

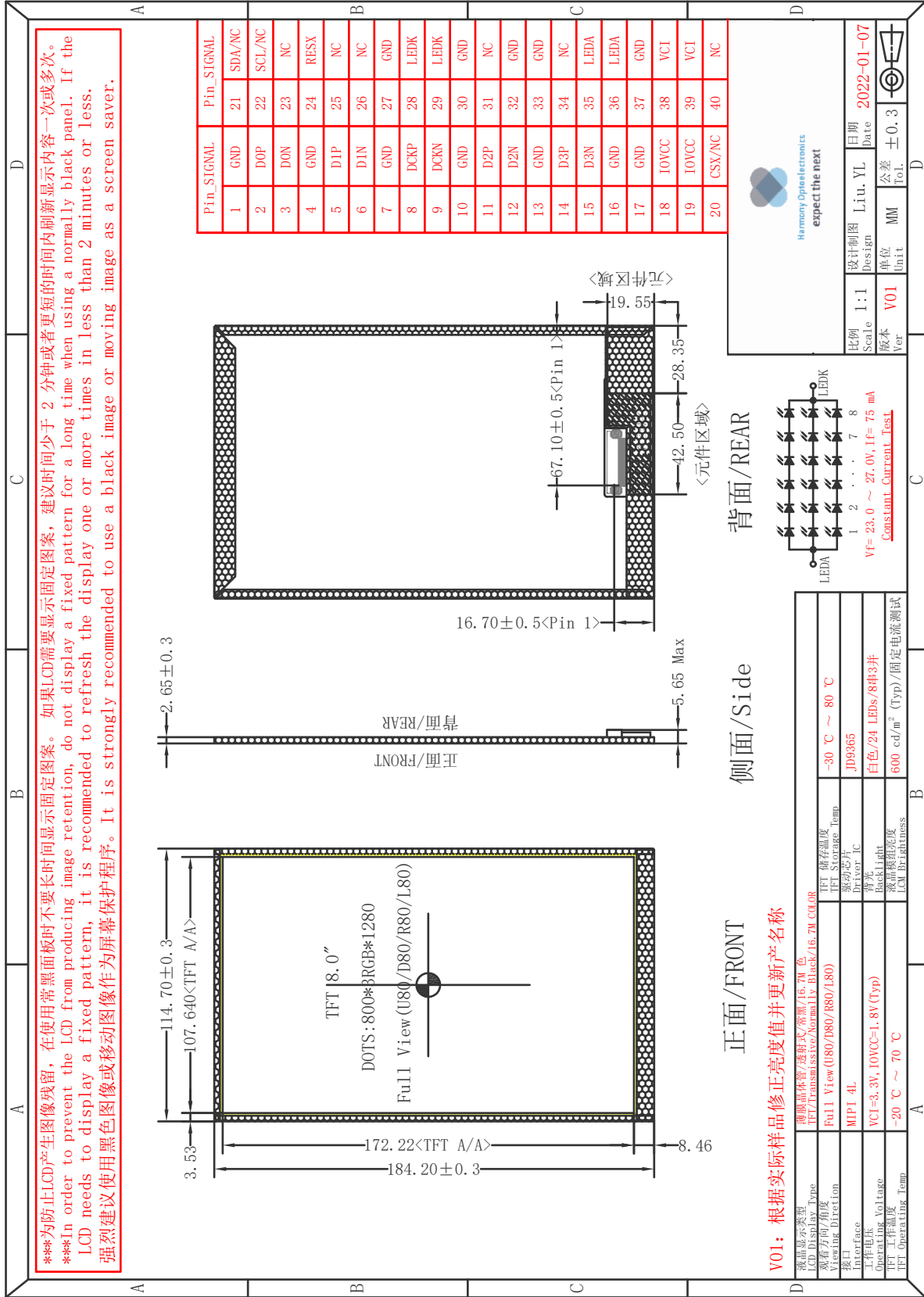
LCM Specification

产品描述 Product Description	TFT LCD Module 800 x 3RGB x 1280 Dots 8.0 " TFT LCD
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一、基本特征 General Feature:

项目 Item	标准值 Standard Value	单位 Unit
显示尺寸 Display Size	8.0"	-
分辨率 Number of Pixels	800 (H) *3(RGB)* 1280 (V)	-
显示区域 Active Area	107.640 (H) * 172.224 (V)	mm
外形尺寸 Outline Dimension	114.70(H) * 184.20(V) * 2.65(D) <TFT>	mm
观看方向 Viewing Direction	全 视角 FULL 0'clock	-
TFT 端口 TFT Interface	MIPI 4L	-
TFT 驱动芯片 TFT Driver IC	JD9365	-
TFT 驱动电压 TFT Driver Condition	VCI=2.8V, IOVCC=1.8V(Typ)	V
背光 Backlight	白色 LED/24 颗/8 串联 3 并联 White LED/24 PCS/8 series 3 parallel	-
触摸屏 Touch Panel	<input checked="" type="checkbox"/> 不带触摸屏 <input type="checkbox"/> 带电阻触摸屏 <input type="checkbox"/> 带电容触摸屏 Whitout TP Whit RTP Whit CTP	-
电容触摸屏驱动芯片 CTP Driver IC	- - -	-
电容触摸屏驱动电压 CTP Driver Condition	VDD=3.3V(Typ)	V
TFT 液晶工作温度 Operation Temperature	-20 ~ 70	°C
TFT 液晶储存温度 Storage Temperature	-30 ~ 80	°C

二、外形尺寸 Outline Dimensions

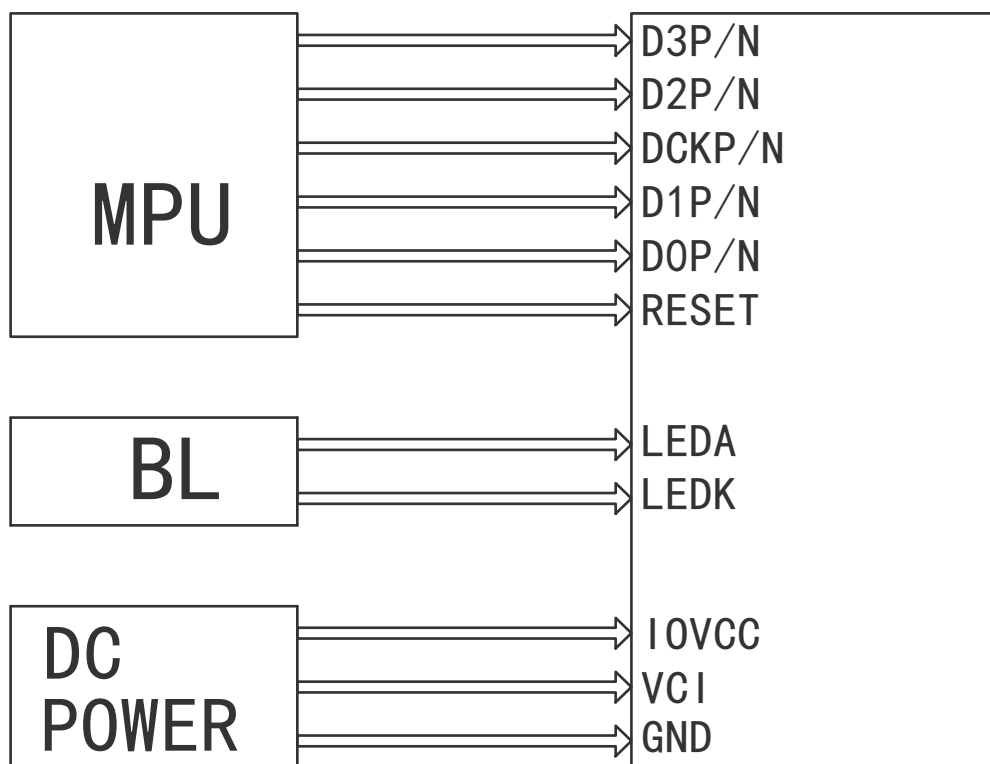


三、引脚说明 Pin Description

3.1. 模组引脚说明 TFT Pin Description

引脚编号 Pin NO.	标号 Symbol	详细描述 Description
1	GND	Ground
2	DOP	MIPI DSI positive differential data
3	DON	MIPI DSI negative differential data
4	GND	Ground
5	DIP	MIPI DSI positive differential data
6	DIN	MIPI DSI negative differential data
7	GND	Ground
8	DCKP	MIPI DSI positive differential clock
9	DCKN	MIPI DSI negative differential clock
10	GND	Ground
11	D2P	MIPI DSI positive differential data
12	D2N	MIPI DSI negative differential data
13	GND	Ground
14	D3P	MIPI DSI positive differential data
15	D3N	MIPI DSI negative differential data
16~17	GND	Ground
18~19	IOVCC	Power Supply for I/O System
20	CSX/NC	No Connect
21	SDA/NC	No Connect
22	SCL/NC	No Connect
23	SDO/NC	No Connect
24	RESX	TFT Reset Pin
25~26	NC	No Connect
27	GND	Ground
28~29	LEDK	LED Cathode
30	GND	Ground
31	NC	No Connect
32~33	GND	Ground
34	NC	No Connect
35~36	LEDA	LED Anode
37	GND	Ground
38~39	VCI	Digital Power
40	NC	No Connect
- - - END - - -		

3.2. 接线说明 Wiring instructions



四、电气特性 Electrical Characteristics

4.1. TFT 模组工作条件 TFT LCD Module Operating Conditions

项目 Item	标号 Symbol	条件 Condition	最小值 Min	典型值 Type	最大值 Max	单位 Unit
数字电源 Digital Power	VCI	-	2.6	2.8	3.3	V
I/O 电源 I/O Power	IOVCC	-	1.7	1.8	3.3	V
TFT 栅极导通电压 TFT Gate on voltage	VGH	-	-	-	-	V
TFT 栅极关断电压 TFT Gate off voltage	VGL	-	-	-	-	V
TFT 共模电压 TFT Common Voltage	VCOM	-	-	-	-	V

4.2. 背光工作条件 LED back light specification

项目 Item	标号 Symbol	条件 Condition	最小值 Min	典型值 Type	最大值 Max	单位 Unit
工作电压 Forward voltage	VF	If=20mA /1-chip	23.0	25.0	27.0	V
工作电流 Forward current	IF		60	75	90	mA
亮度 (带 LCD) Luminance (With LCD)	Lv	If=75mA	500	600	750	cd/m ²
LED 寿命 LED life time	Hr	Ta=25±3 °C	50,000	-	-	Hour

注释 Note:

1. LED 寿命 (Hr) 定义为在 Ta=25±3 °C, 上表所示的典型电压电流值条件下持续工作直至亮度低于 50% 的时间。LED life time (Hr) can be defined as the time in which it continues to operate under the condition: Ta=25±3 °C, typical IL value indicated in the above table until the brightness becomes less than 50%.

4.3. 电容触摸屏推荐工作条件 CTP Recommended Operating Conditions

项目 Item	标号 Symbol	条件 Condition	最小值 Min	典型值 Type	最大值 Max	单位 Unit
数字电源 Digital Power	VDD	-	2.8	-	3.3	V
I/O 电源 I/O Power	IOVDD	-	2.8	-	3.3	V
工作温度 Operation Temperature	T _{OP}	≤90%RH	-10	-	50	°C
储存温度 Storage Temperature	T _{ST}	≤90%RH	-20	-	60	°C

五、液晶光学规格 TFT OPTICAL SPECIFICATION

5.1 概述 Overview

光学规格的测试应在暗室（环境亮度 1lux，温度=25 ±2℃）中使用亮度计系统（测角仪系统和TOPCON BM-5)设备进行测量,测试单元应位于大约 在 θ 和 Φ 等于 0 的视角下,距 LCD 表面 50cm 的距离。显示面上测量点的中心应保持固定。测量前背光应工作 30 分钟。

The test of Optical specifications shall be measured in a dark room (ambient luminance 1lux and temperature = 25 ±2℃) with the equipment of Luminance meter system (Goniometer system and TOPCON BM-5) 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 . 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 光学规格 Optical Specifications

参数 Parameter		标号 Symbol	条件 Condition	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Unit	备注 Remark
视角范围 Viewing Angle Range	水平 Horizontal	⊕左/L	CR>10	-	80	-	Deg.	Note 1
		⊕右/R		-	80	-	Deg.	
	垂直 Vertical	⊕上/U		-	80	-	Deg.	
		⊕下/D		-	80	-	Deg.	
对比度 Contrast ratio		CR	⊕ = 0°	-	1500	-	-	Note2
色域 Color Gamut		CG	CIE1931	-	60	-	%	
白色色度 White Chromaticity		Wx	⊕ = 0°	-0.03	0.298	+0.03	-	Note4 (Based on C Light)
		Wy			0.324		-	
色彩还原 Reproduction of color	红 Red	Rx			0.632		-	
		Ry			0.315		-	
	绿 Green	Gx			0.269		-	
		Gy			0.552		-	
	蓝 Blue	Bx			0.138		-	
		By			0.098		-	
响应时间（上升 + 下降） Response Time (Rising + Falling)		Tr+Tf	⊕ = 0° Ta= 25℃	-	30	35	ms	Note5

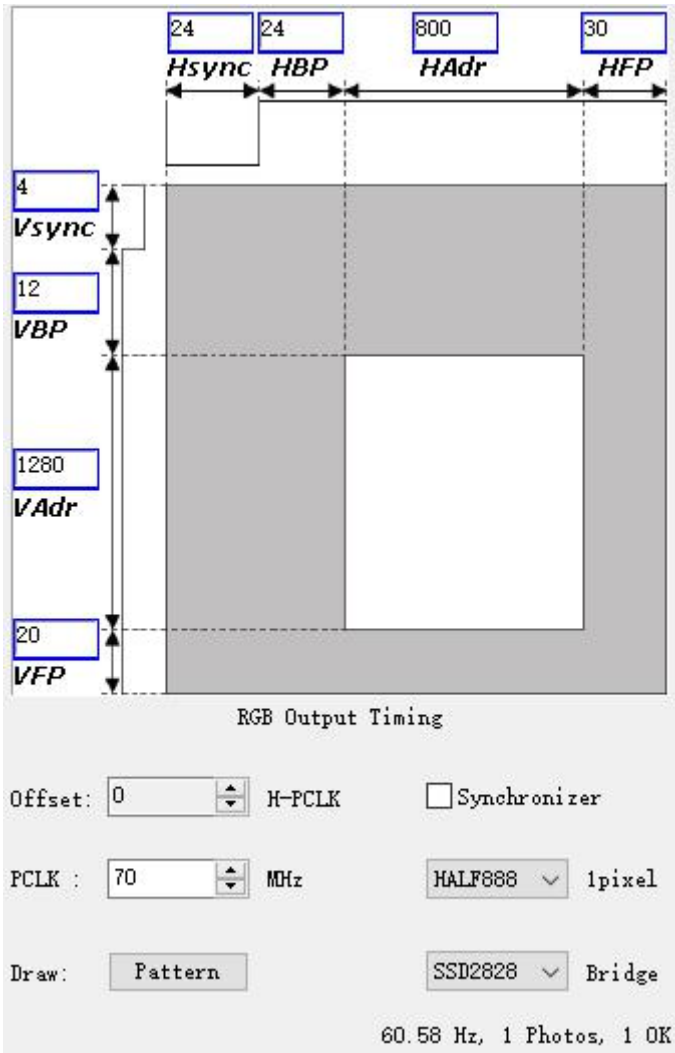
注释 Note:

1. 视角是对比度大于10的角度。视角确定为相对于光轴的水平或3、9点钟方向和垂直或6、12点钟方向 垂直于 LCD 表面（见图 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).

初始化代码 LCD display initialization code

//参考门廊值 Reference Porch



//MIPI 速率 MIPI rate(432 Mbps)

```
8001280_4LANE_SSD2828.c - 0 error(s), 0 warning(s), 432 Mbps,
```



```

Void Panel_Initial_code(void)
{
//TFT分辨率: 800 x 1280
//接口: MIPI 4L
//测试板主控:
//Power:VCI=2.8, IOVCC=1.8
//=====上电复位操作=====//
LCD_RESET=1;
Delaysms(1);          //Delay 1ms
LCD_RESET=0;
Delaysms(10);         //Delay 10ms
LCD_RESET=1;
Delaysms(120);        //Delay 120ms
//=====//
{0xE0, 1, {0x00}},

{0xE1, 1, {0x93}},
{0xE2, 1, {0x65}},
{0xE3, 1, {0xF8}},
{0x80, 1, {0x03}},

{0xE0, 1, {0x01}},
{0x03, 1, {0x00}},
{0x04, 1, {0x2F}},

{0x17, 1, {0x10}},
{0x18, 1, {0x0F}},
{0x19, 1, {0x01}},
{0x1A, 1, {0x10}},
{0x1B, 1, {0x0F}},
{0x1C, 1, {0x01}},

{0x24, 1, {0xFE}},
{0x25, 1, {0x20}},
{0x35, 1, {0x23}},
{0x37, 1, {0x09}},

{0x38, 1, {0x04}},
{0x39, 1, {0x08}},
{0x3A, 1, {0x12}},

```

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{0x3E, 1, {0xFF}},
{0x3F, 1, {0xFF}},

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{0x44, 1, {0x0F}},
{0x45, 1, {0x30}},
{0x4B, 1, {0x04}},

{0x0C, 1, {0x74}},
{0x55, 1, {0x02}},
{0x57, 1, {0x65}},
{0x59, 1, {0x0A}},
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{0x5E, 1, {0x01}},
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{0x0E, 1, {0x4A}},
{0x36, 1, {0x49}},

{0xE0, 1, {0x00}},

```
{0x11, 1, {0x00}},  
{REGFLAG_DELAY, 120, {}},
```

```
{0x29, 1, {0x00}},  
{REGFLAG_DELAY, 5, {}},  
{REGFLAG_END_OF_TABLE, 0x00, {}}
```

```
}
```

```
Void Panel_SleepIn_Mode (void)
```

```
{
```

```
WriteComm(0x28);
```

```
Delays (120);
```

```
WriteComm(0x10);
```

```
Delays (120);
```

```
}
```

```
Void Panel_SleepOut_Mode (void)
```

```
{
```

```
WriteComm(0x11);
```

```
Delays (120);
```

```
WriteComm(0x29);
```

```
Delays (120);
```

```
}
```

--END--