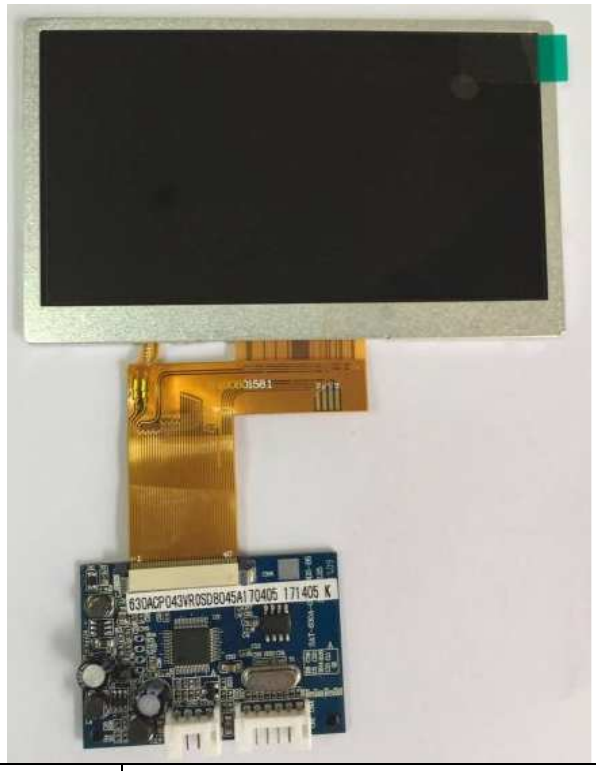
深 圳 视 安 通 电 子 有 限 公 司

SHENZHEN SAT ELECTRONICS CO. LTD

产 品 规 格 书

(Product Specification)



产品名称 (product name)	产品型号 (Description)	制式 (Standard)
彩色显示模组 (Color display module)	SAT-630A-BZ043D-PO-N	PAL/NTSC 自动 (PAL/NTSC automatic)

使用方(USER)			承制方(MANUFACTURER)		
品质 (Quality inspector)	工程 (Engineer)	审 批 (Approver)	制表 (Tabulation)	审核 (Audit)	批准 (Ratify)
			李冬		

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一．产品描述(Product Description)

SAT-630A-BZ043D-PO-N 彩色液晶显示模组由 SAT-630A-043-40DS-B5 驱动板和 SAT043CP40D08B2-30671T051ZN 数字屏组成。支持 PAL 制和 NTSC 两种制式，可实现自动转换。采用高亮度白光 LED 作背光源，耗电低、干扰小。主要用于： 可视门铃、可视电话、车用显示器、便携 DVD、仪器、仪表和测量用具等产品上。

(Support PAL system and NTSC two kinds of standard, can achieve automatic conversion. Using high brightness white LED as backlight, low power consumption, interference small. Mainly used for: video doorbell, video phone, car display, portable DVD, instruments, instruments and measuring appliances and other products.)

二．主要参数(The main parameters)

☆ **解析度(resolution)**：480RGBX272 点数(480RGBX272 Points)

☆ **有效显示范围(valid display range)**：95.04(H) x 53.85 (V)

☆ **彩色配列(color arrangement)**：R.G.B. 直线配列(R.G.B. Straight line arrangement)

☆ **图像显示比例(Image display scale)**：16:9

☆ **背光源(Backlight)**：LED 背光(LED Backlight)

☆ **视角范围(上/下/左右)：(viewing angle range)(up/down/left)**(50/70/70/70)
（说明:视线与屏面垂直时定义为 90 度)(Description: when the line of sight is perpendicular to the screen,it is defined as 90 degrees)

☆ **输入信号类型(enter the signal type)**：PAL/NTSC 制视频(自动识别)(PAL/NTSC video automatic identification)

☆ **输入信号幅度：(input signal amplitude)** 标准(standard)：1.0 Vp-p，最小(Min)：0.5 Vp-p ，最大(Max)：2.0 Vp-p

☆ **工作电压(operating voltage):DC9V 至 DC18V(DC9V to DC18V,标准(standard)：** DC12V（电源纹波小于 0.3VP-P）(power ripple is less than)

☆ **工作电流(DC12V 供电时)：(Operating current DC12V power supply)** DC100mA ±20mA

☆ **消耗功率(power consumption)：** ≤1.4W

☆ **启动时间(start time)：** ≤1.9S

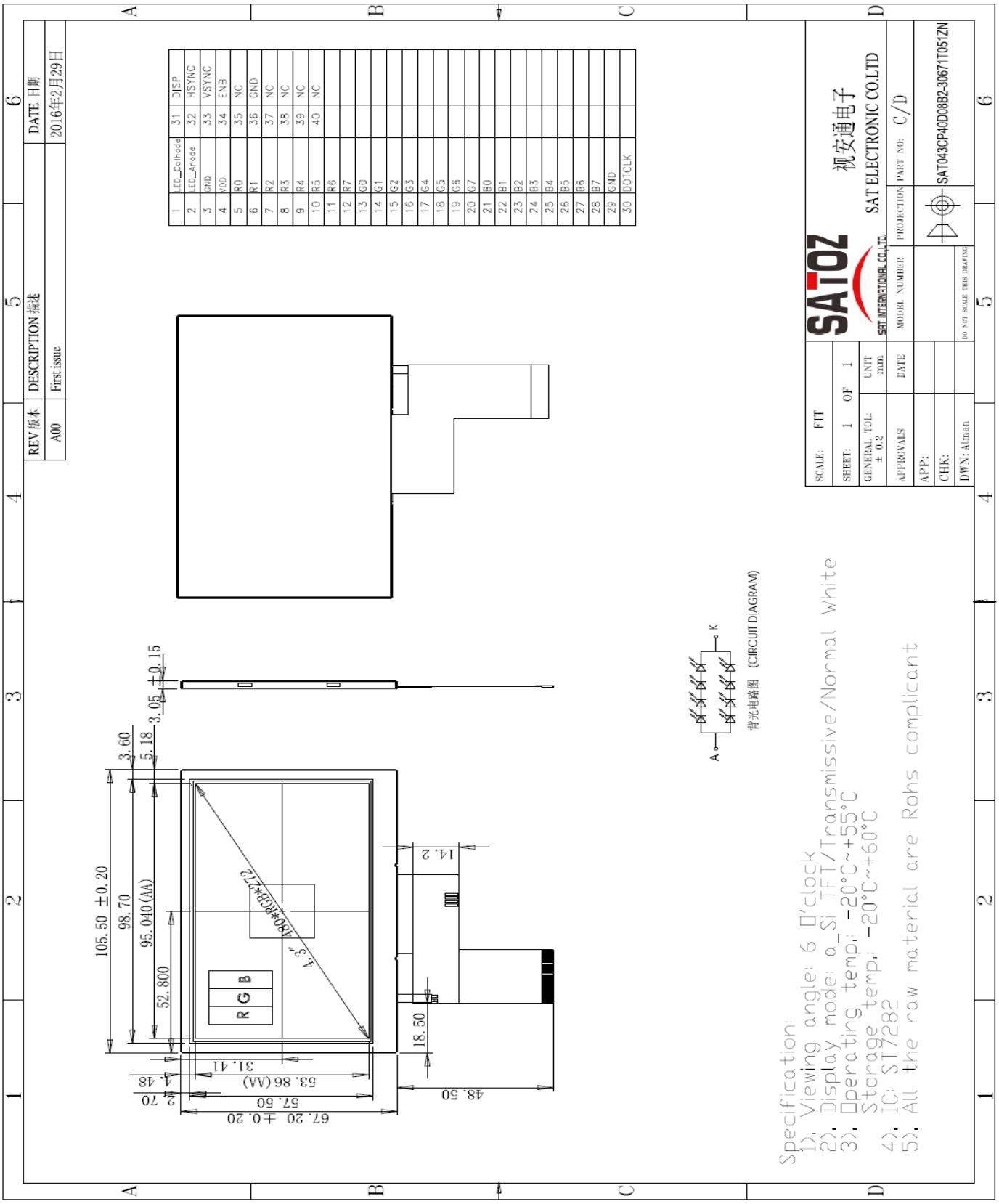
☆ **工作温度范围(operating temperature range)：** -20℃～60℃

☆ **储存温度范围(storage temperature range)：** -40℃～70℃

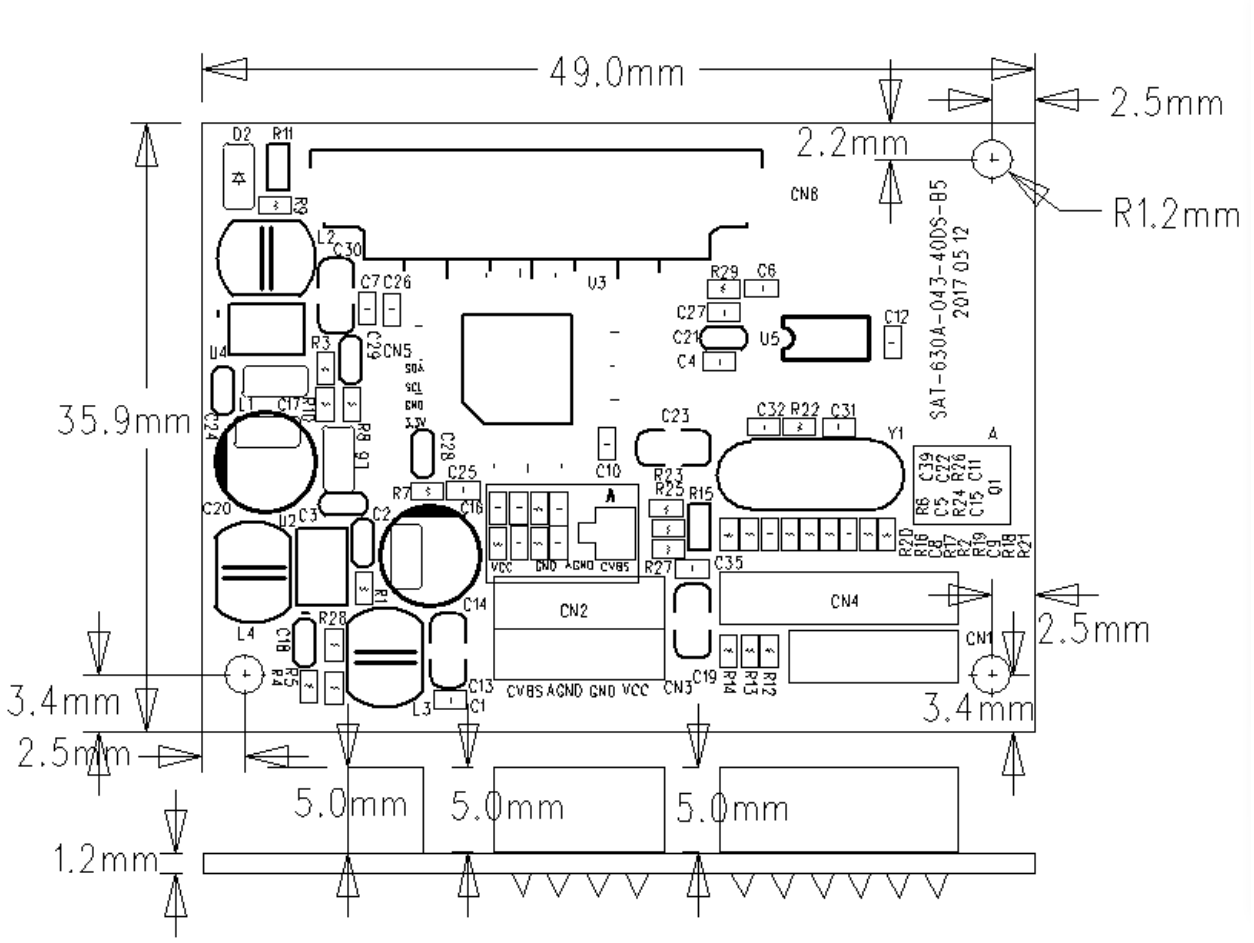
三. 产品图片(Product picture)（此图仅供参考，以实际样品为准）(This picture is reference only ,subject to the actual sample)

四. 结构图(structure diagram)

1. 液晶屏(TFT LCD PANEL)



2. PCB



五. 驱动板接口定义(Driver board interface definition)：

CN2 接口定义(interface definition)： **4 线引出插座（PH 规格，2.0mm 间距），用于连接电源及视频。(4-wire lead-out socket (PH size .2.0mm pitch) for connecting power and video)**

引脚(pin)	符号(symbol)	定　　义(definition)
1	VCC	9V~18v 电源输入(power input of 9v-18v)
2	GND	电源地线（power supply ground wire)
3	GND	视频地线(video ground)
4	CVBS	PAL/NTSC 视频输入(PAL/NTSC Video input)

CN4 接口定义(interface definition)： 6 线插座（PH 规格,2.0mm 间距）,(用于 连接调节电位器。(6-wire socket (PH size .2.0mm pitch)for connecting to adjust potentiometer)

引脚(pin)	符号(symbol)	定 义 (definition)	外接电位器阻值 (external potentiometer subtraction)
1		色度电位器减 (chroma potentiometer subtraction)	10—50K
2		色度电位器 (chroma potentiometer)	
3		色度电位器加 (chroma potentiometer plus)	
4		亮度电位器减 (brightness potentiometer subtraction)	10—50K
5		亮度电位器 (brightness potentiometer)	
6		亮度电位器加 (brightness potentiometer plus)	

CN6 接口定义(interface definition)：

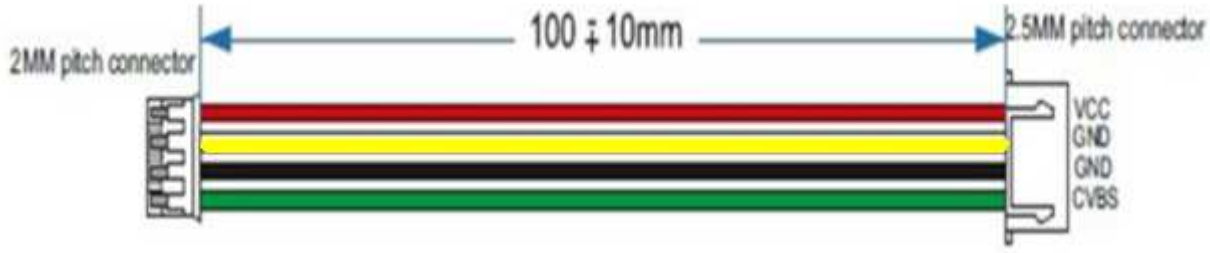
：40pin FPC

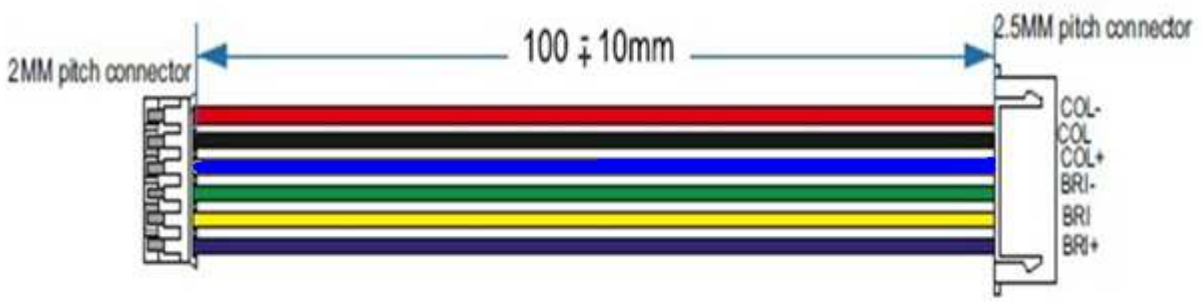
No	Symbol	I/O/P	Description
1	**LED_Cathode**	**p**	**LED_Cathode**
2	**LED_Anode**	**p**	**LED_Anode**
3	**GND**	**P**	**Ground**
4	**VDD**	**P**	**power supply（3.3V）**
5	**R0**	**I**	**Red data**
6	**R1**	**I**	**Red data**
7	**R2**	**I**	**Red data**
8	**R3**	**I**	**Red data**

9	R4	I	Red data
10	R5	I	Red data
11	R6	I	Red data
12	R7	I	Red data
13	G0	I	Green data
14	G1	I	Green data
15	G2	I	Green data
16	G3	I	Green data
17	G4	I	Green data
18	G5	I	Green data
19	G6	I	Green data
20	G7	I	Green data
21	B0	I	Blue data
22	B1	I	Blue data
23	B2	I	Blue data
24	B3	I	Blue data
25	B4	I	Blue data
26	B5	I	Blue data
27	B6	I	Blue data
28	B7	I	Blue data
29	GND	P	Ground
30	DOT CLK	I	Data Clock
31	DISP	I	Sstandby mode control pin
32	HSYNC	I	Horizontal Synchronous Signal
33	VSYNC	I	Vertical Synchronous Signal
34	DEN	I	Data enabling signal
35	NC	-	No Connect
36	GND	P	Ground
37	XR	I/O	Right electrode - differential analog
38	YD	I/O	Bottom electrode - differential analog
39	XL	I/O	Left electrode - differential analog
40	YU	I/O	Top electrode - differential analog

六. 标准配线(The standard wiring)：

TFT-100-SF-4P-200/254-28-8054A 与 TFT-100-SF-6P-200/254-28-8054





七. 包装、运输及贮存(packaging、transportation、storage):

1、供货包装(package of supply)

单台(样品)包装规格(single (simple) packing specification)：120×120×40mm

模组配线(module wiring)： TFT-100-SF-6P-200/254-28-8054 与 (and) TFT-100-SF-4P-200/254-28-8054A 的测试线各 1 条(each test wire is 1)

大箱包装规格(packing specifications of large carton)：413(L)*270(W)*280(H)mm

大箱包装数量(packing quantity of large carton):80PCS(刀卡包装)(carding packaging)

2、运输及贮存(transportation and storage):

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。(The transport process avoids collisions and rain and snow attacks; no storage of chemicals and damp goods in the same warehouse)

八. 注意事项(Matters needing attention):

☆ 输入电压不要高于产品的设计上限。(The input voltage shall not exceed the design limit of the product)

☆ 要注意区分电源线和信号线的位置，接反容易烧坏板子。(Attention should be paid to the location of the power line and signal line, and it will burn the board easily)

☆ 此驱动板为电子产品，所以加工、组装、操作时需注意防静电。(The driver board is an electronic product, so it is necessary to pay attention to anti-static electricity during processing, assembling and operation.)

☆ 显示屏为玻璃制品，要轻拿轻放，以免损坏。(The display is made of glass and should be handled with care so as to avoid damage.)

☆ 显示屏与电路板连接线为 FPC 排线，很容易被折断或拉断,在加工、组装时要小心，以免损坏。 (The display screen and the circuit board are connected with FPC cables, which are easy to break or break. Be careful when processing and assembling, so as not to damage.)

☆ 在使用时，要注意信号的输入阻抗匹配，R15 有电阻时为 75 欧输入，无电阻时为高阻输入,此模组有 75R 电阻。(You should pay attention to when in use, the input impedance of the signal, R15 resistance 75 ohm input, no resistance to the high impedance input, this module has 75R resistance)

九. 显示屏判定标准(Display standard)：

1、检验条件(Test condition)：

检测距离(Detection distance)：35CM±5CM;

观看角度：点灯检验角度：±5 度；外观检验角度：±45 度。（垂直于屏表面定义为 90 度）(**Viewing angle: Lighting inspection angle:**±5 **degrees; appearance inspection angle:** ±**45 degrees. (vertical to screen surface defined as 90 degrees)**

2、环境条件(Environment condition)：

温度(temperature)：23 度±5 度;

湿度(humidity)：45%～65%;

亮度：外观：600LUX，点灯：300 至 500LUX。(Brightness: appearance: 600LUX, lighting: 300 to 500LUX.)

3、检验方法(Inspection method)：

异色点判定方法(Judgment method of color difference point)：

在 20W 荧光灯下，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。(In the 20W fluorescent lamp, from PANEL 30CM vertical (or about 45 degrees) observed, if you do not see foreign objects, scars, then determine OK, otherwise NG.)

LED 显示黑点，白点，色点检测方法与判定(LED display black spots, white spots, color spots detection method and judgment)：

检查方法：黑点 在背光亮的状况下，把检查黑点的 MASK 摆在 LED 黑点附近，目视观察比较大小。白点，色点：在背光点亮的状况下，把检查黑点的 MASK 重叠在 LED 白点（色点）处，目视观察判断白点（色点）是否可以隐藏。(Check method: black spot is in the condition of back bright, the MASK that checks black spot is placed in LED black spot, visual observation compares size. White dot, color dot: in the case of backlighting, check the MASK of the black spot at the LED white spot (color point) and observe visually to see if the white dot (color point) can be hidden)

4、判定标准(Judgment standard)

欠 点 直 径 (Deficit diameter)（mm）		允 收 范 围 (Range of acceptance)	
		A 区域(A region)	B 区域(B region)
黑	d≤0.2	不计	不计
	0.2<d≤0.3	4	4

点 (Black spot)	0.3<d≤0.5	2	3
	0.5d>0.8	0	2
白点 (White spot) 点	d≤0.2	不计	不计
	0.2<d≤0.3	3	3
	0.3<d≤0.5	1	2
	0.5d>0.8	0	1

注：1.大小(Size)：直径=（最长直径+最小直径）/2 (Diameter = (maximum diameter + minimum diameter) /2)2.总的黑点、白点、色点个数：A+B 区≤4 个(The total number of black spots, white, color: A+B area is less than 4)

5、显示屏区域划分(Screen area division)