------|------|------|
| | 48 | 96 | 144 | 192 | 240 | 288 | 336 | 384 | 432 | 480 |
| 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 |

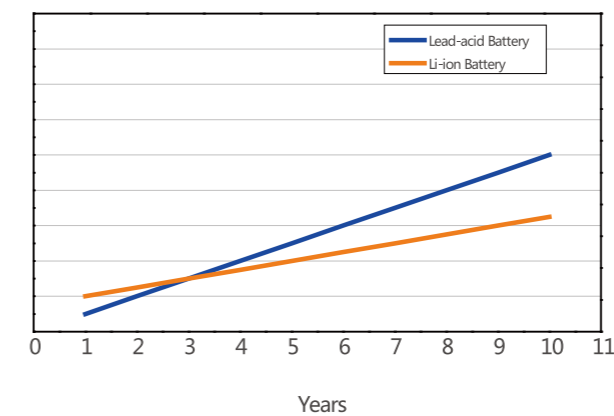
Discharge Curves



Cycle Life Curves



The TCO curve of different battery



Calendar life curve of battery design at different temperatures

