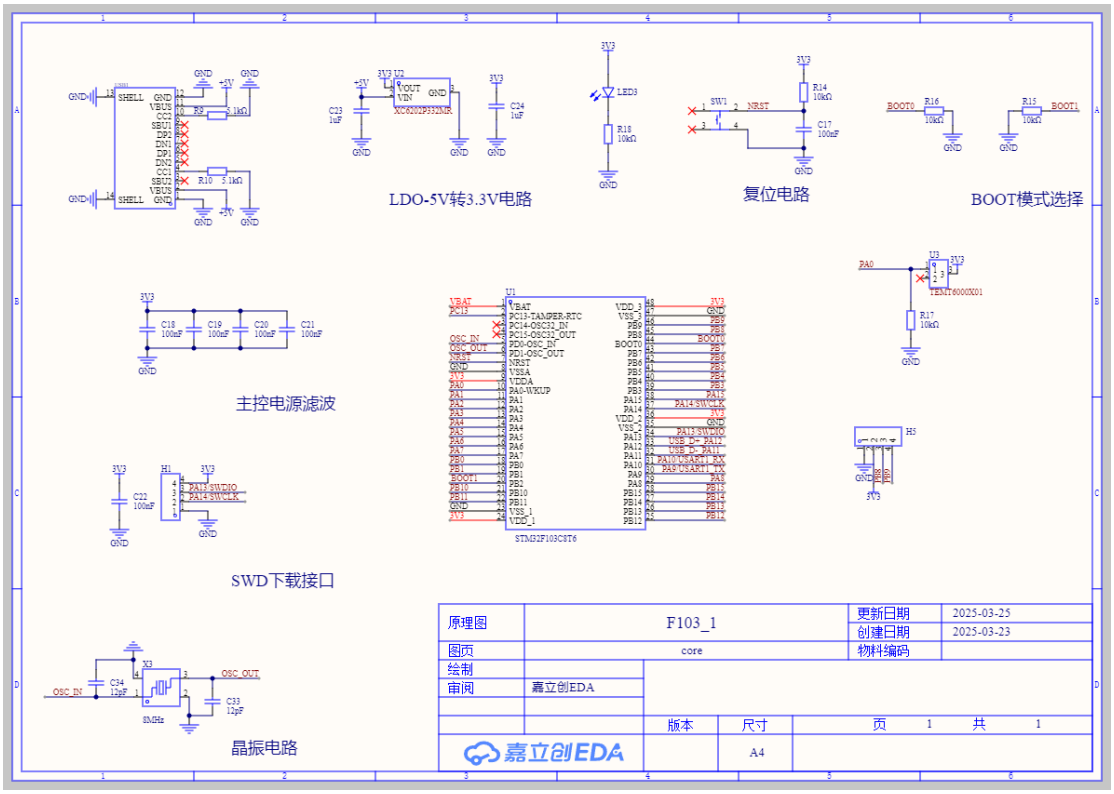
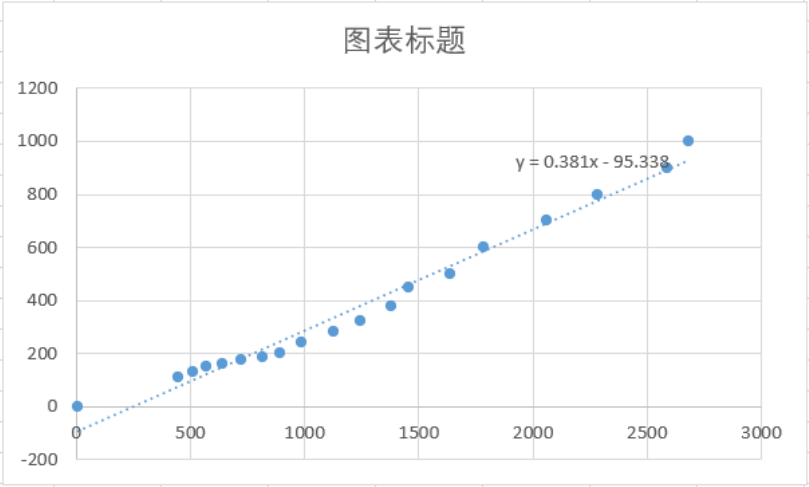
光敏三极管与 adc 引脚之间应再加个跟随器



C	D
10	0
450	110
512	130
570	150
640	160
724	175
820	185
896	200
989	240
1126	280
1245	320
1379	380
1457	450
1641	500
1785	600
2062	700
2284	800
2587	900
2686	1000



```c
#include "stm32f10x.h"                  // Device header

void AD_Init(void)
{
    RCC_APB2PeriphClockCmd(RCC_APB2Periph_ADC1, ENABLE);
    RCC_APB2PeriphClockCmd(RCC_APB2Periph_GPIOA, ENABLE);

    RCC_ADCCLKConfig(RCC_PCLK2_Div6);

    GPIO_InitTypeDef GPIO_InitStructure;
    GPIO_InitStructure.GPIO_Mode = GPIO_Mode_AIN;
    GPIO_InitStructure.GPIO_Pin = GPIO_Pin_0;
    GPIO_InitStructure.GPIO_Speed = GPIO_Speed_50MHz;
    GPIO_Init(GPIOA, &GPIO_InitStructure);

    ADC_RegularChannelConfig(ADC1, ADC_Channel_0, 1, ADC_SampleTime_55Cycles5);

    ADC_InitTypeDef ADC_InitStructure;
    ADC_InitStructure.ADC_Mode = ADC_Mode_Independent;
    ADC_InitStructure.ADC_DataAlign = ADC_DataAlign_Right;
    ADC_InitStructure.ADC_ExternalTrigConv = ADC_ExternalTrigConv_None;
    ADC_InitStructure.ADC_ContinuousConvMode = DISABLE;
    ADC_InitStructure.ADC_ScanConvMode = DISABLE;
    ADC_InitStructure.ADC_NbrOfChannel = 1;
    ADC_Init(ADC1, &ADC_InitStructure);

    ADC_Cmd(ADC1, ENABLE);

    ADC_ResetCalibration(ADC1);
    while (ADC_GetResetCalibrationStatus(ADC1) == SET);
    ADC_StartCalibration(ADC1);
    while (ADC_GetCalibrationStatus(ADC1) == SET);
}

uint16_t AD_GetValue(void)
{
    ADC_SoftwareStartConvCmd(ADC1, ENABLE);
    while (ADC_GetFlagStatus(ADC1, ADC_FLAG_EOC) == RESET);
    return ADC_GetConversionValue(ADC1);
}
```

```c
#include "stm32f10x.h"
#include "OLED_Font.h"

/*引脚配置*/
#define OLED_W_SCL(x)       GPIO_WriteBit(GPIOB, GPIO_Pin_8, (BitAction)(x))
#define OLED_W_SDA(x)       GPIO_WriteBit(GPIOB, GPIO_Pin_9, (BitAction)(x))

/*引脚初始化*/
void OLED_I2C_Init(void)
{
    RCC_APB2PeriphClockCmd(RCC_APB2Periph_GPIOB, ENABLE);

    GPIO_InitTypeDef GPIO_InitStructure;
    GPIO_InitStructure.GPIO_Mode = GPIO_Mode_Out_OD;
    GPIO_InitStructure.GPIO_Speed = GPIO_Speed_50MHz;
    GPIO_InitStructure.GPIO_Pin = GPIO_Pin_8;
    GPIO_Init(GPIOB, &GPIO_InitStructure);
    GPIO_InitStructure.GPIO_Pin = GPIO_Pin_9;
    GPIO_Init(GPIOB, &GPIO_InitStructure);

    OLED_W_SCL(1);
    OLED_W_SDA(1);
}

/**
  * @brief  I2C开始
  * @param  无
  * @retval 无
  */
void OLED_I2C_Start(void)
{
    OLED_W_SDA(1);
    OLED_W_SCL(1);
```

main.c* OLED.h OLED.c AD.c AD.h

```c
#include "stm32f10x.h"                  // Device header
#include "Delay.h"
#include "OLED.h"
#include "AD.h"

uint16_t ADValue;
uint16_t Voltage;

int main(void)
{
    OLED_Init();
    AD_Init();

    OLED_ShowString(1, 1, "ADValue:");
    OLED_ShowString(2, 1, "Illumin:0.001x");

    while (1)
    {
        ADValue = AD_GetValue();
        Voltage = 0.381*ADValue - 95.338;

        OLED_ShowNum(1, 9, ADValue, 4);
        OLED_ShowNum(2, 9, Voltage, 4);

        Delay_ms(100);
    }
}
```