TFT DISPLAY SPECIFICATION



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Represented by:

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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WFN0700DD9P#001-FC

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

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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ISSUED DATE: 2025/06/18			

General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	800 x RGB x 480 (TFT)	dots
Module dimension	165 x 100.0x 13.45	mm
Active area	154.08 x 85.92	mm
Pixel Pitch	0.1926 X 0.179	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	12 o'clock	
Gray Scale Inversion Direction	6 o'clock	
Aspect Ratio	16:9	
TFT Interface	18-bit RGB	
Backlight Type	LED ,Normally White	
Color arrangement	RGB-STRIPE	
TFT Driver IC	ILI6137A +ILI5960-9G or equivalent	
With /Without TP	With RTP	
Surface	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	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

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:

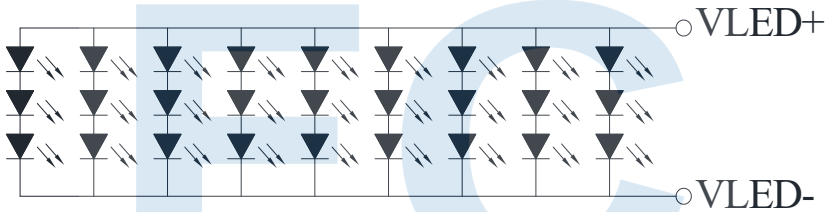
Item	Symbol	Min	Typ	Max	Unit	Remark
Supply Voltage For Logic	VCC	3.0	3.3	3.6	V	—
Power Supply For Current	VCC =3.3V	—	12	18	mA	—

Note: Environmental condition: 25±5

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current	ILED	-	180	-	mA	-
Power Consumption	-	1512	1764	1980	mW	-
LED voltage	VLED+	8.4	9.8	11.0	V	Note 1
LED Life Time	-	50,000	-	-	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



CIRCUIT DIAGRAM

Note 2 : Ta = 25 ℃
Note 3 : Brightness to be decreased to 50% of the initial value
Note 4 : The single LED lamp case

Optical Characteristics

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Response time		Tr+ Tf	θ=0°、Φ=0°	-	25	50	.ms	Note 3
Contrast ratio		CR	At optimized viewing angle	500	800	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.26	0.31	0.36	-	Note 2,5,6
		Wy		0.28	0.33	0.38	-	
Viewing angle (Gray Scale Inversion Direction)	Hor.	ΘR	CR≧10	60	70	-	Deg.	Note 1
		ΘL		60	70	-		
	Ver.	ΦT		50	60	-		
		ΦB		60	70	-		
Brightness		-	-	200	250	-	cd/m²	Center of display
Uniformity		(U)	-	70	-	-	%	Note 5

Ta=25±2℃

Note 1: Definition of viewing angle range

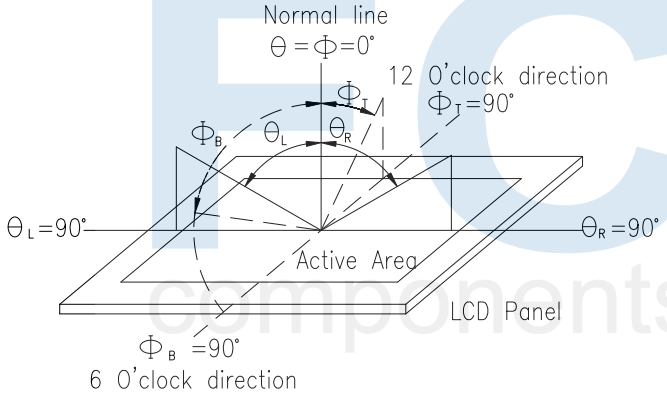
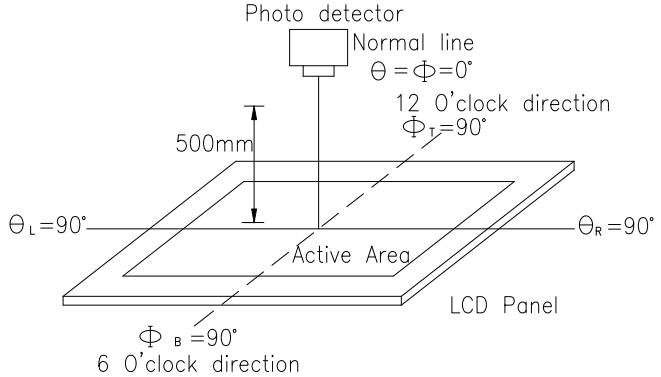


Fig. 1. Definition of viewing angle

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.



Interface

LCM PIN Definition

Pin	Symbol	Function	Remark
1	GND	Power ground	
2	GND	Power ground	
3	NC	No connection	
4	VCC	Power for Digital Circuit	
5	VCC	Power for Digital Circuit	
6	VCC	Power for Digital Circuit	
7	VCC	Power for Digital Circuit	
8	NC	No connection	
9	DE	Data Input Enable	
10	GND	Power ground	
11	GND	Power ground	
12	GND	Power ground	
13	B5	Blue data	
14	B4	Blue data	
15	B3	Blue data	
16	GND	Power ground	
17	B2	Blue data	
18	B1	Blue data	
19	B0	Blue data(LSB)	
20	GND	Power ground	
21	G5	Green data	
22	G4	Green data	
23	G3	Green data	
24	GND	Power ground	
25	G2	Green data	
26	G1	Green data	
27	G0	Green data(LSB)	
28	GND	Power ground	
29	R5	Red data	
30	R4	Red data	
31	R3	Red data	
32	GND	Power ground	

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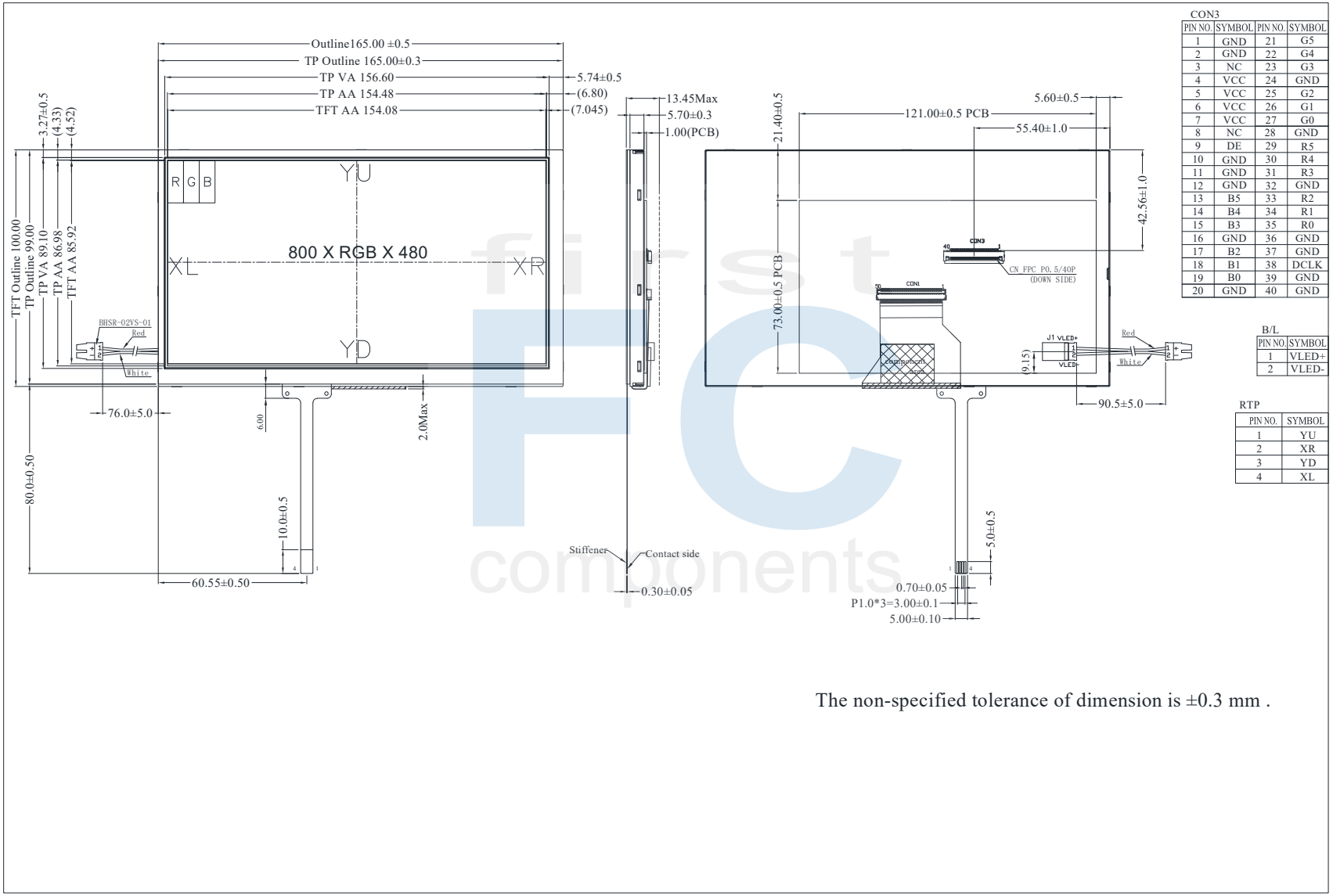
33	R2	Red data	
34	R1	Red data	
35	R0	Red data(LSB)	
36	GND	Power ground	
37	GND	Power ground	
38	DCLK	Sample clock (CLK)	
39	GND	Power ground	
40	GND	Power ground	

Backlight Driving Part

Pin No.	Symbol	Description
1	VLED+	Red, LED_ Anode
2	VLED-	White, LED_ Cathode

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Contour Drawing



CON3

PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	GND	21	G5
2	GND	22	G4
3	NC	23	G3
4	VCC	24	GND
5	VCC	25	G2
6	VCC	26	G1
7	VCC	27	G0
8	NC	28	GND
9	DE	29	R5
10	GND	30	R4
11	GND	31	R3
12	GND	32	GND
13	B5	33	R2
14	B4	34	R1
15	B3	35	R0
16	GND	36	GND
17	B2	37	GND
18	B1	38	DCLK
19	B0	39	GND
20	GND	40	GND

B/L

PIN NO.	SYMBOL
1	VLED+
2	VLED-

RTP

PIN NO.	SYMBOL
1	YU
2	XR
3	YD
4	XL

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

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