

MODEL	:	**TY013QVP02NH**
ISSUED DATE	:	**2025-8-16**
VERSION	:	**1.1**

Version Record

Issued Date	Description	Version	Editor	Audit
2025-03-19	Final release	1.0	Xenia	
2025-8-16	Added connector	1.2	ZP	

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1. Hardware Introduction

1.1. Connector Pin Definitions

No.	Pin Name	Reset state	Function	Note
1	VCC	-	POWER-IPUT, 5V	All multiplexed functions can be forced to be converted to GPIO functions when not in use
3	RX	-	Default UART2-RX function, connect to user's TX	
4	TX	-	Default UART2-TX function, connected to user's RX	
6	GND	-	POWER	

2. Product Specifications

● Product parameter	
Model	TY013QVP02NH
Product serial	With Housing Series
Core processor	TR230M
Size	1.28 inch
Resolution	240RGB×240
Active area(mm)	32.4(W)×32.4(H)
Product size(mm)	50.00(W)×50.00(H)×30.20(T)
Color	262K
Storage	Customer available 16 M
Pictures format	JPG/PNG
Download pictures	TF Card (Needs to be combined with a debugging tool)
Firmware update	TF Card (Needs to be combined with a debugging tool)
● LCD screen	
Display type	TFT LCD IPS
Back light	LED
Brightness(cd/m²)	170
Backlight life(hour)	30000
Contrast	1100

Perspective(T/B/L/R)	(85/85/85/85)
● Touch panel	
Touch mode	None
● Environmental electrical parameters	
Voltage	3.3~5.5V, typical 5V DC
Power consumption	5V/57mA (Max brightness) 5V/31mA (Backlight off)
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
Baud	2400~3Mbps, typical value is 115200
Data frame format	8N1
Communication plug-in specification	HY2.0mm-4P

3. Reliability Test

3.1. ESD Test

3.1.1. Implementation Standards

Implementation standards	GB/T 17626.2
Performance criteria	B

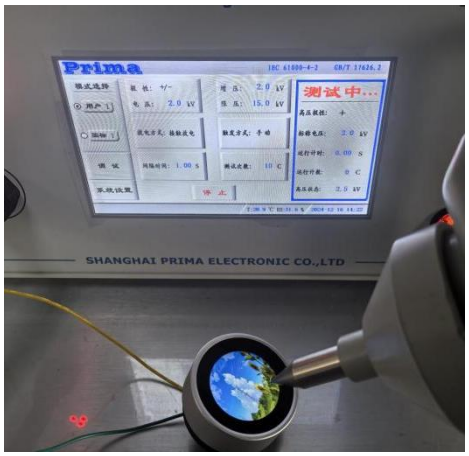
3.1.2. Test Environment

Test ambient temperature: 25℃

Test environment humidity: 50%

Test process: place the product on the test bench, conduct contact and air discharge in turn around the iron frame of the serial port screen and the display area, and observe whether there is any abnormal reset and restart display.

Test remarks: *The current tests are all bare product tests. On the actual product assembly machine, keep the screen and the machine well grounded, or the touch panel surface is protected by PVC or a cover plate, the ESD performance index of the whole machine will be higher.*



3.1.3. Test Data Results:

Discharge type	Discharge value	Test Results	Performance Criteria
Contact	±8KV	Test Passed	B
Air Discharge	±8KV	Test Passed	A

3.2. Electrical fast transient group pulse testing (EFT)

3.2.1. Implementation standards

Implementation standards	GB/T 17626.4

3.2.2. Test Environment

Test ambient temperature: 25℃

Test environment humidity: 50%

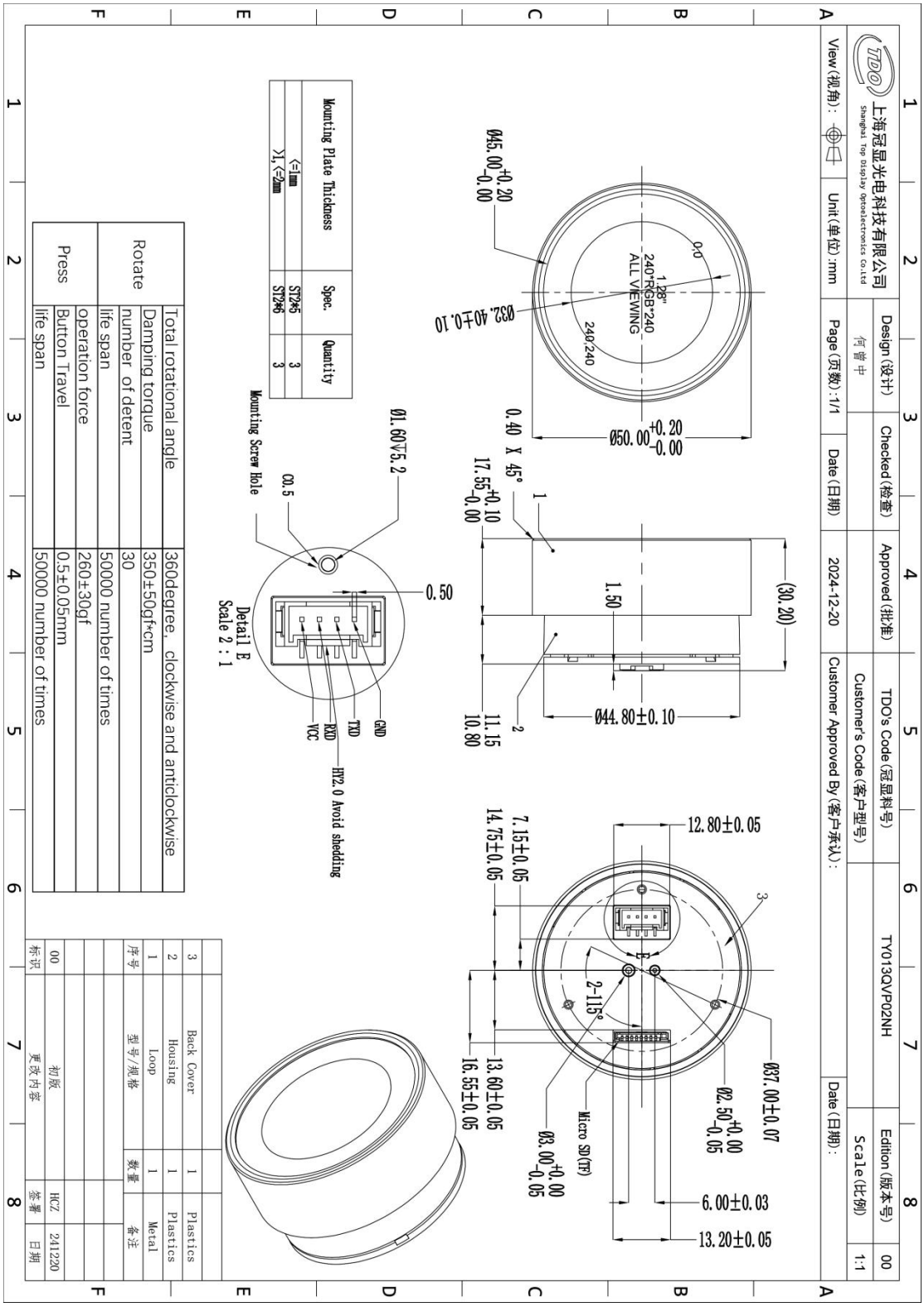
Test process: place the product in the high and low temperature test box, and power the screen through the power supply after the pulse group is coupled by the group pulse generator, and observe whether there is abnormal reset and restart display and other phenomena**.**



3.2.3. Test Data Results:

Implementation standards	GB/T 17626.4
Performance criteria	B
Test environment	4.0KV ; 100KHZ ; 120S

4. Product Size



(Product drawings)

5. Model Definition

T Y 013 QV P 02 N H

1 2 3 4 5 6 7 8

① : 1 position--TDO abbreviation, fixed。

② : 1 position--U(U series serial port)/P(parallel port)/Y(Y series serial port)/H(HDMI interface type)/S(adapter board)/L

③ : 3 position--size,eg.013->1.28 inch

④ : 2 position--resolution abbreviation

⑤ : 1 position--H (standard series)/C (basic series)/L (MINI board series)/P (with housing series)/M (medical series)/A (AV series)

⑥ : 2 position---serial number

⑦ : 1 position---CT (with capacitive touch panel)/RT (with resistive touch panel)/NT(no touch panel)

⑧ : 1 position-----Platform: F-TR660 / G-TR540 / H-TR230M /J -TR240 / K-TR661 / D-TR670 / 0-Android / 1-Linux

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 world. The specific items are subject to the received items.

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



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8. Disclaimer

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