



福建福盛达电子有限公司

Fujian Fu sheng da Electric Co. , LTD

APPROVAL SHEET

承 认 书

Customer 客 户 名 称	
Part NO. 产 品 型 号	FSD30B7016-A
Product type 产 品 内 容	Mode: Transmissive type Normally Black TFT LCD Module LCD Module: Graphic360RGB*640Dot-matrix
Remarks 备 注 栏	☐ APPROVAL FOR SEPCIFICATIONS ONLY ☒ APPROVAL FOR SEPCIFICATIONS AND SAMPLE
Signature by Customer: 客 户 确 认 签 章	

LEAGEND LCM R&D CENTER:

Technical Department: 研 发 部 门	Quality Assurance Department 质量保证部门	Approved by: 核准

TEL: 0755-23113466/23113566 FAX: 0755-23118799

Email: fortida@163.com

Http: www.sz-ftd.com

深圳地址: 深圳市宝安区西乡街道西乡奋达科技创新园D栋五楼



1. GENERAL SPECIFICATION

- 1 Resolution 分辨率: 360xRGBx640
- 2 Module Size 模组尺寸: 42.64x74.51x2.3mm
- 3 Panel Active Area 可视区域: 36.72(H)x65.28(V)mm
- 4 Pixel Arrangement 像素排列: RGB
- 5 Viewing Direction 视角: ALL o'clock
- 6 DriverIC 驱动芯片:
- 7 Interface 接口方式: MIPI 2LANE/SPI+RGB16Bit
- 8 Light Source 背光源: 6 die White side LED
- 9 NTSC 色彩饱和度: 60% (TYP)
- 10 Contrast Ratio 对比度: 1200
- 11 Luminance 亮度: TBD
- 12 Number of Colors 颜色数量: 16.7M
- 13 Display Mode 显示模式: Normally Black
- 14 Panel Type 面板类型: TFT

2. MAXIMUM ABSOLUTE LIMIT

Item	Symbol	Standard value	Unit
Power supply voltage for logic	VCC	-0.3~+6	V
	VDDI	-0.3~+4.5	V
Operating temperature	Topr	-20~+70	°C
Storage temperature	Tstg	-30~+80	°C

Note: Voltage greater than above may damage the module All voltages are specified relative to VSS=0V

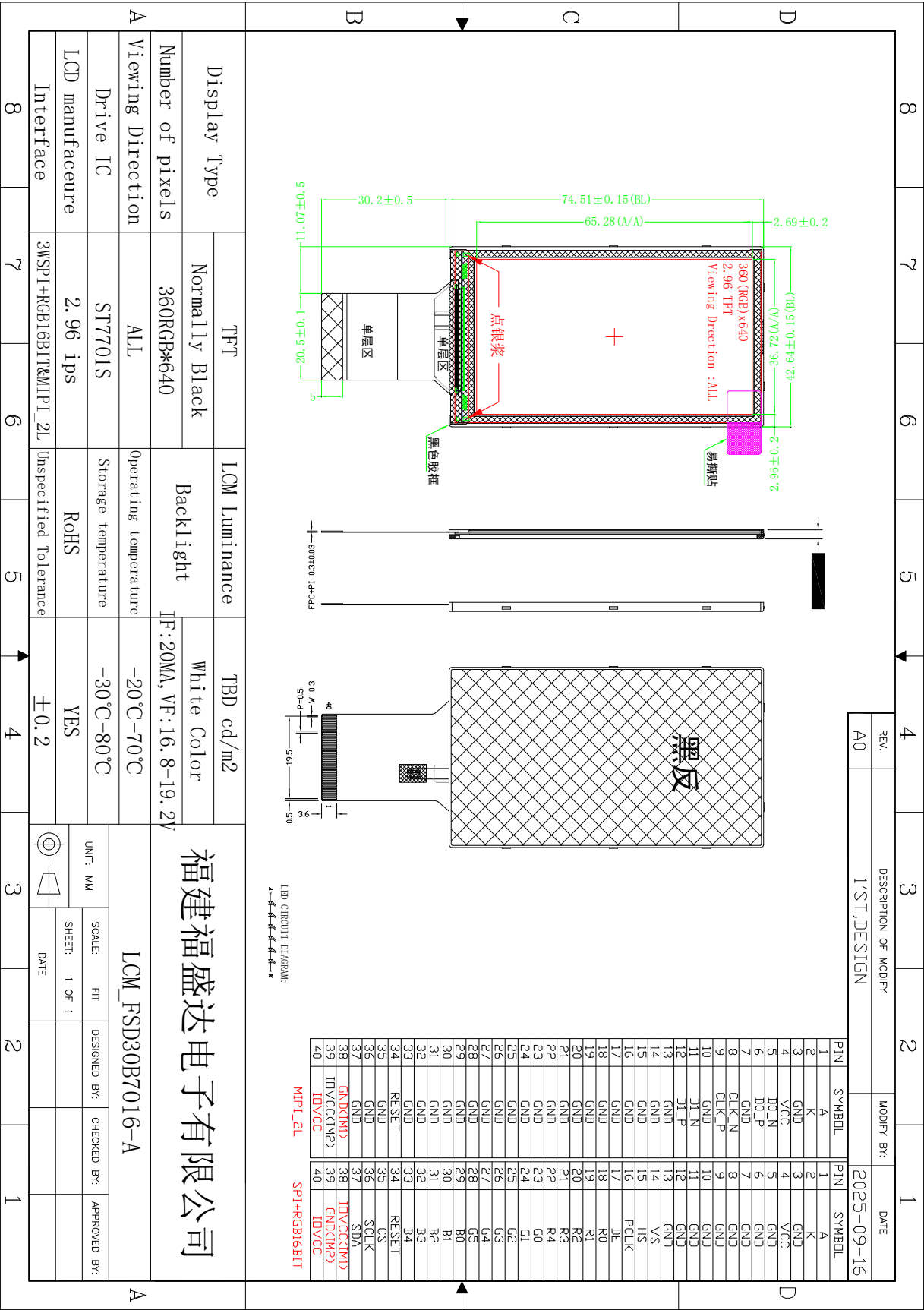
3. ELECTRICAL CHARACTERISTICS.

DC Characteristics

Item	Symbol	Min	Typ	Max	Unit	Test condition
Supply voltage for logic	V _{CC}	2.6	2.8	3.3	V	-
Backlight voltage	V _{BL}	16.8	18	19.2	V	I _{BL} =20mA



4. Outline





5. PIN DESCRIPTION.

MIPI 接口

No. 序号	SYMBOL符号	Description描述
1	A	LED power anode
2	K	LED power cathode
3	GND	<i>Ground for digital circuits.</i>
4	VCC	<i>Power supply for interface logic circuit. 2.8V/3.3V</i>
5	D0N	<i>MIPI DSI differential data pair.</i>
6	D0P	<i>MIPI DSI differential data pair.</i>
7	GND	<i>Ground for digital circuits.</i>
8	CLKN	<i>MIPI DSI differential clock pair.</i>
9	CLKP	<i>MIPI DSI differential clock pair.</i>
10	GND	<i>Ground for digital circuits.</i>
11	D1N	<i>MIPI DSI differential data pair.</i>
12	D1P	<i>MIPI DSI differential data pair.</i>
13-33	GND	<i>Ground for digital circuits.</i>
34	RESET	<i>This signal will reset the device and must be applied to properly initialize the chip.</i>
35-37	GND	<i>Ground for digital circuits.</i>
38	GND(IM1)	<i>Ground for digital circuits.</i>
39	IOVCC(IM2)	<i>Power supply for interface logic circuit. 1.8V</i>
40	IOVCC	<i>Power supply for interface logic circuit. 1.8V</i>



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RGB 接口

No. 序号	SYMBOL符号	Description描述
1	A	LED power anode
2	K	LED power cathode
3	GND	Ground for digital circuits.
4	VCC	Power supply for interface logic circuit. 2.8V/3.3V
5-13	GND	Ground for digital circuits.
14	VS	Vertical sync input in RGB mode(short to GND if not used)
15	HS	Horizontal sync input in RGB mode(short to GND if not used)
16	PCLK	Data clock input
17	DE	Synchronization can make
18	R0	DATA
19	R1	DATA
20	R2	DATA
21	R3	DATA
22	R4	DATA
23	G0	DATA
24	G1	DATA
25	G2	DATA
26	G3	DATA
27	G4	DATA
28	G5	DATA
29	B0	DATA
30	B1	DATA
31	B2	DATA
32	B3	DATA
33	B4	DATA
34	RESET	<i>This signal will reset the device and must be applied to properly initialize the chip. initialize the chip.</i>
35	CS	Chip select signal, When /CS = 'L' , the chip select becomes active, and data/command I/O is enabled
36	SCLK	Serial input clock
37	SDA	Serial input data
38	IOVCC(IM1)	<i>Power supply for interface logic circuit. 1.8V</i>
39	GND(IM2)	<i>Ground for digital circuits.</i>
40	IOVCC	<i>Power supply for interface logic circuit. 1.8V</i>



6. LCM Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Viewing Angle Range 视角	Left	θL	CR>10	-	80		degree	
	Right	θR		-	80			
	Top	θT		-	80			
	Bottom	θB		-	80			
Contrast Ratio 对比度		CR	θ=Φ=0°	900	1200			
Transmittance		Tr.		3.7	4.35		%	
Color Chromaticity (CIE1931) 色坐标	White	Wx		-0.03	0.309	+0.03		
		Wy			0.347			
	Red	Rx						
		Ry						
	Green	Gx						
		Gy						
	Blue	Bx						
		By						
Response Time		Ton+Toff	θ=Φ=0°	-	30	35	ms	

Response time is the time required for the display to transition from white to black (Rising time, T_r) and from black to white (Falling time, T_f) for additional information.



9. Reliability Test Items

Test Item 测试项目	Test Condition 测试条件	Test result determinant gist 实验结果判定
高温存储	80±3°C, 96H;	试验结束后,已测试的LCD 样品必须在室内正常温湿度环境下放置2~4个小时以上才能进行功能和外观检查, 样品不允许有以下缺陷: 1.模块中有气泡; 2.; 不显示; 3; 玻璃破碎; 4.需要满足模块电气性能。
低温存储	-30±3°C, 96H;	
高温运行测试	70±3°C, 96H;	
低温运行测试	-20±3°C, 96H;	
高温高湿	50°C±3°C,90%±3%RH, 120H;	
冷热冲击	-20°C/0.5h~25°C/10MIN~+70°C/0.5h for a total 10 cycles;	
静电测试	±2KV, Human Body Mode, 150pF/330Ω; ±8KV, Air Mode, 150pF/330Ω;	
震动测试	Random vibration , 1. 5.0Hz,0.01g ² /Hz,0.0dB/Oct 2.100.0Hz,0.01g ² /Hz,-0.126xE+02dB/Oct 3. 300.0Hz, 0.0001g ² /Hz, z axial 30 minutes,-z axial 10 minutes, x axial 10 minutes, y axial 10 minutes.	
Contact discharge	±2kV,±4kV to each points @ 10 discharges with +/- polarity (150pF, 330Ω),display power	
Mechanical Drop (with cartion)	Height: 61cm 1 corner, 3edges, 6surfaces	

Remark: 注意:

1:每个被测试的模块只能用于其中的一个测试项目。

2. 每个测试项目的样品数量为2片。

3.故障判断标准:基本规格,电气特性,机械特性,光电特性。