



上海冠显光电科技有限公司
Shanghai Top Display Optoelectronics Co., LTD

MODEL : TY013QVP02NA-300011
ISSUED DATE : 2022-11-29
VERSION : 1.1

● Revision History

Issued Date	Description	Version	Editor
2022-11-15	First edition	1.0	
2022-11-29	Modify model No. ,some description and drawing	1.1	

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1. Hardware Introduction

This chapter mainly introduces the product appearance diagram, hardware configuration diagram and tools required for debugging.

1.1. Product Appearance

The following is the appearance of the product corresponding to this model (hardware interfaces, etc., vary according to the specific model of backplane components), as shown in Figure 1.1-1

Note: There is no key structural process modification or major layout adjustment, only changes in product process or reliability. The company will not initiate changes to the outside product appearance. The specific items are subject to the received goods.

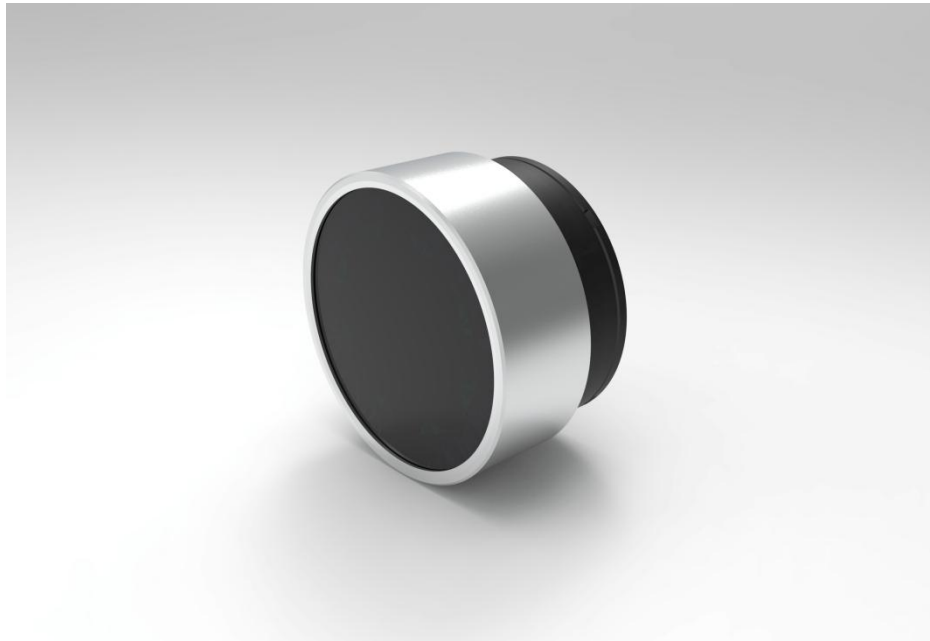


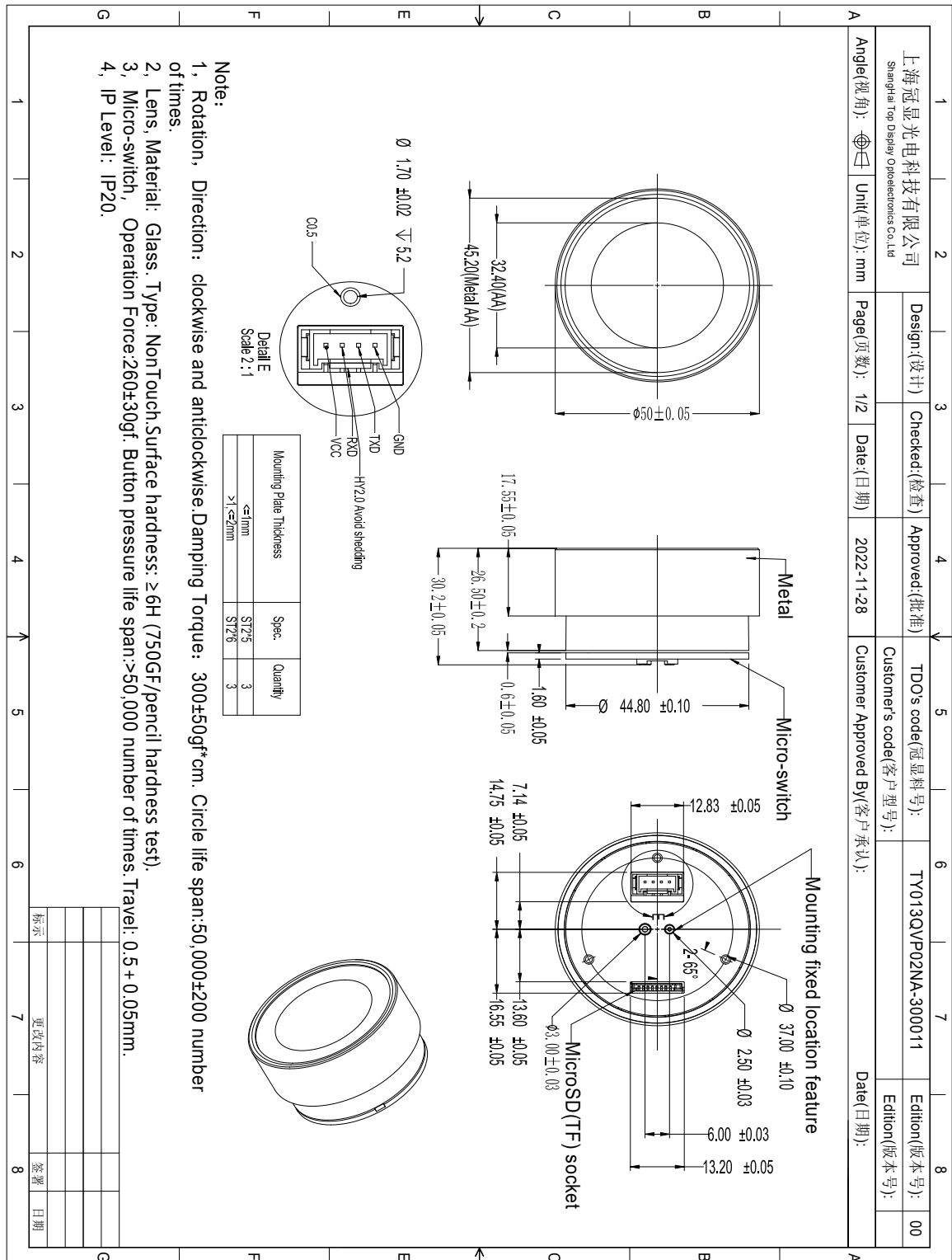
Figure 1.1-1 1.28 inch knob

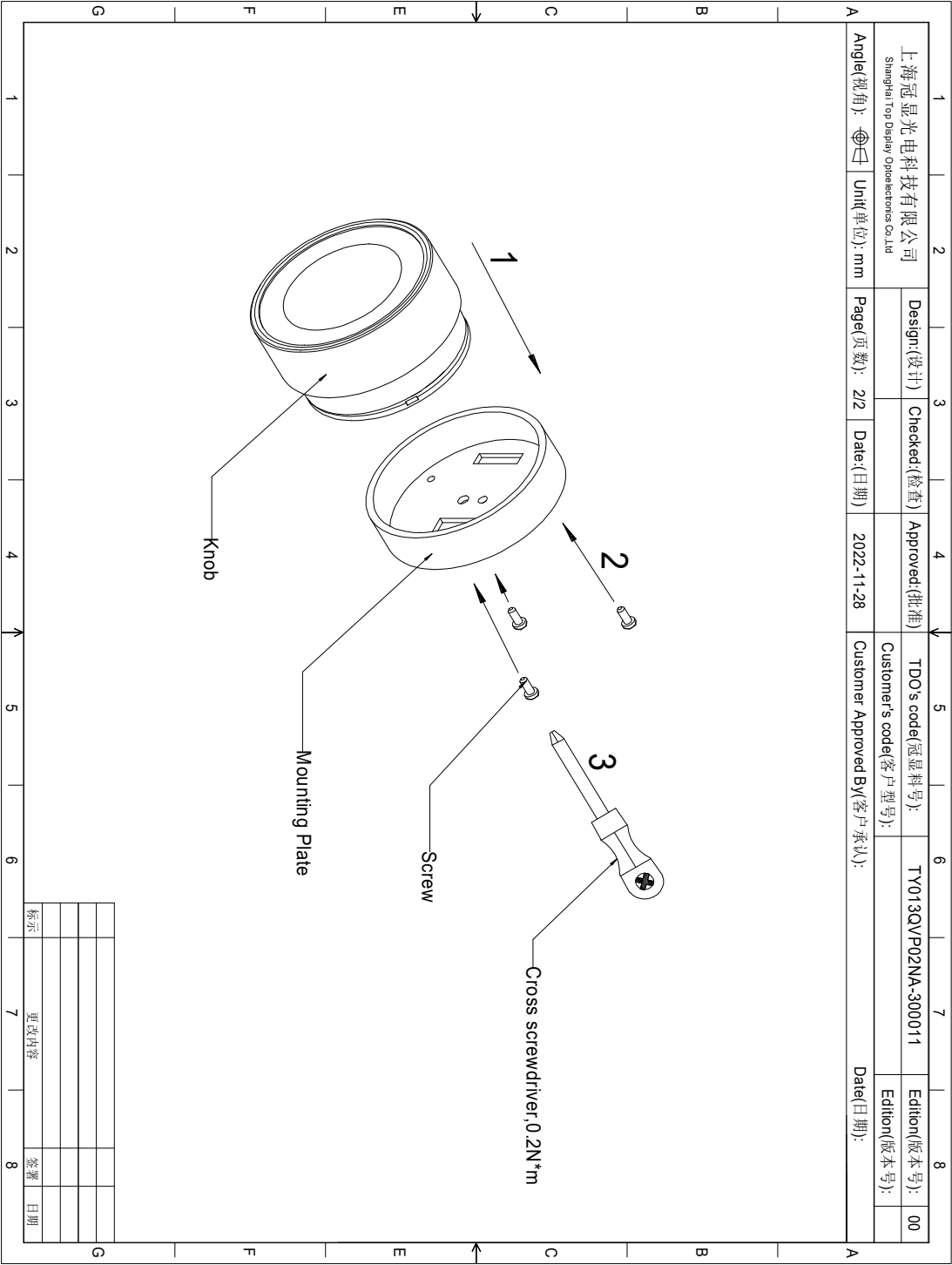
2. Product Specifications

● Product parameter	
Model	TY013QVP02NA-300011
Product serial	Y6 series
Core processor	100MHz SOC processor
Size	1.28 inch
Resolution	240RGB × 240
Active area(mm)	Φ 32.40
Product size(mm)	Φ 50.00 × 30.20(H)
Color	65K,16 bit RGB
Storage	8M in total (customer available 6M)
Pictures format	.jpg and .bmp format is supported.
Font	Comes with ASCII encoding font (can display English and Arabic numbers),also supports DZK font.
Download pictures	Micro SD (TF)
Firmware update	Micro SD (TF)
Display response speed	≤50ms
Feature	Uniform black cover
Control mode	Rotate and press
● LCD screen	
Display type	TFT LCD
Back light	LED
Brightness(nit)	210
Backlight life(hour)	20000
Contrast	800
Perspective(T/B/L/R)	80/80/80/80
● Environmental electrical parameters	

Voltage	DC 5V (Rating)
Power consumption	5V/150mA(Max brightness)
Working temperature	-20℃～70℃
Storage temperature	-30℃～80℃
Working humidity	10%~90%RH
Storage humidity	10%~90%RH
● Communication interface parameters	
Communication mode	3.3V TTL(5V TTL optional)
Baud	1200~115200,typical value is 115200
Data frame format	8N1
Communication plug-in specification	4Pin HY2.0 standing plug-in
● Other hardware specifications	
Micro SD(TF) socket	Support
● Product certification	
Environmental protection grade	RoSH II

3. Product Structure





Note: According to the specific model, the positions of some components on the backplane are reserved but not welded

4. UART Communication

4.1 Wiring

As shown in the figure below, connect the corresponding pins of the drive board.

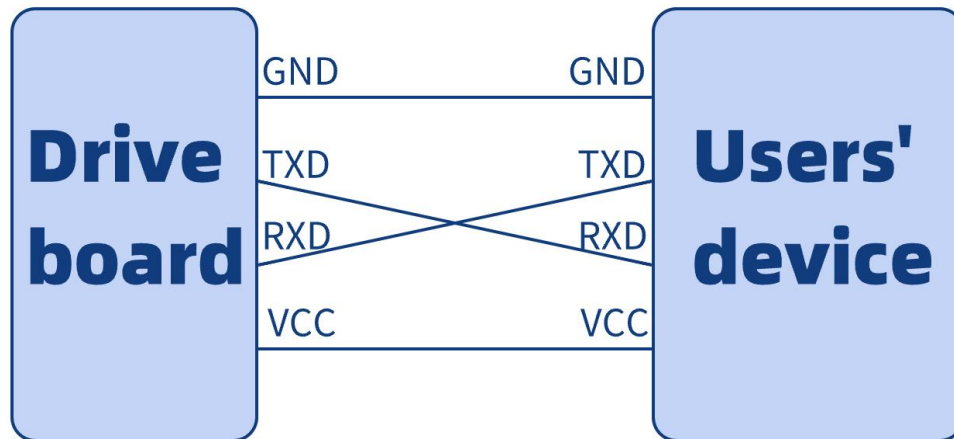


Figure4.1-1 Schematic diagram of UART Hardware Connection

4.2 Serial Debugging Software

In principle, all serial port debugging software can be used, take "SSCOM V5.13.1" as an example.

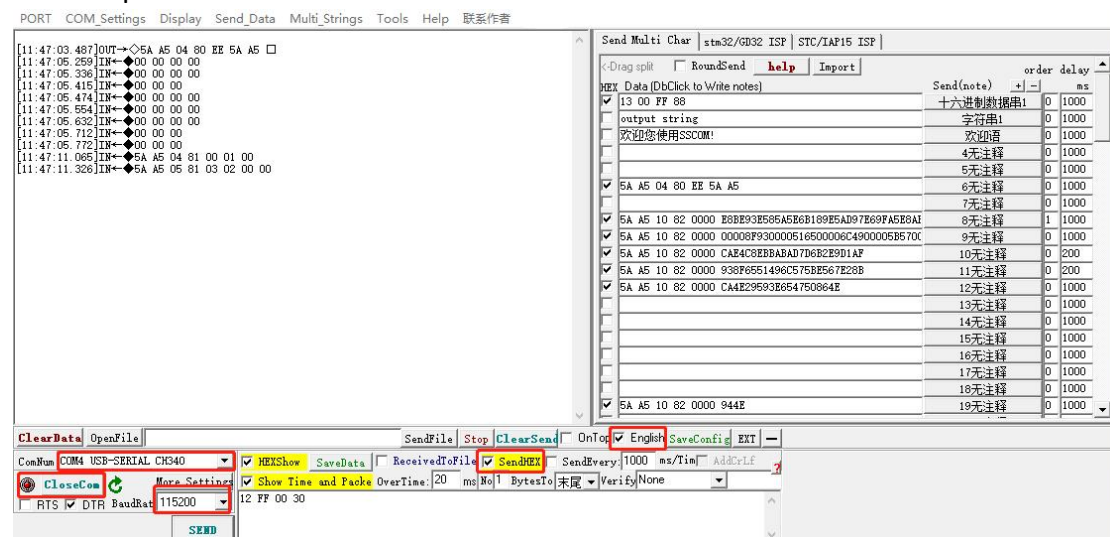


Figure4.2-1 Interface Diagram of UART Debugging Software

Find the debugging port and select it. The baud rate must be consistent with that in the project file.

5. Software Development Mode

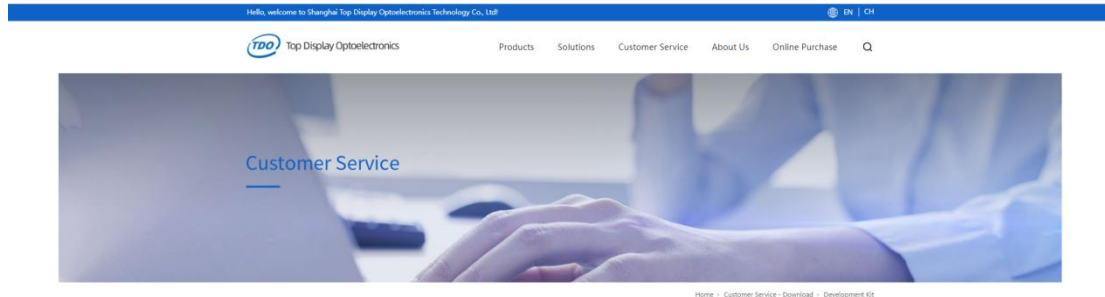


Figure 4-1 Interface of Official Web

This model of product is developed based on Y6 platform. Users can learn the specific software development methods in the *TDO Quick Start Guide* can log on to our official website en.shtdo.com enter the "Customer Service" column to download the corresponding technical documents, development routines, guide videos and other relevant materials.

For more development information or technical support, please call 86-21-64297098 or email: FAE@shtdo.com.

6. Packaging and Physical Dimensions

Single product weight					
Net weight (G)	TBD				
Packaging standard and total weight					
Packing box model	Packing box size (length*width*height, unit: mm)	Layers	Quantity (PCS)/layer	Total quantity (pieces)	Total weight (KG)

7. Sale and Service



TEL:021-6429098

FAX:021-6429089

EMAIL:sales@shtdo.com

WEB:www.shtdo.com

ADDR:Shanghai, Minhang district, Xijunhuan Road 88, Building13A, 4th floor

Online shop:<http://shtdo.en.alibaba.com/>

8. Disclaimer

This document provides product information about Top Display Optoelectronics Technology Co., Ltd. (hereinafter referred to as Shanghai Top Display), which aims to assist customers to speed up product development progress, short development cycles, any routine programs provided in the service process or other channels , technical documents, data manuals, product drawings and other materials and information are for reference only, and customers have the right not to use or to modify and use for their own reference. The company does not provide any guarantee of completeness and reliability. If the customer causes special, incidental or indirect losses for any reason during the use process, the company does not assume any responsibility.