

1, Module Introduction

This module adopts the TI dedicated battery charging chip BQ25606 voltage reduction scheme, with high output efficiency, stable performance, and overcharge and over discharge protection. Type-C interface input, input voltage range 4.5-12V, with a maximum output current of 3A, very suitable for charging nominal 3.7V lithium batteries. The board is equipped with a red LED charging indicator light and a blue LED status indicator light, which can visually observe the charging status of the module and battery.

2, Parameter Introduction

Module type: step-down power supply

Input voltage: DC 4.5-12V

Charging cut-off voltage: $4.2V \pm 1\%$

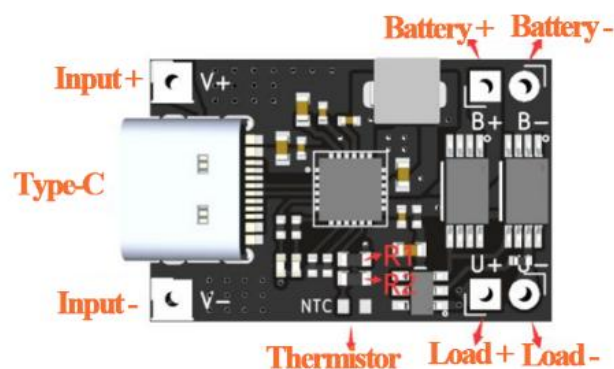
Maximum charging current: 3000mA

Battery over discharge protection voltage: 2.8V

Battery overcharge protection voltage: $4.2 \pm 0.05V$

Module interface: solder pads (can also be connected to 2.54mm pin headers)

Module size: 17.1 x 26.2mm (manually measured, with deviation)



NTC: Connect a negative temperature coefficient thermistor (not used by default), and when the thermistor detects that the battery temperature exceeds the range of 0 ° C to +60 ° C, charging will be paused. Recommend 103AT-2 thermistor.

Attention: When connecting a thermistor, it is necessary to modify the resistance value of the voltage divider resistor, i.e. R1 and R2 above. R1 should be changed to 5.23K, R2 is changed to 30.1K.

3, Regarding Output

When connecting the battery for the first time, there may be no voltage output from the U terminal. It is necessary to connect 5V to the power input terminal to charge and activate the protection circuit. When using a mobile phone charger for power supply, it must be able to output at least 1A, otherwise it may not charge properly.

The module is not designed for high power, but is suitable for the vast majority of nominal 3 Charging with a 7V lithium battery, please do not exceed the limits tested below when using, especially for load current. It is recommended to work below 2A, and heat sinks need to be added to dissipate heat above 2A.

For loads, it is not recommended to use inductive loads with excessive power. Inductive loads have a high starting current and are prone to module burnout. Although the rated current meets the conditions, it is easy for the module to fail to provide the starting current required by the load, resulting in burnout.

Fast charging speed results in poor charging performance, and the more the battery voltage drops after charging is completed.