



SPECIFICATION FOR LCD MODULE

Customer : _____

Customer P/N _____

Model No. : GX093-I4018E30A-05

Version : V00

Date : 2026/05/29

Final Approval by Customer

LCM Machinery OK ☐	Checked By	
LCM Display OK ☐	Checked By	
LCM NG ☐ LCM OK ☐	Approved By	

ShenZhen GX Confirmed :

DESIGN	CHECK	APPROVAL

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	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC . TITLE 9.3LCM+CG Product Specification		PAGE 3 OF 11

Contents

No.	Items	Page
1.0	General Description	4
2.0	Mechanical Characteristics	5
3.0	Pin Assignment	6
4.0	Electrical Specifications.	7
5.0	Optical Specifications.	8
6.0	Reliability Test	11

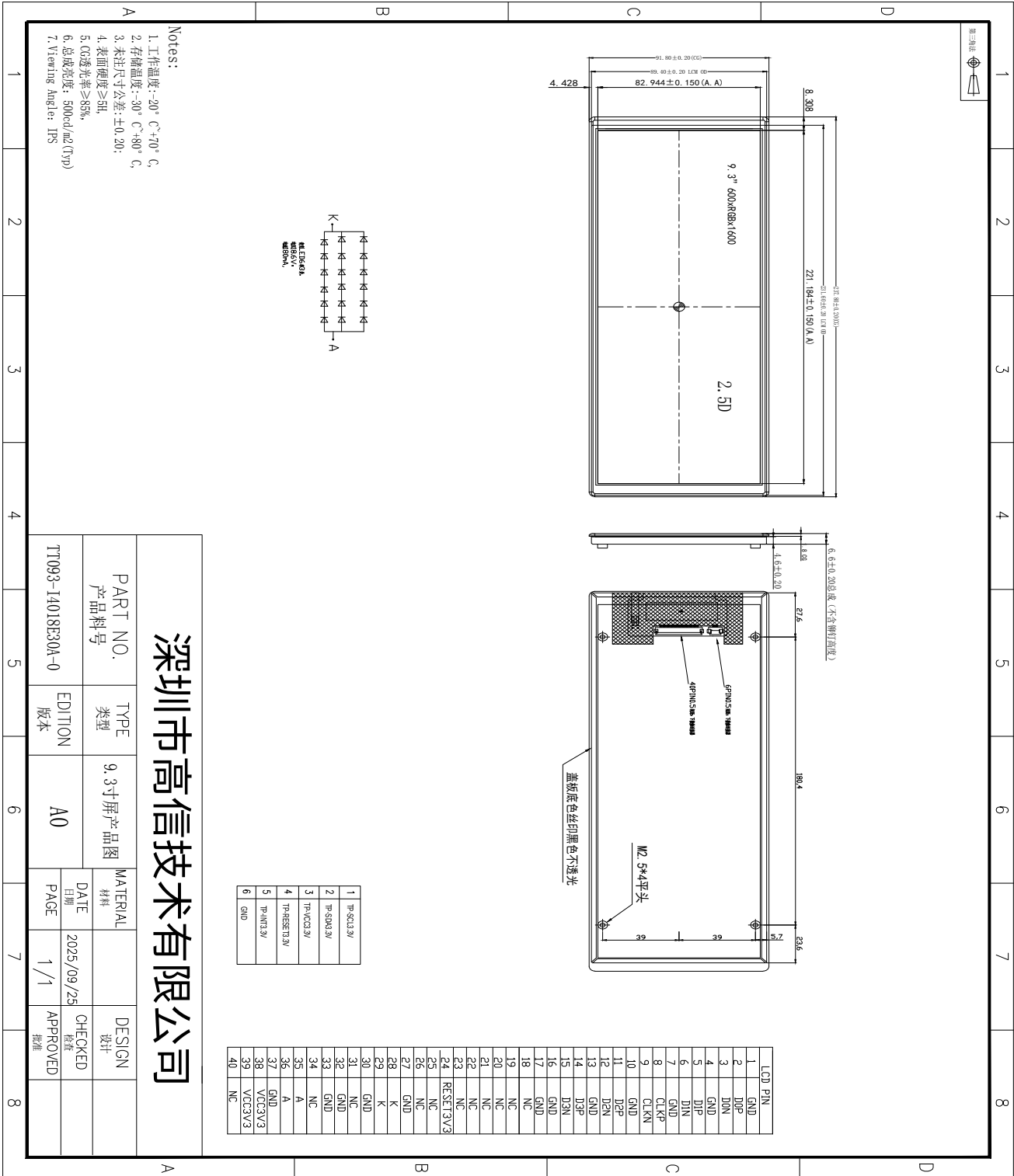
	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 4 OF 11

1.0 GENERAL DESCRIPTION

No.	Item	Specification	Unit
1	Panel Size	9.3	inch
2	Number of Pixels	600(H) × 1600(V)	pixels
3	Active Area	82.944 (H) × 221.184 (V)	mm
4	Pixel Pitch	013824(H) × 013824 (V)	mm
5	Outline Dimension	91.80(H)×237.8(V)×6.60(D)	mm
6	Number of Colors	16.7M	-
7	Display Mode	Transmission mode, normally black	-
8	Viewing Direction	Full viewing	-
9	Display Format	RGB vertical stripe	-
10	Surface Treatment	Glare	-
11	Interface	MIPI and I2C	-
12	Backlight	White LED	-
13	Operation Temperature	-20~70	℃
14	Storage Temperature	-30~80	℃
15	Weight	--	g

	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 5 OF 11

2.0 Mechanical Characteristics



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PART NO. 产品料号		TYPE 类型		9.3寸屏产品图		MATERIAL 材料		DESIGN 设计	
TT093-I4018E30A-0		EDITION 版本		A0		DATE 日期		CHECKED 检查	
						PAGE 1/1		APPROVED 批准	

	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 6 OF 11

3. PIN DESCRIPTION

FPC Connector is used for the module electronics interface.

No.	Symbol	Function	Remark
1	GND	Ground	
2	D0P	Positive MIPI differential data input	
3	D0N	Negative MIPI differential data input	
4	GND	Ground	
5	D1P	Positive MIPI differential data input	
6	D1N	Negative MIPI differential data input	
7	GND	Ground	
8	CLKP	Positive MIPI differential clock input	
9	CLKN	Negative MIPI differential clock input	
10	GND	Ground	
11	NC	No connection	
12	NC	No connection	
13	GND	Ground	
14	NC	No connection	
15	NC	No connection	
16	GND	Ground	
17	GND		
18	NC	No connection	
19	NC	No connection	
20	NC	No connection	
21	NC	No connection	
22	NC	No connection	
23	NC	No connection	
24	RESET3.3V	Reset pin.	
25	GND	Ground	
26	NC	No connection	
27	GND	Ground	
28	K	LED Cathode	
29	K		
30	GND	Ground	
31	NC	No connection	
32	GND	Ground	
33	GND	Ground	
34	NC	No connection	
35	A	LED Anode	
36	A		
37	GND	Ground	
38	VDD 3.3V	A power supply for the analog power.	
39	VDD 3.3 V		
40	NC	No connection	

	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 7 OF 11

4. ELECTRICAL CHARACTERISTICS

4.1 Backlight Driving Conditions (12 White Chips)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Supply voltage of white LED backlight	VL	---	18.6	---	V	Note 1
Current for LED backlight	IL	----	150	-----	mA	
Luminance (on the module surface,BM-7)		--	500	--	cd/m ²	
LED life time	-	30,000	-	-	Hr	Note 2

4.2 Absolute Maximum Ratings

Item	Symbol	Value	Unit	Remark
Analog Power Supply Voltage	VDD	-0.3~ +4.6	V	-
Logic Input Voltage Range	VIN	-0.3~VDDI+0.3	V	-
Logic Output Voltage Range	VO	-0.3~VDDI+0.3	V	-

	PRODUCT GROUP		REV	ISSUE DATE
	TFT- LCM PRODUCT		P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification			PAGE 8 OF 11

5.0 OPTICAL SPECIFICATION

5.1 Overview

The test of optical specifications shall be measured in a dark room (ambient luminance <1lux and temperature=25±2°C) with the equipment of luminance meter system (Goniometer system and CS2000/CA310) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of θ and Φ equal to 0°. We refer to $\varnothing=0$ ($=\theta_3$) as the 3 o'clock direction (the “right”), $\varnothing=90$ ($=\theta_{12}$) as the 12 o'clock direction (“upward”), $\varnothing=180$ ($=\theta_9$) as the 9 o'clock direction (“left”) and $\varnothing=270$ ($=\theta_6$) as the 6 o'clock direction (“bottom”). While scanning θ and/or $\varnothing$, the center of the measuring spot on the Display surface shall stay fixed.

The backlight should be operating for 30 minutes prior to measurement.

5.2 Optical Specifications

<Table 5. Optical Specifications> [Ta=25±2°C]

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Viewing Angle range	Horizontal	Θ_3	CR > 10	80	85	-	Deg.	Note5
		Θ_9		80	85	-	Deg.	
	Vertical	Θ_{12}		80	85	-	Deg.	
		Θ_6		80	85	-	Deg.	
Contrast ratio		CR	$\Theta = 0^\circ$	1000	1200	-	-	HC+Clear @silicate BL U
Luminance of white		L	-	-	500	-	cd/m ²	Note 5.2/5.3
Color Gamut	NTSC	CIE1931	$\Theta = 0^\circ$	70	75	-	%	CF@C Light Note 5.4
Chroma@CIE 1931	Red	(Rx,Ry)	$\Theta = 0^\circ$	Typ± 0.02	(0.668,0.323)	Typ± 0.02	-	
	Green	(Gx,Gy)	$\Theta = 0^\circ$		(0.280,0.615)		-	
	Blue	(Bx,By)	$\Theta = 0^\circ$		(0.135,0.112)		-	
	White	(Wx,Wy)	$\Theta = 0^\circ$		(0.301,0.331)		-	
Response Time		Tr+Tf	Ta= 25° C $\Theta = 0^\circ$	-	30	35	ms	Note 5.5

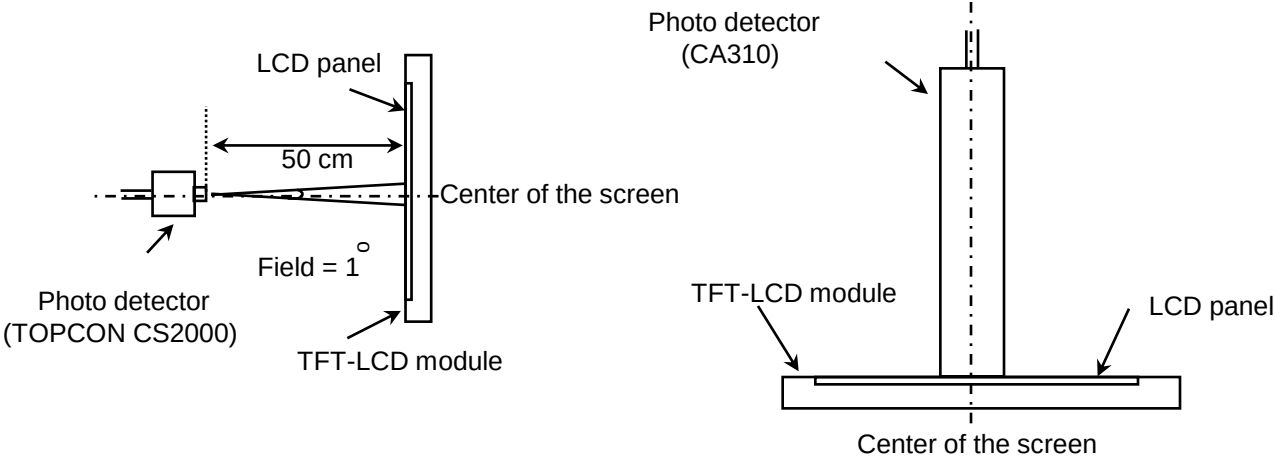
	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 9 OF 11

- Notes : 1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface (see FIGURE 1).
2. Contrast measurements shall be made at viewing angle of $\Theta = 0$ and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state . (see FIGURE 1)
- 1) Luminance Contrast Ratio (CR) is defined mathematically.
- $$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$
3. Luminance of white is defined as luminance values of center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white. This measurement shall be taken at the locations shown in FIGURE 2 for a total of the measurements per display. The luminance is measured by TOPCON BM-7 when the LED current is set at 20mA.
4. The White luminance uniformity on LCD surface is then expressed as : $\Delta Y = \text{Minimum Luminance of 9 points} / \text{Maximum Luminance of 9 points}$ (See FIGURE 2).

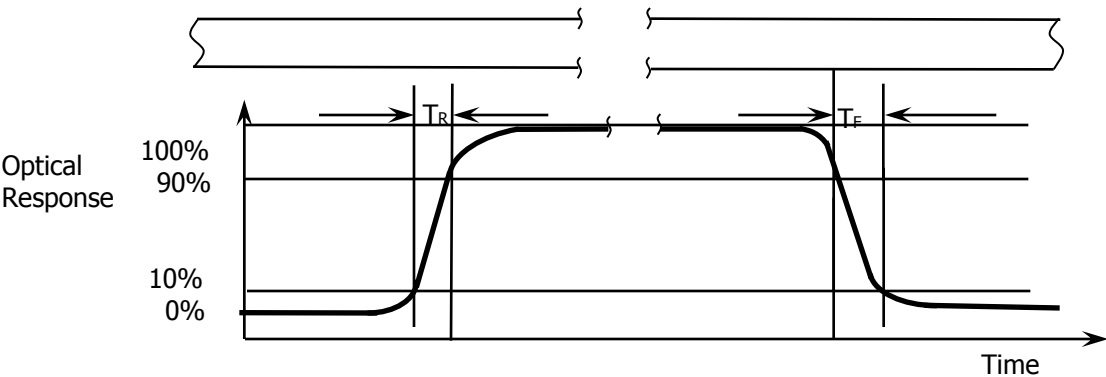
	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 10 OF 11

5.2 Optical measurements

Figure 1. Measurement Set Up



View angel range, uniformity, etc. measurement setup Flicker, measurement setup



The electro-optical response time measurements shall be made as shown in FIGURE 2. The times needed for the luminance to change from 10% to 90% is T_r and 90% to 10% is T_f .

	PRODUCT GROUP	REV	ISSUE DATE
	TFT- LCM PRODUCT	P0	2025.07.18
SPEC. NUMBER	SPEC. TITLE 9.3LCM+CG Product Specification		PAGE 11 OF 11

6.0 RELIABILITY

The Reliability test items and its conditions are shown in below.

<Table 7. Reliability Test Parameters>

No	Items	Conditions	Remark
1	High Temperature Storage test(HTS)	80°C, 72hrs, Non-operational	Note 7.1
2	Low Temperature Storage test(LTS)	-30°C, 72hrs, Non -operational	
3	High Temperature Operating test(HTO)	70°C , 72hrs, operational	
4	Low Temperature Operating test(LTO)	-20°C , 72hrs, operational	
5	Thermal Humidity Storage test(THS)	60°C/90%RH, 72hrs, Non-operational	
6	Thermal Cycle Storage test(TST)	-30~80°C, 50cycles, 1hr/cycle, Non-operational	
7	Image Sticking	5*5 Pattern, 1hr 25°C±2°C check pattern Gray 127, after 5s, the mura must be disappeared completely	

Note 7.1:

The test result shall be evaluated after the sample has been left at room temperature and humidity for 2 hours.