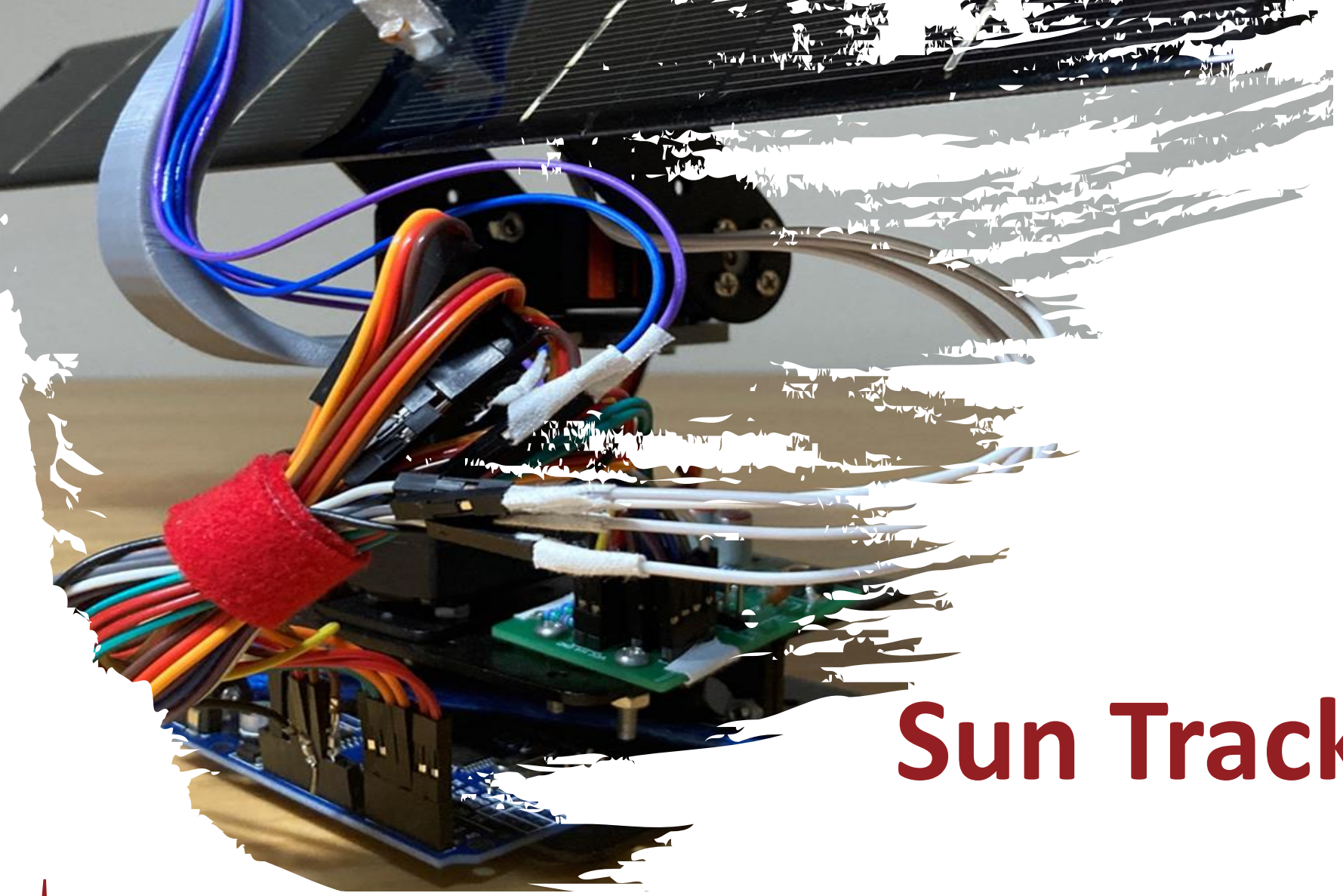


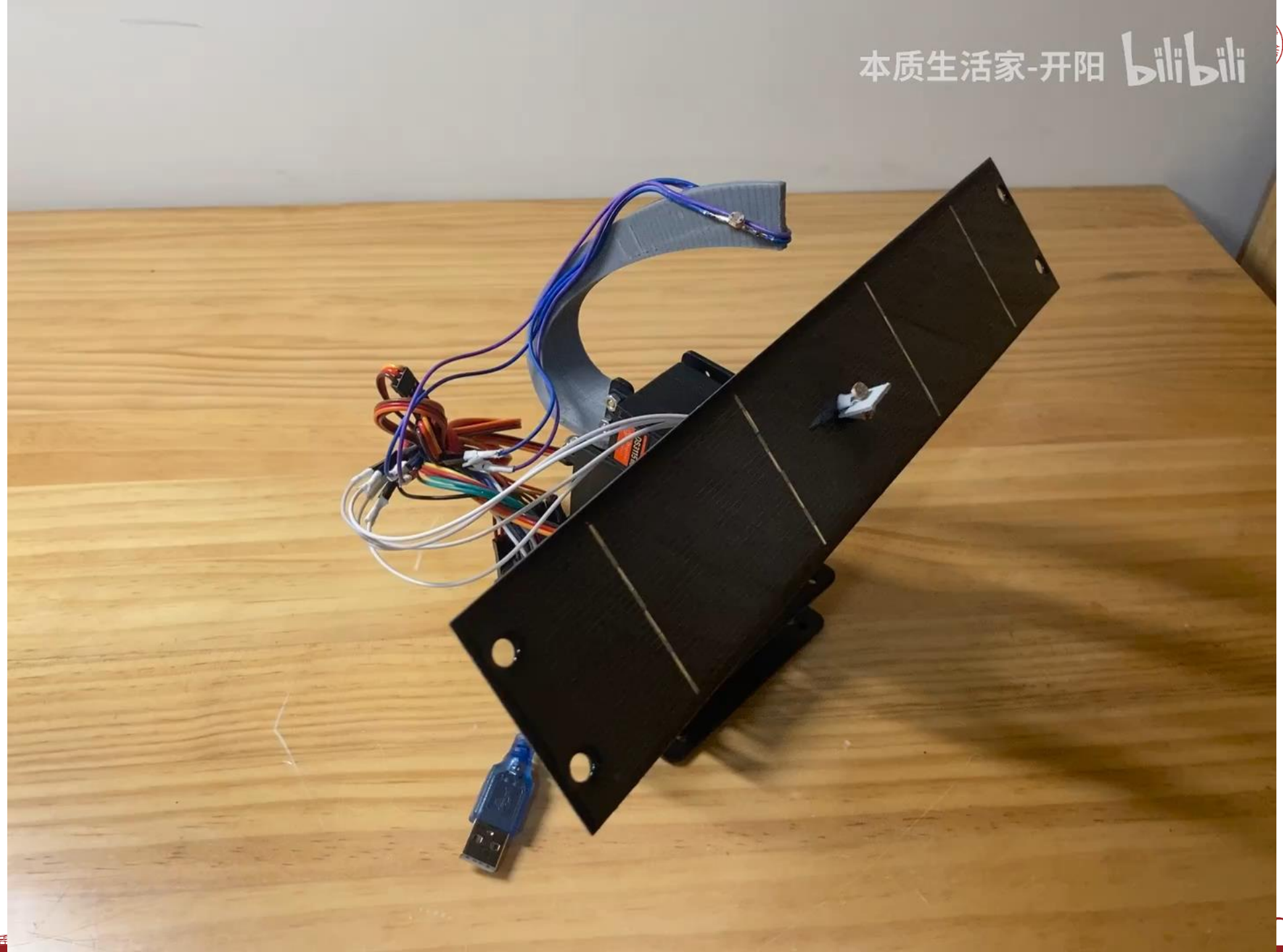
上海科技大学
ShanghaiTech University

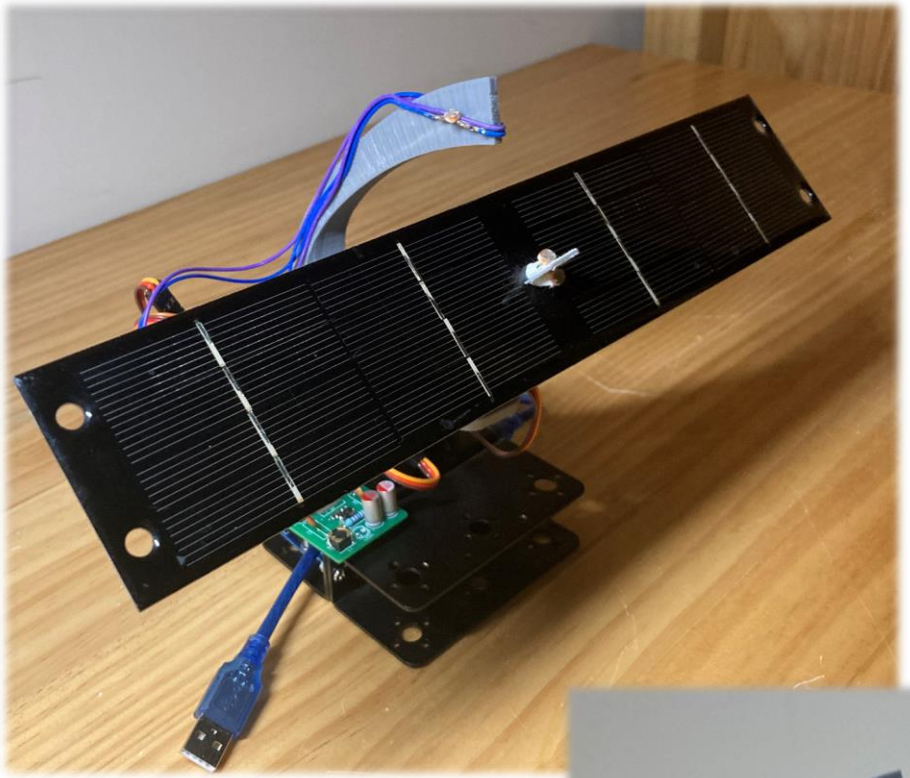
Sun Tracking System

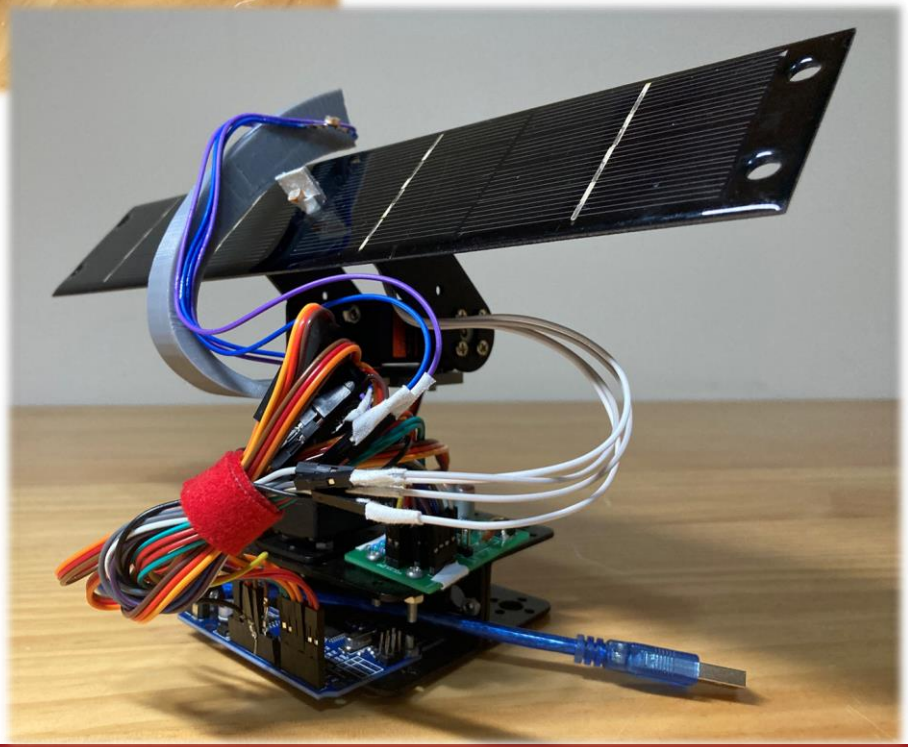
朱宇轩

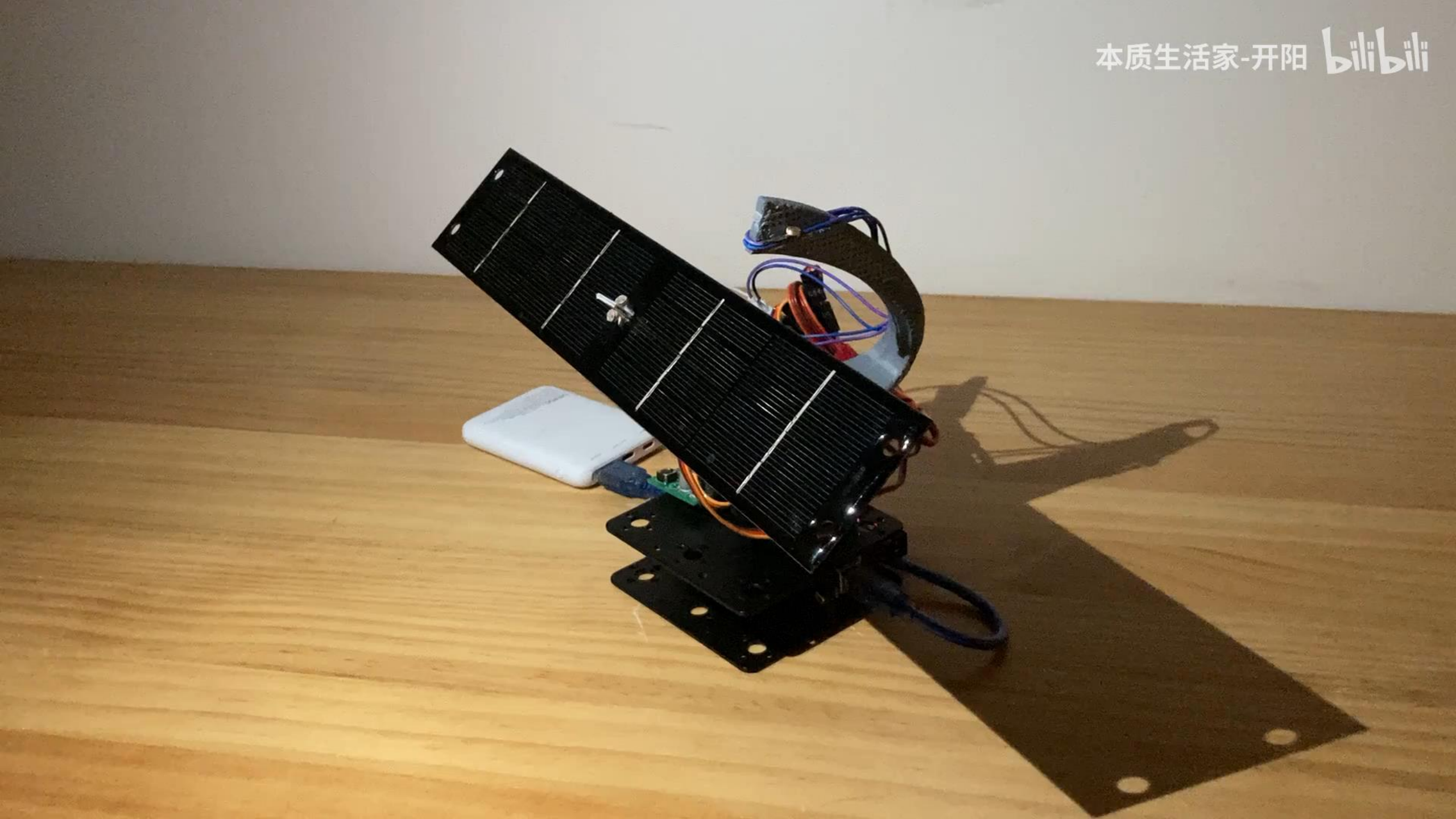
2021.10.8

立志成才 报国裕民


本质生活家-开阳
bilibili






本质生活家-开阳
bilibili

日在哪里

日的闪现

逐日

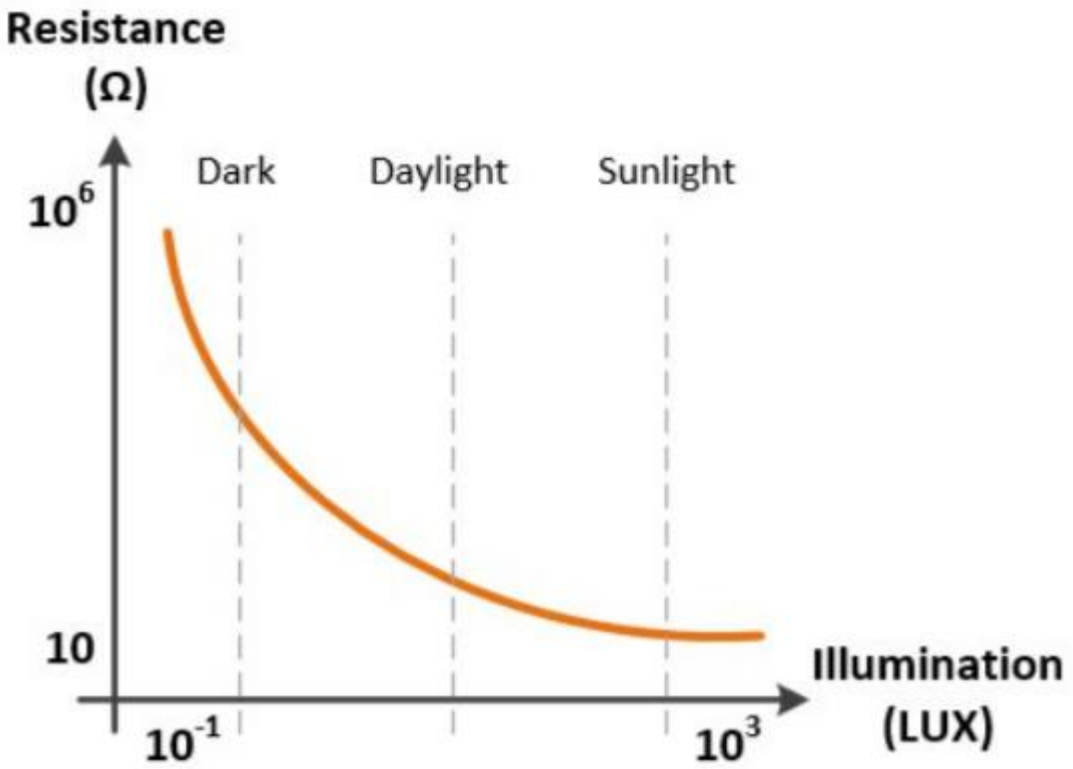
怎么追日

没日咋办

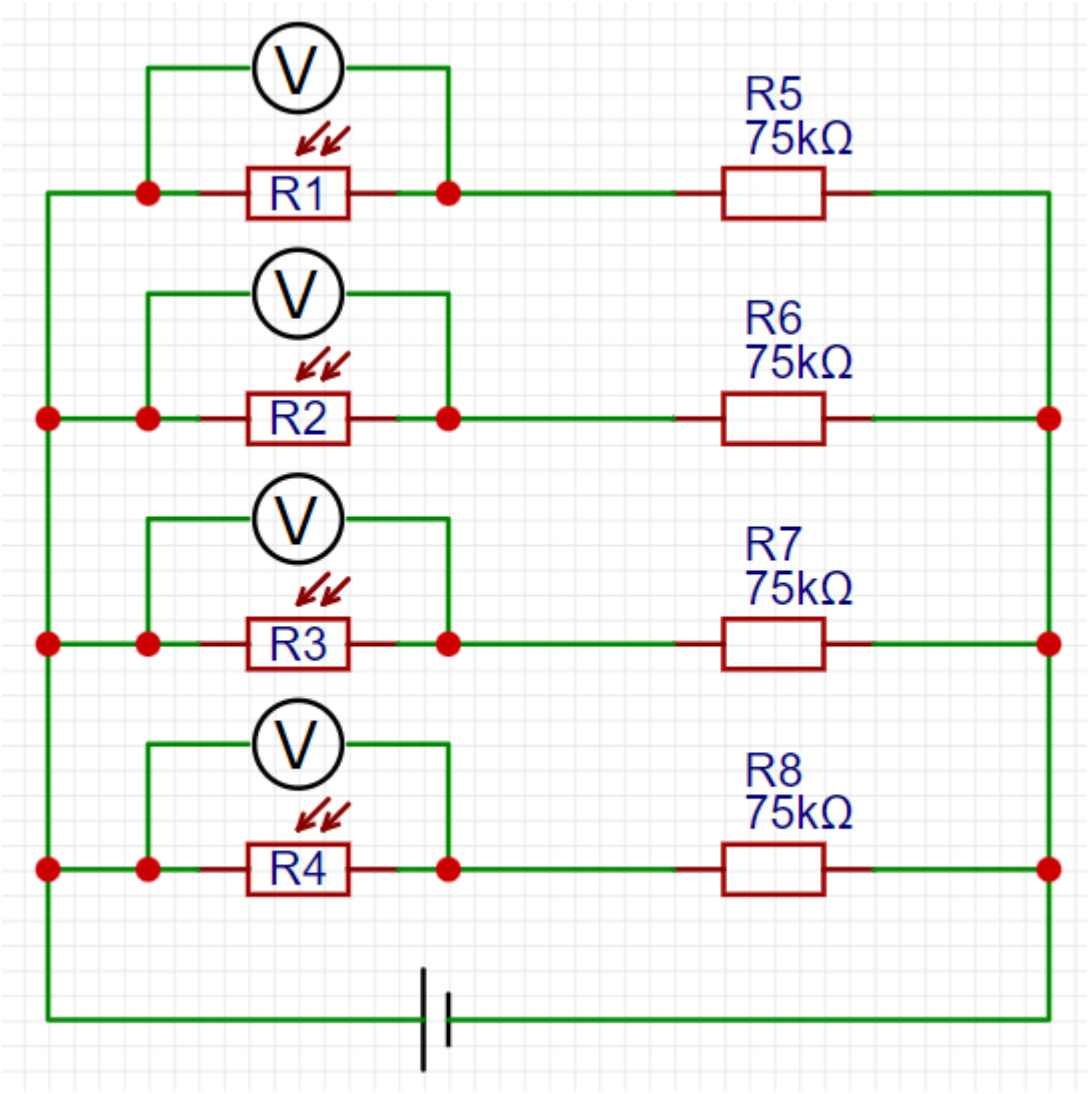
日用没用

日在哪里

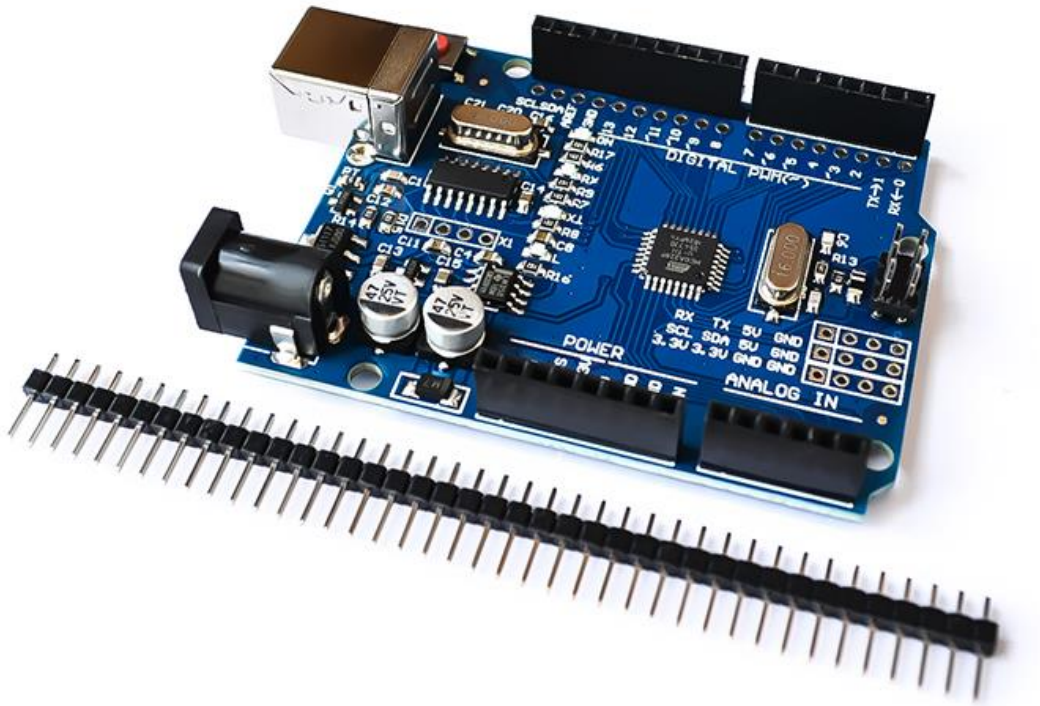
光敏电阻


Resistance
(Ω)
Dark
Daylight
Sunlight
10^6
10
10^-1
10^3
Illumination
(LUX)

日在哪里



日在哪里



Arduino

读取

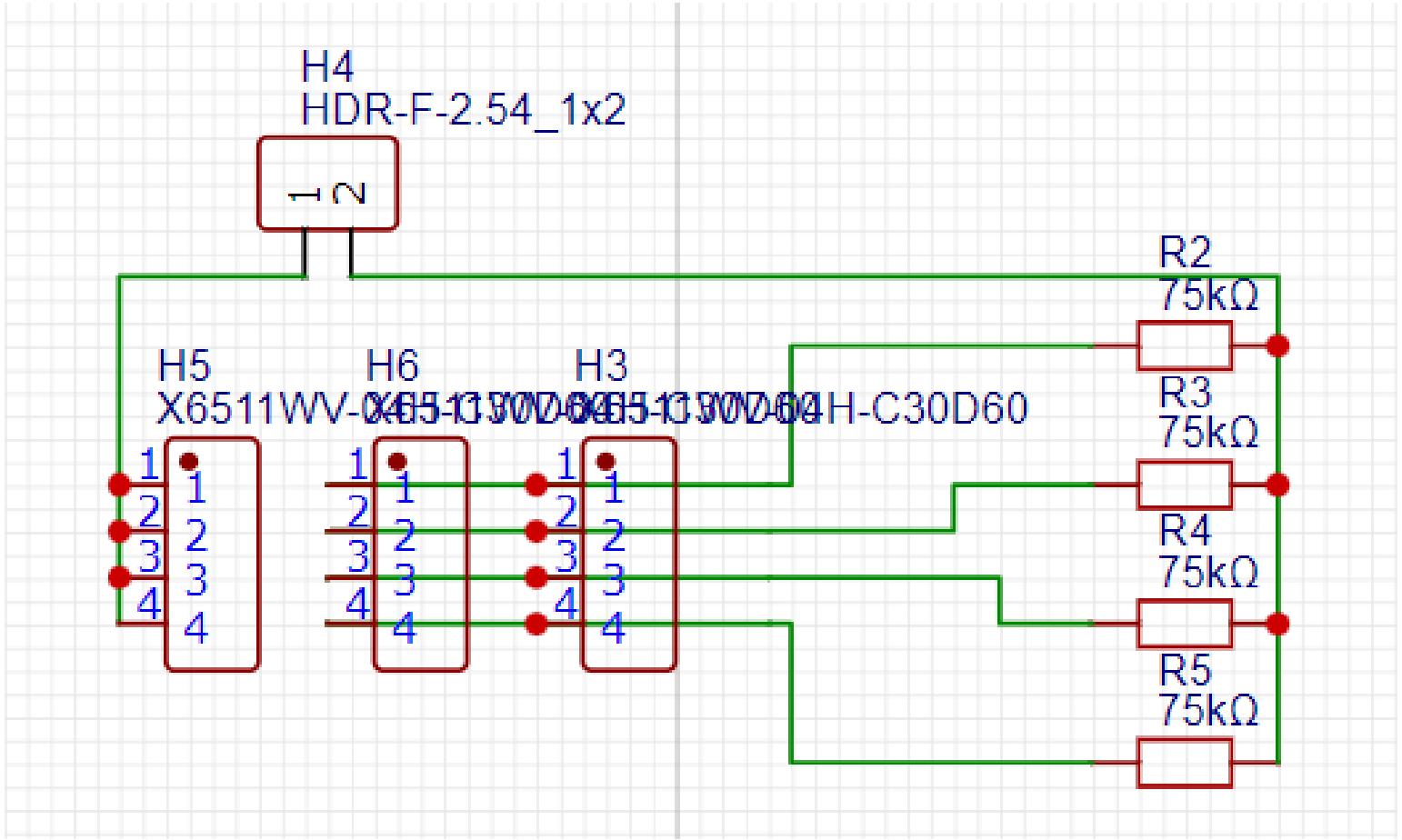
写入

供电

运算

比较

日在哪里



怎么追日

伺服电机

怎么追日

```
if (analogRead(A5) > analogRead(A4) + 100) {
    servo_A3.write((servo_A3.read() + rota));
    delay(5);

  } else if (analogRead(A4) > analogRead(A5) + 100) {
    servo_A3.write((servo_A3.read() - rota));
    delay(5);
  }
  if (analogRead(A1) > analogRead(A0) + 50) {
    if (rota == 1 && servo_A2.read() < 90 || rota == -1 && servo_A2.read() >= 90) {
      servo_A2.write((servo_A2.read() + 1));
      delay(5);
    }
  } else if (analogRead(A0) > analogRead(A1) + 50) {
    if (rota == 1 && servo_A2.read() <= 90 || rota == -1 && servo_A2.read() > 90) {
      servo_A2.write((servo_A2.read() - 1));
      delay(5);
    }
  }
```

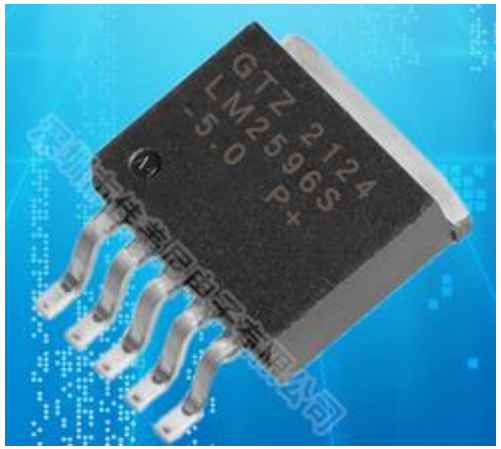
日用没用


没有光的时候绝对不会亮


只要拿支手电筒照它就亮了


55
288
AK28855
> 电压：6.0V
> 工艺： 滴胶
电流：260MA
质保： 1年
> 材质： 高率太阳能电池片
环氧树脂AB胶 ，PCB或玻纤底板
> 产品规格：288X55MM
> 包装：纸箱 / 木盘 / 托盘
> 产地： 中国 宁波

日用没用



LM2596S

National Semiconductor

PRELIMINARY
February 1996

LM2596 SIMPLE SWITCHER® Power Converter 150 kHz 3A Step-Down Voltage Regulator

General Description

The LM2596 series of regulators are monolithic integrated circuits that provide all the active functions for a step-down (buck) switching regulator, capable of driving a 3A load with excellent line and load regulation. These devices are available in fixed output voltages of 3.3V, 5V, 12V, and an adjustable output version.

Requiring a minimum number of external components, these regulators are simple to use and include internal frequency compensation†, and a fixed-frequency oscillator.

The LM2596 series operates at a switching frequency of 150 kHz thus allowing smaller sized filter components than what would be needed with lower frequency switching regulators. Available in a standard 5-lead TO-220 package with several different lead bend options, and a 5-lead TO-263 surface mount package.

A standard series of inductors are available from several different manufacturers optimized for use with the LM2596 series. This feature greatly simplifies the design of switch-mode power supplies.

Other features include a guaranteed ±4% tolerance on output voltage under specified input voltage and output load conditions, and ±15% on the oscillator frequency. External shutdown is included, featuring typically 80 μA standby current. Self protection features include a two stage frequency reducing current limit for the output switch and an over temperature shutdown for complete protection under fault conditions.

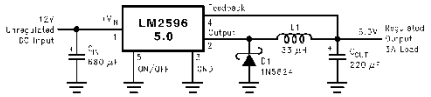
Features

- 3.3V, 5V, 12V, and adjustable output versions
- Adjustable version output voltage range, 1.2V to 37V ±4% max over line and load conditions
- Available in TO-220 and TO-263 packages
- Guaranteed 3A output load current
- Input voltage range up to 40V
- Requires only 4 external components
- Excellent line and load regulation specifications
- 150 kHz fixed frequency internal oscillator
- TTL shutdown capability
- Low power standby mode, I_Q typically 80 μA
- High efficiency
- Uses readily available standard inductors
- Thermal shutdown and current limit protection

Applications

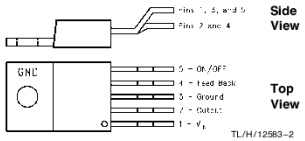
- Simple high-efficiency step-down (buck) regulator
- On-card switching regulators
- Positive to negative converter

Typical Application (Fixed Output Voltage Versions)



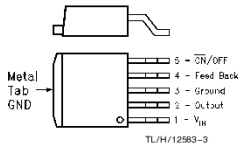
Connection Diagrams and Ordering Information

Bent and Staggered Leads, Through Hole Package
5-Lead TO-220 (T)



Order Number LM2596T-3.3, LM2596T-5.0, LM2596T-12 or LM2596T-ADJ
See NS Package Number T05D

Surface Mount Package
5-Lead TO-263 (S)



Order Number LM2596S-3.3, LM2596S-5.0, LM2596S-12 or LM2596S-ADJ
See NS Package Number TS5B

†Patent Number 5,382,918.

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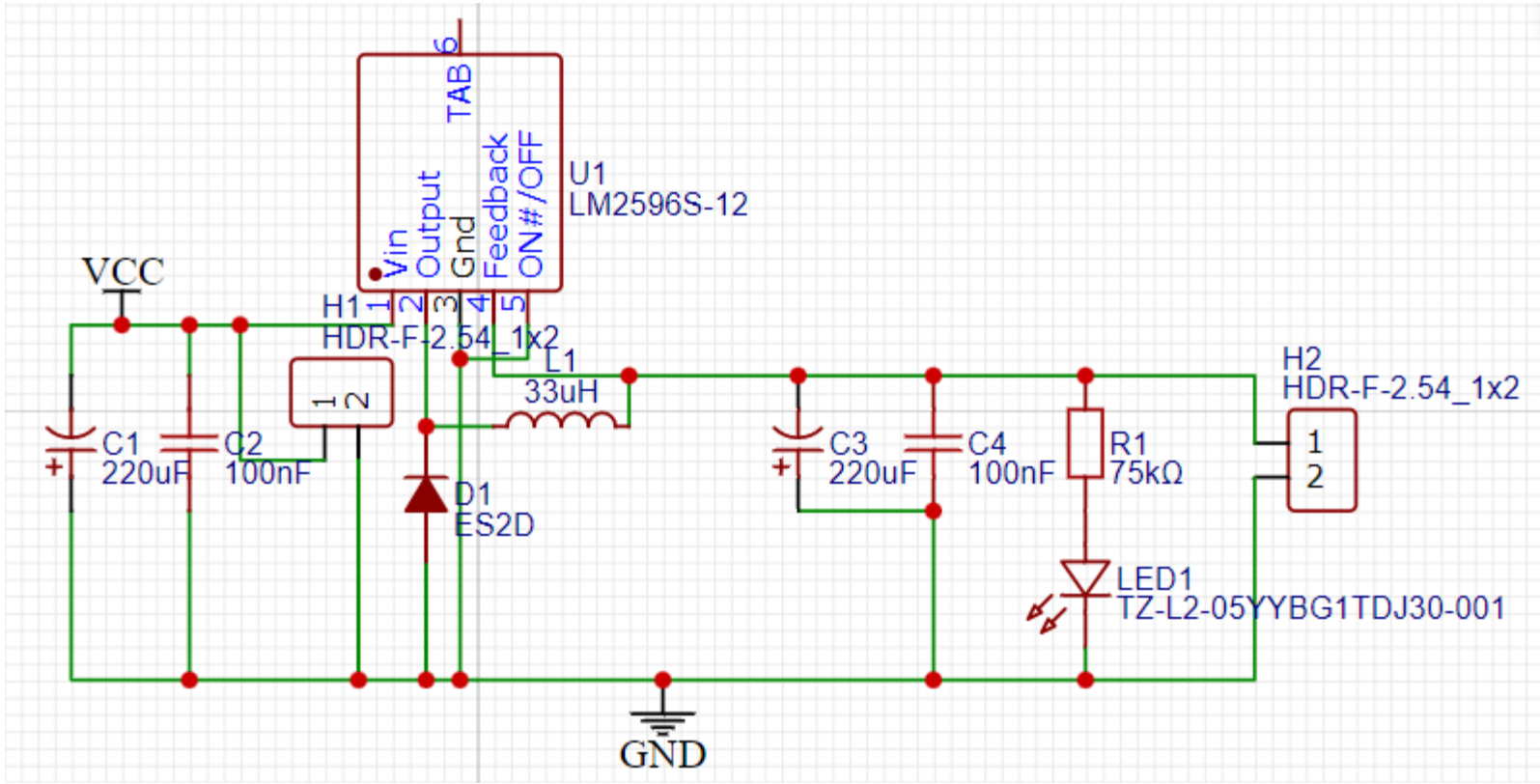
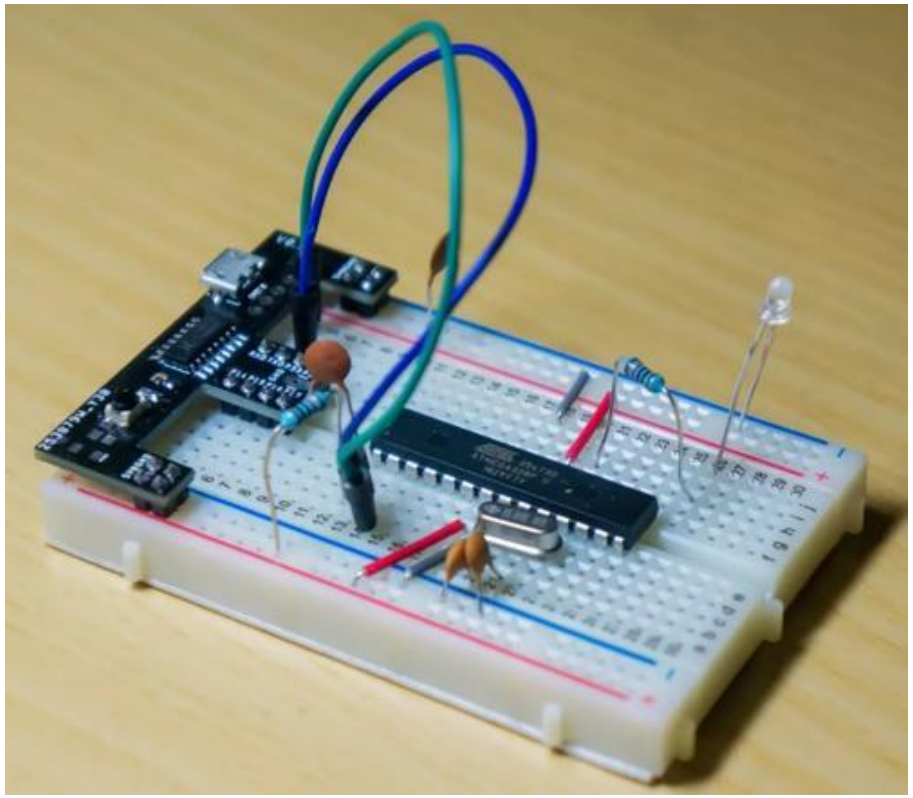
LM2596 SIMPLE SWITCHER® Power Converter 150 kHz 3A Step-Down Voltage Regulator

日用没用


TAB
6
Vin
Output
Gnd
Feedback
ON#/OFF
U1
LM2596S-12
VCC
H1
HDR-F-2.54_1x2
1
2
3
4
5
L1
33uH
C1
220uF
C2
100nF
D1
ES2D
C3
220uF
C4
100nF
R1
75kΩ
H2
HDR-F-2.54_1x2
LED1
TZ-L2-05YYBG1TDJ30-001
GND

日用没用

面包板

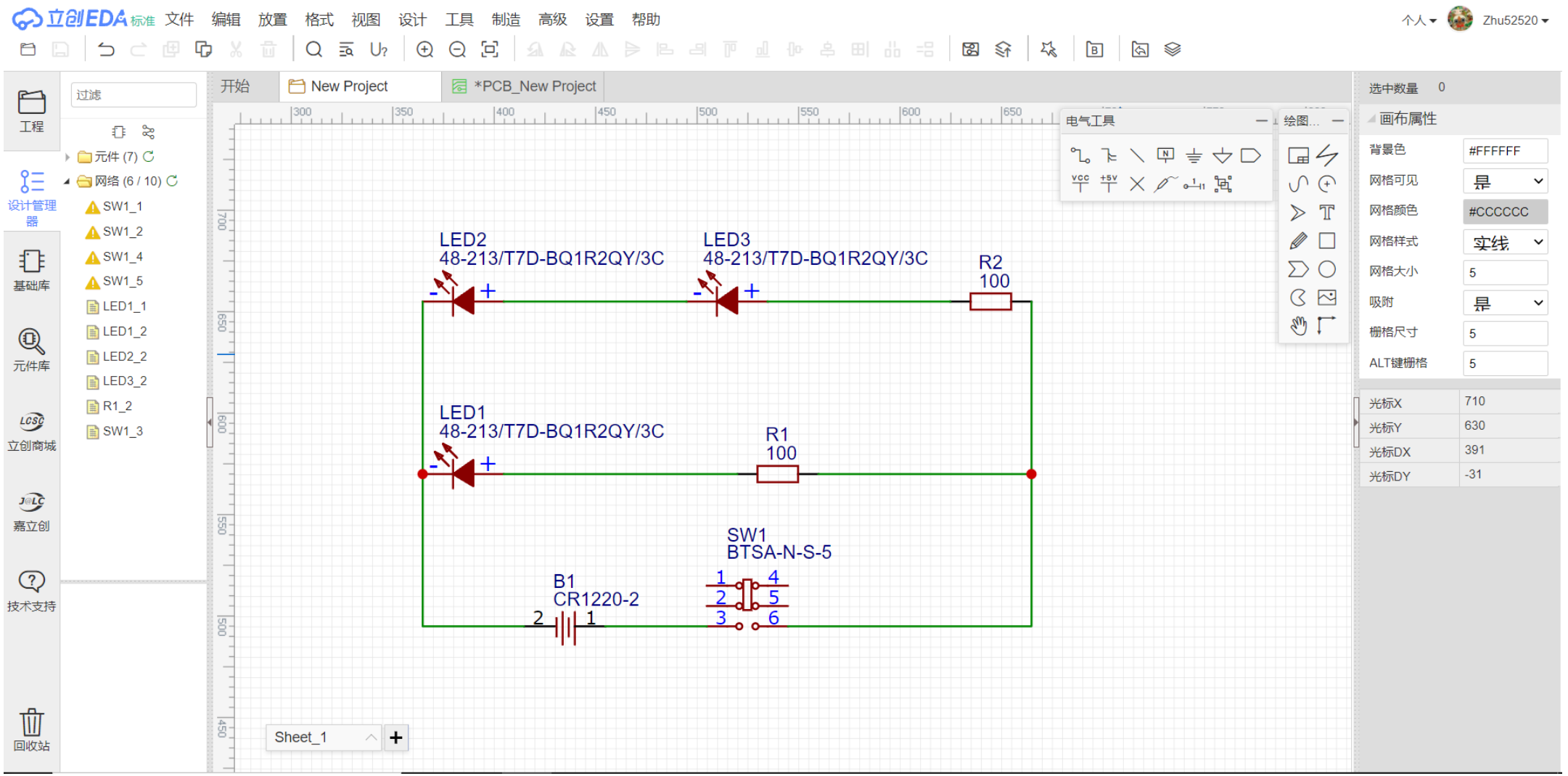


日用没用

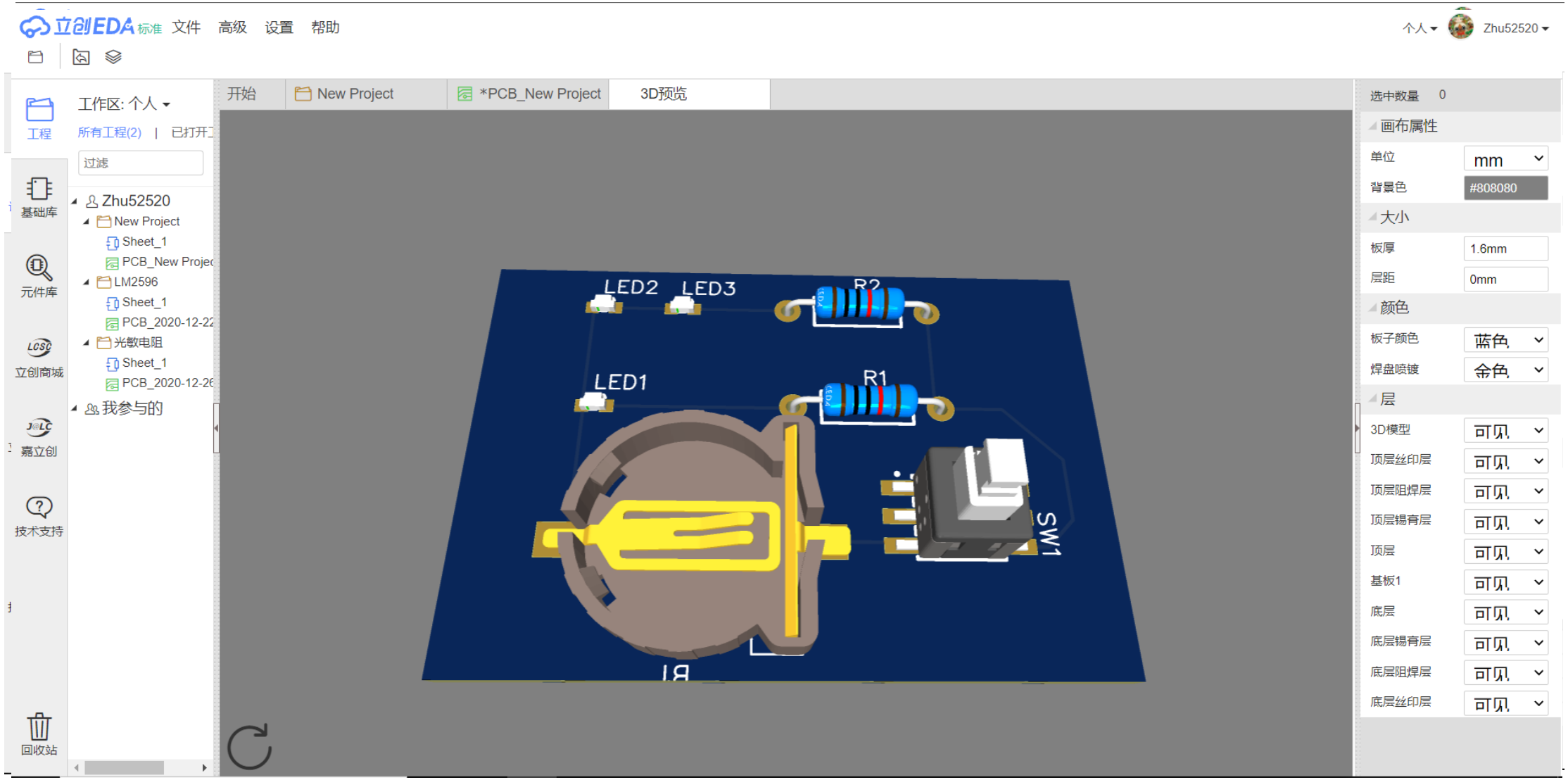
Pri


RoboFly
THR: 481 MOD:Lock
ROL: 12 PIT: 2
ALT: 0 YAW:-16
智创空间
智创空间
F4
F5
F7
F8
F9
F10
F11
F12
ALT
FN
CTRL

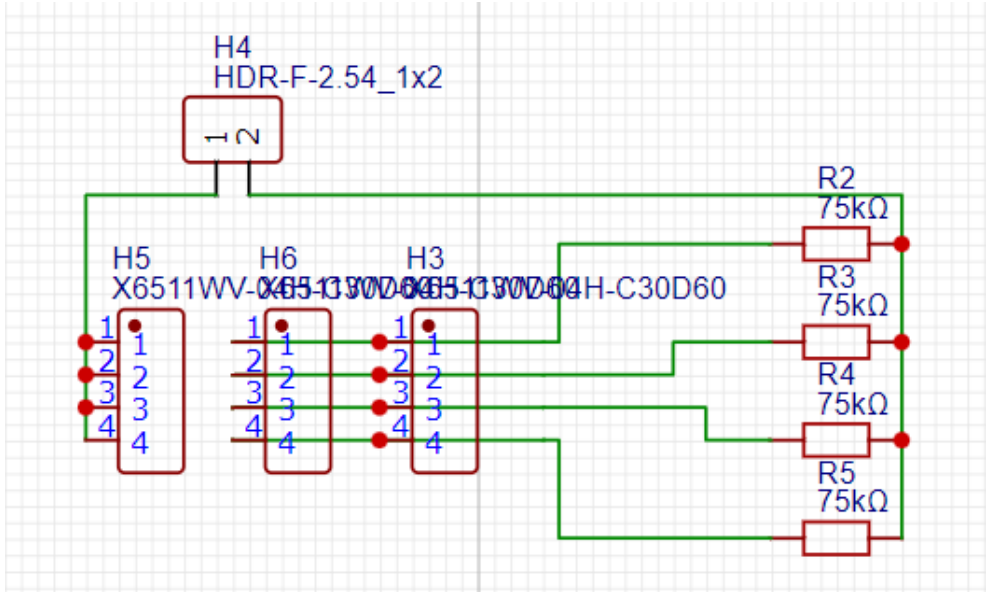
日用没用

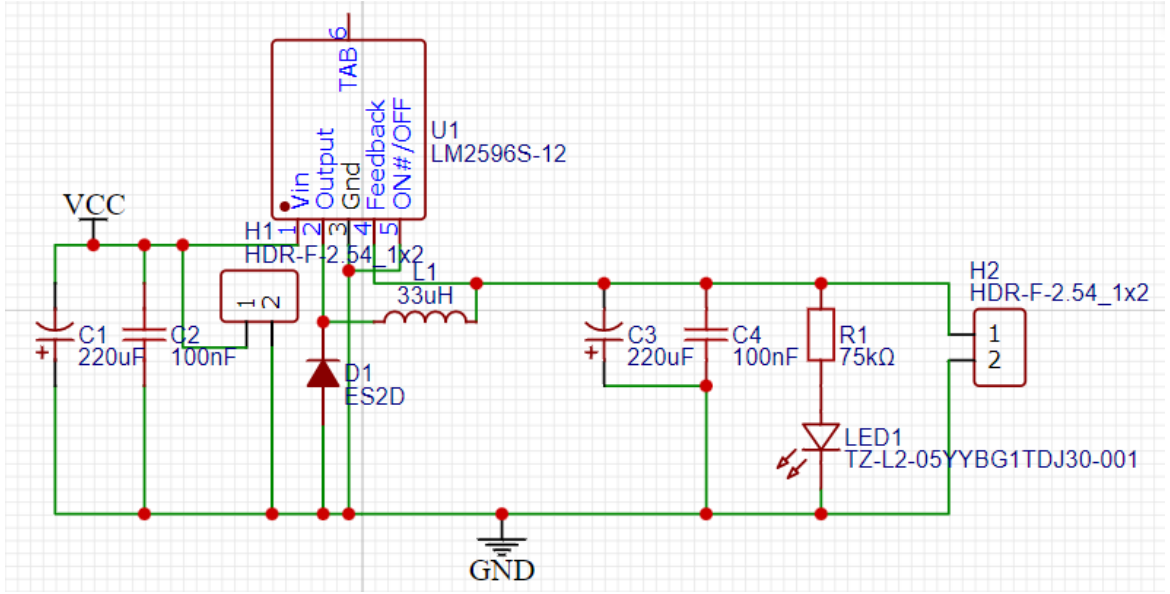

立创EDA 标准
文件 编辑 放置 格式 视图 设计 工具 制造 高级 设置 帮助
个人 Zhu52520
工程
设计管理器
基础库
元件库
立创商城
嘉立创
技术支持
回收站
过滤
元件 (7)
网络 (6 / 10)
SW1_1
SW1_2
SW1_4
SW1_5
LED1_1
LED1_2
LED2_2
LED3_2
R1_2
SW1_3
开始
New Project
*PCB_New Project
电气工具
绘图...
LED2
48-213/T7D-BQ1R2QY/3C
LED3
48-213/T7D-BQ1R2QY/3C
R2
100
LED1
48-213/T7D-BQ1R2QY/3C
R1
100
SW1
BTSA-N-S-5
B1
CR1220-2
Sheet_1
选中数量 0
画布属性
背景色 #FFFFFF
网格可见 是
网格颜色 #CCCCCC
网格样式 实线
网格大小 5
吸附 是
栅格尺寸 5
ALT键栅格 5
光标X 710
光标Y 630
光标DX 391
光标DY -31

日用没用

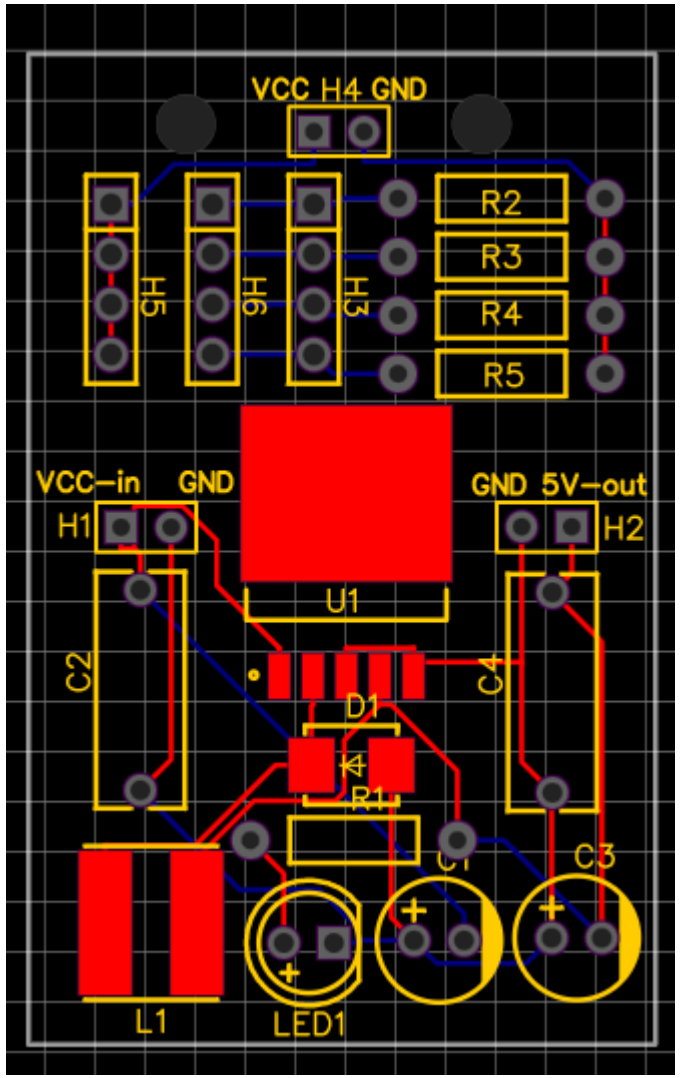

立创EDA 标准
文件
高级
设置
帮助
个人
Zhu52520
工作区: 个人
工程
所有工程(2)
过滤
基础库
元件库
立创商城
嘉立创
技术支持
回收站
Zhu52520
New Project
Sheet_1
PCB_New Projec
LM2596
Sheet_1
PCB_2020-12-22
光敏电阻
Sheet_1
PCB_2020-12-26
我参与的
开始
New Project
*PCB_New Project
3D预览
LED2
LED3
R2
LED1
R1
SW1
选中数量 0
画布属性
单位 mm
背景色 #808080
大小
板厚 1.6mm
层距 0mm
颜色
板子颜色 蓝色
焊盘喷镀 金色
层
3D模型 可见
顶层丝印层 可见
顶层阻焊层 可见
顶层锡膏层 可见
顶层 可见
基板1 可见
底层 可见
底层锡膏层 可见
底层阻焊层 可见
底层丝印层 可见

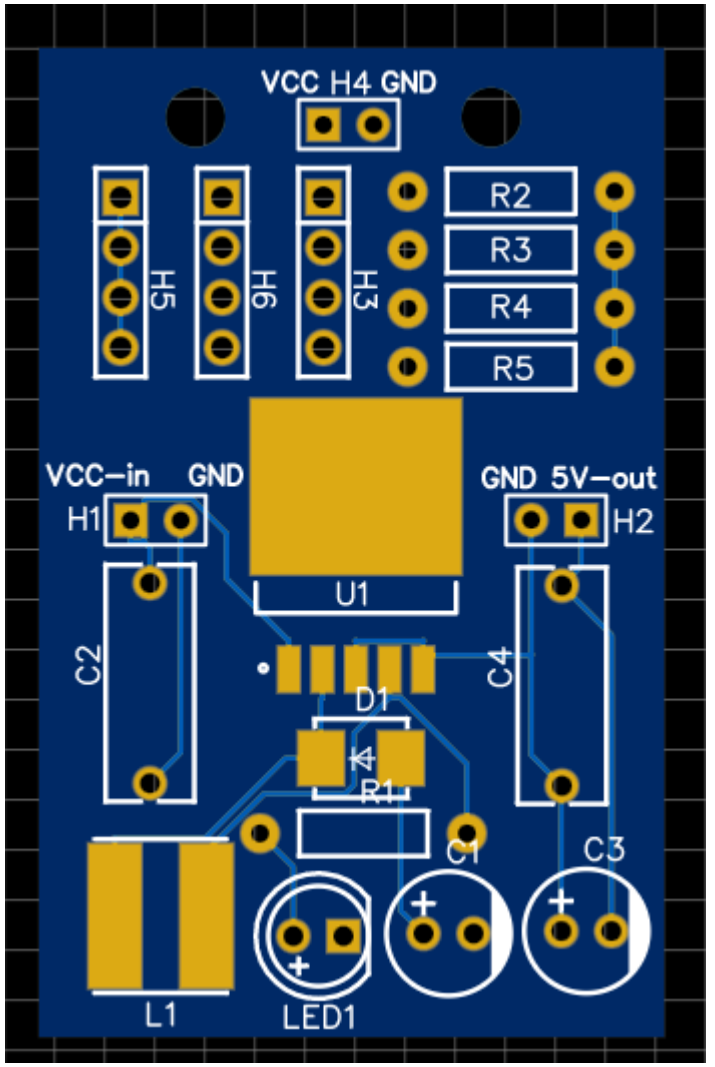
日用没用

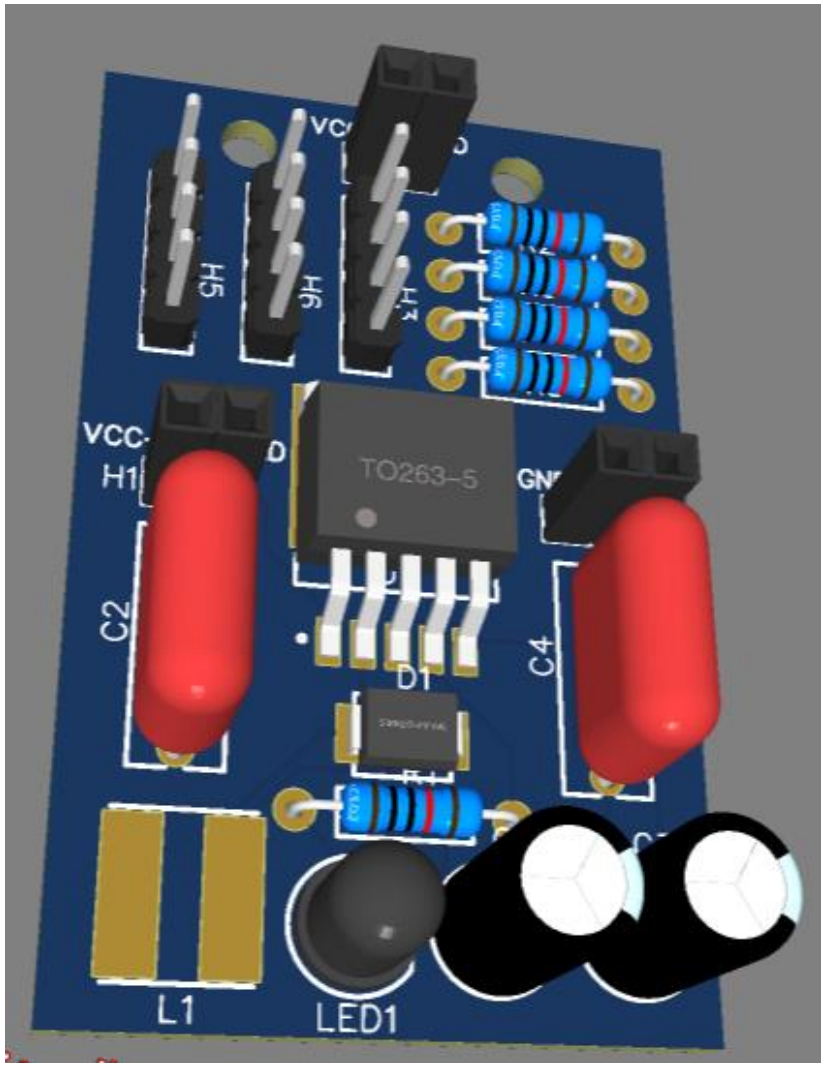

H4
HDR-F-2.54_1x2
H5
H6
H3
R2
75kΩ
R3
75kΩ
R4
75kΩ
R5
75kΩ


VCC
U1
LM2596S-12
TAB
Vin
Output
Gnd
Feedback
ON#/OFF
H1
HDR-F-2.54_1x2
L1
33uH
C1
220uF
C2
100nF
D1
ES2D
C3
220uF
C4
100nF
R1
75kΩ
H2
HDR-F-2.54_1x2
LED1
TZ-L2-05YYBG1TDJ30-001
GND

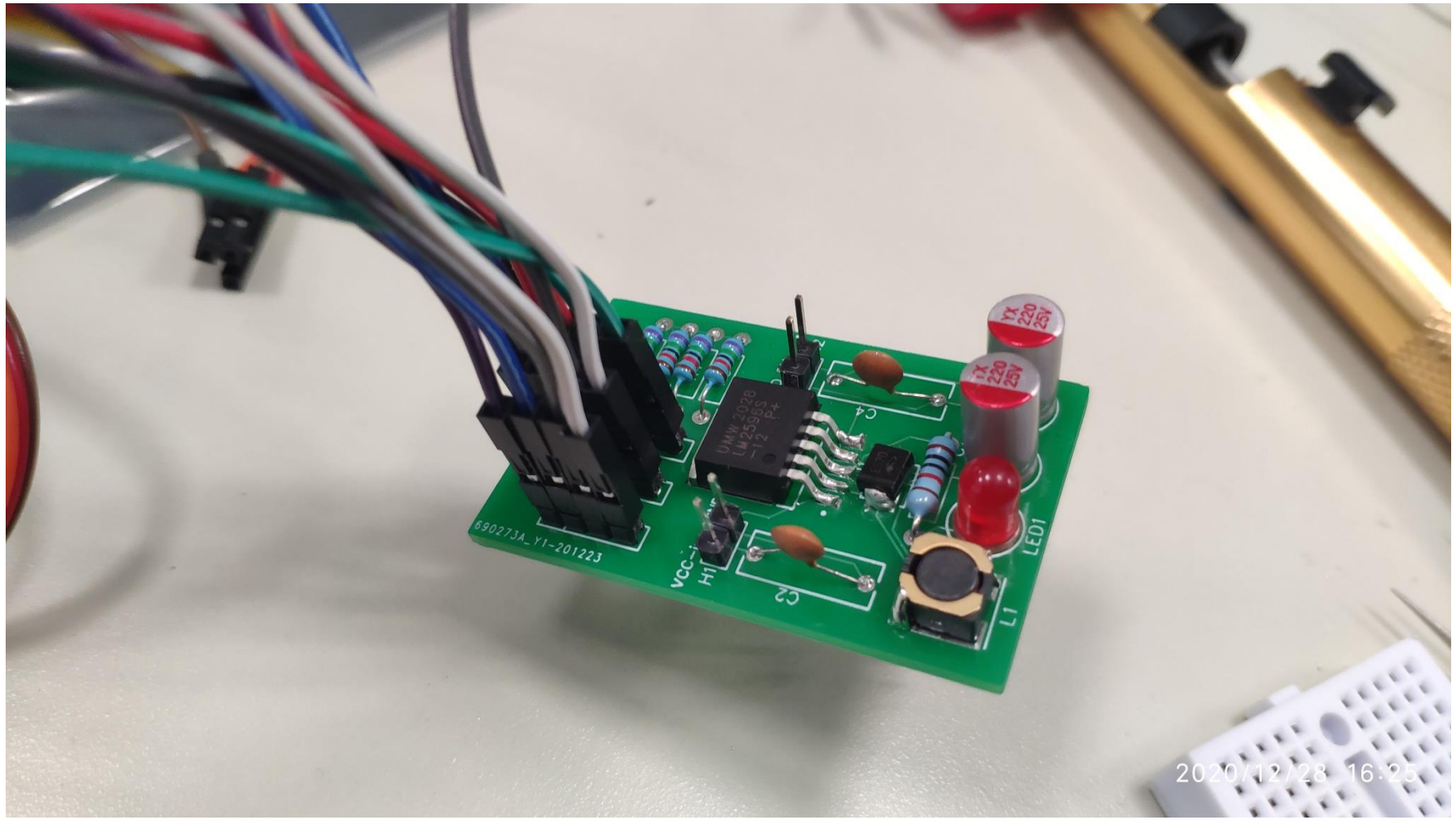
日用没用


VCC H4 GND
H5
H6
H3
R2
R3
R4
R5
VCC–in
GND
GND 5V–out
H1
H2
U1
C2
C4
D1
R1
C1
C3
L1
LED1

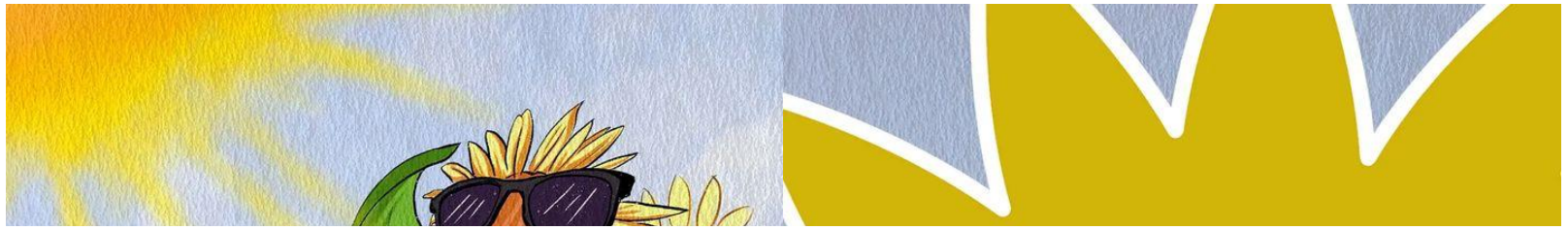

VCC H4 GND
H5
H6
H3
R2
R3
R4
R5
VCC–in
GND
GND 5V–out
H1
H2
U1
C2
C4
D1
R1
C1
C3
L1
LED1


H5
H6
H3
TO263–5
C2
C4
D1
L1
LED1

日用没用



没日咋办



太阳下山之后，向日葵怎么回头？

月半弯，月光下的你显得特别的好看。

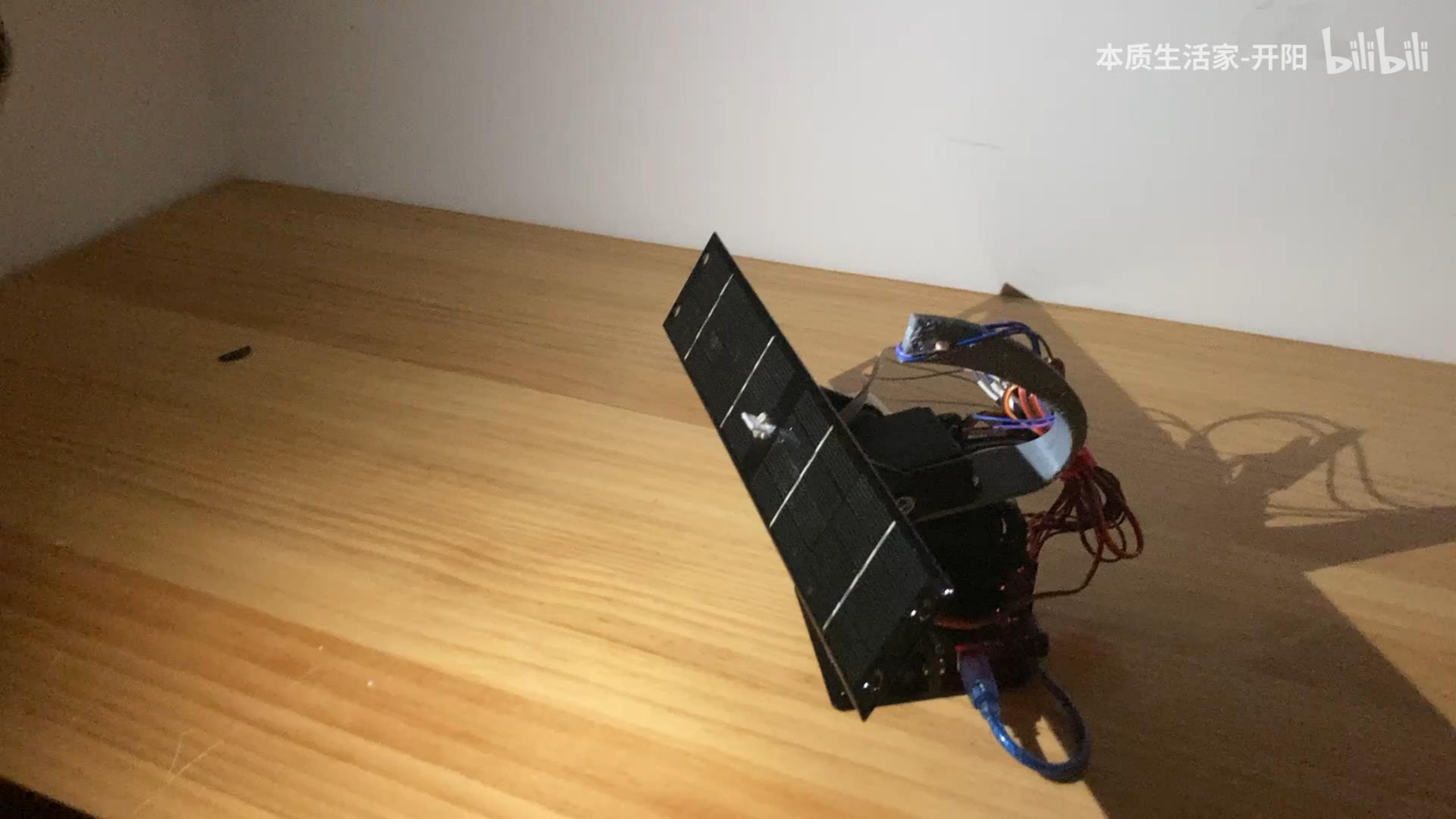
有个问题困扰我很多年，向日葵跟着太阳转，从东边转到西边。那第二天早上是怎么回到东边的？一个猛甩头？是的，你晚上走过向日葵花海，几十万株向日葵突然就一个猛回头。吓得你从此生活不能自理。

发布于 2015-10-23

没日咋办

```
while (flag == 1) {
    if ((analogRead(A5) <= 800 && analogRead(A4) <= 800) && (analogRead(A1) <= 800
&& analogRead(A0) <= 800)) {
      flag = 0;
      break;
    }
……
servo_A3.write(90);
  delay(7);
  servo_A2.write(90);
  delay(7);
  flag = 1;
```

日的闪现


本质生活家-开阳
bilibili

日的闪现

```
if (analogRead(A5) > analogRead(A4) + 100) {
    servo_A3.write((servo_A3.read() + rota));
    delay(5);

  } else if (analogRead(A4) > analogRead(A5) + 100) {
    servo_A3.write((servo_A3.read() - rota));
    delay(5);
  }
  if (analogRead(A1) > analogRead(A0) + 50) {
    if (rota == 1 && servo_A2.read() < 90 || rota == -1 && servo_A2.read() >= 90) {
      servo_A2.write((servo_A2.read() + 1));
      delay(5);
    }
  } else if (analogRead(A0) > analogRead(A1) + 50) {
    if (rota == 1 && servo_A2.read() <= 90 || rota == -1 && servo_A2.read() > 90) {
      servo_A2.write((servo_A2.read() - 1));
      delay(5);
    }
  }
```

日的闪现

```
if (servo_A3.read() == 180 && (servo_A2.read() >= 120 || servo_A2.read() <= 60)) {
      servo_A2.write((180 - servo_A2.read()));
      delay(750);
      servo_A3.write(5);
      delay(750);
      rota = rota * -1;

    }
if (servo_A3.read() == 0 && (servo_A2.read() >= 120 || servo_A2.read() <= 60)) {
      servo_A2.write((180 - servo_A2.read()));
      delay(750);
      servo_A3.write(175);
      delay(750);
      rota = rota * -1;

    }
```