SPECIFICATIONS

CUSTOMER	:	
SAMPLE CODE	:	SH720128T005ZBC
MASS PRODUCTION CODE	:	PH720128T005ZBC
SAMPLE VERSION	:	01
SPECIFICATIONS EDITION	:	001
DRAWING NO. (Ver.)	:	LMD- PH720128T005ZBC (Ver.001)
PACKAGING NO. (Ver.)	:	PKG- PH720128T005ZBC (Ver.001)

Customer Approved

Date:

Approved	Checked	Designer
黃秋源 Oliver Huang	石建莊 Stone Shin	劉俊毅 Terry Liu

POWERTIP 2021.07.22 TW RD APR

☐ Preliminary specification for design input

■ Specification for sample approval

POWERTIP TECH. CORP.

Represented by:

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SPECIFICATIONS

Features

Item	Standard Value
Display Type	720 * (RGB) * 1280
LCD Type	Full Viewing Angle, Normally Black , Transmissive type
Touch panel	True Multi-Touch Capacitive Touch Panel True Multi-touch with up to 5 Points of Absolution
Screen size(Inch)	7.0 Inch
Backlight Type	LED B/L
Weight	170g
Control IC	ILI9881C (TFT Unit)
Interface	MIPI Interface (TFT Unit)
ROHS	THIS PRODUCT CONFORMS THE ROHS OF PTC

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Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	120.24 (W) * 189.32 (L) * 5.36(H)	mm
Viewing Area	87.74 (W) * 155.36 (L)	mm
Active Area	86.94 (W) * 154.56 (L)	mm

Note : For detailed information please refer to LCM drawing.

Absolute Maximum Ratings

Item	Symbol	Condition	Min.	Max.	Unit	Remark
Supply Voltage	VDD	GND=0	-0.3	+3.8	V	-
	VCI		-0.3	+7.0	V	
Operating Temperature	T_{OP}	-	-20	+70	℃	
Storage Temperature	T_{ST}	-	-30	+80	℃	

DC Electrical Characteristics

GND = 0V, Ta = 25℃

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Supply Voltage	VDD	3.0	3.3	3.6	V	Note2
	VCI	3.0	3.3	3.6		
Input signal Voltage	V_{IH}	0.7*VDD	-	VDD		
	V_{IL}	-0.3	-	0.3*VDD		
	V_{OH}	0.8*VDD	-	VDD		
	V_{OL}	0	-	0.2*VDD		
Supply Current	I_{VDD}	-	20mA	35mA		Note1
	I_{VCI}	-	25mA	50mA		Note1

Note1: Maximum current display.

Note2 :For DSI DC level please refer to driver IC ILI9881C Specifications

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Optical Characteristics

VDD= 3.3 V, Ta=25℃

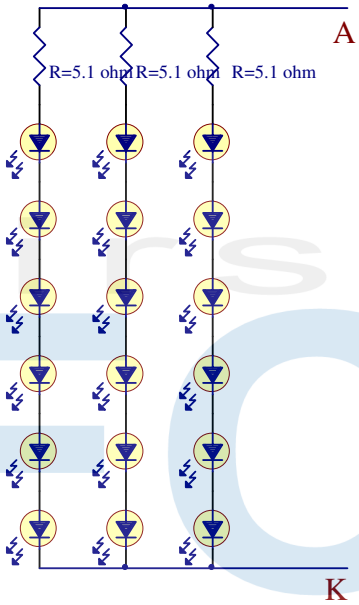
Item		Symbol	Condition	Min.	Typ.	Max.	unit	
Response time		Tr +Tf	Ta = 25℃ θX, θY = 0°	-	35	40	ms	Note 2
Viewing angle	Top	θY+	CR ≥ 10	-	80	-	Deg.	Note 4
	Bottom	θY-		-	80	-		
	Left	θX-		-	80	-		
	Right	θX+		-	80	-		
Contrast ratio		CR	Ta = 25℃ θX , θY = 0°	650	800	-		Note 3
Color of CIE Coordinate (With B/L & touch panel)	White	X		0.255	0.305	0.355	-	Note1
		Y		0.305	0.355	0.405		
	Red	X		0.595	0.645	0.695		
		Y		0.283	0.332	0.382		
	Green	X		0.258	0.308	0.358		
		Y		0.566	0.616	0.666		
	Blue	X		0.082	0.132	0.182		
		Y		0.005	0.055	0.105		
Average Brightness Pattern=white display (With B/L & touch panel) *2		IV	IF=90mA	430	500	-	cd/m^2	Note1
Uniformity (With B/L & touch panel) *1		△B		70	-	-	%	Note1

Backlight Characteristics

Electrical / Optical Characteristics

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Forward Voltage	V_f	16.2	19.2	21.0	V	Ta=25℃ IF=90mA
Life time	-	20000	-	-	H_r	

LED Backlight Circuit:



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Interface Pin Description

Interface for TFT display :

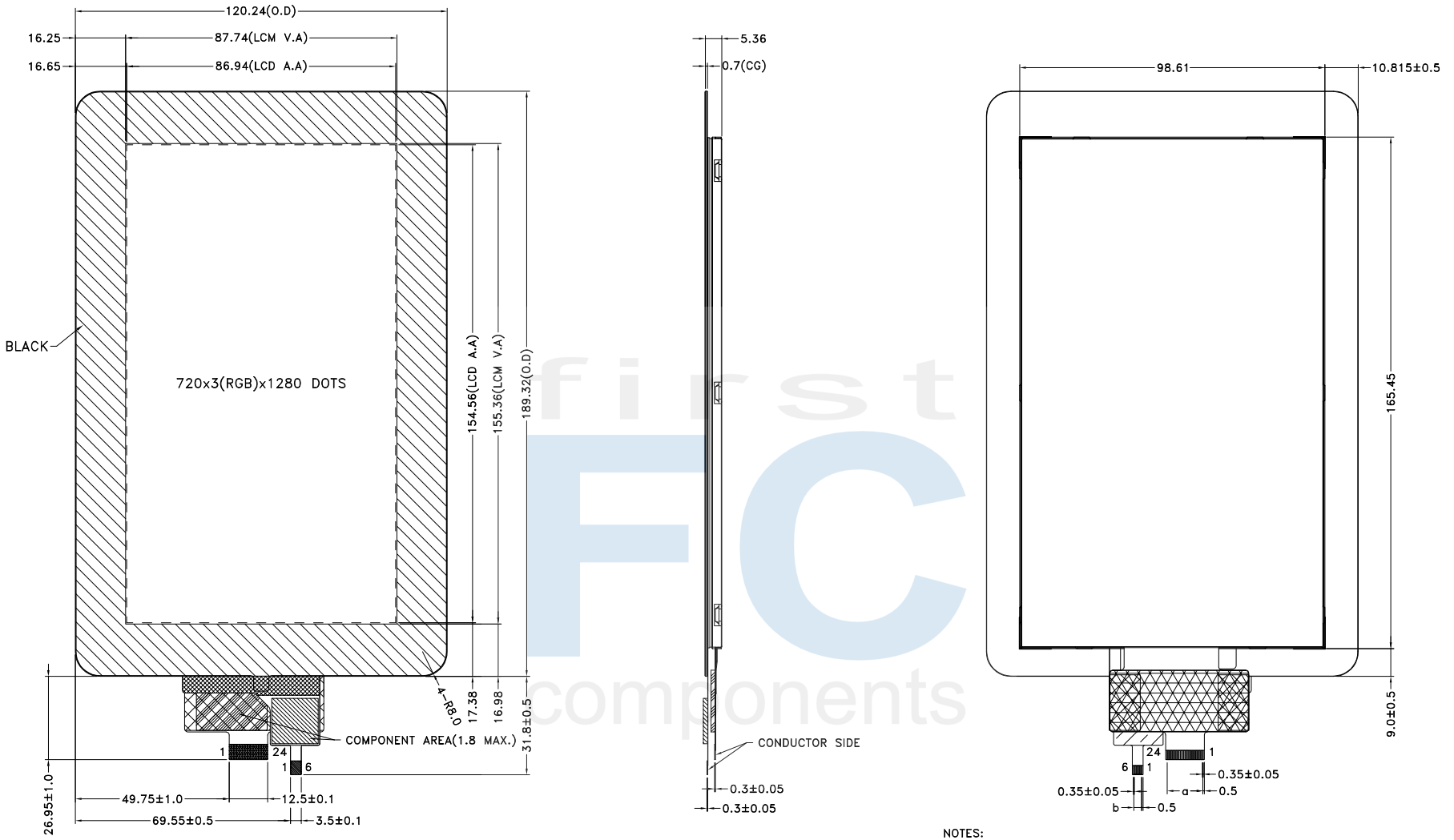
Pin#	Name	DESCRIPTION
1	NC	No connection.
2	K	Power for LED backlight cathode input.
3	A	Power for LED backlight anode input.
4	NC	No connection.
5	NC	No connection.
6	GND	Ground
7	NC	No connection.
8	NC	No connection.
9	VDD	Power supply for internal logic regulator.
10	VCI	Power supply for analog circuit.
11	GND	Ground.
12	LCD_RESX	The external reset input Initializes the chip with a low input. Be sure to execute a power-on reset after supplying power.
13	LCD_TE	Tearing effect output pin.
14	GND	Ground.
15	CLK_P	MIPI DSI differential clock pair
16	CLK_N	MIPI DSI differential clock pair
17	GND	Ground.
18	D1_P	MIPI DSI differential data pair. (Data lane 1)
19	D1_N	MIPI DSI differential data pair. (Data lane 1)
20	GND	Ground.
21	D0_P	MIPI DSI differential data pair. (Data lane 0)
22	D0_N	MIPI DSI differential data pair. (Data lane 0)
23	GND	Ground.
24	NC	No connection.

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Interface for CTP:

Pin#	Name	DESCRIPTION
1	RST	RESET.
2	SCL	I2C Data.
3	SDA	I2C Data.
4	INT	The interrupt from the CTP to the Host.
5	TPVDD	Power.
6	GND	Ground.

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NOTES:
1.LCD TYPE: TFT LCD
2.LCD DISPLAY: Normally Black
3.The tolerance unless classified ±0.3mm
4.T/P suggested connector: "CviLux" CF31061D0R2-05-NH OR EQUIVALENT
5.TFT suggested connector: "CHYAO SHIUNN" JS-1191DR1-24 OR EQUIVALENT
6.a:P0.5X23=11.5±0.05
7.b:P0.5X5=2.5±0.05

REV	REV BY	REVISER	DATE
007			
006			
005			
004			
003			
002			
001	NEW DRAWING	Stone	2021/05/10

sales@first-components.com

PART NO:

DRAWING NAME :

TITLE:

LCD MODULE DRAWING PLZ20R28T005ZBC

久正光電股份有限公司
POWERTIP TECHNOLOGY CORPORATION

Design	Stone	(3)	Surface		
Check	Oliver	Unit	MM	Material	
Approve	Oliver	Scale	1:1	Thickness	
		Page	1/1	Quantity	

Length(Min) (mm) \ Tolerance \ Precision	Precision Level
1 ~ 4	-
4 ~ 16	-
16 ~ 63	-
63 ~ 250	-
250 ~ 1000	-