

产品规格书

Specification

产品名称 (Product): 4寸液晶显示模组/4inch TFT LCD Module驱动板 (Driver board): JDLC40M01A版本号 (Version): VER:1.00液晶屏 (TFT LCD): JD040H54D08A0-32STA(56)

客户名称 (Customer): _____

客户型号 (Cust.P/N): _____

日期 (Date): _____

客户 CUSTOMER			承制方 MANUFACTURER		
品质 Quality	工程 Engineer	审批 Approved	审核 Checked	批准 Approved	销售 Sales

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版本更改 Version

日期/Date	版本/Ver.	修改版本/Modification
2018-8-27	R1.00	第一版(The First Version)

1. 概况 Profile:

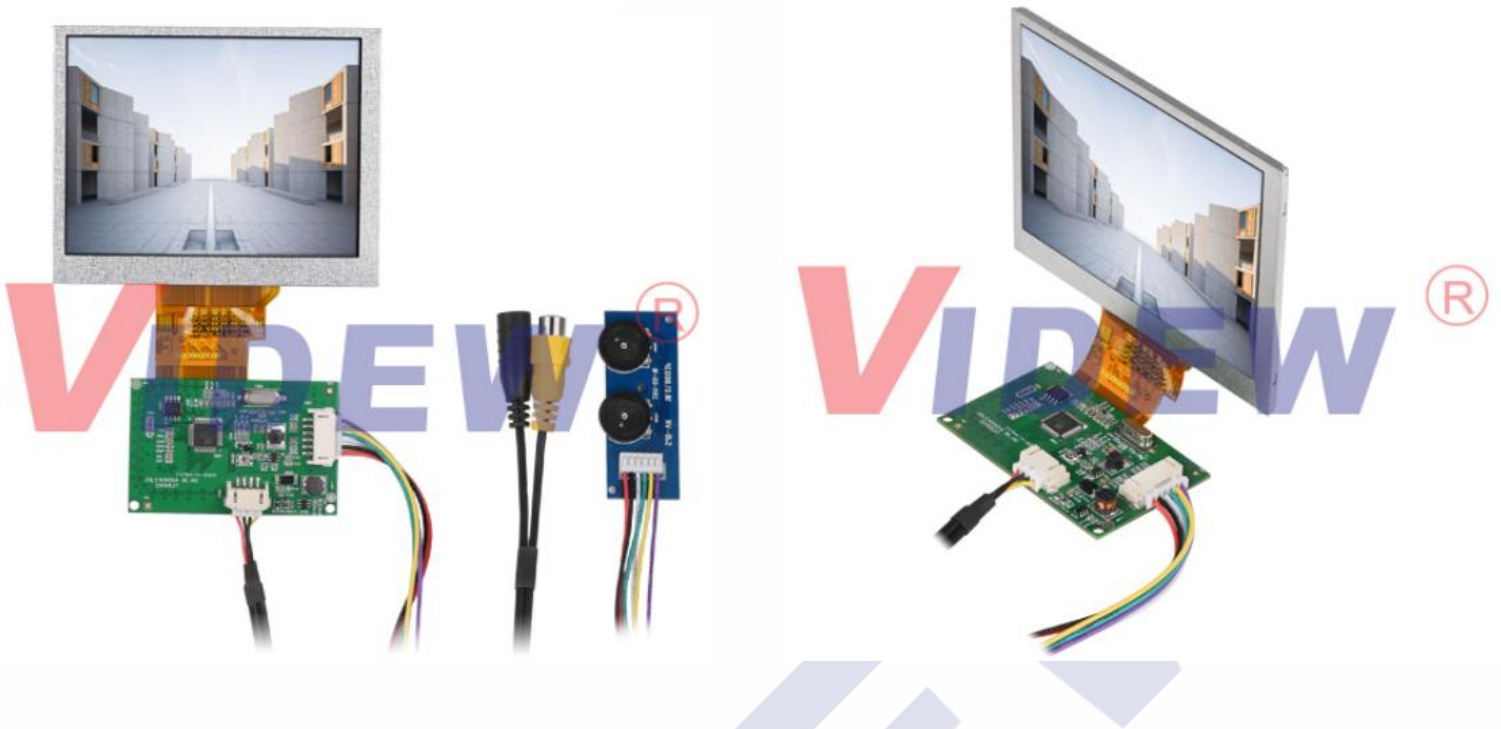
JDLC40M01A VER:1.00-JD040H54D08A0-32STA(56)彩色液晶驱动模组，由 JDLC40M01A VER:1.00 驱动板和（JD040H54D08A0-32STA(56)）屏组成。输入 CVBS 信号，有 PAL 制和 NTSC 两种制式，可实现自动识别。电位器调节彩色、亮度或带 OSD 菜单显示。它主要用于可视电话，也可用于其他显示电子设备。

JDLC40M01A VER:1.00-JD040H54D08A0-32STA(56) Color Digital Module is comprised by JDLC40M01A VER:1.00 driver board and JD040H54D08A0-32STA(56) screen. The LCD module supports CVBS signal input ,NTSC and PAL formats which two formats applies to auto identification. Potentiometer adjust to color,brightness with the OSD menu display.It's suitable for display electronics assembly,such as Video door phone &video phone,building talk-back system etc.

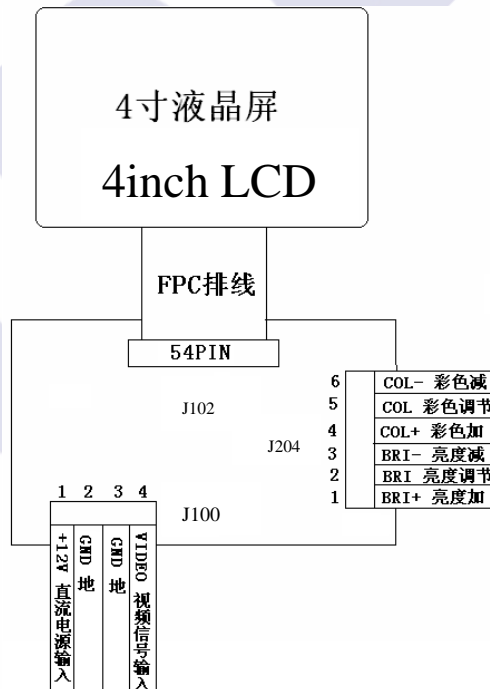
2. 基本参数 Specifications:

No.	项目/Item	说明/Description	Note
1	液晶屏显示尺寸/LCD Display	4.0 英寸/4.0inch	
2	液晶屏显示比例/LCD Display Ratio	4:3	
3	背光方式/Backlight	LED	
4	亮度/Brightness	320±20 cd/m ²	
5	解析度/Resolution	320(RGB)×240	
6	视角范围/View angle	(60/70/75/75) up/down/left/right	
7	液晶屏尺寸/LCD dimension	96.0 (W) ×76.0 (H) ×3.2 (D) mm	
8	有效显示范围/Effect area	82.08 (H) ×61.56 (V) mm	
9	驱动板尺寸/Driver board size	62.03 (W) ×40.07 (H) ×9.0 (D) mm	
10	工作电压（纹波小于 0.3VP-P） / Working Voltage (Wave<0.3VP-P)	最小: DC7V; 标准: DC12V; 最大: DC18V; Min:DC7V; Standard: DC12V; Max: DC18V;	
11	工作电流（DC 12V 供电时） / Working Current (DC 12V supply)	DC100mA±20mA	
12	消耗功率/Power Consumption	1.2W (TYP)	
13	启动时间/Start Time	≤2 秒 ≤2 S	
14	工作温度范围/Working Temp.	0℃~60℃	
15	储存温度范围/Storage Temp.	-20℃~70℃	
16	环境相对湿度/ENV. Humidity	5~95%RH	

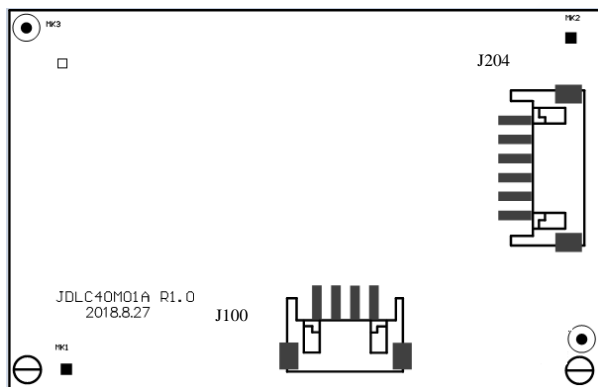
3. 产品图片/Product Picture:



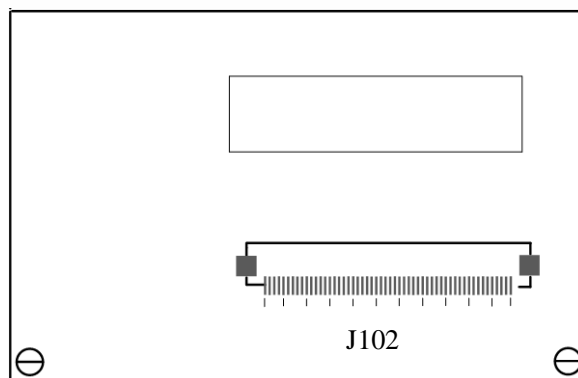
4. 连线示意图/Wiring Diagram:



正面/ the obverse side:



背面/ the reverse side:



5. 驱动板接口定义/Interface Definition:

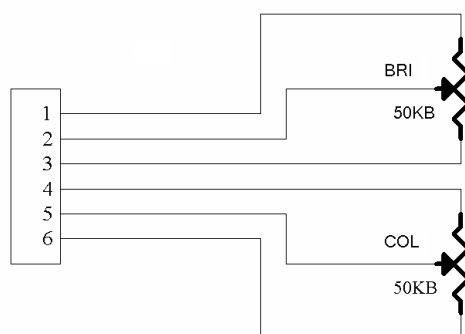
5.1. J100 接口定义 /J100 Interface Definition:

PIN	Function	I/O/P	脚位定义说明/PIN Definition	Note
1	+12VIN	I	直流电源输入/DC power input	
2	GND	-	地/ Ground	
3	GND	-	地/ Ground	
4	VIDEO	I	视频信号输入/Video Signal input	

5.2. J204 接口定义/J204Interface Definition: (6PIN)

PIN	Function	I/O	脚位定义说明/PIN Definition	Note
1	BRI+	I	亮度加/ Brightness+	
2	BRI	I	亮度调节/ Brightness adjustment	
3	BRI-	I	亮度减/ Brightness-	
4	COL+	I	彩色加/ Color+	
5	COL	I	彩色调节/ Color adjustment	
6	COL-	I	彩色减/ Color-	

5.2.1. 电位器规格:10KB/50KB (直线型) / Potentiometer Spec.:10KB/50KB (Line type)



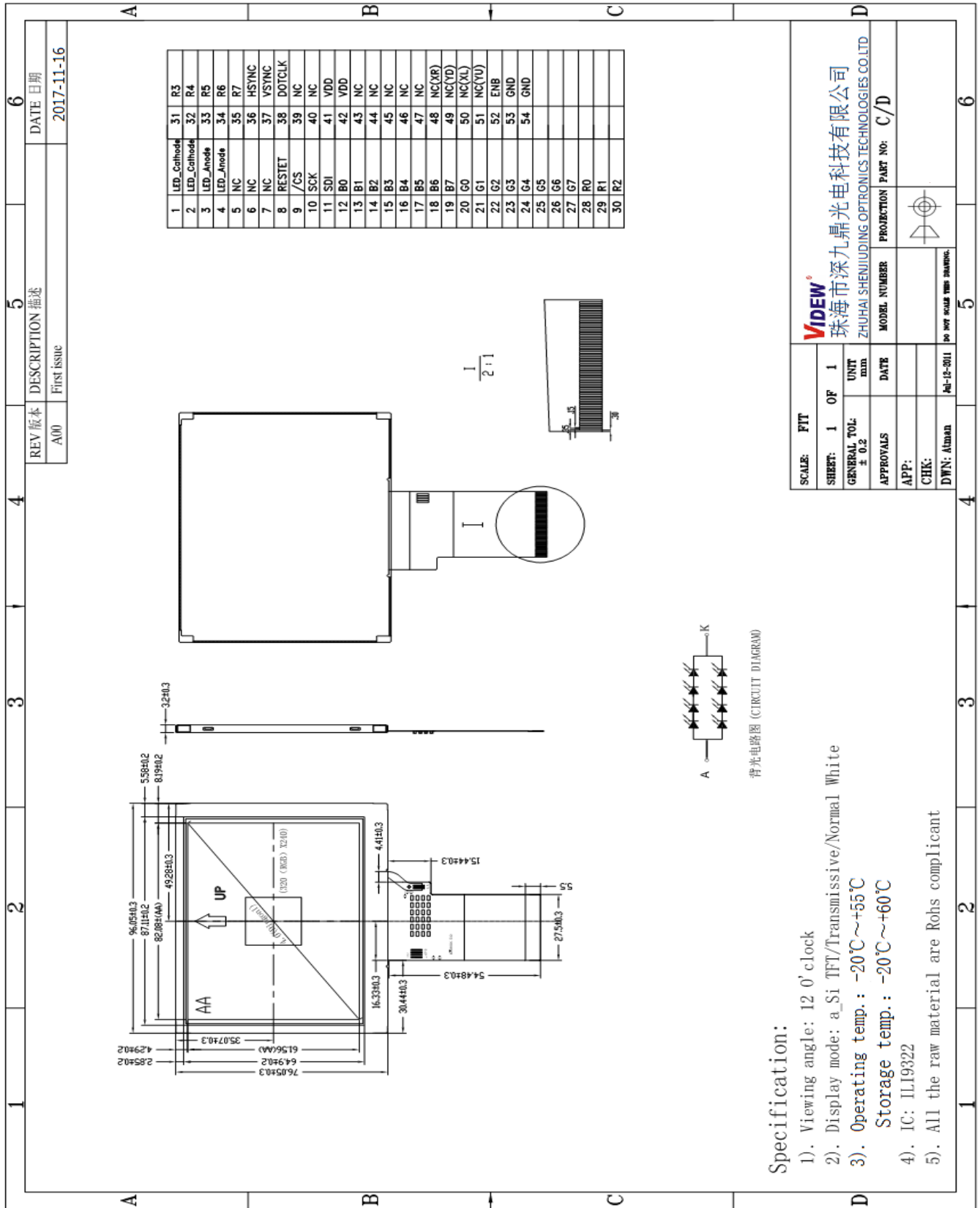
5.3、J102 接口定义/ J102 connector definition:

序号	脚位定义/Pin Connection	I/O	脚位定义说明/explain	备注
1-2	LED_Cathode	P	LED_Cathode	
3-4	LED_Anode	P	LED_Anode	
5-7	NC	-	No Connect	
8	RESET	O	RESET	
9	SPENA	O	Serial port data enable signal	
10	SPCK	O	SPI Serial Clock	
11	SPDA	I/O	SPI Serial Data Input/output	
12-19	B0- B7	O	Blue data	
20-27	G0- G7	O	Green data	
28-35	R0- R7	O	Red data	
36	HSYNC	O	Horizontal Synchronous Signal	
37	VSYNC	O	Vertical Synchronous Signal	
38	CLK	O	Data Clock	
39-40	NC	-	No Connect	
41	VDD	P	power supply (3.3V)	
42	VDD	P	power supply (3.3V)	
43-47	NC	-	No Connect	
48	NC/XR	-	No Connect	
49	NC/YD	-	No Connect	
50	NC/XL	-	No Connect	
51	NC/YU	-	No Connect	
52	DEN	O	Data enabling signal	
53	GND	P	Ground	
54	GND	P	Ground	

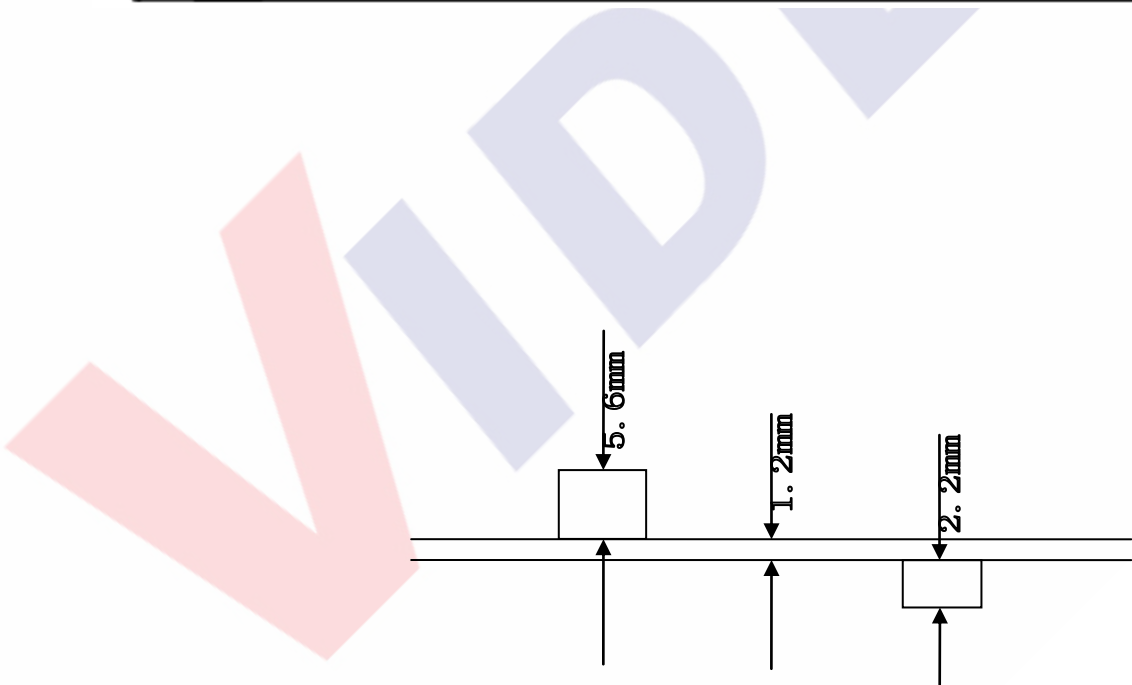
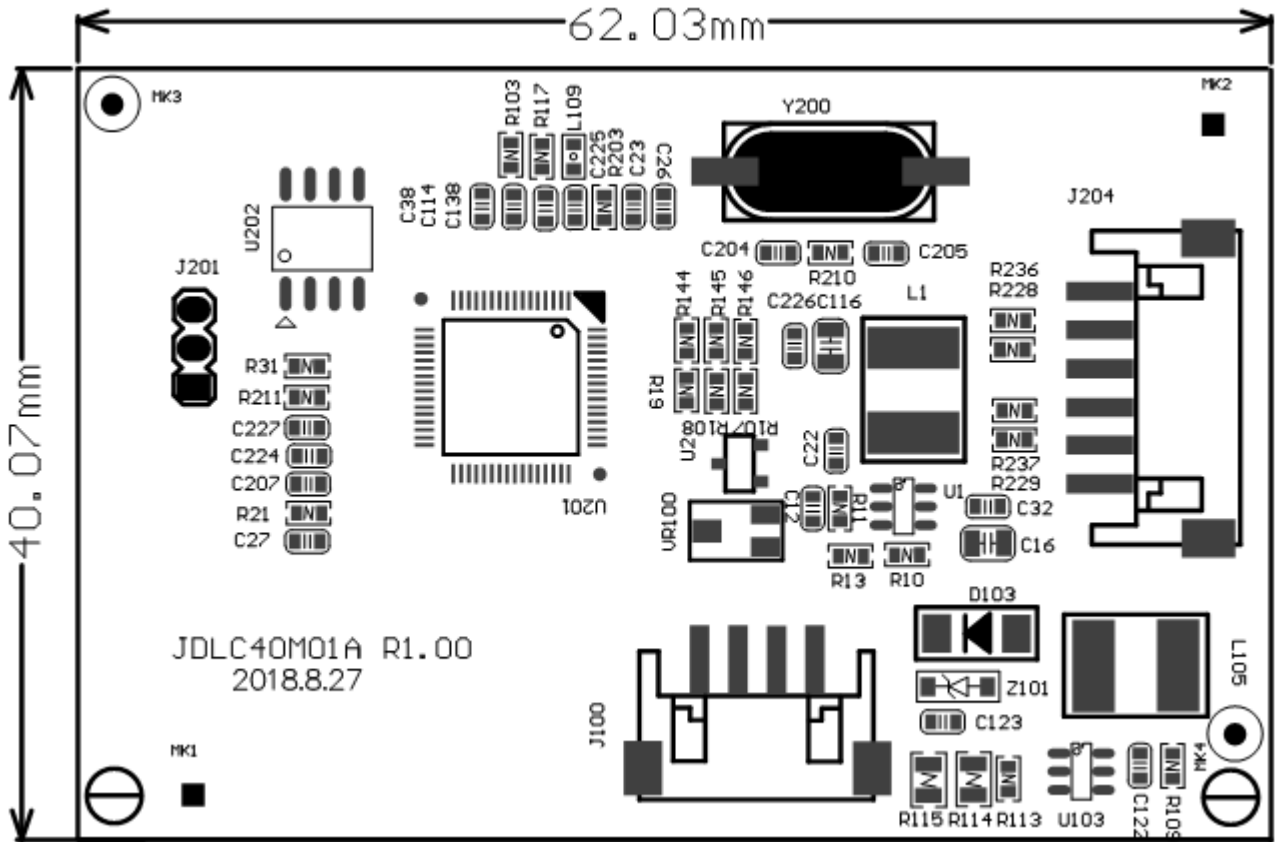
I/O: I: input, O: output, P: power

6. 结构图/Structure:

6.1. TFT LCD Panel:



6.2. PCB 尺寸/PCB size: 62.03 (W) × 40.07 (H) × 9.0 (D) mm



7. 产品标示/Product Label:

JD040H54D08A0-32STA(56)

8. 包装、运输及贮存/Packing Shipping

8.1. 供货包装/Packing

TBD

8.2. 运输及贮存/Shipping

运输过程避免碰撞和雨雪淋袭；严禁与化学物品及潮湿物品同库贮存。

Don't hit and rain when transportation: Don't storage with chemic goods and wet goods together.

9、 JDLC40M01A 调试注意事项/ JDLC40M01A Debugging precautions

9.1. TFT 出厂前已用专用仪器进行精密调试和老化、测试，一般不需要再做调整。

TFT have used by special instrument to adjust precision and aging, test before leave factory, no need adjust again.

9.2. 调整前，应正确连接电源、视频信号，应数次开关电源以及视频信号检查图像情况。

Please correctly connect power, video signal before you adjust, should be on/off power and video signal to check the image's effect.

9.3. 因为此产品为电子产品，请注意防静电。

Due to this product is electronic product, please notice prevent static.

9.4. 4 "TFT- LCD PANEL 为玻璃制品，小心拿放，以免破裂。

4"TFT-LCD Panel is a glasswork, place carefully ,broken for fear

9.5. 调节电位器时需注意不能让手碰到按键引脚，因人体有一定的电阻，如触摸到会对按键功能造成影响。

Don't touch pushbutton's pin feet when you adjust potentiometers, due to person have resistance, you will effect pushbutton's function when touch it.

10. 4"TFT- LCD PANEL 判定标准:/4 "TFT- LCD PANEL Inspection standard :

目的: 制定 PANEL 的标准供进料检查、制程检查、客户检查的依据.

Aim: Make the panel standards to material purchasing, process inspecting and customer checking.

范围: 适用于 4"TFT LCD 产品.

Ranges: apply to 4"TFT LCD modules

作业内容/ Determinant standard and method:

10.1. 判定标准及方法:

Judgment standard and method:

10.1.1. LCD 显示屏伤痕检测方法 with 判定:

The method and determinant of inspecting the nick of panel of LCD:

在 20W 萤光灯下, 距离 PANEL 30CM 处垂直 (或左、右 45 度) 观察, 如果没有看见异物、伤痕, 则判定 OK, 否则 NG.

Inspect vertically (or at 45° angle from left/right) under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick, it determines "OK", otherwise "NG".

10.1.2. LCD 显示屏黑点, 白点, 色点检测方法 with 判定:

The method and determinative for black & white & color spots for the Panel of LCD:

10.1.2.1 检查方法/Inspection Method:

黑点: 在表示点灯状况下, 把检查黑点的 MASK 摆在 LCD 黑点的附近, 目视观察比较大小.

Black spots: under the situation of "turn on the light", set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

白点, 色点: 在表示点灯状况下, 把检查黑点的 MASK 重叠在 LCD 白点 (色点) 处, 目视观察判断白点 (色点) 否可以隐藏.

White & Color spots: under situation of "turn on the light", set the Mask of black spot inspection on the white spot (or color spot) then observe them by eyes if it can hide.

10.1.3、判定选择/ Determinant Choice:

一类：一百万像素允许 2 个亮点。

Category 1: 1 million pixels allows 2 bright spots.

二类：一百万像素允许 2 个黑点。

Type 2: two black dots per million pixels.

三类：一百万像素允许 5 个黑点或者 5 个亮点。

Three types: one million pixels allows five black dots or five bright spots.

例如/ for example:

- 1、液晶屏像素为 480 x234，它的总像素是 112320。按比例算应该允许有 0.22464 个亮点或者黑点，属于一类和二类缺陷的 LCD 屏，可以接受。

The LCD screen has 480 x234 pixels, and its total pixels are 112320. The LCD screen with 0.22464 light or black spots, which belongs to category 1 and category 2 defects, should be allowed in proportion and acceptable.

- 2、液晶屏像素为 1440 x234，它的总像素是 336960。按比例算应该允许有 1.68 个亮点或者黑点，属于三类缺陷的 LCD 屏，可以接受。

The LCD screen has 1440 x234 pixels, and its total pixels are 336960 pixels. Proportionally, 1.68 light or black dots should be allowed, which is acceptable for LCD screens with three types of defects.