



Shenzhen LC Technology Co.,Ltd.

[Home](#)

[New Arrivals](#)

[Product Center](#)

[OEM / ODM](#)

[About US](#)

[Contact US](#)

Search

## Product Classify

### Hardware

[IoT Series](#)

[WIFI Series](#)

[Bluetooth Series](#)

[Development Board Series](#)

[51 Series Board](#)

[PIC Study Board](#)

[AVR Study Board](#)

[MSP430 Study Board](#)

[ARM7 Study Board](#)

[DSP Study Board](#)

[CPLD Study Board](#)

[FPGA Study Board](#)

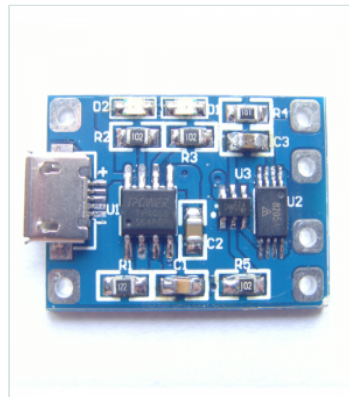
[STM8 Study Board](#)

[STM32 Study Board](#)

[Other Study Board](#)

## TP4056 lithium battery charging board over-current protection 18650 micro USB

Category: Power Module Publish Time: 2015-04-14 13:51



USB Study Board

Module Series

Clock module

SD Module

Storage module

USB Module

MP3 Module

DDS Module

Wireless Module

Network Module

Serial Module

Sensor Module

Audio Module

Motor Module

Power Module

Voice Module

Relay Module

Video Modules

Other Modules

Display module

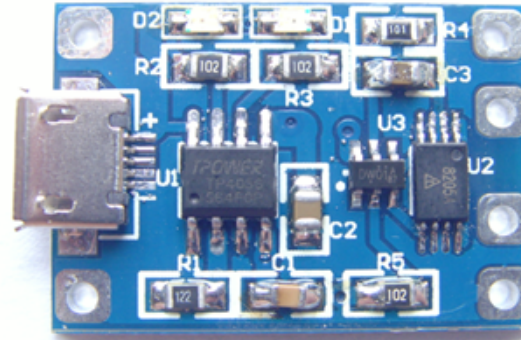
Communication module

PWM module

AD/DA Module

wireless power module

## Function Description



LC TP4056 Lithium battery charge and discharge protection module equipped with TP4056 chip, a maximum charge current up to 1.2A, and this module is equipped with a charge-discharge protection device for the voltage of 3.6V, 3.7V, such as 18650, polymer etc., single or multiple parallel can also be used.

## Product Features

1. onboard TP4056 lithium battery charging management chip;
2. on-board micro USB, can connect with most smartphone charger directly as an input to the lithium battery;
3. reserved IN + and IN- input port, convenient to user's DIY;
4. on-board charging status indicator;
5. support the charge and discharge current protection;
6. the chip with constant current, full automatic stop;
7. supports simultaneous charging and discharging;

.....

Download Cable / Emulator /

Programmer

-----  
Arduino

-----  
Software

Online Service

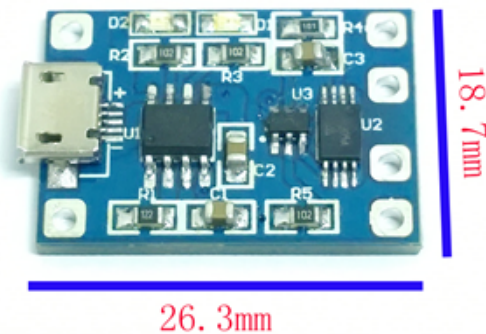
 chinalctech

 LCTechnology

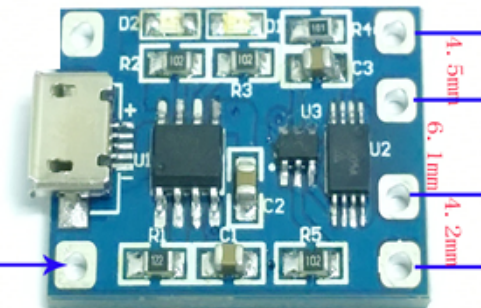
## Performance Parameters

Input Voltage	DC 5V
Charging cut-off voltage	DC $4.2V \pm 1\%$
maximum output current	1.2A
Charging method	Linear Charge
Working temperature	-20℃-85℃

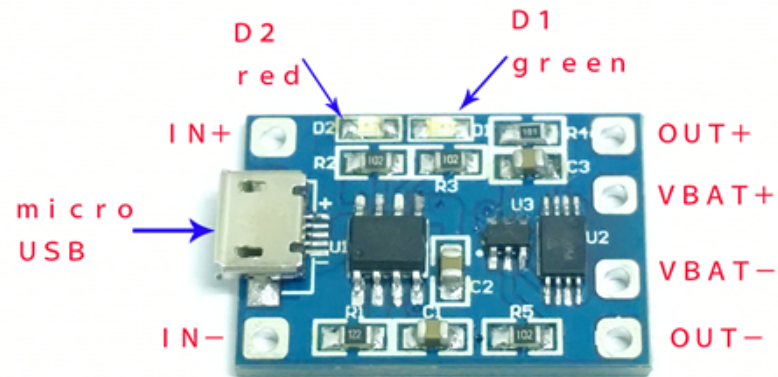
## The hardware size



Note: 6 pads are the same size, the  
hole diameter is 1.54 mm  $\Phi 1.54\text{mm}$



## Basic Features



- Inputs can via USB or IN +, IN- to input; IN + connected positive input voltage, IN- connected to the negative;  
D1 is full indication Green LED, that only take input, output without any connection or the lithium battery is fully charged, then D1 light;
- OUT +, OUT- connected load, the output interface does not support the charge and discharge over-current protection, the remaining functions and VBAT +, VBAT- consistent interface functions;
- VBAT +, VBAT- take lithium positive and negative charge, VBAT + connected lithium battery positive, VBAT- then negative, charging red LED D1 light, green LED D2 lights off, the lithium battery positive and negative poles can not be reversed!

## Directions for use

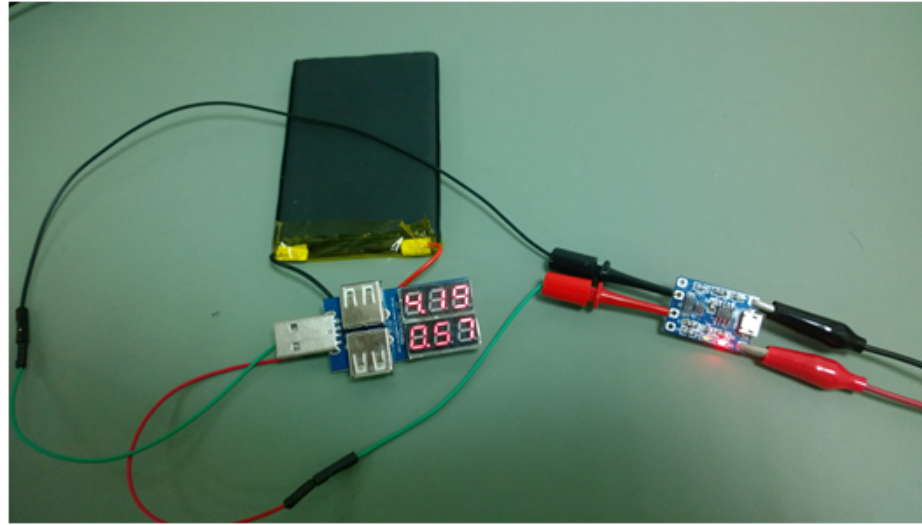
input through micro USB or IN +, IN- access 5V, the output without any wiring, the green always light.

### **1.Charge for lithium battery**

Lithium battery positive and negative, respectively access

VBAT + and VBAT-, not reversed; as follow picture:

access 4.8V to 20000MAH polymer lithium battery for charging, upcoming full status, voltage display 4.19V and 570mA charging current



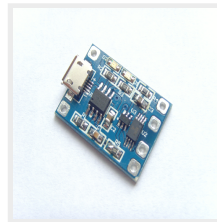
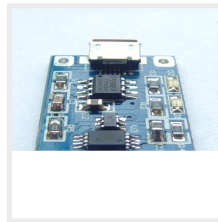
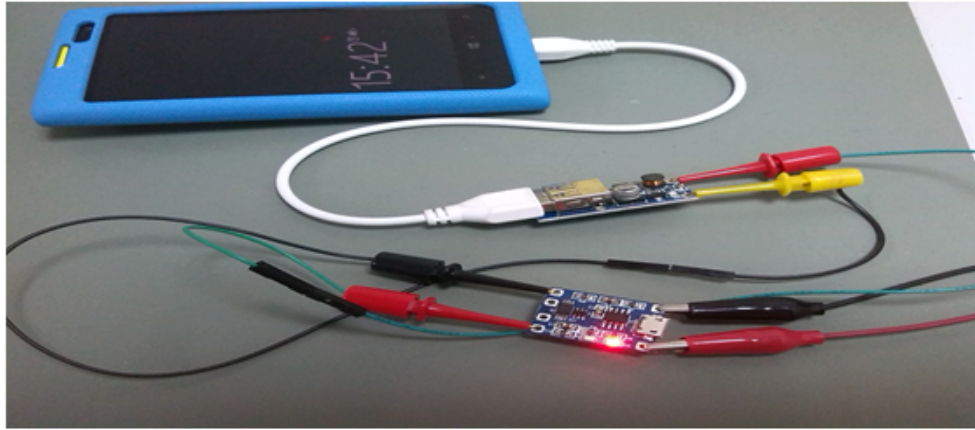
Noted that the charging current is preferably a battery capacity  $0.37C$ ,  $0.37$  times of the capacity ,such as  $1000\text{mAH}$  capacity, $400$  is ok. Via USB power supply, input voltage  $5\text{V}$ ,  $660\text{mA}$  charging current and  $4.19\text{V}$ charging voltage

## 2.OUT connect to load



OUT port can be directly connected to the load, when the load is connected, via VBAT charging port is invalid.

For convenience, the OUT terminal through a small boost module (0.9V-5V input, 5V output) 5V boost to charge the phone. As shown, the OUT + connect to positive of small boost module, OUT- then negative, phone connect with USB female.



Prev product: MC34063A positive voltage negative voltage module reverse voltage module

Next product: XL6009 DC - DC DC converter performance ultra LM2577 booster circuit board

