TFT DISPLAY SPECIFICATION



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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF0299-268800AM#0P54-FC

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

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
ISSUED DATE: 2024/06/13			

General Specifications

Item	Dimension	Unit
Size	2.99”	inch
Dot Matrix	268 x RGB x 800(TFT)	dots
Module dimension	26.52 (W) x 78.2 (H) x 2.46 (D)	mm
Active area	24.12 x 72.0	mm
Pixel Pitch	0.09 x 0.09	mm
LCD type	TFT, Normally Black, Transmissive	
TFT Interface	2-Lanes MIPI	
TFT Driver IC	GC9503 or Equivalent	
Viewing angle	80/80/80/80	
CTP Driver IC	CST328 or Equivalent	
CTP Interface	I2C	
CTP FW Version	1.0.3	
CTP Resolution	268*820	
Backlight Type	LED,Normally White	
With /Without TP	With CTP	
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. ≦50℃, 90% RH MAX. Temp.＞50℃, Absolute humidity shall be less than 90% RH at 50℃

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Electrical Characteristics

Operating conditions

Item	Symbol	Min	Typ	Max	Unit
Supply voltage for analog circuit	VIO28	2.6	2.8	3.6	V
Working current for VIO28	—	—	43.0	65.0	mA
Supply voltage for logic circuit	VIO18	1.65	1.8	3.3	V
Input voltage 'H'level	VIH	0.7*VIO18	—	VIO18	V
Input voltage 'L'level	VIL	GND	—	0.3*VIO18	V
Output voltage 'H'level	VOH	0.8*VIO18	—	VIO18	V
Output voltage 'L'level	VOL	GND	—	0.2*VIO18	V
Supply CTP	CTP_VDD	2.65	2.8	3.3	V
	CTP_IDD	—	7.0	11.0	mA

Note: 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	—	—	20	—	mA	—
LED voltage	VLED+	17.4	18	19.2	V	Note 1
LED Life Time	—	—	40,000	—	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



Backlight LED Circuit

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	-	1200	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.30	0.33	0.36		Note 2,6,7
		Wy		0.33	0.36	0.39		
Viewing angle	Hor.	ΘR	CR≧10	-	80	-	Deg.	Note 1
		ΘL		-	80	-		
	Ver.	ΦT		-	80	-		
		ΦB		-	80	-		
Brightness		-	-	500	530	-	cd/m2	Center of display
Uniformity		(U)	-	70	-	-	%	Note5

Ta=25±2℃

Note 1: Definition of viewing angle range

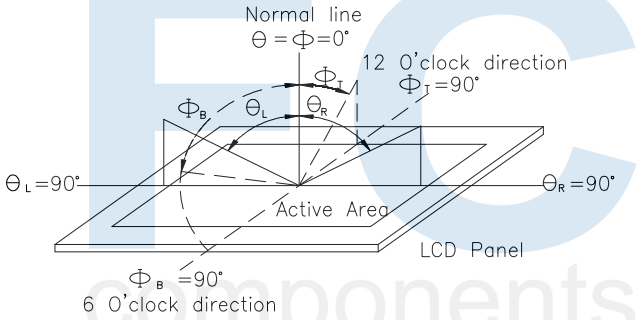


Fig. 8.1. Definition of viewing angle

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-7 or BM-5 luminance meter 1.0° field of view at a distance of 50cm and normal direction.

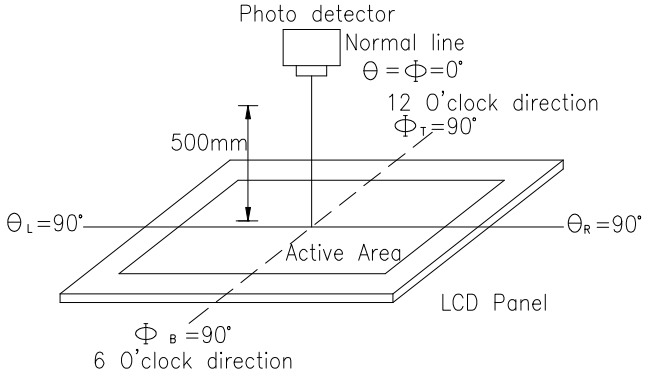


Fig. 8.2. Optical measurement system setup

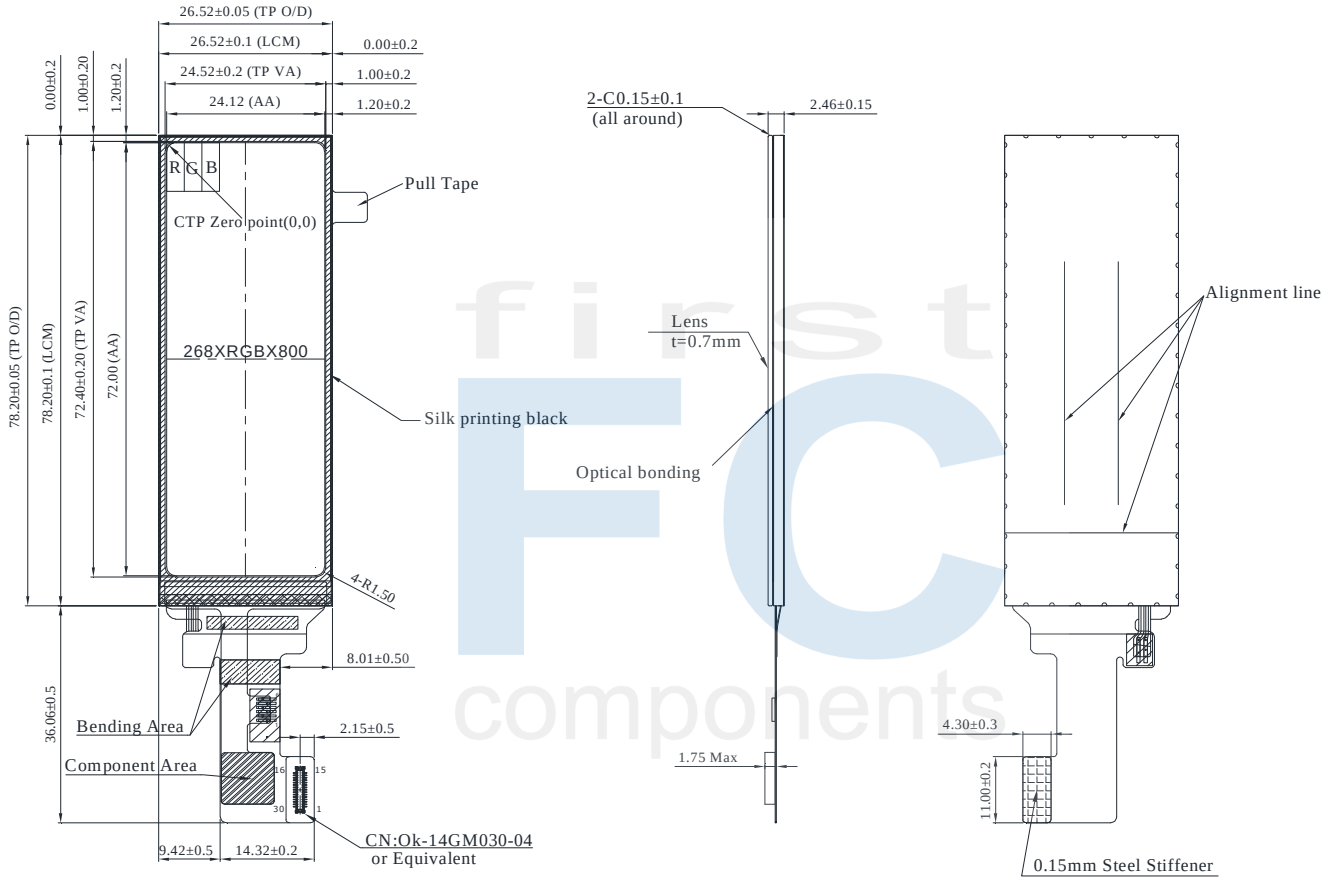
Interface

LCM PIN Definition

Pin No.	Symbol	Description
1	NC	No connection
2	NC	No connection
3	GND	Power ground
4	NC	No connection
5	NC	No connection
6	GND	Power ground
7	DP1	MIPI-DSI data lane 1 posivtve input pin
8	DN1	MIPI-DSI data lane 1 negtive input pin
9	GND	Power ground
10	DP0	MIPI-DSI data lane 0 posivtve input pin
11	DN0	MIPI-DSI data lane 0 negtive input pin
12	GND	Power ground
13	CLKP	MIPI-DSI data lane posivtve input pin
14	CLKN	MIPI-DSI data lane negtive input pin
15	GND	Power ground
16	RST	Reset signal(low active)
17	TE	Serves TE (Tearing Effect) pin on MPU interface
18	VLED-	LED backlight cathode
19	VLED-	LED backlight cathode
20	VLED+	LED backlight anode
21	VLED+	LED backlight anode
22	VIO28	Analog power supply
23	VIO18	Power supply for the logic power and I/O circuit
24	CTP_SDA	TP-SDA
25	CTP_SCL	TP-SCL
26	CTP_EINT	TP-EINT
27	CTP_VDD	TP-VCC
28	NC	No connection
29	CTP_RST	TP-RESET
30	GND	Power ground

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Contour Drawing



PIN:	SYMBLE
1	NC
2	NC
3	GND
4	NC
5	NC
6	GND
7	DP1
8	DN1
9	GND
10	DP0
11	DN0
12	GND
13	CLKP
14	CLKN
15	GND
16	RST
17	TE
18	VLED-
19	VLED-
20	VLED+
21	VLED+
22	VIO28
23	VIO18
24	CTP_SDA
25	CTP_SCL
26	CTP_EINT
27	CTP_VDD
28	NC
29	CTP_RST
30	GND

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

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