

TOUCH&DISPLAY MODULE

SPECIFICATIONS

MODULE NO: (模组型号) 98-33028-7270A

CUSTOMER NO: (客户型号) A5

CUSTOMER: (客户) 国光

CONFIDENTIALITY LEVEL: (保密等级) 秘密 (SECRET)

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REVISION RECORD

REV NO. 版本	CONTENTS 内容	REV DATE 修改日期	REMARKS 注释
A0	First version	2025-05-30	

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1. 1 GENERAL INFORMATION

基本描述

Item 项目	Contents 内容	Unit 单位
LCD Type LCD 类型	TFT-LCD /TRANSMISSVIE	-
TP Structure TP 结构	GF	-
Number of Dots 点阵	480(H)*640(V)	Pixel
Outline dimensions 外形尺寸	52.6*76.9*3.39	mm
Active area 有效区域	43.200 (W) × 57.600(H)	mm
CG Viewing area (宽×高) CG 可视区 (W×H)	42.8(W)*57.2(H)	mm
Pixel pitch 像素	0.090 (W)*0.090 (H)	mm
LCD Display Frame Rate LCD 显示刷新率	60	Hz
Module size 模组尺寸	2.83	inch
Pixel Per inch 像素密度	282.2	PPI
Viewing direction 视角方向	ALL View	O'clock
Backlight type 背光类型	1S4P	LED
LCD Driver IC LCD 驱动 IC	JD9161C-A1	-
Active Stylus 主动式触控笔	NA	-
Interface type 接口类型	MIPI D-PHY	-
Display Operating Mode 显示工作模式	Normally Black	-
LCM Input voltage 模组输入电压	IOVCC=1.8V, VDD=2.8V	V
All material of MODULE and process measure up to ROHS、HF、REACH		

3. INTERFACE DESCRIPTION

接口定义

Note: I/O definition:

I---Input/输入 O---Output/输出 I/O---输入/输出
 P---Power or GND NC---No connection/ 不连接

Pin No 接口序号	Symbol 符号	Description 描述
1	GND	Ground
2	LCM_DATA0_N	MIPI differential data0 input (Negative)
3	LCM_DATA0_P	MIPI differential data0 input (Positive)
4	GND	Ground
5	LCM_CLK_N	MIPI differential clock input (Negative)
6	LCM_CLK_P	MIPI differential clock input (Positive)
7	GND	Ground
8	CTP_RST	Touch External Reset, Low is active
9	CTP_INT	Touch External interrupt to the host
10	CTP_SDA	Touch I2C data input and output
11	CTP_SCL	Touch I2C clock input
12	GND	Ground
13	CTP_VDD2V8	Touch Analog power supply
14	GND	Ground
15	LCM_ID0	Resistor ID0, 0 Ω resistor grounded
16	LCM_ID1	Resistor ID1, 0 Ω resistor grounded
17	LCM_ID2	Resistor ID2, 0 Ω resistor grounded
18	LCM_FMARK/TE	TE
19	LCM_RSTN	External Reset, Low is active
20	GND	Ground
21	VDD2V8	Power Supply 2.8V
22	VDD1V85	Power Supply 1.8V
23	GND	Ground
24	DISPLAY_AVDD_EN	NC
25	GND	Ground
26	LED_K	Backlight negative electrode
27	LED_K	Backlight negative electrode
28	LED_A	Backlight positive electrode
29	LED_A	Backlight positive electrode
30	GND	Ground

4. BACKLIGHT CHARACTERISTICS 背光电气特性

Item 项目	Symbol 符号	Min 最小值	Typ 中间值	Max 最大值	Unit 单位	Condition 条件
LED voltage	VLED	2.8	3.1	3.3	V	Single Serial
LED current	ILED	-	单串电 流*串数	20*4	mA	Single Serial
Number of LED LED 灯数	-	4			Piece (颗)	-
Connection mode 连接类型	S/P	Series and Parallel(串联与并联)			-	-

(Ta= 25°C, GND=0V)

5. ABSOLUTE MAXIMUM RATINGS 极限参数(IC)

Parameter 参数	Symbol 符号	Min 最小值	Max 最大值	Unit 单位
Supply voltage for logic	IOVCC	-0.3	+3.6	V
Input voltage for analog circuit	VDD	-0.3	+3.6	V
Operating temperature 操作温度	TOP	-40	85	°C
Storage temperature 存储温度	TST	-55	110	°C

6. ELECTRICAL CHARACTERISTICS 模块电气特性

Parameter 参数	Symbol 符号	Min 最小值	Typ 中间值	Max 最大值	Unit 单位	Note 备注
Analog operating voltage	VDD	2.5	-	3.6	V	
Logic operating voltage	IOVCC	1.65	-	3.6	V	
Input voltage “H”level	V _{IH}	0.7IOVCC	-	IOVCC	V	
Input voltage “L”level	V _{IL}	0	-	0.3 IOVCC	V	
Output voltage “H”level	V _{OH}	0.8IOVCC	-	IOVCC	V	
Output voltage “L”level	V _{OL}	0	-	0.2 IOVCC	V	

7. OPTICAL CHAYACTERISTICS 光学特性

Item	Symbol	Condition	Min	Typ	Max	Unit	Remark	Note
Response time	Ton+Toff	$\Theta=0^\circ$ $\varnothing=0^\circ$ $T_a=25^\circ\text{C}$	-	-	20	ms	FIG1	1
	GTG		-	-	27			
Luminance (With CG)	WHITE	$\Theta=0^\circ$ $\varnothing=0^\circ$ $T_a=25^\circ\text{C}$	350	400	-	nits	FIG2	2
Contrast ratio	Cr	$\Theta=0^\circ$ $\varnothing=0^\circ$ $T_a=25^\circ\text{C}$	600	900	-	-	FIG2	2
Color gamut CIE1931	S(%)	CIE1931		69	-	%	FIG2-	2
CIE (X,Y) Chromaticity CIE1931	White(X)	$\Theta=0^\circ$ $\varnothing=0^\circ$ $T_a=25^\circ\text{C}$	0.26	0.29	0.32	-	FIG2	6
	White(Y)		0.27	0.30	0.33	-		
	Red(X)					-		
	Red(Y)					-		
	Green(X)					-		
	Green(Y)					-		
	Blue(X)					-		
	Blue(Y)					-		
Luminance uniformity	WHITE	P25	80	85	-	%	FIG2	3
Viewing angle	Θ_{x+}	$CR \geq 10$ $T_a=25^\circ\text{C}$	70	80	-	deg	FIG3	4
	Θ_{x-}		70	80	-			
	Θ_{y+}		70	80	-			
	Θ_{y-}		70	80	-			

Note1. Response time is the time required for the display to transition from White to black(Rise Time, Tr) and from black to white(Decay Time, Tf). For additional information see FIG1...

备注 1. 响应时间是 Tr(上升时间) 与 Tf(下降时间) 的和, Tr 指显示黑色画面转为显示白色画面需要时间, Tf 指显示白色画面转为显示黑色画面需要时间, 详见 FIG1.。

Note2. contrast Ratio(CR) is defined mathematically by the following formula, For more information see FIG2.

Contrast Ratio(CR)=Average Surface Luminance with all white pixels/ Average Surface Luminance with all black pixels

备注 2. 对比度是由以下公式计算所得。详见 FIG2.

对比度=显示白色画面时平均表面亮度 (P1, P2, ……)/显示黑色画面时平均表面亮度 (P1, P2, ……)

Note3. The uniformity in surface luminance(WHITE) is determined by measuring luminance at each test position, and then dividing the maximum luminance of all white pixels by minimum luminance of all white pixels, For more information see FIG2.

WHITE=Minimum Surface Luminance with all white pixels(P1,P2,……)/Maximum Surface Luminance with all white pixels(P1,P2,……)

备注 3. 均匀度是在显示白色画面时, 测试 P1 到 P25 的亮度, 然后再用 25 个点亮度的最小值除以最大值。详见 FIG2.。

均匀度=白色画面下表面亮度最小值 (P1, P2, ……)/白色画面下表面亮度最大值 (P1, P2, ……)

Note4. Viewing angle is the angel at which contrast ratio is greater than a specific value. For TET

module, the specific value of contrast ratio is 10. For monochrome and color stn module, the specific value of contrast ratio is 2. The angles are determined for the horizontal or x axis and the vertical or y axis with respect to the z axis which is normal to the LCD surface. For more information see FIG3

备注 4. 视角指对比度大于等于一个特定值时的可视范围, 对 TFT 屏, 对比对特定值为 10, 对黑白屏 CSTN 屏, 对比度特定值为 2, 视角由横轴 (X 轴), 竖轴 (Y 轴) 同 Z 轴 (垂直与 LCD 表面) 之间的夹角来定义, 详见 FIG3.。

Note5. Surface luminance is the LCD surface luminance with all white pixels, For more information see FIG2.

LV=Average Surface Luminance with all white pixels(P1,P2,.....)

备注 5. 表面亮度是在显示白色画面时, 测试的亮度值, 详见 FIG2.

Lv=平均的表面亮度 (P1, P2,)

Note6. CIE(X,Y)chromaticity is the Center point value. For more information see FIG2.

备注 6. 选择中心点, 分别测试 X, Y 值, 详见 FIG2.。

Note7. For Viewing angle and response time testing, the testing date is base on Autronic-Melchers' s ConScope. Series instruments. For contrast ratio, Surface Luminance, Luminance uniformity and CIE, the testing date is base on CA310 photo detector.

备注 7. 视角和响应时间, 测试数据基于 Autronil Melchers' s Conoscope 系列, 而对比度, 表面亮度, 均匀度 CIE 坐标, 测试数据基于 CA310 photo detector.

Note8. For TN type TFT transmissive module, Gray scale reverse occurs in the direction of panel viewing angle

备注 8. TN 型 TFT 全透产品, 在视角方向会发生灰度反转。

FIG1. The definition of Response time

响应时间定义

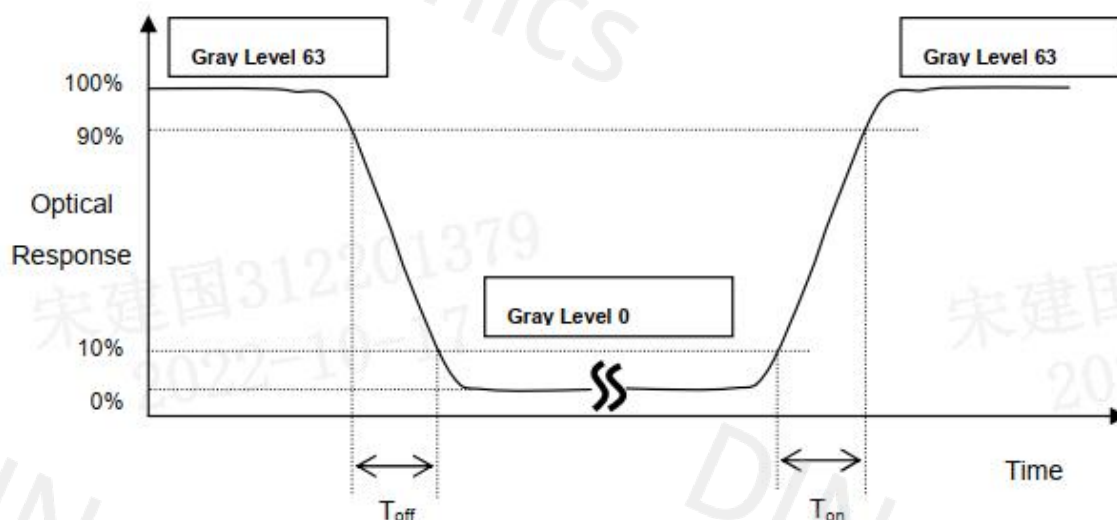
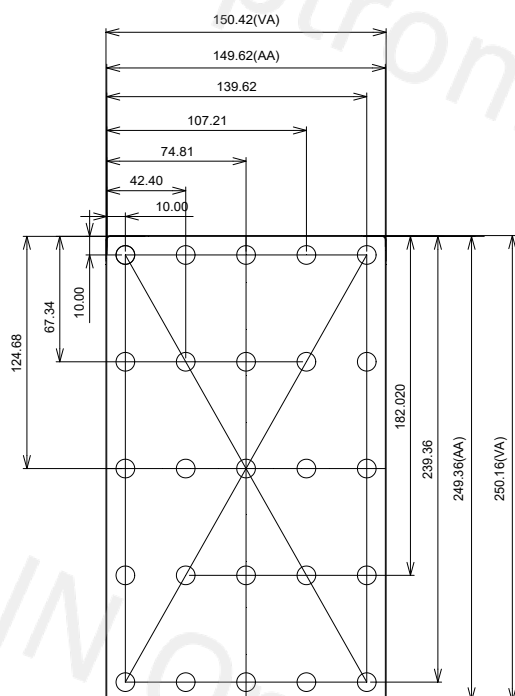
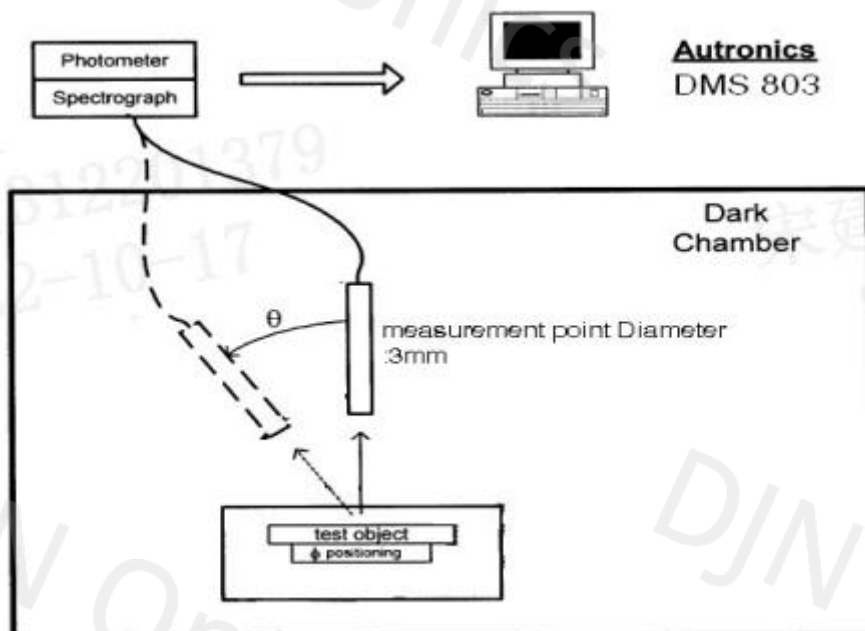


FIG1. Measuring method for Contrast ratio, surface luminance, Luminance uniformity, CIE(X,Y)chromaticity.

对比度, 表面亮度, 均匀度, CIE 坐标测试方法

Measurement Set-Up:

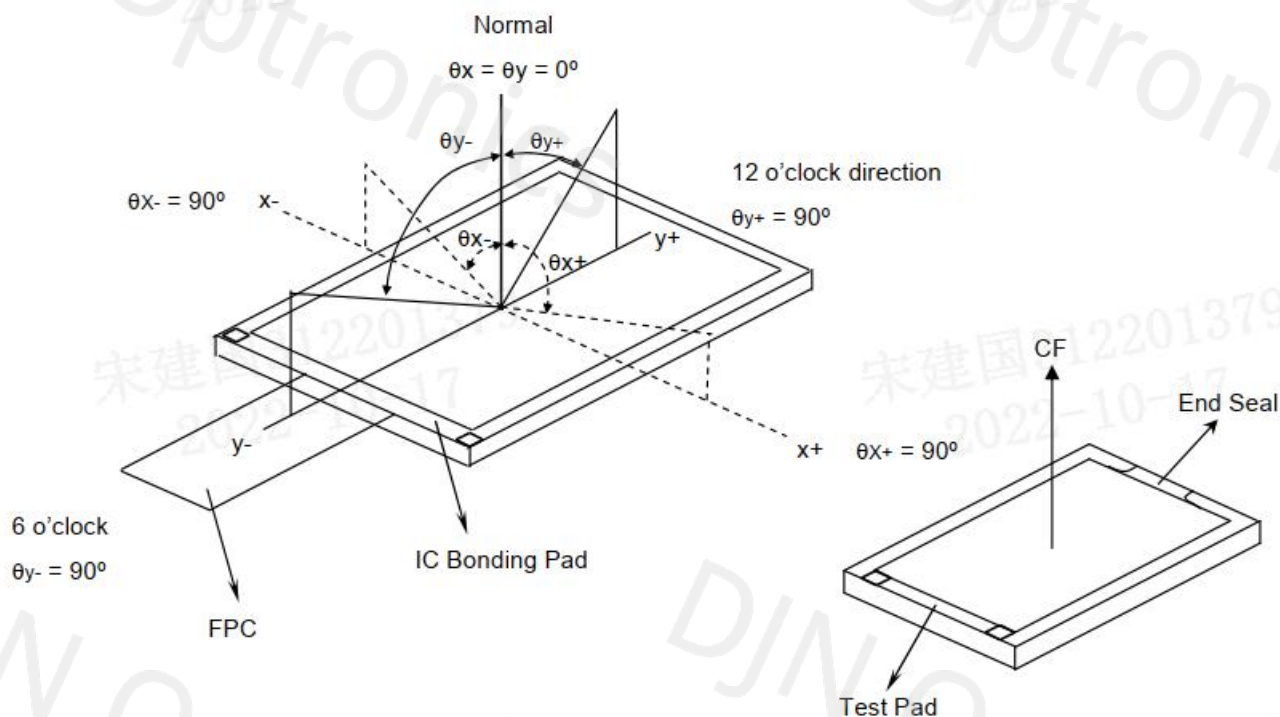
The LCD module should be stabilized at a given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.



25点均匀性测试点位-距离AA 10mm
Measure point in AA

FIG 2 25 点均一性测试点位

FIG3 The definition of viewing angle
视角定义



8. Power On/Off Sequence (电源开/关时序)

9.5.2. Power on/off sequence

Power on sequence:

Internal DC/DC power mode IOVCC=VCCH=1.65V ~ 3.6V, VCI=VCIP=2.5V ~ 3.6V.

	Min	Typ	Max
Power up for VCI/IOVCC	-	no limit	-

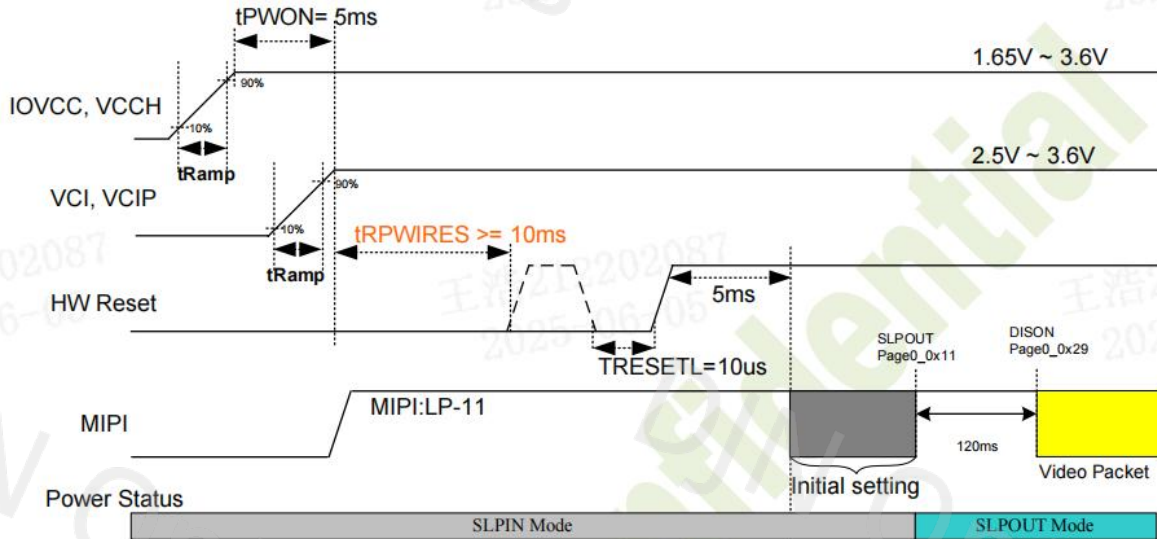


Figure 9.9: Power on sequence for DSI interface

Power off sequence:

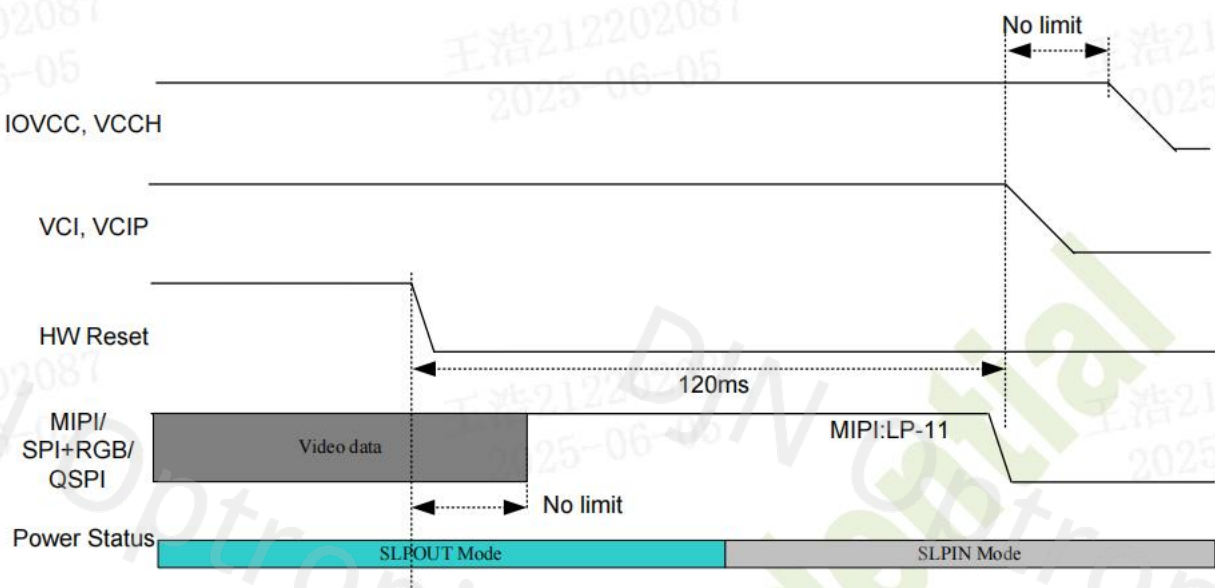


Figure 9.12: Power off sequence with HW Reset

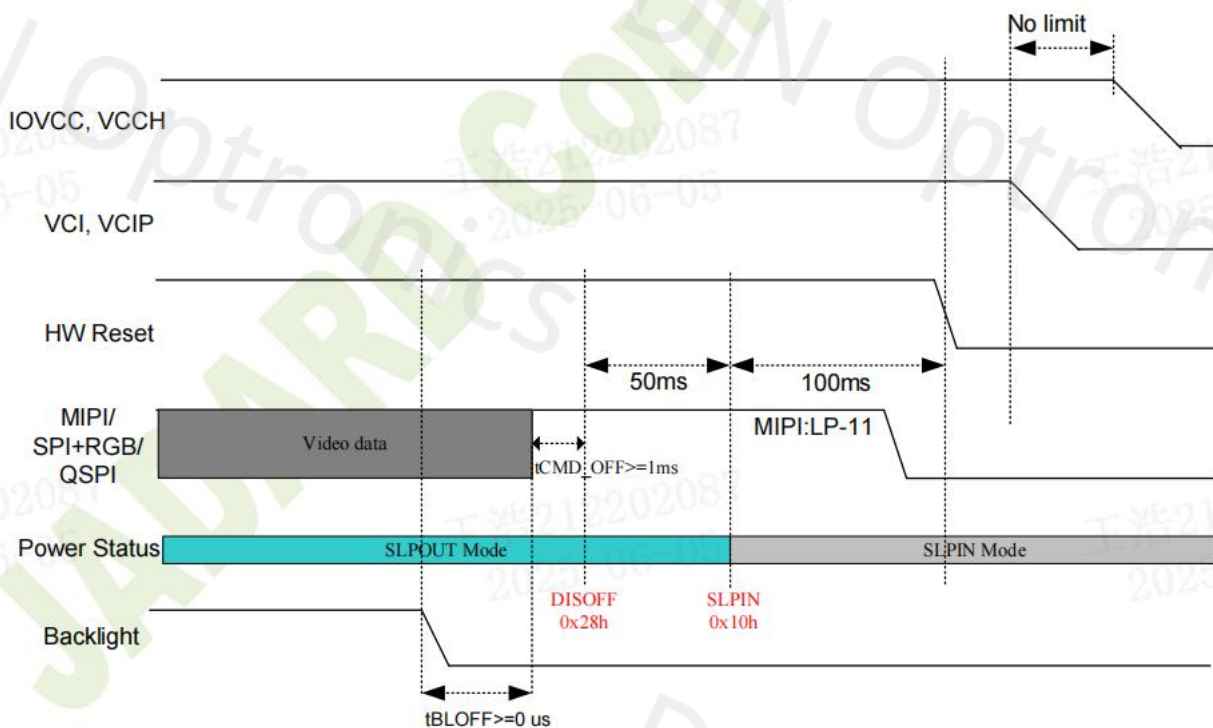
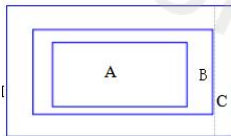


Figure 9.13: Power off sequence with SLPIN+DISOFF CMD

NOTE: This section is only for reference, Details please refer to the IC specification.

备注：本节仅供参考，详细信息请参阅 IC 规格书

9. INSPECTION SPECIFICATIONS 品质检验标准

7270A TCLM exterior inspection standard											
7270A TLCM 外观/功能检验标准											
Area 区域	缺陷项目	尺寸（单位：mm）	最多允收数量			备注	故障分类				
			A 区	B 区	C 区		CRI	MAJ	MIN		
							A类	B类	C类		
屏幕 正面	区域A：可视区，符号和数字显示区； 区域B：（除A 区外）可视区周围离玻璃边缘左右3MM，上下5MM 区域C：可视区外围（装机后看不到的区域，如固定框）；  检验项目：要求表面平坦，无变形、刮花、划伤、裂痕、污渍、指纹、灰尘；色差；保护膜粘贴良好，无难撕现象；边缘胶框部分无压痕（小屏LCD无此检验查项目）、变形、披锋，标识位置正确，字迹清晰，字体正常；对于带导光板的要求没有明显的压痕，划伤等。										
	色点（黑白点、针孔、污点、模糊点、气泡等）	$\phi \leq 0.1$	忽略不计, 不允许串点			肉眼观察难以区分长与宽的形状，测量时以最大直径为其尺寸, 点不良两点之间的距离大于 20MM A B 区不能同时存在				✓	
	彩点，亮点	$\phi \leq 0.1$	忽略不计, 不允许串点			肉眼观察难以区分长与宽的形状，测量时以最大直径为其尺寸, 点不良两点之间的距离大于 20MM, A B 区不能同时存在				✓	
		$0.10 < \phi \leq 0.15$	1	2	可接收						
		$0.15 < \phi \leq 0.20$	0	0	可接收						
	Mura	1、5% ND Filter 判定，不可见为OK； 2、5% ND Filter 判定，可见为NG，或依限度样品。								✓	
	划伤	L < 3.0	W ≤ 0.03	1	2	可接收	原则上, 不接受有深度的, 硬划伤				✓
		L ≤ 1.0	0.03 ≤ W ≤ 0.05	1	3	可接收					
		任意长度	0.04 ≤ W ≤ 0.05	0	1	可接收					
		任意长度	任意宽度	0	0	可接收					
		L > 3.0	任意宽度	0	0	0					
FPC	检验项目：FPC上走线方式与样板是否一致；FPC有无划伤、有无折痕；FPC上的标识是否清晰、准确；										
	FPC边缘	有非金属的毛刺，不影响装配	可接受							✓	
	FPC与模组连接处	锈迹，氧化变黑	不可接受							✓	
	表面	压坑、折痕、划痕	无伤及线路的可以接受					✓			
		表面破损、漏铜，线路断，气泡，脱胶 表面短路、金手指异物/脏污/氧化变黑	不可接受							✓	
	标识	字迹清晰，可辨认	可接受					✓			
	FPC表面导电图形	导线有无缺口	与封样一致							✓	

检验项目：检验五金部分外表有无脏污、划伤、变形、批锋，有无氧化、缺损、断裂，脚位数是否符合要求；触点是否光亮、平整，有无高低不平；颜色是否均匀，有无异色，是否与样板相符；材料、形状是否与样板一致；						
连接器	五金部分表面	表面脏污、氧化、变黑，划伤	不接受		✓	
		触点不光亮，颜色不均匀	不接受		✓	
		表面披锋、毛刺	不影响装配，可以良好连接，可接受			✓
		触点高低不平、变形	不影响装配，可以良好连接，可接受		✓	
	结构	形状、结构与样板不符	不接受		✓	
	FPC表面导电图形	导线有无缺口	与封样一致			✓
包装	包装外箱	1、包装外箱不可受潮、变形、破损、颜色明显偏差	目视			
		2、印刷字体不可模糊，内容及贴附需正确	目视			
		3、箱体内品产数量与现品票标识要一致	目视			
	吸塑盒包装	1、不可变形、破损	目视			
		2、产品在吸塑盒槽内摆放整齐	目视			
		3、真空包装袋不能有漏气、破损（防静电包装）4. 加防潮袋及干燥剂	目视			

Note：品质标准如有异议，请以品质窗口信息为准。

10. RELIABILITY TEST CONDITIONS 可靠性测试条件(参照客户标准)

项目	检验内容	判定标准	检验工具及频率	数量	CRI	MAJ	MIN
可靠性测试	跌落测试	以《产品可靠性测试标准》手机跌落试验方法及判定标准实施。	整机	3pcs		✓	
	连接器插拔试验	插拔 50 次：试验后检查 LCM 功能及显示效果 应正常。	手动	3pcs		✓	
	可焊性测试	烙铁温度 360±10℃，来回拖锡 3 次，每次 3~5 秒：试验后 FPC 焊接手指应无脱落或翘起现象	烙铁	3pcs		✓	
	低温运行	开机，-30℃、120h：试验后检查 LCM 结构、功能、功耗及显示 效果应正常	低温箱	3pcs		✓	
	高温运行	开机，70℃、120h：试验后检查 LCM 结构、功能、功耗及显示 效果应正常	高温箱	3pcs		✓	
	恒温恒湿	关机，60℃、RH95%，120H：试验后检查 LCM 结构、功能、功耗及显示效果应正常	恒温恒湿试验箱	3pcs		✓	
	温度冲击	关机，-40℃ 下放置 0.5 小时；接着在 70℃ 高温下放置 0.5 小时；转移时间小于 5 分钟，循环试验 48 个循环：试验后检查 LCM 结构、功能、功耗及显示效果应正常	高低温试验箱	3pcs		✓	
	FPC 弯折测试	180 度来回弯折(中筒夹 1MM 橡胶棒)：大于 10 次	手动	3pcs		✓	

	裸屏跌落	6.5'' 及 6.5'' 以上 LCM 跌落 0.4m ; 4.3'' 及 4.3'' ~6.5'' LCM 跌落 0.5m ; 3.8'' 及 3.8'' ~4.3'' LCM 或数码相机跌落 0.6m ; 3.0'' 及 3.0'' ~3.8'' LCM 跌落 0.8m ; 2.8'' 及 2.4'' ~2.8'' LCM 跌落 1.0m ; 2.4'' 及 2.4'' 以下 LCM 跌落 1.1m ; 正反面平面跌落各 1 次, 试验完成后无外观完好, 功能正常为 合格。	手动	3pcs		✓	
	盐雾测试	5% NaCl 48H, 测试完毕外观完好, 功能正常	盐雾测试仪	3pcs		✓	
	高/低温存储	高温+80℃/120H; -40℃/120H; 试验完成后外观检查, 无爆裂、变形、起泡、变色、脱胶等; 功能与效果要求与测试前保持一致, 显示不能有黑影, 坏点, 白屏, 屏淡, 缺划, 漏液等异常; 划写, 点压准确(如有触摸不准偏位等现象, 进行屏幕校准看是否可恢复)	高低温箱	3pcs		✓	
	ESD 测试	接触放电±6KV, 空气放电±10KV; 试验完成后无花屏、白屏、线条等功能性异常	ESD 测试仪	3pcs		✓	
包装可靠性	包装跌落	一角三棱六面, 自由落地, 高度根据产品重量决定: < 10KG 高度 1M; 11-20KG 高度 0.8M; 21-30KG 高度 0.6M; 跌落 1 次. 测试完成后, 外观完好, 功能正常。	手动	1 箱		✓	
	包装震动测试	频率 200/MIN, 振幅 1 英寸, 时间 45MIN; 测试完成后, 外观完好, 功能正常。	震动测试仪	1 箱		✓	

Note: The rest of the test items are executed according to the customer's standard
注: 其余测试项目按客户标准执行。如有异议, 请以品质窗口信息为准。

11. RoHS TEST REPORT RoHS 测试标准

Tested Item(s) 测试项目	Measured Equipment(s) 测量设备	Report Limit 限定值	Content 内容
Lead(Pb) 铅	XRF	Organic materials < 100PPM 有机材料 < 100PPM Inorganic materials < 700PPM 无机材料 < 700PPM	N.D.
Mercury(Hg) 汞	XRF	< 700PPM	N.D.
Cadmium(Cd) 镉	XRF	< 70PPM	N.D.

Hexavalent Chromium(Cr(VI)) 六价铬	XRF	<700PPM	N.D.
Polybrominated Biphenyls(PBBS) 多溴联苯	XRF	<700PPM	N.D.
Polybrominated Diphenyl Ethers(PBDES) 多溴二苯醚	XRF	<700PPM	N.D.

Note:-N.D.=Not Detected (<report limit)

-mg/kg=ppm=parts per million

12. PRECAUTIONS FOR USING LCD MODULES 模组使用注意事项

1. Handling precautions 使用注意事项

1.1 The display panel is made of glass and polarizer.As glass is fragile.It tends to become or chipped during handing especially on the edges.Please avoid dropping or jarring.Do not subject it to a mechanical shock by dropping it or impact.

显示屏由玻璃和偏光片组成，由于玻璃是脆的，使用过程中要特别注意边缘区，请防止跌落或震动，不能机械碰撞。

1.2 Do not apply excessive force to the display surface or the adjoining areas since this may cause the color tone to vary.Do not touch the display with bare hands,This will stain the display area and degraded insulation between terminals(some cosmetics are determined to the polarizer)

请勿施加过大的压力与显示屏或连接部位，否则会引起色调变化，不要用手接触显示屏，这将弄脏显示区和降低端子之间的绝缘能力，（一些外观是由偏光片决定的）

1.3 The polarizer covering the display surface of the LCD module is soft and easily scratched. Handle this polarizer carefully.Do not touch,push or rub the exposed polarizers with anything harder than an HB pencil lead(glass,tweezers,etc)Do not put or attach anything on The display area to avoid leaving marks on it.Condensation on the surface and contact with terminals due to cold will damage,stain or dirty the polarizer.After products are tested at low temperature they must be warmed up in container before coming in to contact with room temperature air.

覆盖液晶显示模块显示平面的偏光片是软性且易被擦伤，请小心轻拿，请勿用任何硬度大于 HB 铅笔芯的物品（玻璃，镊子等）接触、撞压或摩擦裸露偏光片，不要放置或粘附物体在显示区域上以免留下痕迹，冷凝在表面和端子将会损坏或弄脏偏光片，产品在低温下测试之后，与室温空气接触之前必须在容器内升温。

1.4 Tools required for assembling,such as soldering irons,must be properly grounded.Make certain the AC power source for the soldering iron does not leak.When using an electric screwdriver to attach LCM,the screwdriver should be of ground potentiality to minimize as much as possible any transmission of electromagnetic waves produced sparks coming from the commutator of the motor.

使用工具如电烙铁，要可靠接地，并确保烙铁使用交流电，不要漏电，用电批固定模块时，电批应接地，尽可能

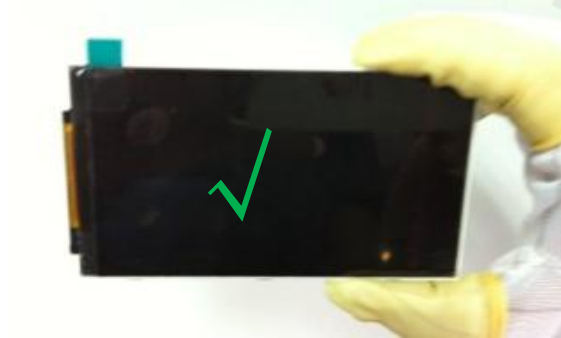
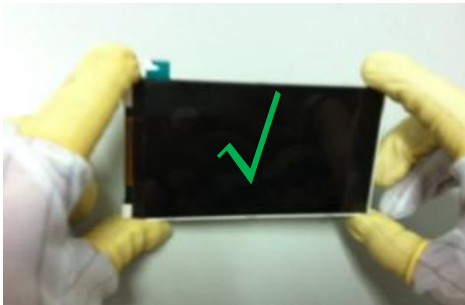
降低电动换向器火花产生的电磁波。

2. Handling precaution for LCM 模块操作规范

2.1 LCM is easy to be damaged. Please note below and be careful for handling.

液晶显示模块很容易被损坏，请注意以下并小心操作

2.2 Correct handling; 正确操作



As above picture, Please handle with anti-static gloves around LCM edges.

像上面的图片，请戴防静电手套，并拿模块边缘。

2.3 Incorrect handling 错误操作



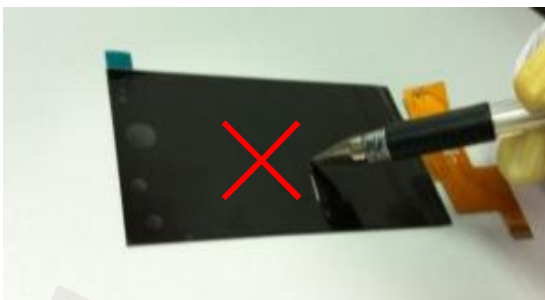
Please don't stack LCM
不要把模块叠在一起



Please don't hold the surface
请不要拿着面板的表面



don't hold the surface of IC
请不要拿着 IC 的表面



Please don't operate with sharp stick such as pens
请不要用尖锐的物体来操作，例如用笔尖

2.4 Input logic voltage before apply analog high voltage such as LCD driving voltage when power on. Remove analog high voltage before logic when power off the module. Input each signal after the positive/negative voltage becomes stable.

开机时，先开逻辑电压，再接通模拟电压，如显示屏驱动电压。关机时，先断开模拟电压，再关逻辑电压，正负电源都稳定后再送控制信号。

2.5 If the LCD modules have been operating for a long time showing the same display pattens, the

display patterns may remain on the screen as ghost images and a slight contrast irregularity may also appear. A normal operating status can be regained by suspending use for some time. It should be noted that this phenomenon does not adversely affect performance reliability.

如果液晶显示模块长时间工作于同一个显示图案，换屏时会出现鬼影，也会出现轻微的对比度不均，停止使用一段时间后可恢复到正常状态，此现象不会严重影响性能可靠性。

2.6 Please keep the temperature within the specified range for use and storage. Polarization degradation, bubble generation or polarizer peel-off may occur with high temperature and high humidity. 模块在操作和存储规范范围内使用，高温高湿可能会引起偏振退化，气泡，偏光片脱落等问题。

3. Storage Precautions 储存注意事项

3.1 When storing the LCD modules, the following precaution are necessary.

液晶显示模块的存储依照以下几点：

3.2 Store them in sealed polyethylene bag. If properly sealed, there is no need for the desiccant

使用聚乙烯密封袋，如果密封得当，不需要干燥剂。

3.3 Store them in a dark place. Do not expose to sunlight or fluorescent light, keep the temperature between 0~35°C, and keep the relative humidity between 40% RH and 60% RH.

避光保存，避免直接暴晒在太阳光或黄光灯下，保持温度在 0~35°C 之间，保持相对湿度在 40% RH 和 60% RH 之间。

3.4 The polarizer surface should not come in contact with any other objects (We advise you store them in the anti-static electricity container in which they were shipped)

偏光片表面避免接触其他物质（建议存放在货运防静电包装中）

4. Transportation Precautions 运输注意事项

4.1 During shipment, please handle with care. The packaging bag can not be broken, step on trap. Packing Carton layer height can not be over two meters.

装运过程要轻拿轻放，不能出现包装袋破损，塌陷，卡通箱叠层高度不能超过两米。

4.2 The transportation process should pay attention to the waterproof and moisture-proof measures. Product can not be watering. Ethylene sealed bags can not be unsealed.

运输过程要注意有防水和防潮措施，产品不能淋水，产品乙烯密封袋不可拆封。

13. PACKING SPECIFICATION 包装规格

14. SPECIAL REMARKS 注意事项

1. The above specifications are the binding criteria for DJN Technology's outgoing quality inspection.
以上规格描述为帝晶的品质出货标准
2. The customer is kindly requested to inform DJN Technology as soon as possible on any questions, remarks, and disagreements regarding these specifications.
对于规格中的任何问题或存在疑问，客户可随时向帝晶公司进行咨询。
3. DJN is not responsible for damage to its products due to neglect of the precautions as described in the previous chapter.

如果不按照规格书要求进行操作而损坏产品的，帝晶不承担责任。

4. About the limited warranty unless special agreement between DJN and customer DJN will replace or repair any of its products that are found to be functionally defective when inspected in accordance with DJN acceptance standards for a period of one year from data of shipments.

除帝晶跟客户签定协议外，对确认为属于产品本身功能性缺陷的，在帝晶可接受范围内可进行退换或维修，帝晶保质期为从出货日期起一年内有效