TFT DISPLAY SPECIFICATION



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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WFN0700MD8#0SPW0-FC

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

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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ISSUED DATE: 2025/02/18			

Summary

This is a color active matrix a-Si LCD Q-Panel, using a-Si (amorphous silicon) TFTs (Thin Film Transistors) as an active switching devices. The module has a 6.9 inch diagonally measured active area with 280x1424 resolutions (280 horizontal by 1424 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors.

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General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	280 x RGB x 1424 (TFT)	dots
Module dimension	38.2 x 186.62 x 4.03	mm
Active area	33.6 x 107.88	mm
Pixel pitch	0.12 X 0.12	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	85/85/85/85	
TFT Interface	4-Lanes MIPI	
Backlight Type	LED ,Normally White	
TFT Driver IC	FL7703NI or Equivalent	
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	—	+80	℃
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

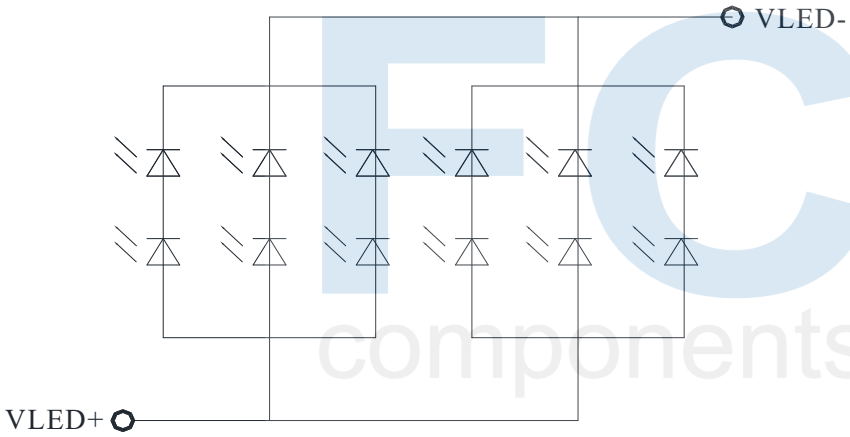
TFT LCD Module

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Analog Supply voltage	VCC	2.5	2.8	3.3	V	
Analog supply current	I_{CC}	-	71.0	110.0	mA	VCC=2.8V
Logic input voltage	VIH	0.7*VCC	-	VCC	V	
	VIL	GND	-	0.3*VCC	V	

Backlight Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current	-	-	270	-	mA	-
LED voltage	VLED+	5.5	6.0	6.8	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

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Optical Characteristics

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Response time		Tr+ Tf	θ=0°、Φ=0°	-	-	35	.ms	Note 3
Contrast ratio		CR	At optimized viewing angle	900	1200	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.251	0.301	0.351	-	Note 2,5,6
		Wy		0.279	0.329	0.379	-	
Viewing angle	Hor.	ΘR	CR≧10	80	85	-	Deg.	Note 1
		ΘL		80	85	-		
	Ver.	ΦT		80	85	-		
		ΦB		80	85	-		
Brightness		-	-	900	1000	-	cd/m²	Center of display
Uniformity		(U)	-	75	-	-	%	Note 5

Ta=25±2℃,

Note 1: Definition of viewing angle range

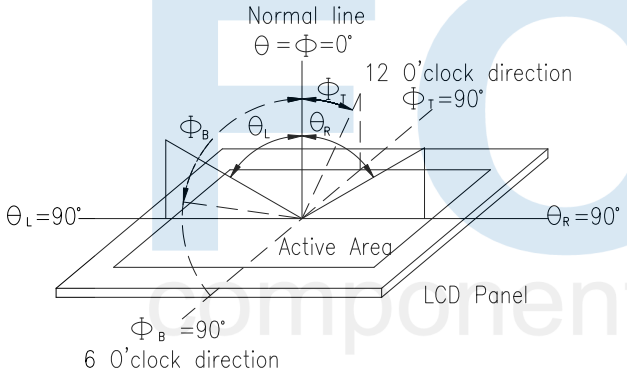
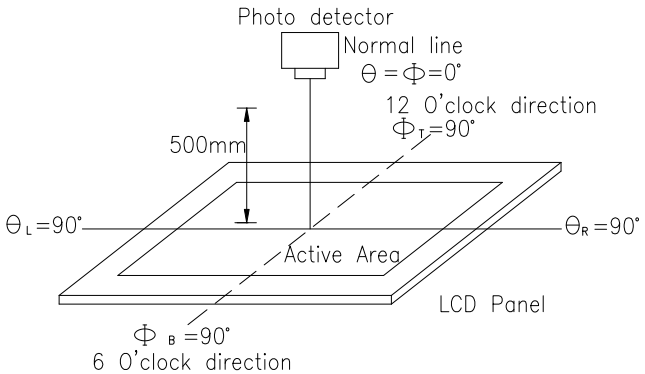


Fig. 8.1. Definition of viewing angle

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.



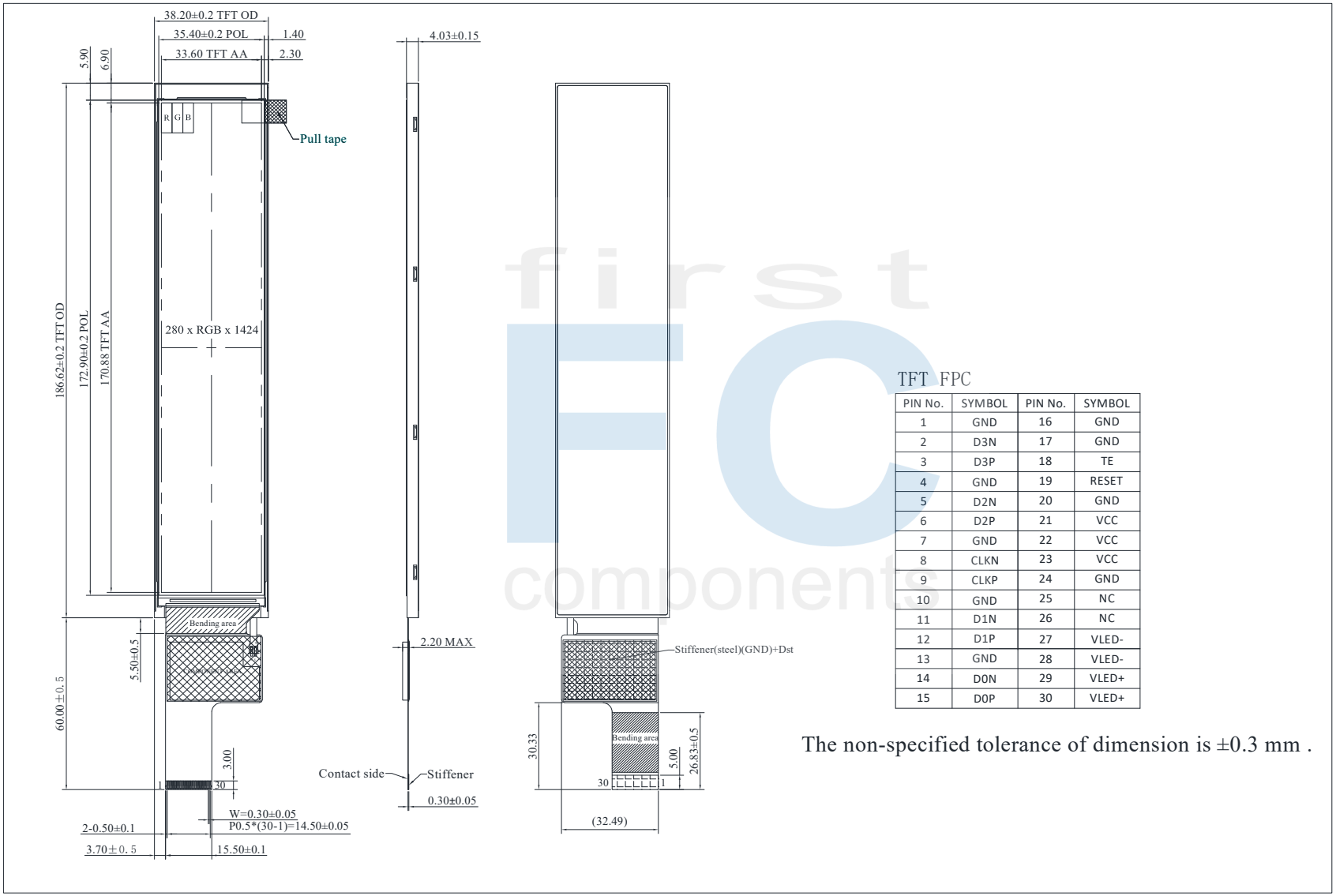
Interface

LCM PIN Definition

Pin No.	Symbol	Description
1	GND	Ground.
2	D3N	MIPI data input pins
3	D3P	
4	GND	Ground.
5	D2N	MIPI data input pins
6	D2P	
7	GND	Ground.
8	CLKN	MIPI clock input pins.
9	CLKP	
10	GND	Ground.
11	D1N	MIPI data input pins
12	D1P	
13	GND	Ground.
14	D0N	MIPI data input pins
15	D0P	
16	GND	Ground.
17	GND	Ground.
18	TE	Tearing effect output pin to synchronize to frame writing. If not used, open this pin
19	RESET	Reset signal pin
20	GND	Ground.
21-23	VCC	Power supply
24	GND	Ground.
25-26	NC	Not connect
27-28	VLED-	LED cathode
29-30	VLED+	LED anode

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Contour Drawing



TFT FPC

PIN No.	SYMBOL	PIN No.	SYMBOL
1	GND	16	GND
2	D3N	17	GND
3	D3P	18	TE
4	GND	19	RESET
5	D2N	20	GND
6	D2P	21	VCC
7	GND	22	VCC
8	CLKN	23	VCC
9	CLKP	24	GND
10	GND	25	NC
11	D1N	26	NC
12	D1P	27	VLED-
13	GND	28	VLED-
14	D0N	29	VLED+
15	D0P	30	VLED+

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

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