TFT DISPLAY SPECIFICATION



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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF70-1024600D5M#0PW0-FC

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	**PCB VERSION:** **DATA:**

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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ISSUED DATE: 2025/06/25			

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General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	1024 x RGB x 600(TFT)	dots
Module dimension	169.9(W) x 103.4(H) x 5.6(D)	mm
Active area	154.2144 x 85.92	mm
Pixel pitch	0.1506x 0.1432	mm
LCD type	TFT, Normally Black, Transmissive	
View Angle	80/80/80/80	
TFT Driver IC	JD9165BA or Equivalent	
TFT Interface	4-Lanes MIPI	
Backlight Type	LED,Normally White	
With /Without TP	Without TP	
Surface	Anti-Glare	

*Color tone slight changed by temperature and driving voltage.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-30	—	+85	℃
Storage Temperature	TST	-40	—	+90	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp. > 60℃, Absolute humidity shall be less than 90% RH at 60℃

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Electrical Characteristics

Operating conditions:
Typical Operation Conditions

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Power voltage	VDD	1.71	1.8	1.89	V	
Analog Power	AVDD	-	11	-	V	
TFT Gate ON Voltage	VGH	19.5	20	20	V	Note1
TFT Gate OFF Voltage	VGL	-8.5	-8	-7.5	V	Note2
TFT Common Voltage	VCOMIN	-	4.9	-	V	Note3
Power Current	IDD	-	14	22	mA	VDD=1.8V
Analog Power Current	I_{AVDD}	-	18.5	-	mA	AVDD=11V
TFT Gate ON Current	I_{VGH}	-	1.5	-	mA	VGH=20V
TFT Gate OFF Current	I_{VGL}	-	1.5	-	mA	VGL=-8V
TFT Common Current	I_{VCOMIN}	-	1	-	uA	VCOM=4.9V

Note 1. VGH is TFT Gate operating Voltage.
Note 2. VGL is TFT Gate operating Voltage.
The storage structure of this model is CST (Storage on Common)
Note 3. Vcom must be adjusted to optimize display quality Crosstalk, Contrast Ratio and etc.

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Optical Characteristics

TFT LCD characteristic

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Response time		Tr+ Tf	θ=0°、Φ=0°	-	30	35	.ms	Note 3
Contrast ratio		CR	At optimized viewing angle	700	1000	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.264	0.314	0.364	-	Note 2,6,7
		Wy		0.272	0.322	0.372	-	
Viewing angle	Hor.	ΘR	CR≧10	70	80	-	Deg.	Note 1
		ΘL		70	80	-		
	Ver.	ΦT		70	80	-		
		ΦB		70	80	-		
Brightness		-	-	500	600	-	cd/m²	Center of display
Uniformity		(U)	-	75	-	-	%	Note 5

Ta=25±2℃,

Note 1: Definition of viewing angle range

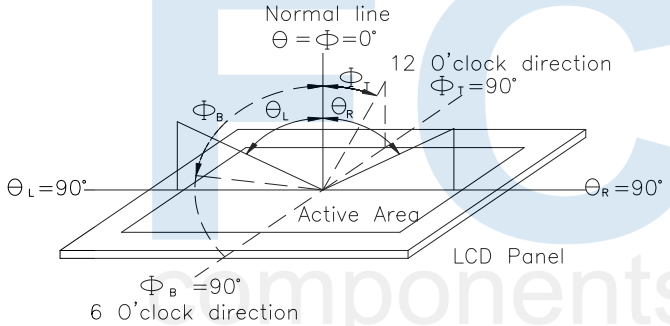


Fig.1. Definition of viewing angle

Note 2: Test equipment setup:

After stabilizing and leaving the panel alone at a driven temperature for 10 minutes, the measurement should be executed. Measurement should be executed in a stable, windless, and dark room. Optical specifications are measured by Topcon BM-7orBM-5 luminance meter 1.0° field of view at a distance of 50cm and normal direction.

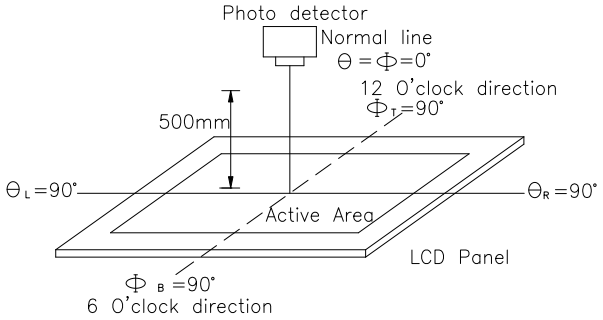


Fig. 2. Optical measurement system setup

Interface

LCM PIN Definition

Pin No.	Symbol	Function	Remark
1	VLED+	LED Anode	
2	VLED+	LED Anode	
3	VGH	Positive power for TFT	
4	VGL	Negative power for TFT	
5	UPDN	Horizontal inversion	
6	SHLR	Vertical inversion	
7	VLED-	LED Cathode	
8	VLED-	LED Cathode	
9	AVDD	Power for Analog Circuit	
10	GND	Ground	
11	D3P	MIPI data input.	
12	D3N	MIPI data input.	
13	GND	Ground	
14	D2P	MIPI data input.	
15	D2N	MIPI data input.	
16	GND	Ground	
17	CLKP	MIPI clock input	
18	CLKN	MIPI clock input	
19	GND	Ground	
20	D1P	MIPI data input.	
21	D1N	MIPI data input.	
22	GND	Ground	
23	D0P	MIPI data input.	
24	D0N	MIPI data input.	
25	GND	Ground	
26	NC	No connection	
27	RESET	Global reset pin. Active Low to enter Reset State. Normally pull high. Connecting with an RC reset circuit for stability.	

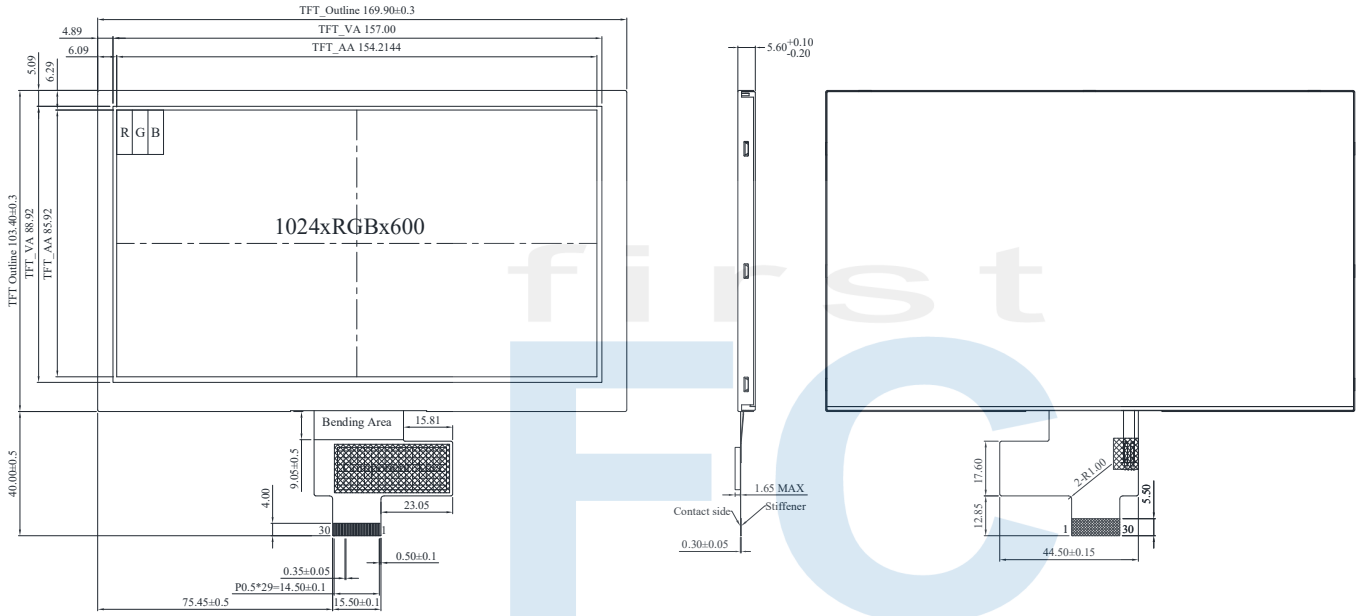
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28	VDD(1.8V)	Digital circuit	
29	VDD(1.8V)	Digital circuit	
30	VCOMIN	Common voltage	

Note
When SHLR =”1”,set right to left scan direction.
When SHLR =”0”,set left to right scan direction.
When UPDN =”0”,set top to bottom scan direction.
When UPDN =”1”,set bottom to top scan direction

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Contour Drawing



PIN NO.	SYMBOL
1	VLED+
2	VLED+
3	VGH
4	VGL
5	UPDN
6	SHLR
7	VLED-
8	VLED-
9	AVDD
10	GND
11	D3P
12	D3N
13	GND
14	D2P
15	D2N
16	GND
17	CLKP
18	CLKN
19	GND
20	D1P
21	D1N
22	GND
23	D0P
24	D0N
25	GND
26	NC
27	RESET
28	VDD (1.8V)
29	VDD (1.8V)
30	VCOMIN

VDD:1.8V
RESET: H:1.8V L:0V
STBYB:H:1.8V L:0V
SHLR:H:1.8V L:0V
UPDN:H:1.8V L:0V

The non-specified tolerance of dimension is ±0.3mm.

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