SPECIFCATION
8.0 寸 LCD

Customer

Customer's Acceptance ：

Comment	Approved by

Product **8.0 800*1280 寸 LCD**

Part NO.

DATE **JYM0807692181BB**

date: **2022/11/17**

Approved	Checked	Prepared
		YZ
date		

Document Revision History				
REV.	ECN NO	DESCRIPTION OF CHANGES	DATE	PREPARED
00	**-**	**New**	**2022.11.17**	

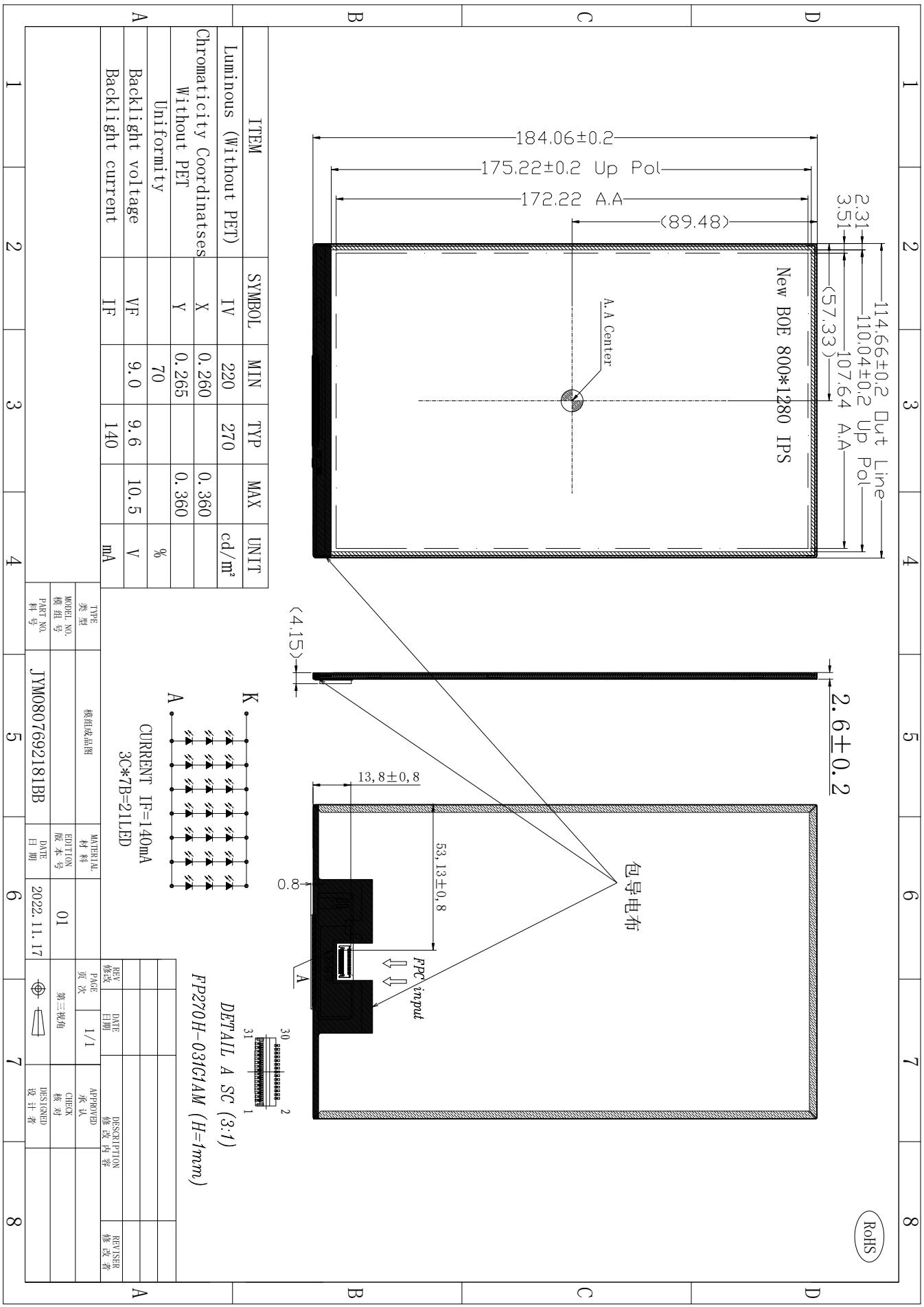
1. Introduction

JYM0807692181BB is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 8.0 inch diagonally measured active area with resolutions (800 horizontal by 1280 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.

2. General Specifications

Parameter	Specification	Unit	Remarks
LCD size	8.0	inch	
LCM Outline Dimension	114.66 (H)X184.06(V)X2.6(T)	mm	±0.2
Active area	107.64(H)X172.22(V)	mm	
Number of pixel	800RGB(H)X1280(V)	pixels	
Pixel pitch H XV	44.85(H) ×RGB×134.55(V)	㎛	
Pixel arrangement	RGB Vertical stripe	colors	
Display colors	16.7M		
Display mode	Normally Black		
Color Gamut	Typ. 65%, Min. ---		NTSC
Brightness	Typ: 270 , Min: 220	cd/m2	@center
LED Q’ty	21(3Serial 7Paralle)		
Viewing angle (CR 10)	Typ:80/80/80/80		Single Center Point
Contrast Ratio	Typ 1200:1,min 900:1		
Driver IC	JD9365DA-H3		
Interface	3/4 Lane MIPI (Default 4 Lane)		
Module Weight	TBD	g	
Touch IC			
Touch structure			
Color			

3.Outline Dimension



ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Luminous (Without PET)	IV	220	270		cd/m²
Chromaticity Coordinatses Without PET	X	0.260		0.360	
	Y	0.265		0.360	
Uniformity		70			%
Backlight voltage	VF	9.0	9.6	10.5	V
Backlight current	IF		140		mA

TYPE 类 型	模组成品图
MODEL NO. 模 组 号	
PART NO. 料 号	JYM0807692181BB

MATERIAL 材 料					
EDITION 版 本 号	01				
DATE 日 期	2022.11.17				
PAGE 页 次	1/1				
第三视角					

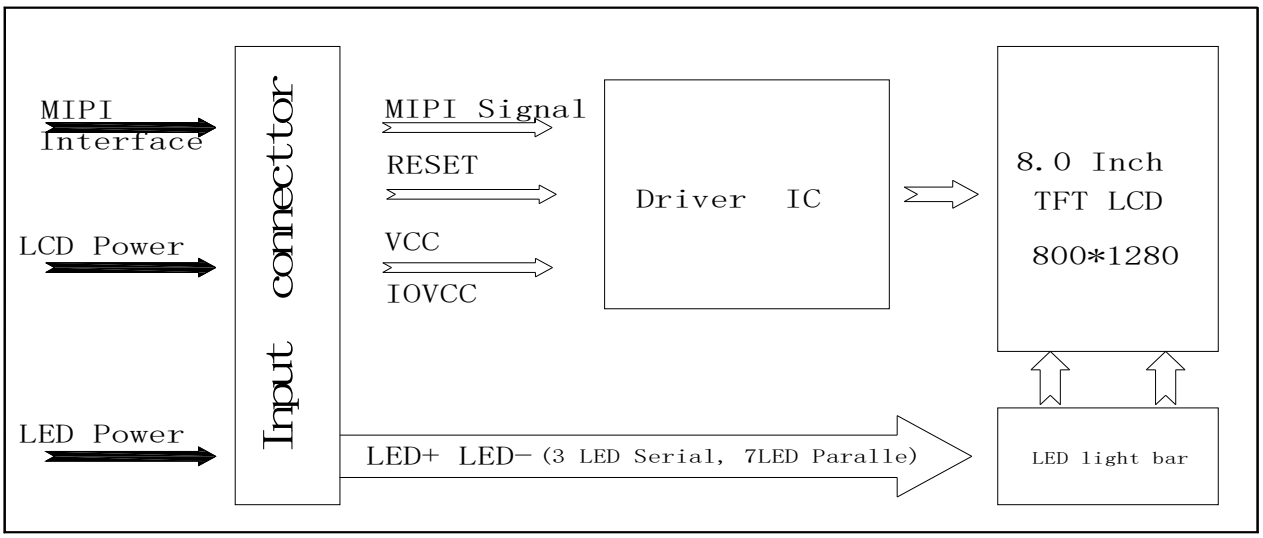
REV 修改	DESCRIPTION 修 改 内 容	APPROVED 承 认	CHECK 核 对	DESIGNED 设 计 者	REVISER 修 改 者

4.Interface Definition

Pin No.	Symbol	Function	Notes
1	LEDA	Backlight Anode	
2	LEDA	Backlight Anode	
3	LEDA	Backlight Anode	
4	NC	No Connection	
5	LEDK	Backlight Cathode	
6	LEDK	Backlight Cathode	
7	LEDK	Backlight Cathode	
8	LEDK	Backlight Cathode	
9	GND	Ground	
10	GND	Ground	
11	D2+	MIPI differential data input (Positive)	
12	D2-	MIPI differential data input (Negative)	
13	GND	Ground	
14	D1+	MIPI differential data input (Positive)	
15	D1-	MIPI differential data input (Negative)	
16	GND	Ground	
17	CLK+	MIPI differential clock input (Positive)	
18	CLK-	MIPI differential clock input (Negative)	
19	GND	Ground	
20	D0+	MIPI differential data input (Positive)	
21	D0-	MIPI differential data input (Negative)	
22	GND	Ground	
23	D3+	MIPI differential data input (Positive)	
24	D3-	MIPI differential data input (Negative)	
25	GND	Ground	
26	NC	No Connection	
27	RST(GRB)	Reset signal, normal pull High(RESET:H=IOVCC)	
28	NC	No Connection	
29	IOVCC_1.8V	Power supply 1.8V/3.3V	
30	VCC_3.3V	Power supply 3.3V	
31	VCC_3.3V	Power supply 3.3V	

5.Functional Block Diagram

The following diagram shows the functional block of the 8.0 inches wide Color TFT/LCD four channel Module



6. Operation Specifications

6.1 Absolute Max. Rating

The following are maximum values which，if exceeded，may cause faulty operation or damage to the unit.

Item	Symbol	Values		Unit	Remark
		Min.	Max.		
Power Voltage	IOVCC	-0.3	3.6	V	
	VCC	-0.3	6.0	V	
	AVEE	--	--	V	
Input Signal Voltage	V_I	-0.3	IOVCC	V	
Operation Temperature	T_{OP}	-10	50	℃	
Storage Temperature	T_{ST}	-20	60	℃	

Note: The absolute maximum rating values of this product are not allowed to be exceeded at any times. Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed. There is a risk of permanent damage to the product.

6.2 Electrical Characteristic

Characteristics	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage for I/O	VDDIO	1.65	1.8	3.3	V
Supply Voltage for(DC/DC)	VDD	2.5	2.8	3.6	V
Supply Voltage for(DC/DC)	AVDD				V
Supply Voltage for(DC/DC)	AVEE				V
Current Consumption	IDD	-	TBD	-	mA
	IDD-SLEEP		TBD		uA

6.3 Back-Light Unit Characeristics

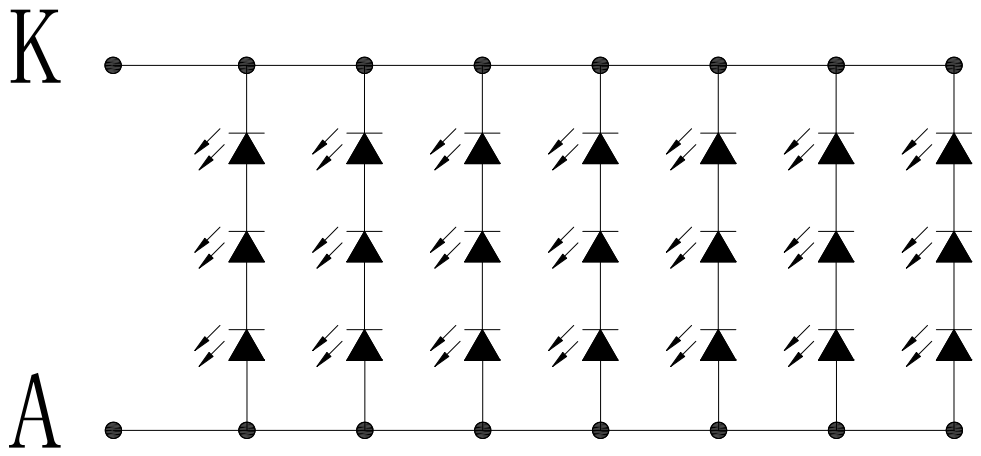
The back-light system is an edge-lighting type with white LEDs. The characteristics of the back-light are shown in the following tables.

Characteristics	Symbol	Min.	Type	Max.	Unit	Condition
LED Forward current	I_F	--	140	-	mA	Ta=25℃
LED Forward Voltage of every LED String	$V_{F\text{-string}}$	9.0	--	10.5	Volt	Ta=25℃ Note1
LED life time	N/A	----	20,000	--	Hr	Ta=25℃ @270 cd/m2 Note2

Note 1: LED : 3 Series / 7 Parallel (3S7P ; 21 ea.)

Note 2: The LED life-time define as the estimated time to 50% degradation of initial luminous.

Backlight circuit diagram shown in below:



CURRENT IF=140mA

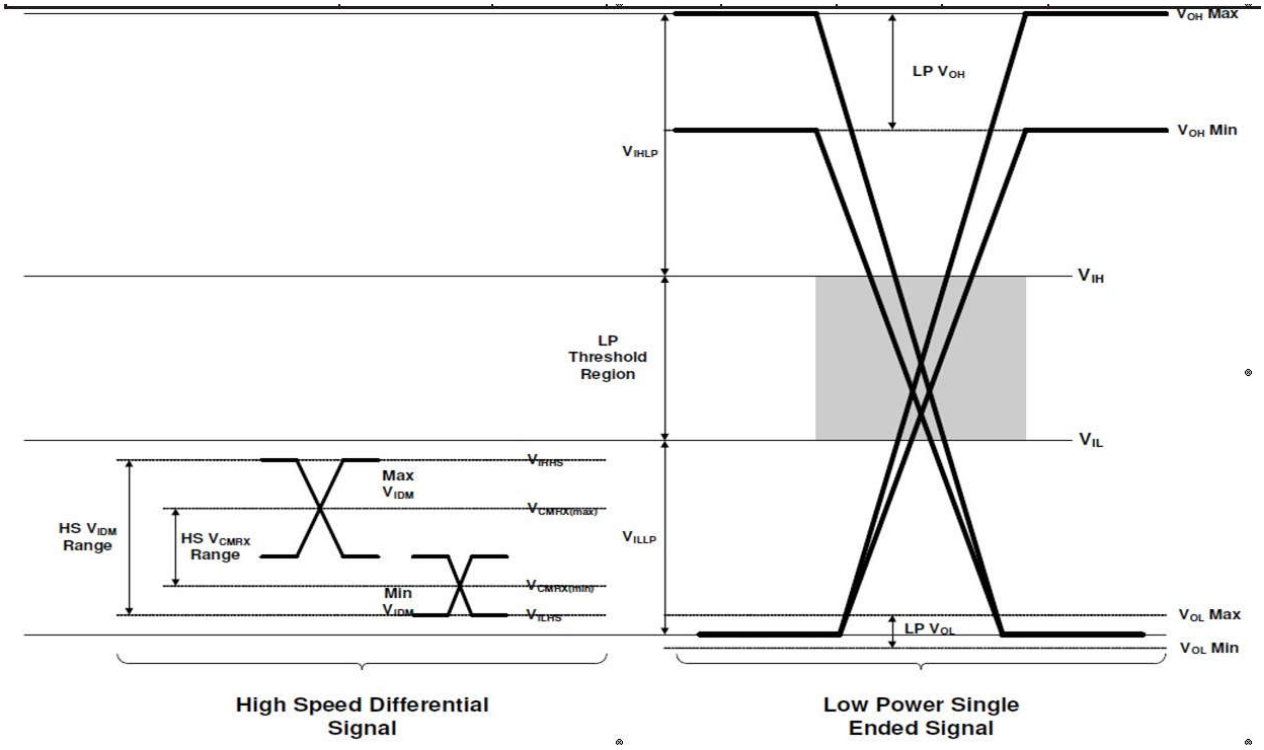
3C*7B=21LED

7.Signal Timing Characteristics

7.1 Timing Parameters

Parameter	Symbol	Min	Typ	Max		Unit	Condition
MIPI digital operation current	I_{VCCIF}	14	15	16		mA	-

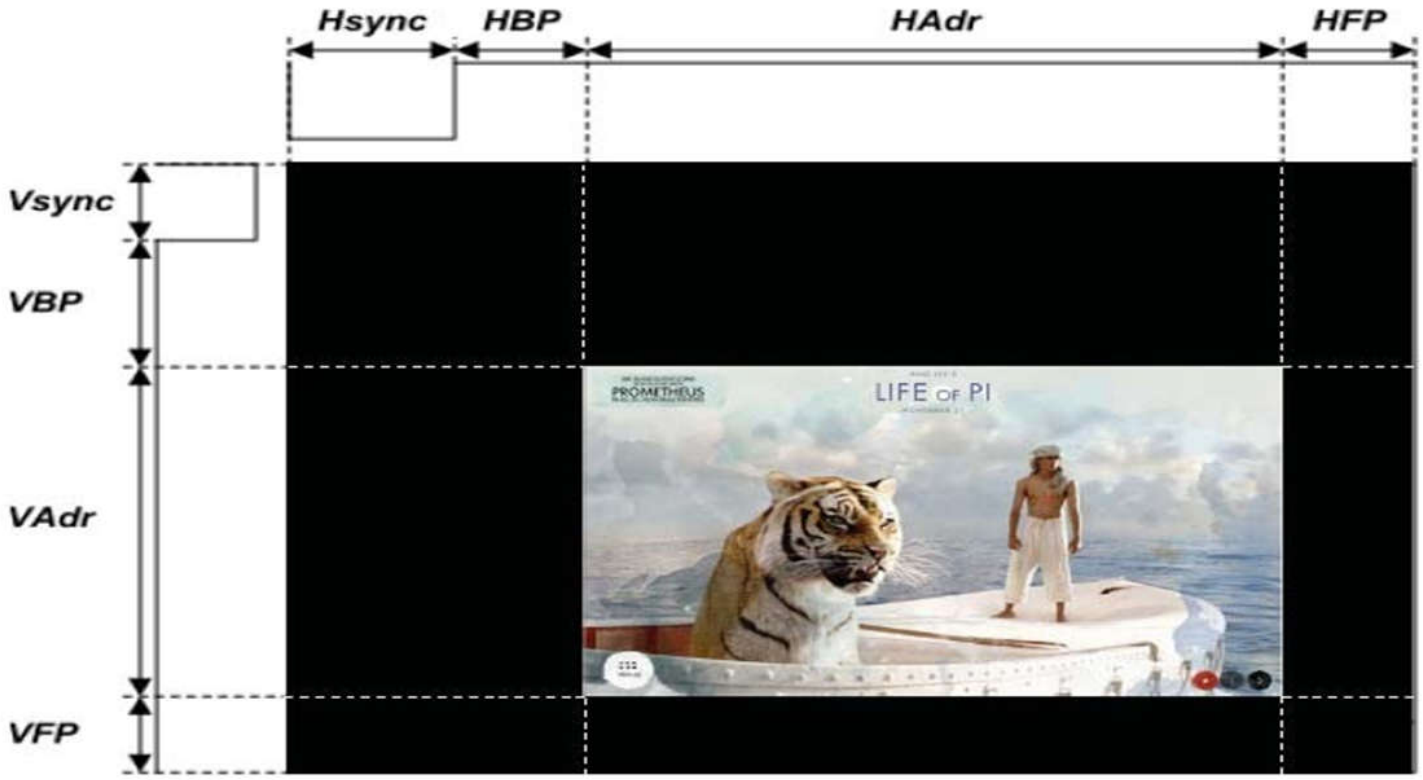
MIPI digital stand-by current	$I_{VCCIFST}$	-	200	-		uA	-
MIPI Characteristics for High Speed Receiver							
Single-ended input low voltage	V_{ILHS}	-40	-	-		mV	
Single-ended input high voltage	V_{IHHS}	-	-	460		mV	
Common-mode voltage	V_{CMRXDC}	155	-	330		mV	
Differential input impedance	Z_{ID}	80	100	125		K	
HS transmit differential voltage(V_{OD}=V_{DP}-V_{DN})	$\|V_{OD}\|$	85	200	250		mV	
MIPI Characteristics for Low Power Receiver							
Pad signal voltage range	V_I	-50	-	1350		mV	
Ground shift	V_{GNDSH}	-50	-	50		mV	
Output low level	V_{OL}	-150	-	150		mV	
Output high level	V_{OH}	1.1	1.2	1.3		V	



7.2 MIPI Timing Parameter

ITEM		SYNBOL	min	typ	max	UNIT
LCD	Frame Rate	-	-	60	-	Hz
	Pixels Rate	-	TBD	72	TBD	MHz

	Horizontal	Horizontal total time	tHP	TBD	900	TBD	t_{CLK}
		Horizontal Active time	tHadr	800			t_{CLK}
		Horizontal Pulse Width	tHsync	TBD	20	TBD	t_{CLK}
		Horizontal Back Porch	tHBP	TBD	40	TBD	t_{CLK}
		Horizontal Front Porch	tHFP	TBD	40	TBD	t_{CLK}
	Vertical	Vertical total time	tvp	TBD	1310	TBD	t_H
		Vertical Active time	tVadr	1280			t_H
		Vertical Pulse Width	tVsync	TBD	4	TBD	t_H
		Vertical Back Porch	tVBP	TBD	12	TBD	t_H
		Vertical Front Porch	tVFP	TBD	20	TBD	t_H
Bit Rate			TX SPD (MBPS)	TBD	450	TBD	Mbps
Lane				-	4	-	Lane



8. Reliability Test Items

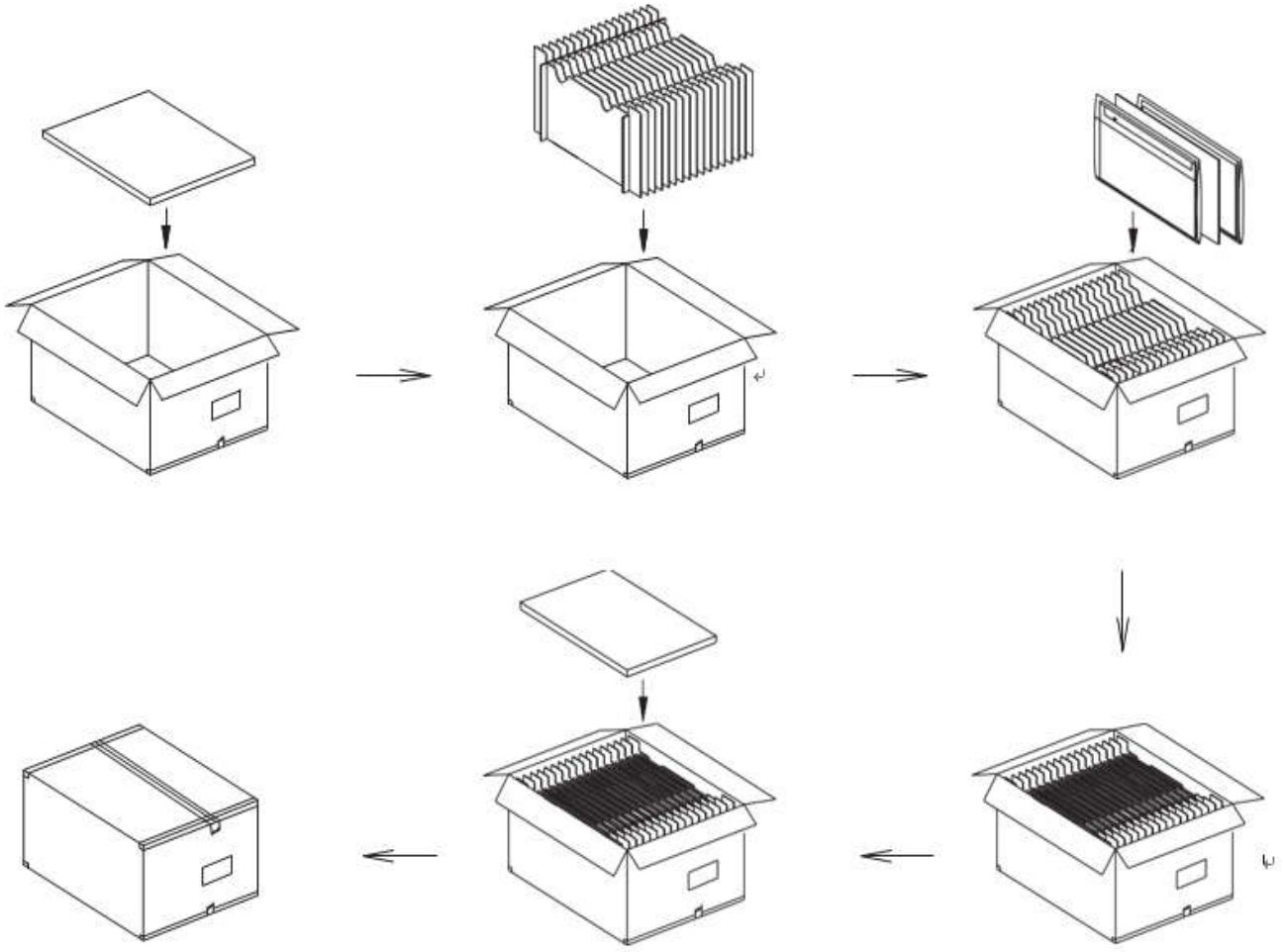
Item	Test Conditions	Remark
High Temperature Storage	Ta = 60℃ 48hrs	

Low Temperature Storage	Ta = -20℃ 48hrs	
High Temperature Operation	Ts = 50℃ 48hrs	
Low Temperature Operation	Ta = -10℃ 48hrs	
Operate at High Temperature and Humidity	Ta=+40℃,80%RH,48hrs	Operation
Thermal Shock	0℃~+50℃10 cycles 1 Hrs/cycle	Non-operation
Electrostatic Discharge	Contact=±4KV, class B Air=±8KV, class B	

Note1: In the standard condition, there shall be no practical problem that may affect the display function. After the reliability test, the product only guarantees operation, but don't guarantee all of the cosmetic specification.

Note2: Before cosmetic and function test, the product must have enough recovery time, at least 2 hours at room temperature.

9.Packing and Label Format



10.0 General Precaution

10.1 Use Restriction

This product is not authorized for use in life supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be life-threatening or otherwise catastrophic.

10.2 Asembly Precaytton

10.2.1 Please use the mounting hole on the module side in installing and do not bending or wrenching LCD in assembling. And please do not drop, bend or twist LCD module in handling.

10.2.2 Please design display housing in accordance with the following guide lines.

10.2.2.1 Housing case must be destined carefully so as not to put stresses on LCD all sides and not to wrench module. The stresses may cause non-uniformity even if there is no non-uniformity statically.

10.2.2.2 Keep sufficient clearance between LCD module back surface and housing when the LCD module is mounted. The clearance in the design is recommended taking into account the tolerance of LCD module thickness and mounting structure height on the housing.

10.2.3 Please do not push or scratch LCD panel surface with any-thing hard. And do not soil LCD panel surface by touching with bare hands. (Polarizer film, surface of LCD panel is easy to be flawed.)

10.2.4 Please do not press any parts on the rear side such as source IC, gate IC, and FPC during handling LCD module. If pressing rear part is unavoidable, handle the LCD module with care not to damage them.

10.2.5 Please wipe out LCD panel surface with absorbent cotton or soft cloth in case of it being soiled.

10.2.6 Please wipe out drops of adhesives like saliva and water on LCD panel surface immediately. They might damage to cause panel surface variation and color change.

10.2.7 Please do not take a LCD module to pieces and reconstruct it. Resolving and reconstructing modules may cause them not to work well.

10.3 Disassembling or Modification

Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. HannStar does not warrant the module, if customers disassemble or modify the module.

10.4 Breakage of LCD Panel

10.4.1 If LCD panel is broken and liquid crystal spills out, do not ingest or inhale liquid crystal, and do not contact liquid crystal with skin.

10.4.2 If liquid crystal contacts mouth or eyes, rinse out with water immediately.

10.4.3 If liquid crystal contacts skin or cloths, wash it off immediately with alcohol and rinse thoroughly with water.

10.4.4 Handle carefully with chips of glass that may cause injury, when the glass is broken.

10.5 Absolute Maximum Ratings and Power Protection Circuit

10.5.1 Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature, etc., otherwise LCD module may be damaged.

10.5.2 Please do not leave LCD module in the environment of high humidity and high temperature for a long time.

10.5.3 It's recommended employing protection circuit for power supply.

10.6 Operation

10.6.1 Do not touch, push or rub the polarizer with anything harder than HB pencil lead.Use fingerstalls of soft gloves in order to keep clean display quality, when persons handle the LCD module for incoming inspection or assembly.

10.6.2 When the surface is dusty, please wipe gently with absorbent cotton or other soft material.

10.6.3 Wipe off saliva or water drops as soon as possible. If saliva or water drops contact with polarizer for a long time, they may causes deformation or color fading.

10.6.4 When cleaning the adhesives, please use absorbent cotton wetted with a little petroleum benzine or other adequate solvent.

10.7 Static Electricity

10.7.1 Protection film must remove very slowly from the surface of LCD module to prevent from electrostatic occurrence.

10.7.2 Because LCD module uses CMOS-IC on TFT-LCD panel, it is very weak to electrostatic discharge. Please be careful with electrostatic discharge.

10.7.3 Persons who handle the module should be grounded through adequate methods.

10.8 Disposal

When disposing LCD module, obey the local environmental regulations.

10.9 OTHERS

10.9.1 A strong incident light into LCD panel might cause display characteristics' changing inferior because of polarizer film, color filter, and other materials becoming inferior. Please do not expose LCD module direct sunlight land strong UV rays.

10.9.2 Please pay attention to a panel side of LCD module not to contact with other materials in preserving it alone.

10.9.3 For the packaging box, please pay attention to the followings:

10.9.3.1 Packaging box and inner case for LCD are designed to protect the LCDs from the damage or scratching during transportation. Please do not open except picking LCDs up from the box.

10.9.3.2 Please do not pile them up more than 6 boxes. (They are not designed so.) And please do not turn over.

10.9.3.3 Please handle packaging box with care not to give them sudden shock and vibrations. And also please do not throw them up.

10.9.3.4 Packing box and inner case for LCDs are made of cardboard. So please pay attention not to get them wet. (Such like keeping them in high humidity or wet place can occur getting them wet.)