东莞市宝龙微电子科技有限公司

PRODUCT SPECIFICATION FOR LCD MODULE

Revision: 0.0

BLW101SGI07

Module Type: COG+FPC+B/L

APPROVED SIGNATURE

□ Approved Product Specification only

■ Approved Product Specification and Samples

Prepared By	Checked By	Approved By

Contents

1. General Description

BLW101SGI07 is a transmissive type a-Si TFT-LCD (amorphous silicon thin film transistor liquid crystal display) module, which is composed of a TFT-LCD panel, a driver circuit and a backlight unit. The panel size is 10.1 inch and the resolution is 800*1280, the panel can display up to 16.7M colors. The LCM can be easily accessed by micro-controller via MIPI interface.

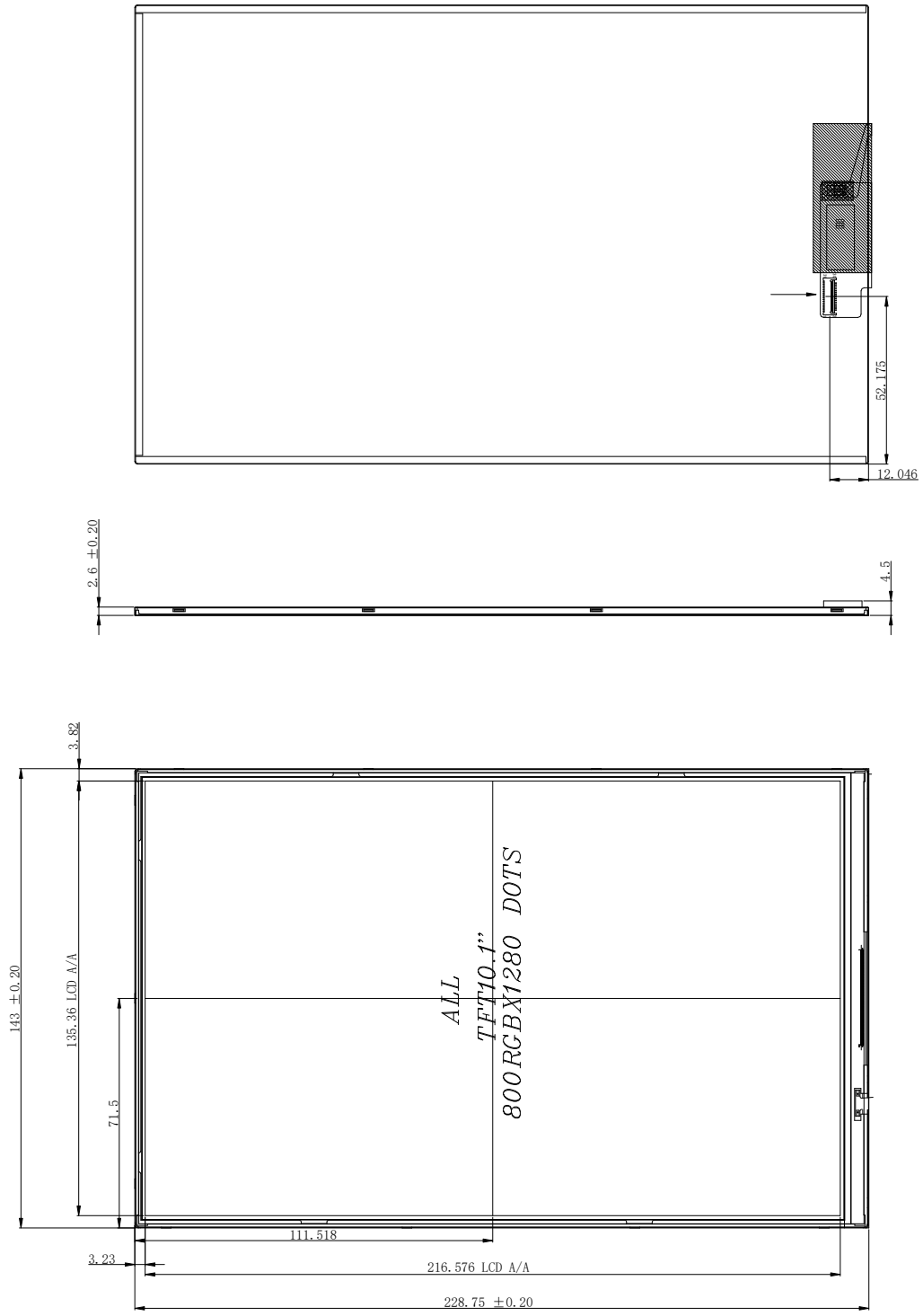
2. Physical Features

Display Mode	TFT-LCD Module
	Active matrix TFT, Transmissive type
Display Format	Graphic 800×RGB×1280 Dot-matrix
Input Data	24 bit RGB with MIPI Interface
Viewing Direction	IPS
Drive	TBD

3. Mechanical Specification

Item	Contents	Unit
Module size (W×H×T)	143.0*228.75*2.6	mm
Number of dots	800(RGB) × 1280	---
Active area (W×H)	135.36*216.576	mm

4.Outline


52.175
12.046
2.6 ±0.20
4.5
3.82
143 ±0.20
135.36 LCD A/A
71.5
ALL
TFT10.1"
800RGBX1280 DOTS
111.518
3.23
216.576 LCD A/A
228.75 ±0.20

5. Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit	Remark
Power Voltage	VDD	-0.3	3.6	V	Note1、Note2
Input Voltage	VIN	-0.3	VCC+0.3	V	
Operating temperature	TOPR	-10	50	℃	
Storage temperature	TSTR	-10	60	℃	
Humidity	---	---	90	%RH	---

6. Electrical Characteristics

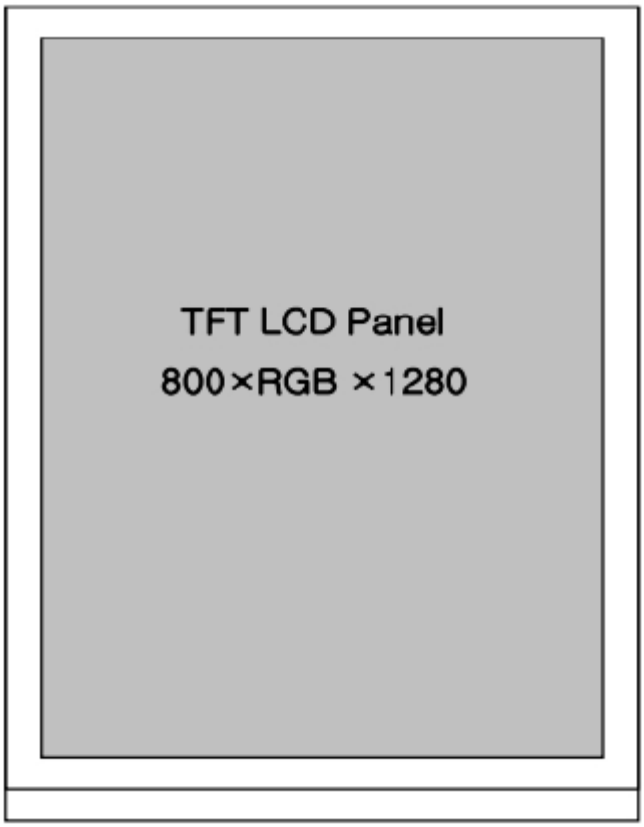
Item		Symbol	Rating			Unit	Remark
			Min	Typ	Max		
Power Voltage	ALogic	VDD	2.8	3.3	3.6	V	
Power Voltage	Logic	VDDIO	1.8	1.8/3.3	3.6	V	
Input Voltage	L level	VIL	-0.3	----	0.2*VCC	V	
	H level	VIH	0.8* VDD	---	---	V	
LCD Drive Power current		ILCD	---	---	---	mA	---

Remark:

Note1:Vcom must be adjusted to optimize display quality: Cross-talk, Contrast Ratio and etc.

7. Module Function Description

7-1. Pixel Fomat

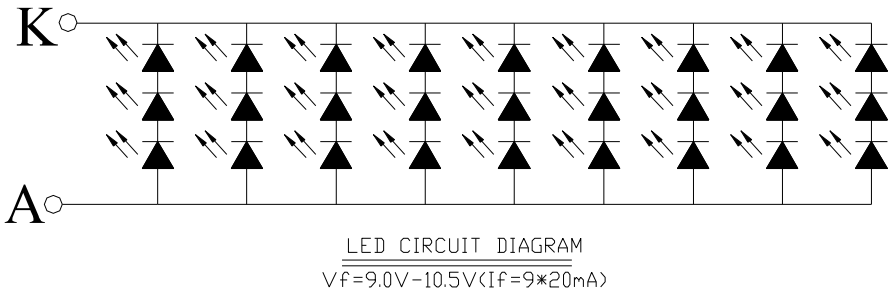


7-2. Pin Description

PIN NO	SYMBOL	Description
1-3	LEDA	LED Anode
4	NC	OPEN
5-8	LEDK	LED Cathode
9-10	GND	Ground
11	D2P	MIPI data input.
12	D2N	MIPI data input.
13	GND	Ground
14	D1P	MIPI data input.
15	D1N	MIPI data input.
16	GND	Ground
17	CLKP	MIPI clock input.
18	CLKN	MIPI clock input.
19	GND	Ground
20	D0P	MIPI data input.
21	D0N	MIPI data input.
22	GND	Ground
23	D3P	MIPI data input.
24	D3N	MIPI data input.
25	GND	Ground
26	VDDIO	Power SUPPLY 1.8V
27	RESET	Global reset signal
28	GND	Ground
29	VDDIO	Power SUPPLY 1.8V
30-31	VDD	Power SUPPLY 3.3V

8. Backlight Characteristics

Item	Symbol	Min	Typ	Max	Unit	Remark
Forward voltage	V_{BL}	9.0	9.6	10.0	V	-
Current	I_{BL}	160	180	200	ma	-
ICE	X	0.26	-	0.32	-	-
	Y	0.26	-	0.32	-	
Brightness	-		-	-	cd/m²	★1
Uniformity	-	80	-	-	%	★2



LED CIRCUIT DIAGRAM

Vf=9.0V-10.5V(If=9*20mA)

★1 Test condition is：

(a) Center point on active area

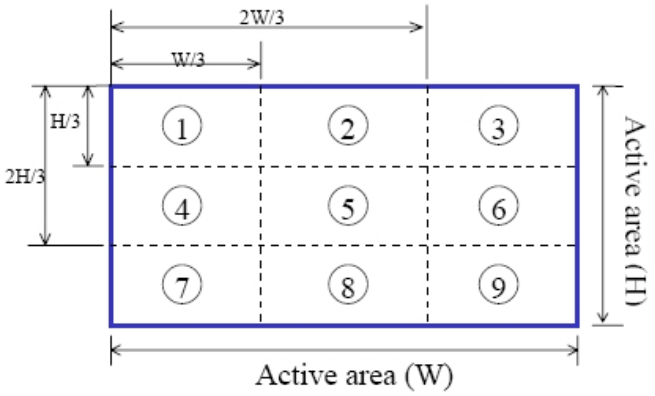
(b) Best Contrast

★2 Uniform measure condition：

(1)Measure 9 point. Measure location is show below：

(2)Uniform = (Min. brightness / Max. brightness)×100%

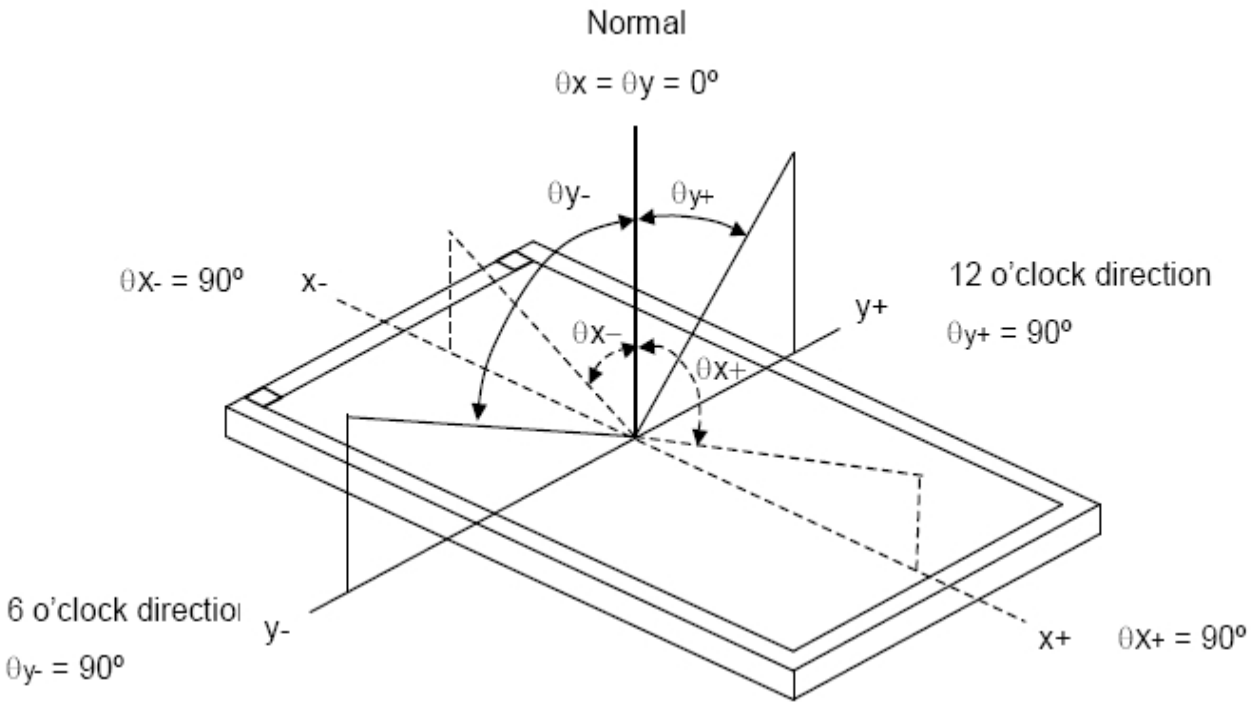
(3)Best Contrast.



9. Electro-Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Response time		Tr +Tf	θx = θy =0	---			ms	Reference Only
Contrast Ratio		CR		150	250	---	---	
Transmittance		T%		---	6.3	---	%	
Color chromaticity	white	Wx					-	
		Wy						
	Red	Rx						
		Ry						
	Green	Gx						
		Gy						
	Blue	Bx						
		By						
Viewing angle	Hor.	θx+	CR ≥ 10	---	85	---	Deg.	
		θx-		---	85	---		
	Ver.	θy+		---	85	---		
		θy-		---	85	---		

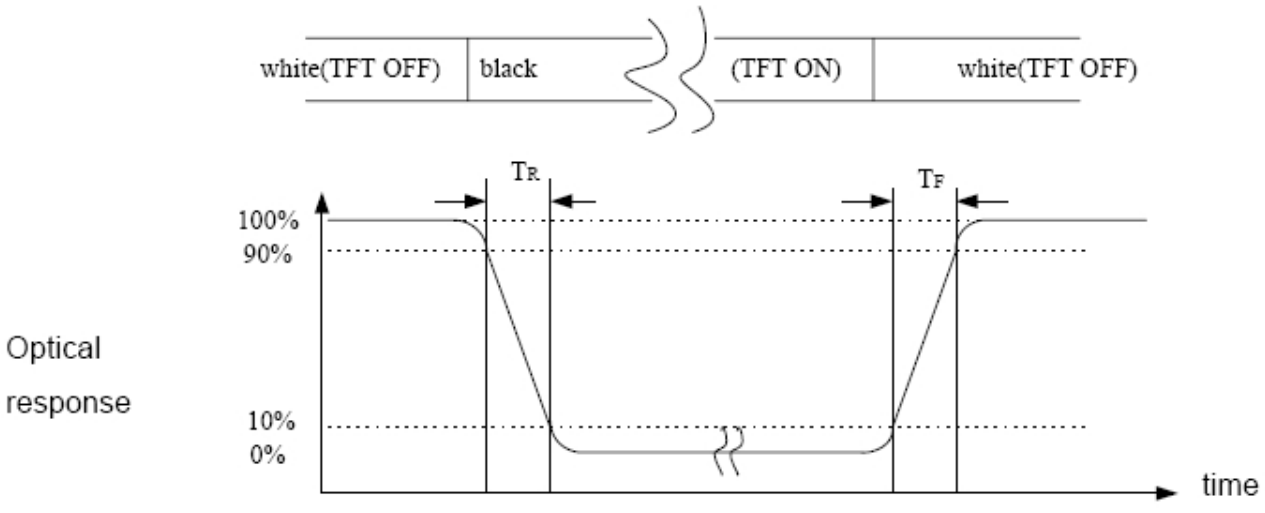
Note (1) Definition of Viewing Angle x and y:



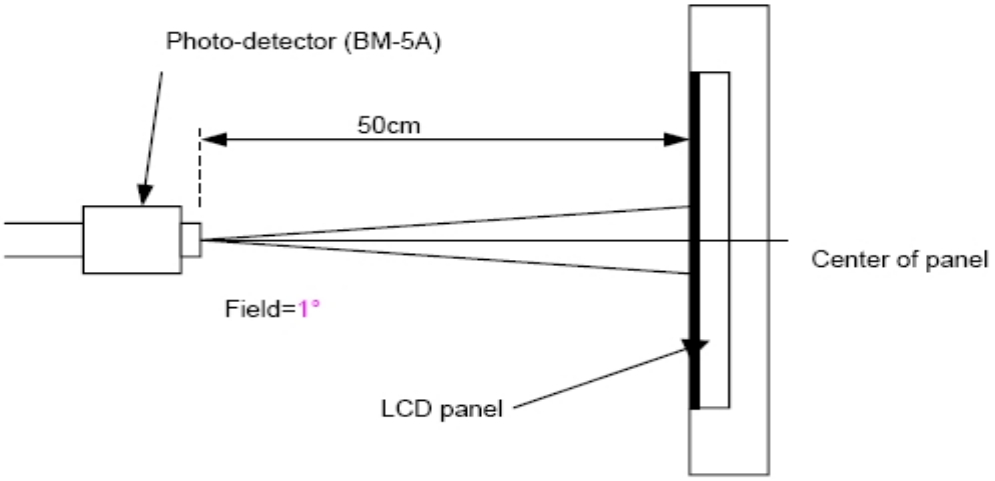
Note (2) Definition of Contrast Ratio(CR) :
measured at the center point of panel

$$CR = \frac{\text{Luminance with all pixels white}}{\text{Luminance with all pixels black}}$$

Note (3) Definition of Response Time : Sum of T_R and T_F



Note (4) Definition of optical measurement setup



9. Records Of Version

Version	Revise Date	Page	Content
0.0	2017-09-01	All	zy