■ Tentative Specification

□ Preliminary Specification

□ Approval Specification

MODELNAME:YH080HS4001

Version:CLA01

Customer: Common

APPROVED BY **SIGNATURE**

Name / Title

Note

Please return 1 copy for your confirmation with your signature and comments.

Approved By	Checked By	Prepared By

Contents

Document Revision History				
Change No.	Date	Subject And Reason	Version No.	Responser
1	2023.05.16	New	01	

1.0 General Description

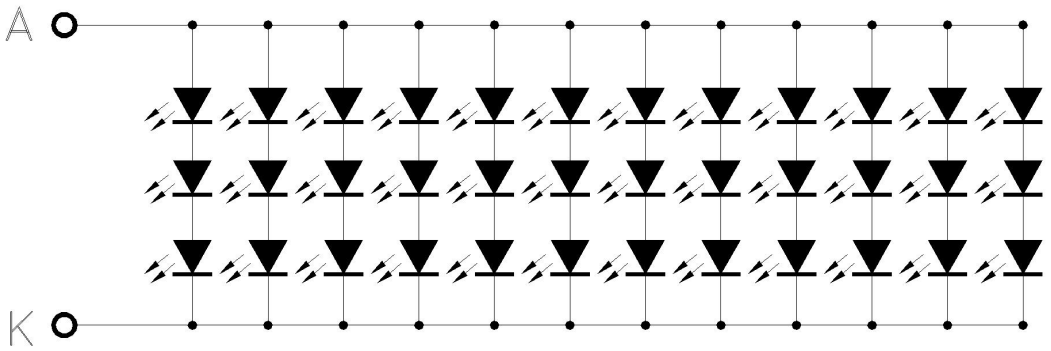
NO.	Item	Specification	Remark
1	LCD size	8.0 inch(Diagonal)	
2	Driver element	a-Si TFT active matrix	
3	Resolution	1024 × 3(RGB) × 600	
4	Display mode	Normally White, Transmissive	
5	Dot pitch	0.0575(W) × 0.1656(H) mm	
6	Active area	176.64(W) × 99.36(H) mm	
7	Module size	192.80(W)×117.00(H)×6.30 mm	Note1
8	Surface treatment	plain	
9	Color arrangement	RGB-stripe	
10	Panel power consumption	TBD(Typ.)	
11	Interface	Digital	
12	Weight	TBD(Typ.)	

Note 1: Refer to Mechanical Drawing.

1.1Back-light Unit:

PARAMETER	Sym.	Min.	Typ.	Max.	Unit	Test Condition	Note
LED Current	IF		360		mA	–	–
LED Voltage (Total)	VF	8.7	9.0	10.2	V	–	–
Luninous instensity		400	450		Cd/m2		
Life Time		–	20000	–	Hr.	I≦360mA	–
Color	White						

CIRCUIT DIAGRAM (LED 3*12=36 DISE)



2.0 Pin Assignment

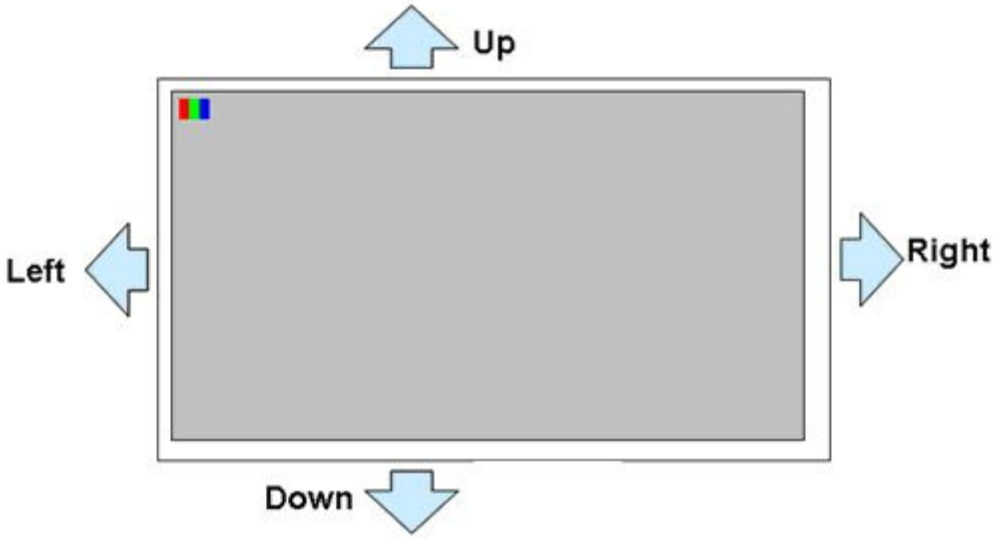
FPC Connector is used for the module electronics interface. The recommended model is FH12A-40S-0.5SH manufactured by Hirose.

PIN NO	SYMBOL	DESCRIPTION
1	VCOM	Common voltage
2	DVDD	Digital power
3	DVDD	Digital power
4	NC	Not connect
5	RESET	Global reset pin. Active low to enter reset state. Suggest to connecting with an RC reset circuit for stability. Normally pull high. (R=10KΩ，C=1μF)
6	U/D	Vertical inversion
7	L/R	Horizontal inversion
8	STBYB	Standby mode, normally pull high STBYB="1", normal operation STBYB="0",timing control, source driver will turn off, all output are high-Z
9	GND	Ground
10	RXCLKIN-	Negative LVDS differential clock inputs
11	RXCLKIN+	Positive LVDS differential clock inputs
12	GND	Ground
13	RXIN0-	Negative LVDS differential data inputs
14	RXIN0+	Positive LVDS differential data inputs
15	GND	Ground
16	RXIN1-	Negative LVDS differential data inputs
17	RXIN1+	Positive LVDS differential data inputs
18	GND	Ground
19	RXIN2-	Negative LVDS differential data inputs
20	RXIN2+	Positive LVDS differential data inputs
21	GND	Ground
22	RXIN3-	Negative LVDS differential data inputs
23	RXIN3+	Positive LVDS differential data inputs
24	GND	Ground
25	SELB	6-bit/8-bit input select SELB = L , 8-bit ; SELB = H , 6-bit
26	GND	Ground
27	AVDD	Power for Analog Circuit
28	GND	Ground
29	VGH	Positive power for TFT
30	NC	Not connect
31	NC	Not connect
32	VGL	Negative power for TFT
33	GND	Ground
34	NC	Not connect
35	LED-	LED-
36	LED-	LED-
37	NC	Not connect
38	NC	Not connect
39	LED+	LED+
40	LED+	LED+

Remarks：

1) Mating connector：FH12A-40S-0.5SH
2) UD and LR control function

UD	LR	FUNCTION
0	1	Normal display
0	0	Inverse Left and Right
1	1	Inverse Up and Down
1	0	Inverse Left and Right Inverse Up and Down



3.0

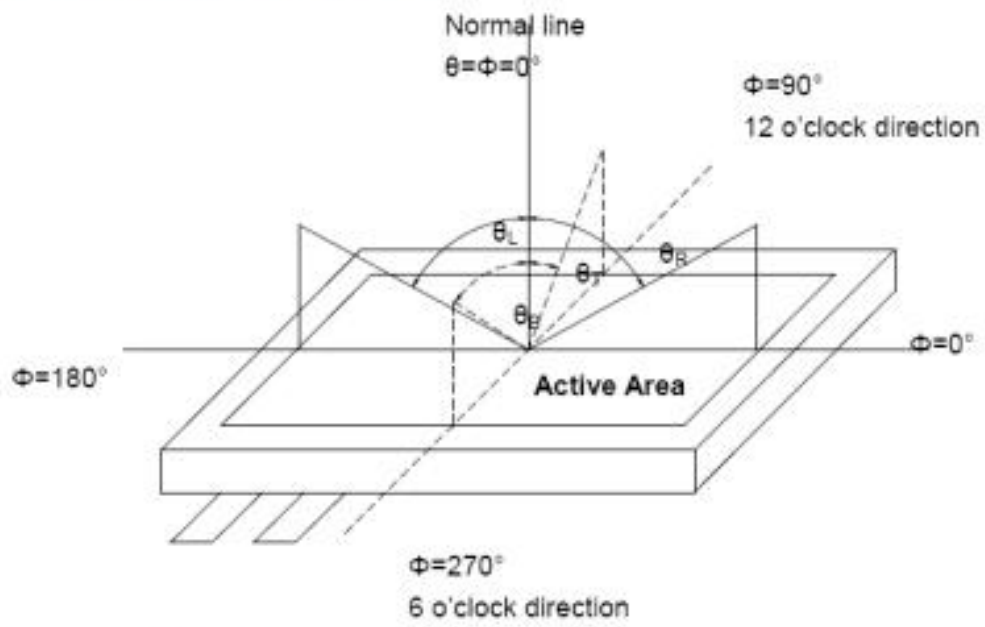
Optical specifications

Item	Symbol	Condition	Specification			Unit	Remark
			Min.	Typ.	Max.		
Response time	Tr	θ= 0°	-	10	20	ms	Note 3
	Tf		-	20	30		
	Tr+Tf		-	30	-		
Contrast ratio	CR	θ= 0°	500	700	-		Note 2,4
Viewing angle	Top(12 o'clock)	CR≧10	60	70	-	deg.	Note 1
	Bottom(6 o'clock)	CR≧10	65	75	-		
	Left(9 o'clock)	CR≧10	65	75	-		
	Right(3 o'clock)	CR≧10	65	75	-		
Color chromaticity(CIE 1931) （Color saturation base on CF only with ITO&light source is C light）	Wx	θ= 0°	-0.015	0.309	+0.015		Note 5
	Wy			0.326			
	Rx			0.648			
	Ry			0.331			
	Gx			0.292			
	Gy			0.585			
	Bx			0.140			
	By			0.092			
Transmittance	Trans		3.20	3.55	-	%	
Cross talk	CT	-	-	-	1.2	%	Note 6

Test conditions:

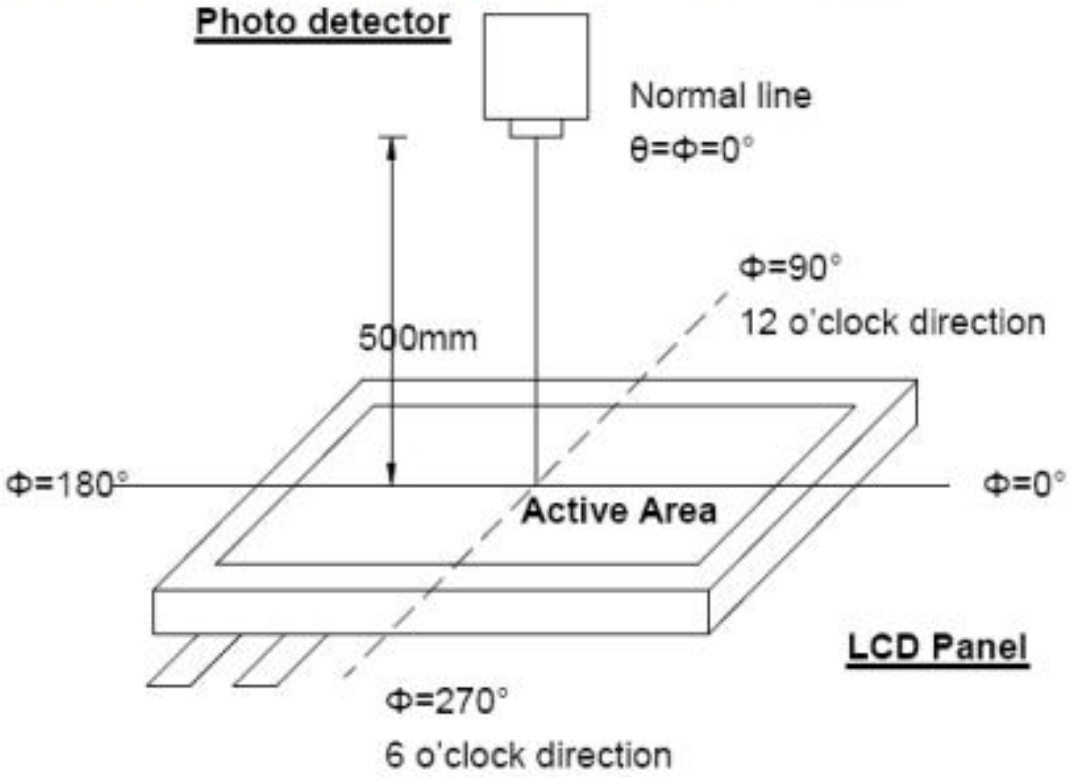
1. VCC=3.3V, V_{LED}=5.0V, the ambient temperature is 25℃.
2. The test systems refer to Note 2.

Note 1: Definition of viewing angle range



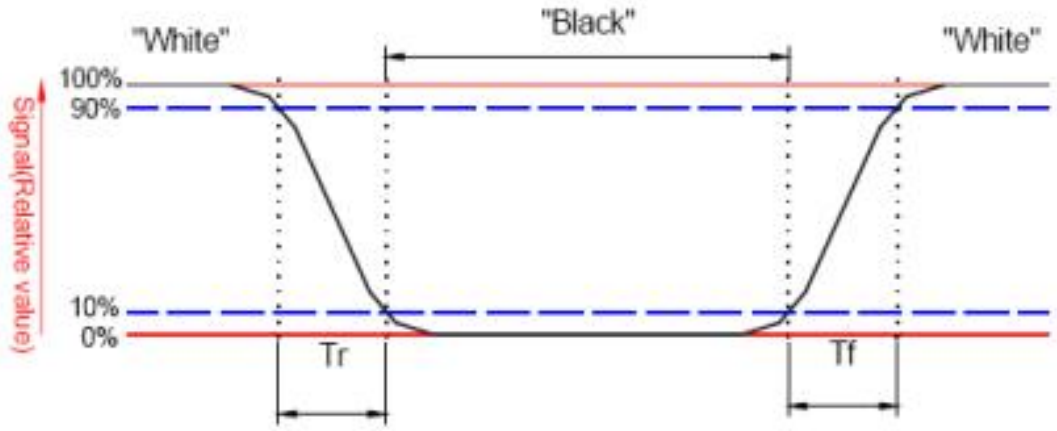
Note 2: Definition of optical measurement system.

The optical characteristics should be measured in dark room. The optical properties are measured at the center point of the LCD screen,(Response time is measured by Photo detector TRD_100, other items are measured by BM-5A/Field of view :1° /Height 500mm.)



Note 3: Definition of response time:

The output signals of TRD_100 are measured when the input signals are changed to "White" (falling time) and from "White" to "Black" (rising time), respectively. The interval is between the 10% and 90% of amplitudes. Refer to figure as below.



Note 4: Definition of contrast ratio:

Contrast ratio is calculated by the following formula.

$$\text{Contrast ratio (CR)} = \frac{\text{Brightness on the "white" state}}{\text{Brightness on the "black" state}}$$

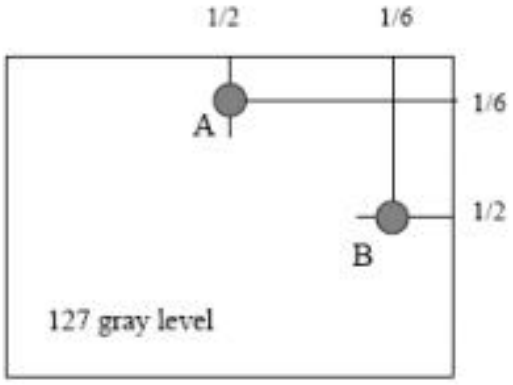
Note 5: Definition of color chromaticity (CIE 1931)

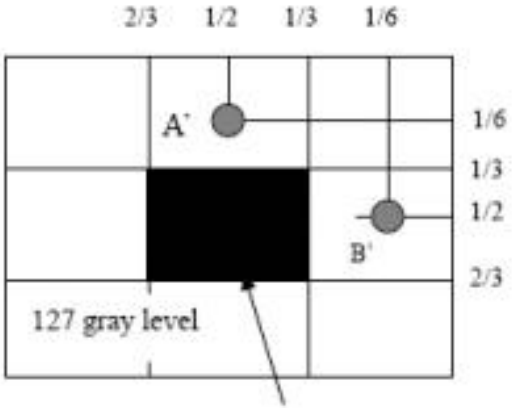
Color coordinates measured at center point of LCD. CF only measure under C light simuzation

Note 6: Definition of crosstalk:

$|L_A - L_{A'}| / L_A \times 100\% \leq 1.2\%$ max., L_A and $L_{A'}$ are brightness at location A and A'

$|L_B - L_{B'}| / L_B \times 100\% \leq 1.2\%$ max., L_B and $L_{B'}$ are brightness at location B and B'

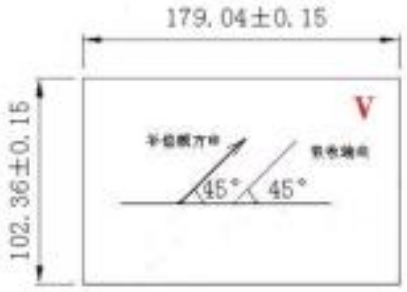




4.0

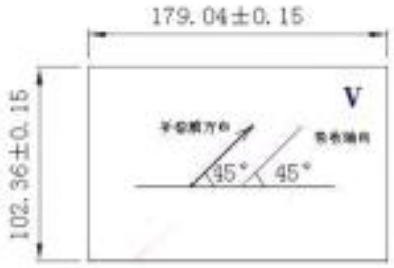
Item		Values	Tolerance	Unit	Remark
Size	Top	179.04(L)X 102.36 (W)	±0.15	mm	Note 1 Note 2 Note 3
	Bottom	179.04(L)X 102.36 (W)			
Thickness		215	±25	um	
Type	Top	Plain	-	-	
	Bottom	AG			
Compensation type		EWV	-	-	
Absorption direction	θ1	45	±1	degree	
Inclination direction	θ2	45	±1	degree	
Polarizer paste tolerance		±0.4	W/I POL size tolerance	mm	

Note 1: Top Polarizer.



CF侧（保护膜朝上）

Note 2: Bottom Polarizer.



TFT侧（保护膜朝上）

5.0

Electronic Specification

Item	Symbol	Values			Unit	Remark
		Min	Type.	Max		
Input Signal Voltage	V_{COM}	3.4	3.7	4.0	V	Note 1
Power Voltage	V_{GL}	-9.8	-6.8	-3.8	V	Note 2
	V_{GH}	16	20	24	V	

Note 1:

(1) Vcom value is available in the condition:

The ambient temperature is 25℃.

The operation frequency is 60Hz

(2) The gate IC is the HX8696-A00DPD300 COG Himax,the source IC is the HX8282-A08DPD300 COG.

Note 2:

(1) Be sure to apply VCC and VGL to the LCD first, and then apply VGH

(2) Be sure center contrast ratio is 90% at least when VGL drifts3v and VGH drifts 4v.

Operation Frequency is @ 60Hz.

5.1

Safety

(1) Sharp Edge Requirements

There will be no sharp edges or corners on the cell that could cause injury.

(2) Materials

There will be no carcinogenic materials used anywhere in the cell. If toxic materials are used, they will be reviewed and approved by the responsible CTC Toxicologist.

5.2

Display quality

The display quality of the color TFT-LCD module should be in compliance with the CTC's Incoming inspection standard.

5.3

Handling precaution

The Handling of the TFT-LCD should be in compliance with the CTC's handling principle standard.

6.0 Reliability test items

I. Reliability Assurance Specification

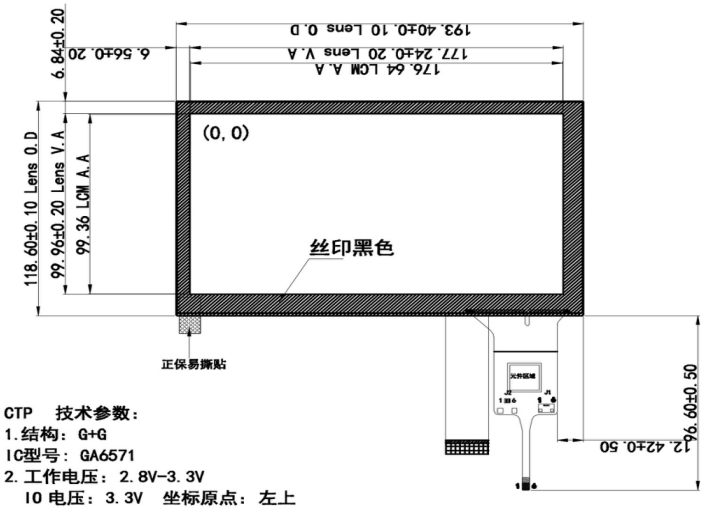
Item	Test Conditions	Judgment	Remark
High Temperature Storage	Ta = 85℃ 240hrs	Note 1	Note 2
Low Temperature Storage	Ta = -40℃ 240hrs	Note 1	Note 2
High Temperature Operation	Ta = 80℃ 240hrs	Note 1	Note 2
Low Temperature Operation	T a = -30℃ 240hrs	Note 1	Note 2
Operate at High Temperature and Humidity	60℃,90% RH max, 240hrs	Note 1	Note 2
Thermal Shock	-40℃/30 min ~ +85℃/30 min for a total 100 cycles, Start with cold temperature and end with high temperature	Note 1	Note 2

Note1: T_a is the ambient temperature of sample. In the standard condition, there shall be no practical problem that may affect the display function.

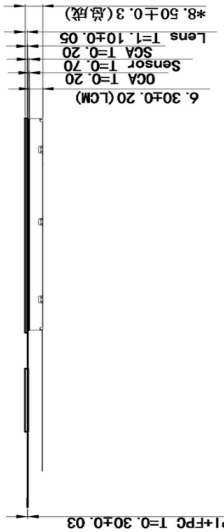
Note2: Before cosmetic and function test, the product must have enough recovery time, at least 2hours at the room temperature.

MARK	REVISER	DATE	REVISED DESCRIPTIONS

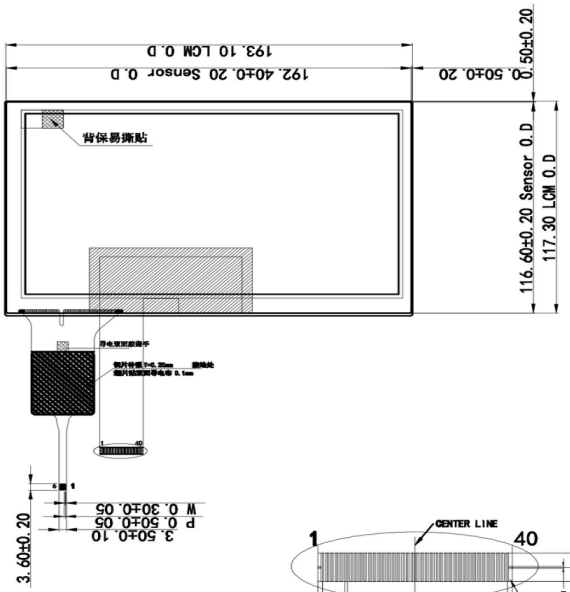
正视图



侧视图



背视图



CTP 技术参数：

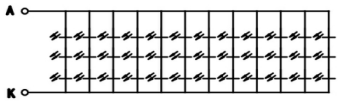
1. 结构：G+G
   IC型号：GA6571
2. 工作电压：2.8V-3.3V
   IO 电压：3.3V 坐标原点：左上
3. 透光率：≥82 %
4. 表面硬度：6H
5. 工作环境：-20 ℃~+70 ℃，湿度20%~90%
6. 储存环境：-30 ℃~+80 ℃，湿度20%~90%
7. 未注尺寸公差按 ±0.2mm

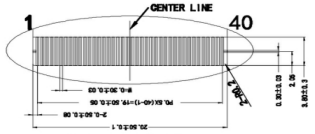
ELECTRICAL-OPTICAL CHARACTERISTICS
(Ta=25° C. The Ambient temperature Ta=25° C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Forward Current	If	If=20.0 mA	8.7	9.0	10.2	V
Reverse Current	Ir	Vr= 5 V				μA
Power dissipation	Pd	If=20.0 mA				W
Colour Coordinates	x	If=20.0 mA		0.31		
	y			0.33		
BL Luminance (Center Area)	Lv	If=20.0 mA	/	/		cd/m²
Luminous Uniformity (Center)		If=20.0 mA	75			%
LCM Luminance	Lv	If=20.0 mA	400	450		cd/m²

Operating Temperature Range	Topr	normal use	-20		+70	° C
Storage Temperature Range	Tstg	normal use	-30		+80	° C

CIRCUIT DIAGRAM (LED 3*12=36 DISE)





DETAIL A (3:1)

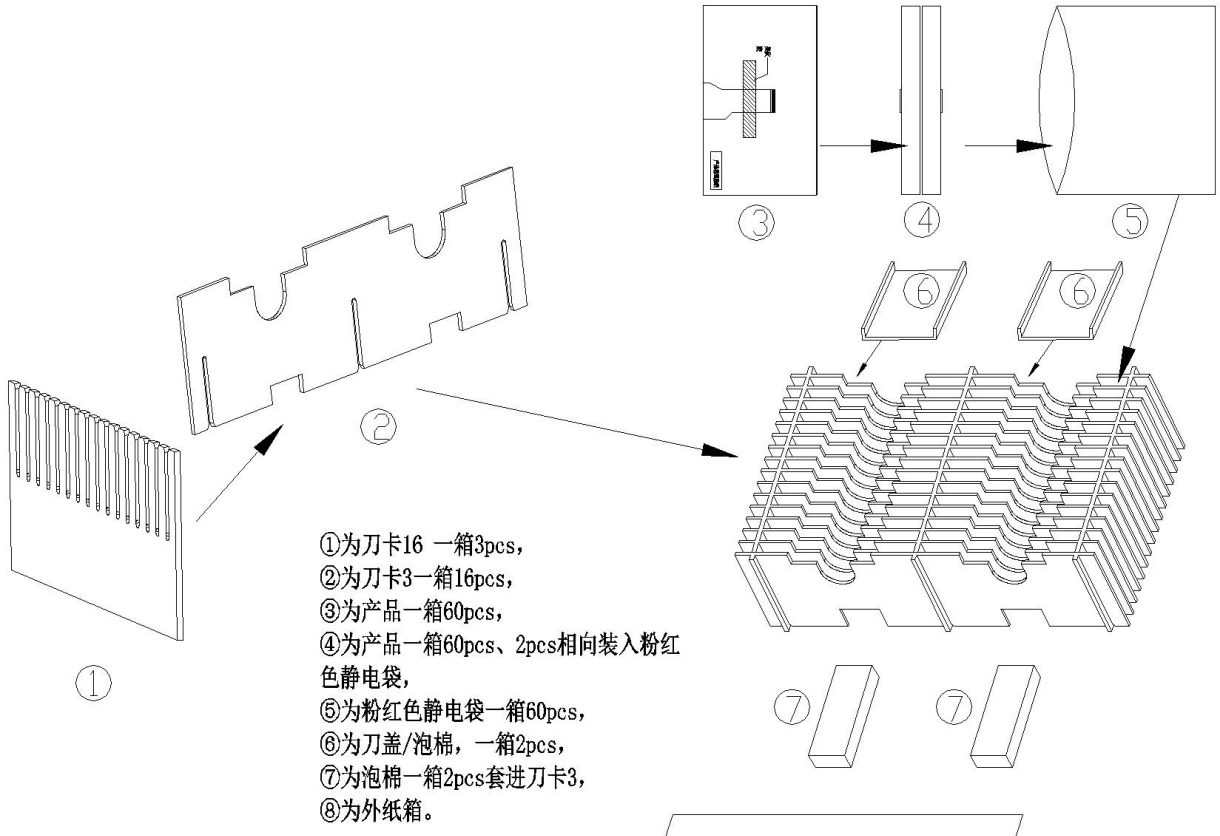
TP引脚定义

PIN	定义
1	RST3.3V
2	VDD3.3V
3	GND
4	INT3.3V
5	SDA3.3V
6	SCL3.3V

REV 版本	MODEL NAME 总成 型号	ZYT080631G4F36W21-0			
A0					
SCALE 比例	TITLE 名称		APPROVED BY 核准	CHECKED BY 审查	DRAWN BY 绘图
1:1	UNSPECIFIED TOLERANCE 未标注公差	UNIT 单位 mm			
	DATE 日期	2023-05-16			

由 Autodesk 教育版产品制作

8.0 Packing form



①为刀卡16 一箱3pcs，
②为刀卡3一箱16pcs，
③为产品一箱60pcs，
④为产品一箱60pcs、2pcs相向装入粉红色静电袋，
⑤为粉红色静电袋一箱60pcs，
⑥为刀盖/泡棉，一箱2pcs，
⑦为泡棉一箱2pcs套进刀卡3，
⑧为外纸箱。