TFT DISPLAY SPECIFICATION



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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF43-480272WS#0SPW1B-FC

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

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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ISSUED DATE: 2025/04/28			

General Specifications

Item	Dimension	Unit
Size	4.3	inch
Dot Matrix	480 x RGBx272(TFT)	dots
Module dimension	105.5(W) x 67.2(H) x 4.05(D)	mm
Active area	95.04 x 53.856	mm
Pixel pitch	0.198 x 0.198	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	80/80/80/80	
Aspect Ratio	16:9	
TFT Driver IC	NV3041A-01 or equivalent	
TFT Interface	4 Line SPI	
Backlight Type	LED,Normally White	
With /Without TP	With RTP	
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

Operating conditions:

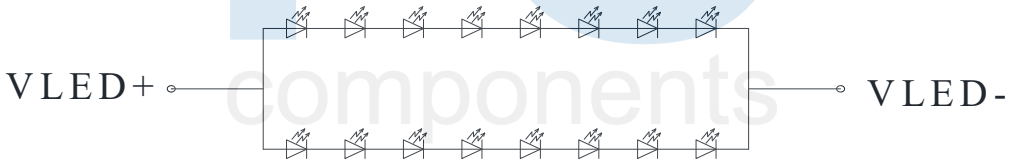
Item	Symbol	Min	Typ	Max	Unit	Remark
Power supply for analog circuit	VCI	3.0	3.3	3.6	V	
Power supply for logic circuit	IOVCC	1.65	1.8	3.3	V	VCI= 3.3V
Current for Driver	I_{VCI}	-	30	45	mA	VCI= 3.3V
	I_{IOVCC}	-	20	30	mA	IOVCC=1.8V

Note 1 : This value is test for VCI=3.3V , Ta=25 ℃ only, to avoid power supply noise, please avoid using driving conditions close to min, or max value

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current	-	-	40	-	mA	-
Power Consumption	-	864	1024	1088	mW	-
LED voltage	VLED+	21.6	25.6	27.2	V	Note 1
LED Life Time	-	50,000	-	-	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



CIRCUIT DIAGRAM(8*2)

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°	-	30	40	ms	Note 3
Contrast ratio		CR	At optimized viewing angle	640	800	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.27	0.32	0.37	-	Note 2,6,7
		Wy		0.295	0.345	0.395	-	
Viewing angle	Hor.	ΘR	CR≧10	70	80	-	Deg.	Note 1
		ΘL		70	80	-		
	Ver.	ΦT		70	80	-		
		ΦB		70	80	-		
Brightness		-	-	550	700	-	cd/m2	Center of display
Uniformity		(U)	-	75	-	-	%	Note 5

Ta=25±2℃, IL=40mA

Note 1: Definition of viewing angle range

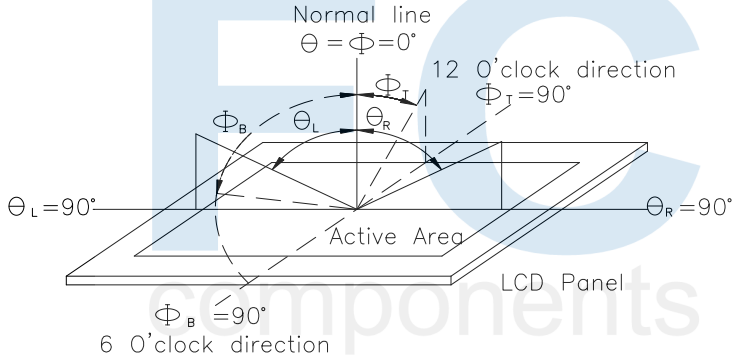


Fig. 8.1. Definition of viewing angle

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.

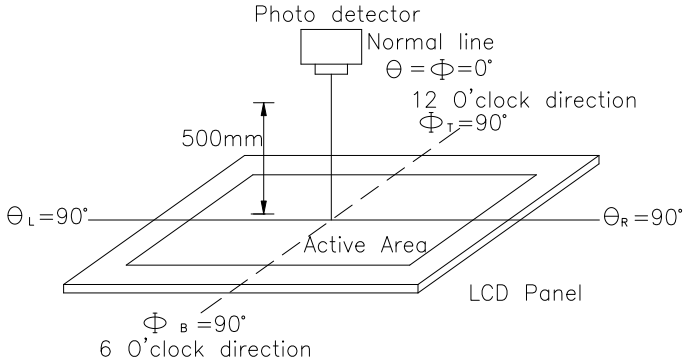


Fig. 8.2. Optical measurement system setup

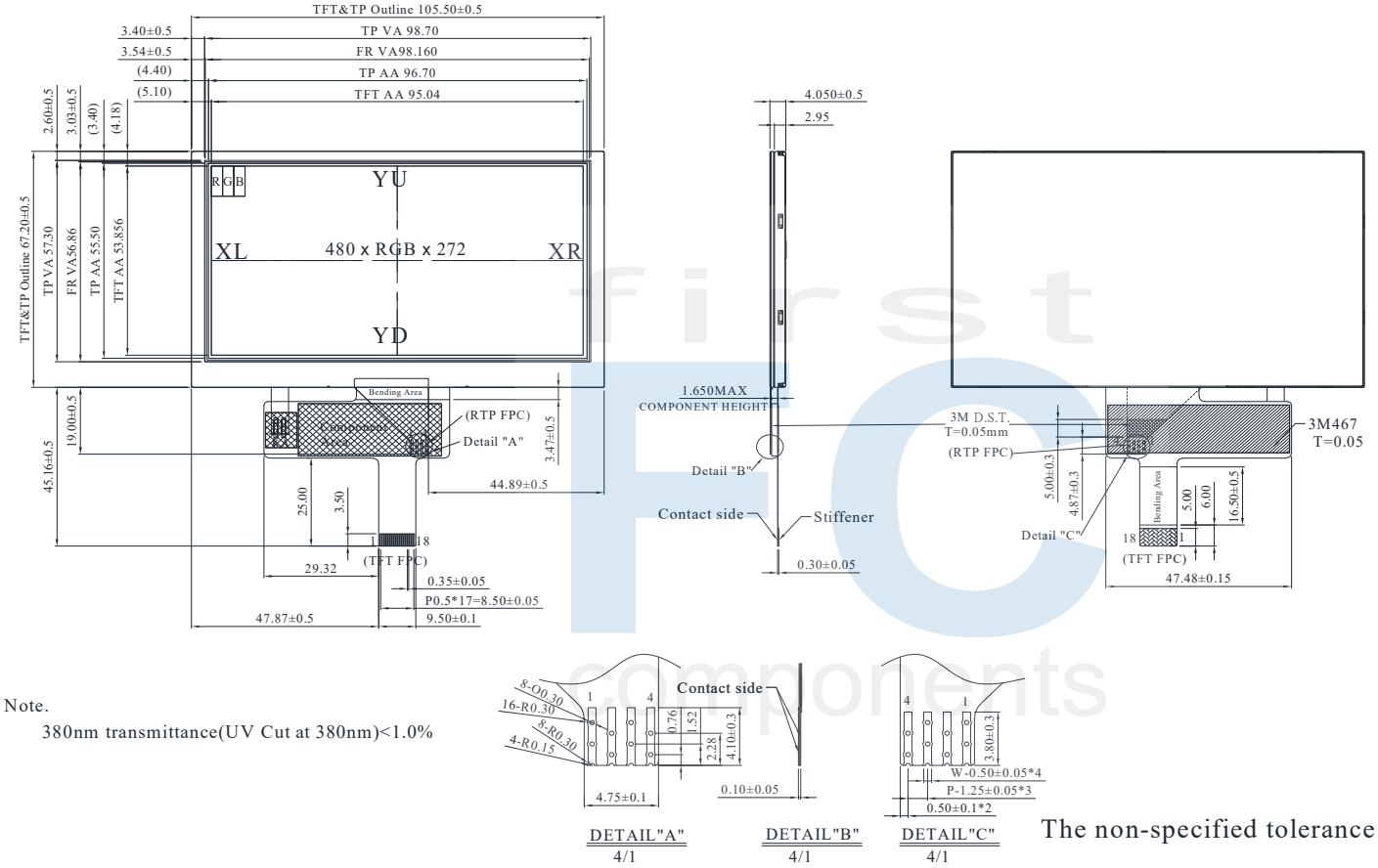
Note 3: Definition of Response time:

Interface

LCM PIN Definition

Pin	Symbol	Function	Remark
1	VLED-	Power for LED backlight cathode	
2	VLED+	Power for LED backlight anode	
3	NC	No connection	
4	VCI	Power supply for analog circuit	
5	IOVCC	Power supply for digital interface I/O pins	
6	GND	Ground	
7	RESET	Reset.	
8	GND	Ground	
9	CS	Chip select, internal pull high. (CSX)	
10	SCL	This pin is used serial interface clock	
11	GND	Ground	
12	SDA	SPI bi-direction data pin (SDA)	
13	DCX	Command or parameter select.	
14	NC	No connection	
15	NC	No connection	
16	GND	Ground	
17	TE	Tearing effect output pin is used to synchronize MCU frame writing, activated by S/W command. When this pin is not activated (TE function OFF), this pin is GND level.	
18	GND	Ground	

Contour Drawing



RTP FPC

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

TFT FPC

PIN NO.	SYMBOL
1	VLED-
2	VLED+
3	NC
4	VCI
5	IOVCC
6	GND
7	RESET
8	GND
9	CS
10	SCL
11	GND
12	SDA
13	DCX
14	NC
15	NC
16	GND
17	TE
18	GND

Note.

380nm transmittance(UV Cut at 380nm)<1.0%

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

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