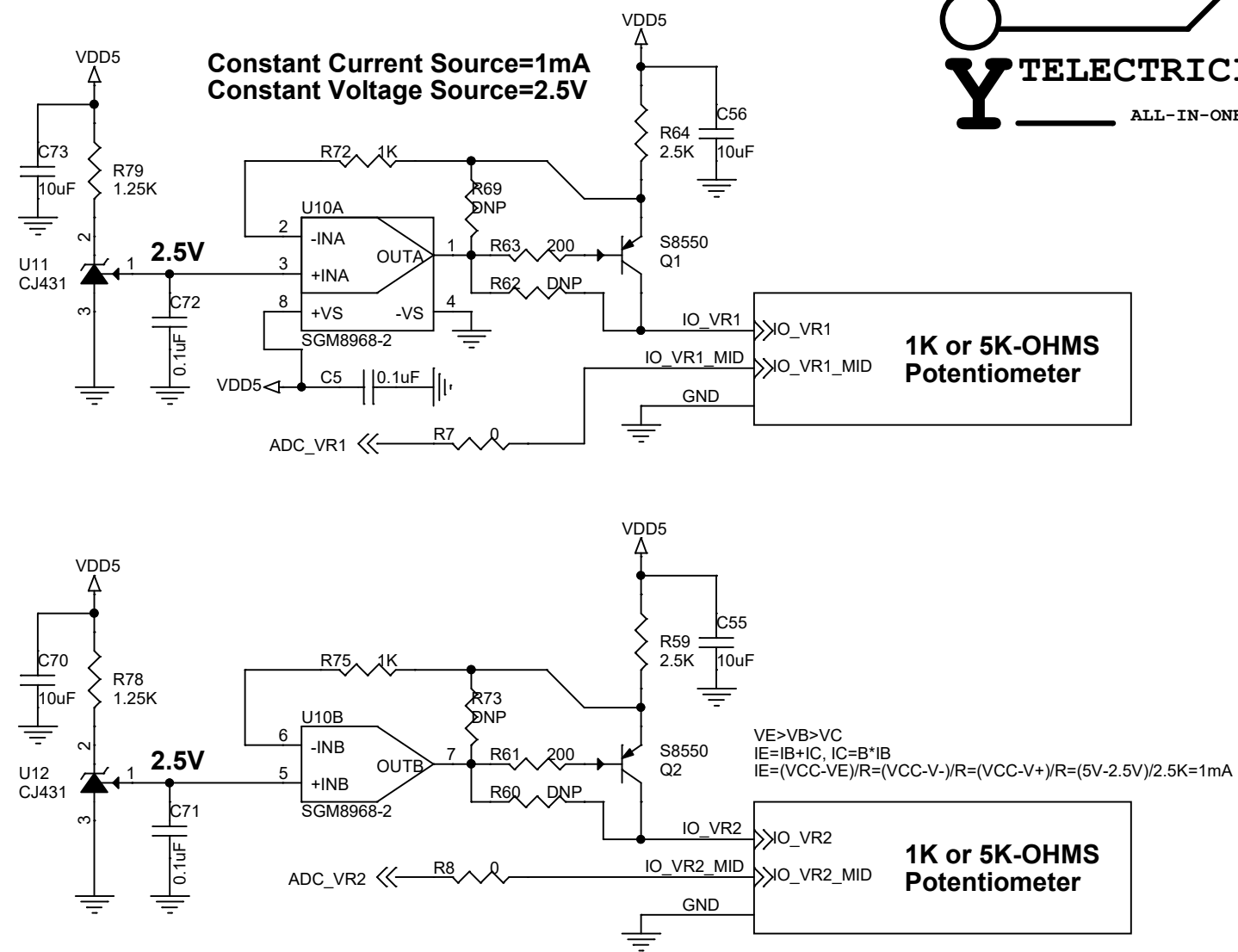


| | | |
|--------------|--------------------------------|--------------|
| Title | | |
| 0-POWER-TREE | | |
| Size A | Document Number FLASH LIGHT | Rev A1 |
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Minimum cathode current for regulation
 $I_{KA(min)}=1mA(Max) @V_{KA}=V_{REF}$
 Choose $I_{KA}=2mA$
 So $R=(5V-2.5V)/2mA=1.25K$

| MODE | MIN | MAX |
|------|-----|------|
| CCS | 0V | 1V |
| CVS | 0V | 2.5V |



Constant Voltage Source Enabled to Hit 5K-ohms Potentiometer
 SGM8968-2 Output Current (I_{out})>=19mA
 $I=2.5V/5K=0.5mA$

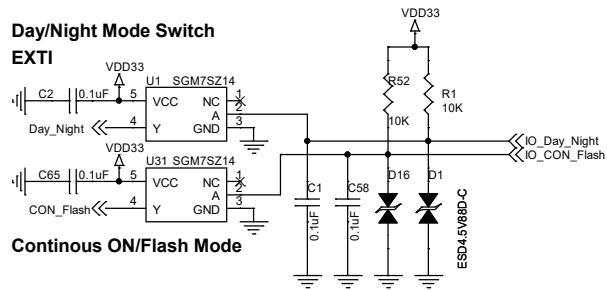
Constant Current Source Enabled to Hit 1K-ohms Potentiometer
 $V=1mA*1K-ohms=1V$



| | | |
|-------------------|---------------------------|--------------|
| Title | | |
| 3-SENSOR EXCITING | | |
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Day/Night Mode Switch

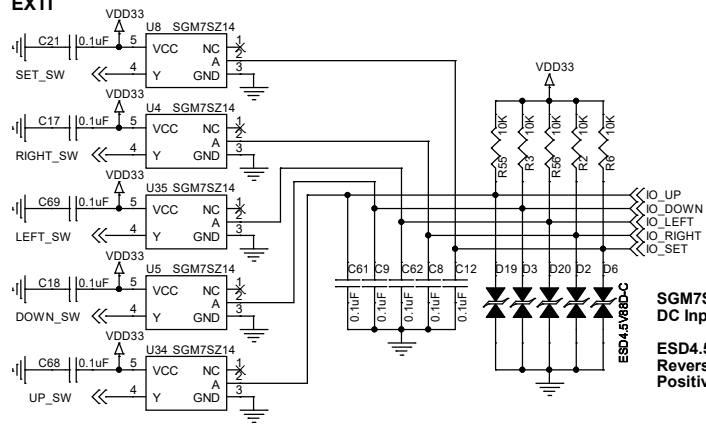
EXTI



Continuous ON/Flash Mode

Arrows(Up/Down/Left/Right+Set)

EXTI



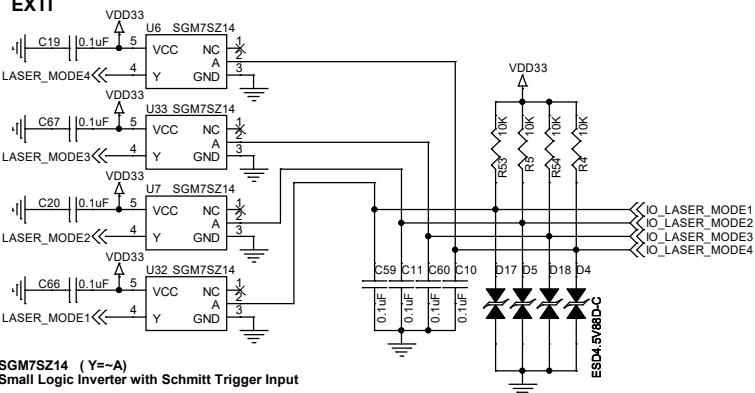
SGM7SZ14 (Y=A)
Small Logic Inverter with Schmitt Trigger Input

SGM7SZ14 (Absolute Maximum Ratings)
DC Input Voltage Range, $V_{in} = -0.5V$ to $6V$

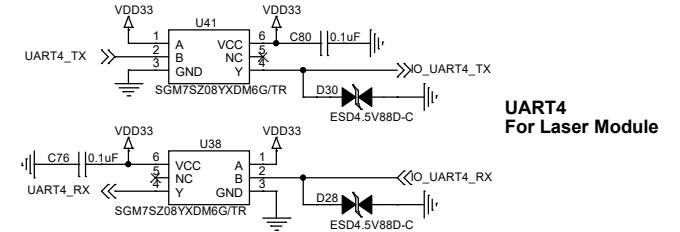
ESD4.5V88D-C
Reverse Working Voltage $(V_{BWM}) = 4.5V$ (Max)
Positive Clamping Voltage $= 6.5V$ (Max)

Fast to change Laser Module Working Mode

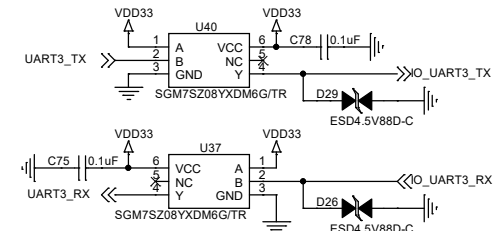
EXTI



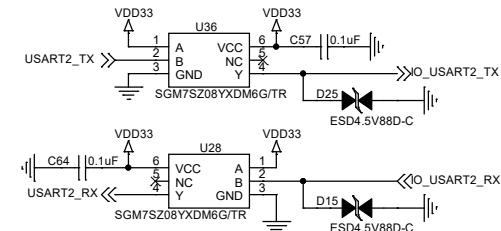
SGM7SZ14 (Y=A)
Small Logic Inverter with Schmitt Trigger Input



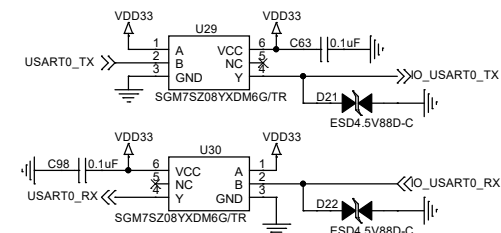
UART4 For Laser Module



UART3 For WiFi-UART Module



USART2 For Display Module



USART0 For Debug TTL-USB

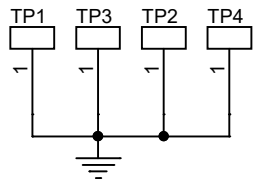
| | | |
|-------------|---------------------------|--------------|
| Title | | |
| 4-IO BUFFER | | |
| Size | Document Number | Rev |
| A3 | FLASH LIGHT | A1 |
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**Fast
Navigate Keys**

IO_SET
IO_Day_Night
IO_CON_Flash
IO_SHOT_SW1
IO_SHOT_SW2
IO_LASER_MODE3
IO_LASER_MODE4
IO_LASER_MODE1
IO_LASER_MODE2
IO_FL_ADD
IO_FL_SUB
IO_DOWN
IO_UP
IO_LEFT
IO_RIGHT

**Debug USART0
SWD**
FPC 0.5mm 6P

Mechanical Installation Screw



MCU CONTROLLER BOARD

WiFi-UART Module
3.3V/500mA

VDD33_WIFI

Laser Distance Module
RS422
12V/500mA

**OLED+CMOS
UART**
5V/500mA

Laser Driver Board
UART

1# DC MOTOR
2# DC MOTOR

1# POTENTIOMETER

2# POTENTIOMETER

| | | |
|-------------|---------------------------|--------------|
| Title | | |
| 5-CONNECTOR | | |
| Size | Document Number | Rev |
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