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深圳市优瑞泰克科技有限公司

产 品 规 格 书

Product Specification

产品型号	ET080WU05-OT	客户名称	
产品名称	液晶屏总成	版本	VER.1
产品结构	8.0” G+G	产品类型	电容式触摸屏
制作人 （Prepared by）	设计部审核 （Checked by）	品管部审核 （Checked by）	批准 （Approved by）
FU	**Amore**	**SXW**	**JEFF**

请客户仔细阅读规格书中的各项内容，当对规格书内各项内容表示认可时；请在下面客户确认项中签字（此规格书为一式两份）。

Please read carefully the product specification and duly sign back to us at the following columns:

客户确认 Client Approval:

确认人 (Confirmed by)	设计部审核 (Checked by Design Dept.)	品管部审核 (Checked by QC Dept.)	批准 (Approved by)

变更记录表 Revision Record

序号 No.	版本号 Rev. No.	修改人 Revised by	修改内容概要 Revised items	批准 Approved by	生效日期 Effected from
1	V1.0	FU	初始版本	Amore	2020.04.28
2					
3					
4					
5					
6					
7					
8					
9					
10					

目 录

电容触摸屏Capacity Touch Panel

1 产品结构 Construction

结构 Construction	所用材料 Materials Used	注释 Comment
镜片 COVER Glass	Glass 旭硝子	厚度：0.55mm Thickness：0.55mm
粘合胶 SCA	粘合胶 SCA	厚度：0.2 mm Thickness：0.2mm
ITO Glass Sensor	ITO Glass Sensor	厚度：0.55 mm Thickness：0.55mm

2 机械特性 Mechanical Characteristics

项目 Item	描述 Description	单位 Unit
外形尺寸 Outside Dimension	118.91±0.1×184.59±0.1×1.3 ±0.15	mm
可视区 View Area	108.64±0.2×173.22±0.2	mm
输入方式 Input Method	手指或者导电笔触 Finger Or Conductive Pen	
表面硬度 Hardness Of Surface	表面防刮伤 Hard Surface :≧6H	500gf
精确度 Accuracy	+/- 1.5	mm
支持操作 Support Operation	手指 Finger	10 指触摸
屏体通道数 Channel	16*26	
分辨率 Resolution	1200*1920	与 LCD 分辨率一致
接口定义 Interface	USB	
支持操作系统 Supported Operating Systems	Android、Linux	

3 电气特性 Electrical Characteristics

项目 Item	描述 Description	单位 Unit
工作电压 Operating Voltage	DC 3.3 V	V
绝缘阻抗 Insulation Resistance	＞20MΩ At DC 25V	MΩ
绝缘稳定性 Insulation Ability	≥60sec At DC 25V	sec
响应时间 Response Times	≤16ms	ms
ESD 保护电压	接触 4K，	kV
ESD 保护电压	非接触 8K，	kV

4 光学特性 Optical Characteristics

项目 Item	描述 Description
可见光透光率	＞85% [JISK7105]
雾度 Total Haze	<3% [JISK7105]
总成亮度 Luminance of Assembly	Typ. 1000nits

5 使用环境 Processing Environment

项目 Item	描述 Description
工作温度 Operating Temperature	-20℃～+70℃
工作湿度 Operating Humidity	≤90%RH
储存温度 Storage Temperature	-30℃～+ 80℃
储存湿度 Storage Humidity	≤90%RH

6 CTP 引脚定义 CTP PIN Assignment

引脚 PIN	信号 Signal	描述 Description
1	GND	Ground
2	GND	Ground
3	USB_DP	
4	USB_DM	
5	USB5V	
6	GND	Ground

7 机械测试 Mechanical Test

1 钢球跌落测试 Ball Drop Test

(1) 作业环境：温度：22±3℃、湿度： ≤90%RH、Level：等级 1000

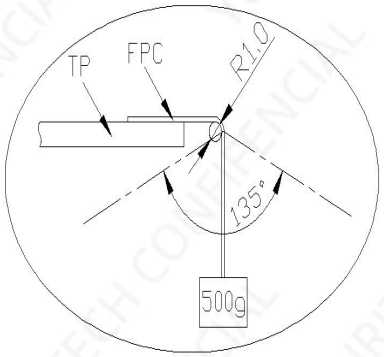
Operating Environment:Temperature:22±3℃、Humidity:≤90%RH、Level : Class1000

(2) 测试方法：用直径为 64g 钢球从 30cm 高度跌落产品中心 3 次，产品不会破裂为合格。

Test Method: With a 64g ball falling from 30cm height to product center three times , the product will not break as qualified.

2 FPC 折弯和拉力测试 FPC Bending and tensile test.

(1) 作业环境：温度：22±3℃、湿度：≤90%RH、Level：等级 1000
Operating Environment:Temperature:22±3℃、Humidity:≤90%RH、Level:Class1000
(2) 测试方法：产品测试后满足电气性能。
Test Method: Meet electrical spec after testing.



1.测试角度 Bending Degree:135°;
2.测试半径 Bending Radius: R1.0 mm;
3.测试次数 Bending Times: 50 Times;
4.测试重量 Load: 500g.

3 FPC 插拔测试 FPC Insert/Pull Out Test:
(1) 作业环境：温度：22±3℃、湿度：≤90%RH、 Level：等级 1000
Operating Environment:Temperature:22±3℃、Humidity:≤90%RH、Level:Class1000
(2) 测试方法：Test Method:
A.测试前确认电性特性符合规格；
Before Test: Electrical Characteristic Test is OK.
B.测试步骤：开卡锁连接器→插入 FPC→锁住 FPC→开卡锁连接器→插入 FPC→锁住 FPC，重复 10 次；
Test Circle: Connector Unlock →FPC Insert →Connector Lock →Connector Unlock →FPC Pull Out →Connector Lock, cycle 10 Times;
C.测试后再次确认电性特性符合规格.
After Test: Electrical characteristic test is OK;

8 寿命测试 Life Test

(1)作业环境：温度：22±3℃、湿度：≤90%RH、 Level：等级 1000
Operating Environment:Temperature:22±3℃、Humidity:≤90%RH、Level:Class1000

项目 Item	规格 Specification	条件 Condition
打点寿命 Input Life	250g×3500 万次 35,000,000 Times	功能 OK，外观轻微划伤 OK。 The function is ok。
笔写寿命 Notes Life	250g×10 万次 100,000 Times	功能 OK，外观轻微划伤 OK。 The function is ok。

9 环境测试 Environment Test

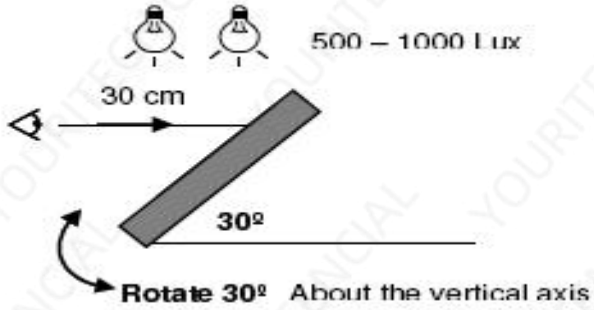
(1) 高温储存测试 High temperature storage test ：+80℃，48 hr.
(2) 低温储存测试 Low temperature storage test：-30℃，48hr.
(3) 高温高湿测试 High temp./high humidity test：60℃ & 90%RH 48 hr.
(4) 高低温测试 High Low temperature test：-30℃ 30min/+80℃ 30min,，this is a Cycle, continued 48hr test. (Including heating and cooling of 30 minutes)

将产品从测试机内取出，在室温放置 24 小时后才能进行测试，功能无异常。

Remove the product from the testing machine, at room temperature for 24 hours before testing, function is OK.

10 检验标准 Inspection Standard

1 检验条件Inspection conditions：



1.1 检查距离：距离产品250-450mm

Inspection distance: Inspect 250-450mm away from the sample.

1.2 检查角度：30-45度，（所有的不良项目在此方向和角度需要被检查出来）。

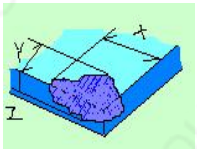
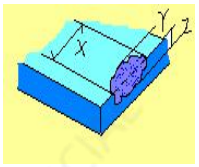
Inspection angle: 45 degrees in 6 o'clock direction (all defects in viewing area should be inspected from this direction)，Rotate 30º about the vertical axis.

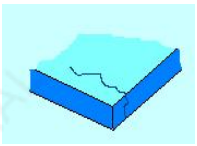
1.3 环境温度为：20-30度

Temperature: 25±5 ºC

1.4 光源亮度：luminance：500-1000Lux

2 检验项目Inspection Items

项目 Items		图片 Picture	类型 Type	标准 Standard	判定 Judgment	备注 Remarks
玻璃破损 The Glass is damaged	拐角破损 It's damaged to turn Cape		Ma	X≤3.0mm	合格 Accept	在不影响功能的前提下 Without affecting the function of the premise
				Y≤2.0mm	合格 Accept	
				Z≦1/2T	合格 Accept	
	除转角以外任何范围的破损 In addition to turning Cape		Mi	X≤3.0mm	合格 Accept	在不影响功能的前提下 Without affecting the
			Ma	Y≤2.0mm	合格 Accept	

	any breakage of scope corner			Z≦1/2T	合格 Accept	function of the premise
玻璃破裂 Broken Glass			Cr	产品任何部位存在破裂 Product any part exists broken	不合格 Failure	
点状物 (包括白点与黑点等) Spot (includes white and black spots)			Ma	D≤0.15mm	合格 Accept	
				0.15＜D≤0.25mm 3(≥20mm separation)；0.25＜D≤0.30mm, 2 个	允许 Allow	
			Cr	D＞0.30mm	不合格 Failure	
刮伤 Scratch			Ma	W≤0.05mm	合格 Accept	
				0.05＜W≤0.1 ,L≤4mm 2 个，相距大于 20mm	允许 Allow	
			Cr	W＞0.1mm	不合格 Failure	
线性物 Linear Material			Mi	W≤0.05mm	合格 Accept	
			Ma	0.05＜W≤0.1 L≤2mm 2 个.相距大于 20mm 。	允许 Allow	
			Cr	W＞0.1mm	不合格 Failure	
气泡 Bubble			Ma	0.15 ＜ D≤0.25mm ，3 个相距＞20mm 0.25＜ D≤0.30mm,1 个	允许 Allow	
				D≤0.15mm	合格 Accept	
			Cr	D＞0.30mm	不合格 Failure	

内污（产品内部） Inside Dirty（Product inner part）		Ma	呈圆形状 Cylindrical shape	不合格 Failure	于灯光下目视可视区内内污直径大小超出点标准范围的块状明显污迹 Visual areas in the visual light pollution within the diameter of the block beyond the obvious point of the standard range of stains
			长条状 Strip		
			集中状 Concentrated form		
			斜纹状 Twill-like		
			水纹状（含手纹） Watermark-like (with hand lines)		
保护膜及表面脏污 Protective Film And Surface Dirt		Mi	保护膜贴于产品两面，边缘与产品对齐。保护膜超出产品边缘≤10mm。 Protective film affixed to the product sides, edges and product alignment. Protective film products beyond the edge of ≤ 10mm.	合格 Accept	
		Ma	产品撕起保护膜后，目视检查 TP 表面有脏印。Tear the protective film products, the visual inspection TP surface dirty.	不合格 Failure	

11 包装及运输 Packing and Transportation

1 包装 Packing

不可有脏东西附着，使用气泡袋+纸箱材质包装。

The product should be free of dirt and packed in foam box and then put in export carton

2 运输 Transportation

避免产品直接暴露在阳光直射或高温高湿的环境下运输。

Avoid direct exposure to sunlight or transporting in high temperature and high humidity.

12 注意事项 Attention

项目 Project	注意事项 Notes
储藏 Store	(1)按照本规格书中保存温度范围要求储藏产品。 Store the product at the required temperature as specified in the product specification. (2)储藏时请保证产品包装完好。 Ensure packaging intact when storing (3)避免阳光直射产品。 Avoid direct sunlight. (4)尽量避免产品接触水、有机溶剂、酸性物质和硫酸化合物等。 Avoid the product in direct contact with water, organic solvents, acids and sulfuric acid compounds.
拆包装Unpacking	(1)请勿通过抓住FPC来取放产品。 Do not take or place the product by grasping FPC (2)按照包装箱上的"上/下"标记方向打开产品包装。 Open the product packaging in the direction of “top/bottom” marked on the carton
操作Operating	(1)输入时应使用手指或专用笔。 Input by fingers or special pens (2)不可用力拉扯 FPC，以免造成产品内部电气连接不良；不可扭曲和弯折 FPC输出端，以免造成FPC与控制器的连接不良。 Do not pull hard FPC to avoid bad electrical connection inside the product; Do not twist and bend FPC output terminal to avoid bad connection between FPC and controller (3)不可弯折和分解本品。 Do not bend and disassemble the product. (4)不要在产品的动作区域滴上水滴，以免引起误操作。 Do not put water drop at the working area to avoid improper operation
上机 Installing	(1)请勿在触摸屏上施加过大压力而造成产品损伤。 Do not press hard on the touch screen to avoid product damage (2)整机设计时，请避免损伤FPC及呈锐角状弯折FPC。 Avoid damaging FPC or bending FPC in acute angle when assembling (3)请勿在FPC与屏连接部施加过大压力，导致屏体内部电气连接不稳定。 Do not press hard when connecting FPC to screen to avoid unstable electrical connection inside the screen. (4)组装时避免工具损伤产品。 Avoid damaging the product by tool when assembling (5)装机中尽量避免静电产生。 Avoid static electricity when assembling

13 质量保证 Guarantee

1 本条款适用于深圳市优瑞泰克电子有限公司生产的所有产品。

The provision applies to all the products made by Shenzhen YOURI Technology Co.,LTD.

2 优瑞泰克公司对条款适用内的产品于购买日起，提供壹年（1 年）的质量保证期，如在质量保证期内是我司责任的不良品，我司将负责返修或更换。储存温度 22±3℃，存储时长 3 个月内上线，若延期上线或存储温度过高造成外观问题，我司不负责任。

YOURI Technology Co.,LTD provides 1 year quality assurance from the date of purchase. The manufacturer would either repair or replace for the unqualified products within the terms of guarantee. Storage temperature of 22 + - 3 DEG C, stored within a long period of time within 3 months on the line, if the delay on the line or storage temperature is too high to cause the appearance of the problem, I am not responsible.

3 以下情况不在我司保证范围之内，我司不给予返修或更换。具体如下：

YOURI Technology Co.,LTD would not repair or replace the products in the following conditions, which is out of guarantee scope.

3.1 产品交付客户后，因跌落或撞击或不当操作造成的不良品；

Products damaged by falling, impacting or improper operation after delivering to customers;

3.2 因为自然灾害造成的不良品；Products damaged by natural disaster;

3.3 在未经我司同意之前，客户私自进行再加工处理的产品；

Products processed by customers without any permission of our company;

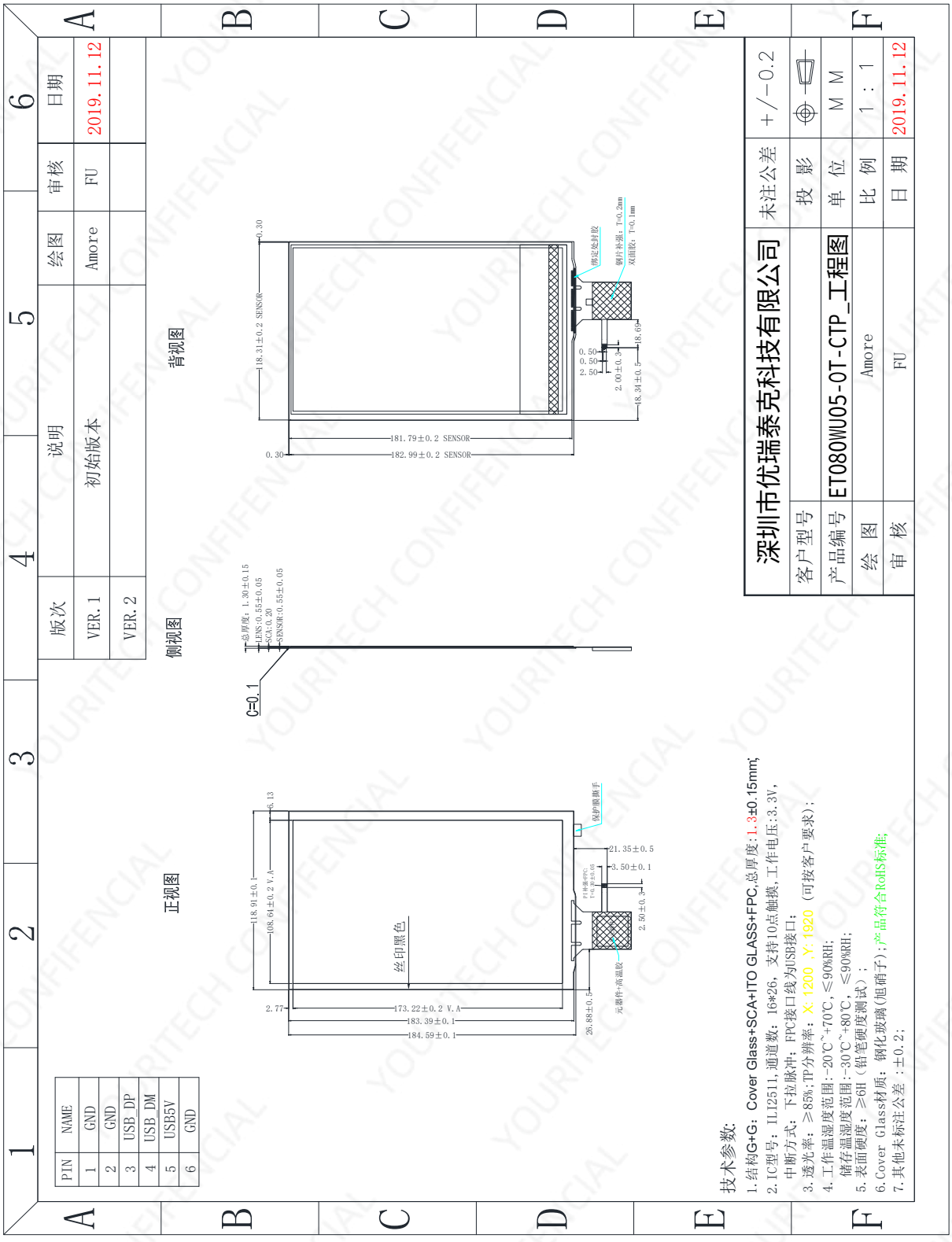
3.4 客户未按注意事项作业而造成的不良品。

Products damaged by customers whoever conducts the operation without complying with the instructions.

4 本确认书经客户承认后，客户不得有所变更，如需变更，需双方友好协商好重新出确认书认可，否则一切损失由贵公司负责。

Once signed, the confirmation document shall not be altered in any terms and conditions without prior agreement between both parties. Otherwise, any loss thus incurred should be borne by the buyer.

14 电容触摸屏工程图 CTP Engineering Drawing



Contents

LCD Module

1.General Specifications

No.	Item	Specification	Remark
1	LCD size	8 inch	
2	Driver element	a-Si TFT active matrix	
3	Resolution	1200(W) RGB x 1920(H)	
4	Display mode	Normally Black, Transmissive	
5	Dot pitch	0.0897 (w)x 0.0897(H)	
6	Active area	107.64(W) x 172.22(H) mm	
7	Module size	119.41(W) ×184(H) ×4.5(D) mm	Note 1
8	View direction	ALL	O'clock
9	Surface treatment	Anti-Glare	
10	Color arrangement	RGB-stripe	
11	Interface	MIPI	
12	Lcm power consumption	4.7W	TYP
13	Drive IC	NT51021B*2	

Note 1: Refer to Mechanical Drawing.

1. Pin Assignmen

FPC Connector is used for the module electronics interface. The recommended model is FH26-31S-0.3SHW manufactured by Hirose.

Pin .No	Symbol	I/O	Function	Remark
1	NC	-	No Connection	
2	RST	I	Global reset pin, active low.	
3	VDD3.3V	P	(VDD)Power Supply For LCD	
4	VDD3.3V	p	(VDD)Power Supply For LCD	
5	GND	P	Ground	
6	DP0	I	Positive MIPI differential data inputs	
7	DN0	I	Negative MIPI differential data inputs	
8	GND	P	Ground	
9	DP1	I	Positive MIPI differential data inputs	
10	DN1	I	Negative MIPI differential data inputs	
11	GND	P	Ground	
12	CLKP	I	Positive MIPI differential clock inputs	
13	CLKN	I	Negative MIPI differential clock inputs	
14	GND	P	Ground	
15	DP2	I	Positive MIPI differential data inputs	
16	DN2	I	Negative MIPI differential data inputs	
17	GND	P	Ground	
18	DP3	I	Positive MIPI differential data inputs	
19	DN3	I	Negative MIPI differential data inputs	
20	GND	P	Ground	
21	NC	-	No Connection	
22-24	GND	P	Ground	
25	USB_DP(TP)	p	USB data bus（+）	

26	USB_DM(TP)	P	USB data bus（-）	
27	USB5V(TP)	P	USB power supply	
28	NC	-	No Connection	
29-30	GND	P	Ground	
31	NC	-	No Connection	
32	GND	P	Ground	
33-34	NC	-	No Connection	
35-38	LED-	P	Power Supply For LED Backlight Cathode Input	
39-40	LED+	P	Power Supply For LED Backlight Anode Input	

I: input; O: output; P: Power or Ground(0V).

3. Operation Specifications

3.1. Typical Operation Conditions

Test condition: GND=0V, TA=25 ºC

Note1

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Power voltage	VDD	2.7	3.1	3.6	V	Note 1
	VDDIO	1.55	1.6	1.65	V	

Note 1:VDD setting should match the signals output voltage of customer's system board.

3.2. Current Consumption

Item	Symbol	Values			Unit	Remark
		Min.	Typ.	Max.		
Voltage for LED Backlight	V_L	28	30	32	V	Note 1
Crrent for LED Backlight	I_L	-	150	-	mA	
LED life time	-	20,000	-	-	Hr	Note 2

Note1: V_L=30V, I_L=150mA (Backlight circuit: 10 series connection, 5 parallel connection), the ambient temperature is 25℃.

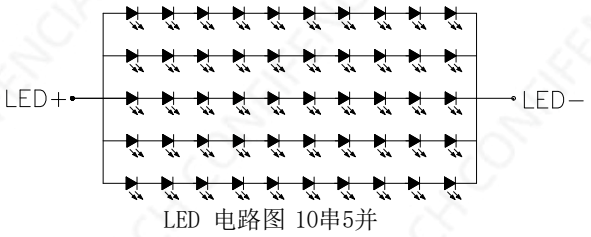
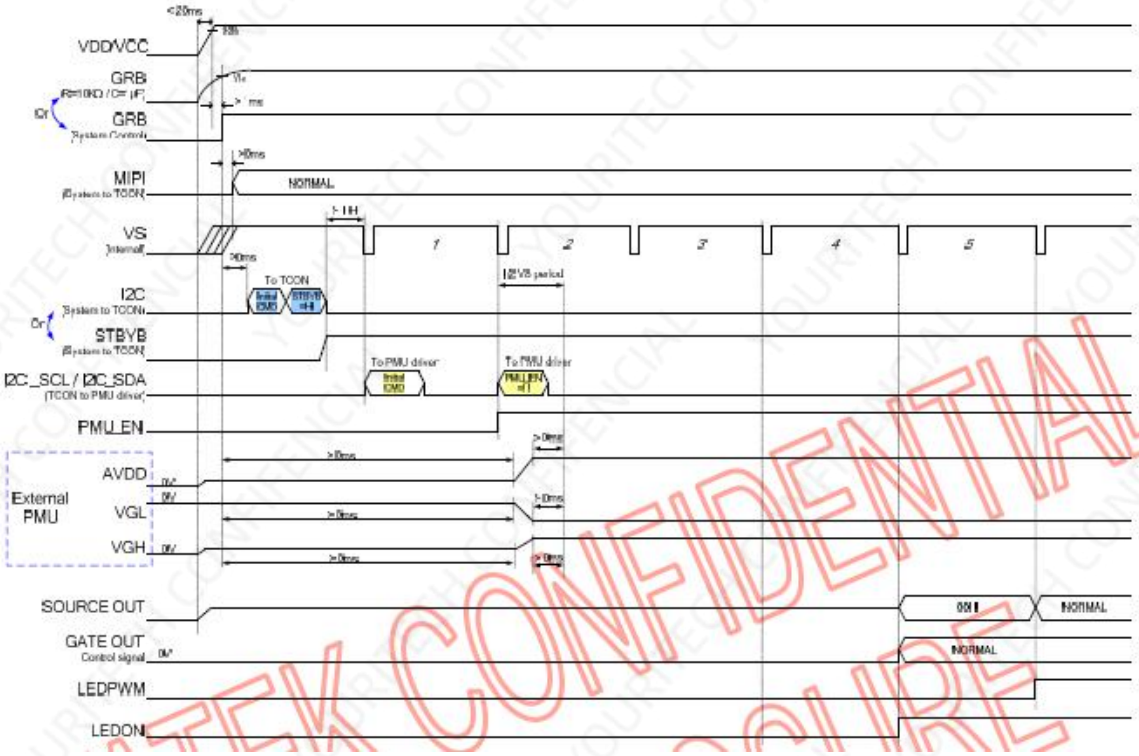


Fig. 3-1 LED test circuit diagram

Note 2: The “LED life time” is defined as the module brightness decrease to 50% original brightness at Ta=25℃ and 1/2 rated current . The LED lifetime could be decreased if operating I_L is larger than150mA.

3.3. Timming Sequence

Power on/off timing:



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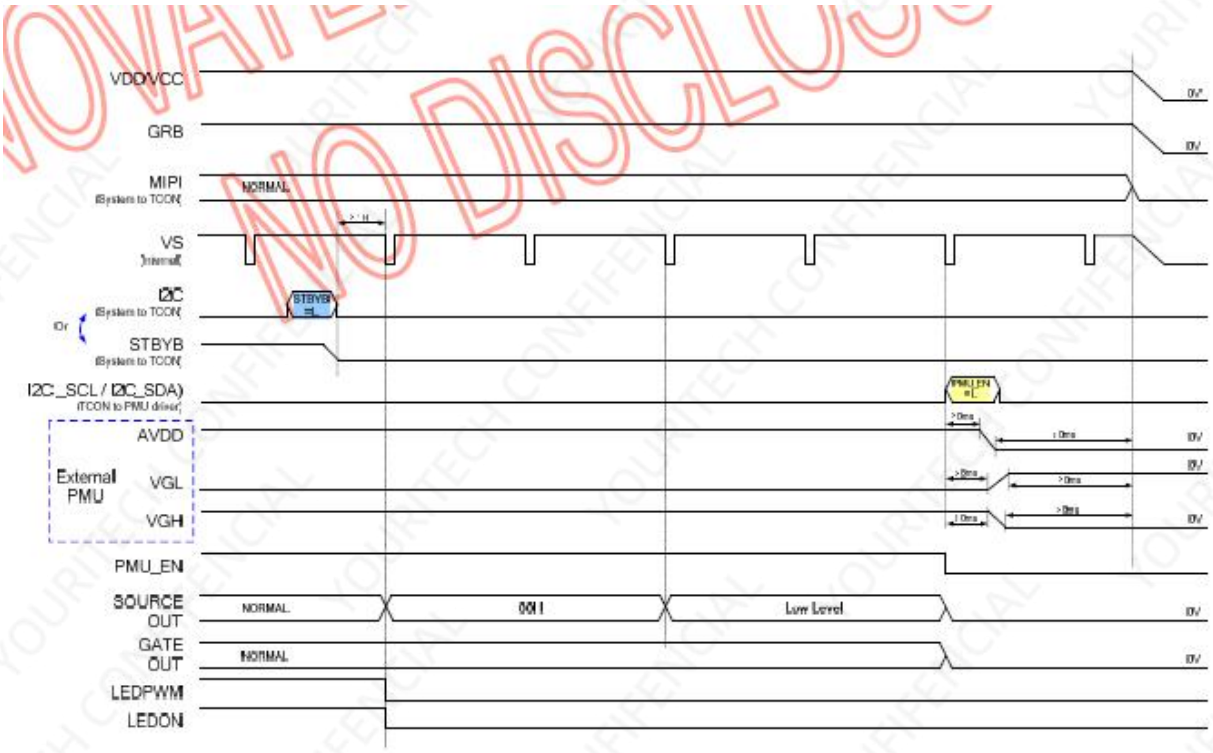
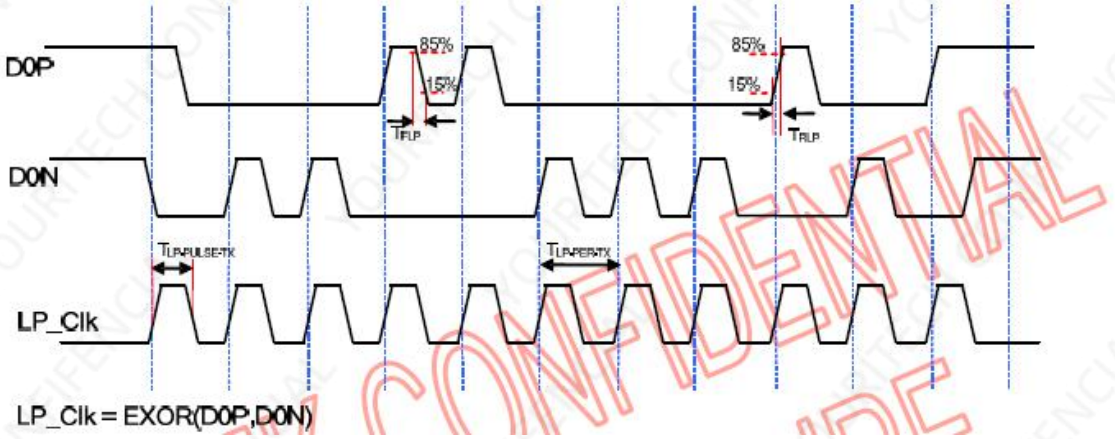


3.4. MIPI AC Characteristic:

3.4.1. LP Transmission

(VDD= 2.7V to 3.6V, AVDD= 7V to 10V, GND=AGND= 0V, TA= -20 to +85°C)

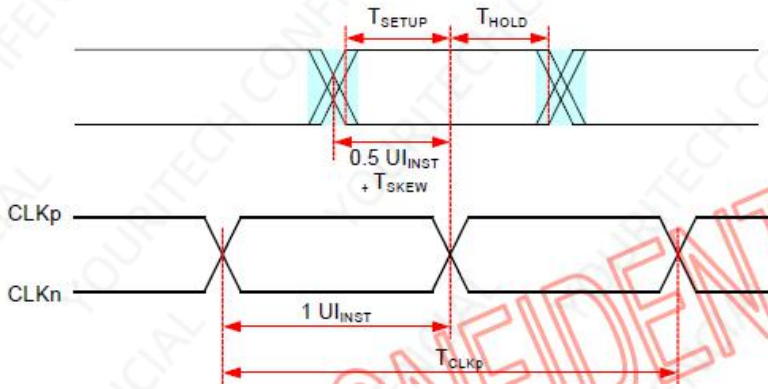
Parameter	Symbol	Min	Typ	Max	Units
15%-85% rise time and fall time	T_{RLP} / T_{FLP}	-	-	25	ns
Pulse width of the LP exclusive-OR clock	$T_{LP\text{-}PULSE\text{-}TX}$	50	-	-	ns
Period of the LP exclusive-OR clock	$T_{LP\text{-}PER\text{-}TX}$	100	-	-	ns



3.4.2. High Speed Transmission:

(VDD= 2.7V to 3.6V, AVDD= 7V to 10V, GND=AGND= 0V, TA= -20 to +85°C)

Parameter	Symbol	Min	Typ	Max	Units
UI instantaneous	UI_{INST}	1.0	-	12.5	ns
Data to Clock Setup Time	T_{SETUP}	0.3	-	-	UI_{INST}
Data to Clock Hold Time	T_{HOLD}	0.3	-	-	UI_{INST}



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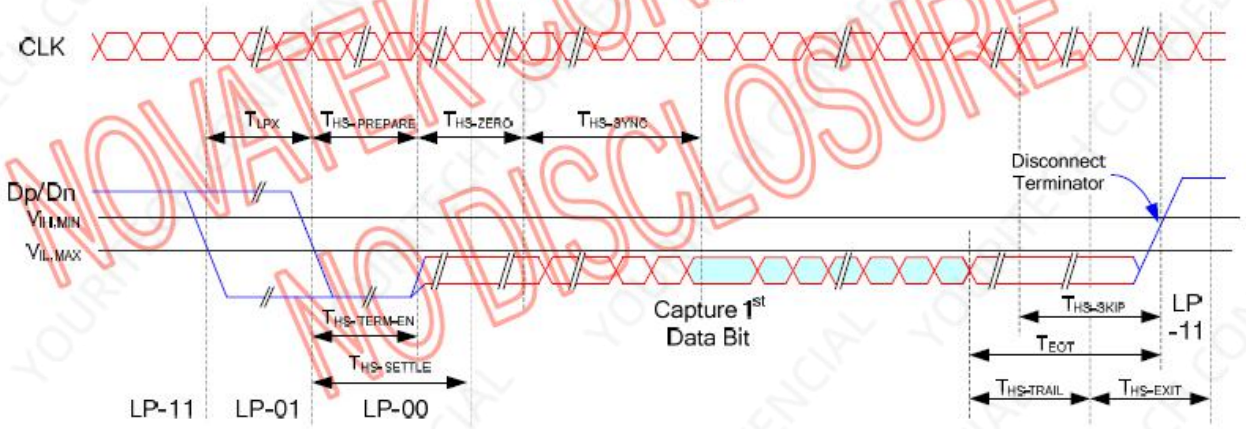
3.4.3 High-speed data transmission in bursts:

(VDD= 2.7V to 3.6V, AVDD= 7V to 10V, GND=AGND= 0V, TA= -20 to +85°C)

Parameter	Symbol	Min	Typ	Max	Units
Time to drive LP-00 to prepare for HS transmission	$T_{HS-PREPARE}$	40+4UI	-	85+6UI	ns
Time from start of tHS-TRAIL or tCLK-TRAIL period to start of LP-11 state	T_{EOT}	-	-	105+12UI	ns
Time to enable Data Lane receiver line termination measured from when Dn cross VIL,MAX	$T_{HS-TERM-EN}$	-	-	35+4UI	ns
Time to drive flipped differential state after last payload data bit of a HS transmission burst	$T_{HS-TRAIL}$	60+4UI	-	-	ns
Time-out at RX to ignore transition period of EoT	$T_{HS-SKIP}$	40	-	55+4UI	ns
Time to drive LP-11 after HS burst	$T_{HS-EXIT}$	100	-	-	ns
Length of any Low-Power state period	T_{LPX}	50	-	-	ns
Sync sequence period	$T_{HS-SYNC}$	-	8UI	-	ns
Minimum lead HS-0 drive period before the Sync sequence	$T_{HS-ZERO}$	105+6UI	-	-	ns

Note:

1. The minimum value depends on the bit rate. Implementations should ensure proper operation for all the supported bit rates.
2. UI means Unit Interval, equal to one half HS clock period on the Clock Lane.
3. T_{LPX} is an internal state machine timing reference. Externally measured values may differ slightly from the specified values due to asymmetrical rise and fall times.



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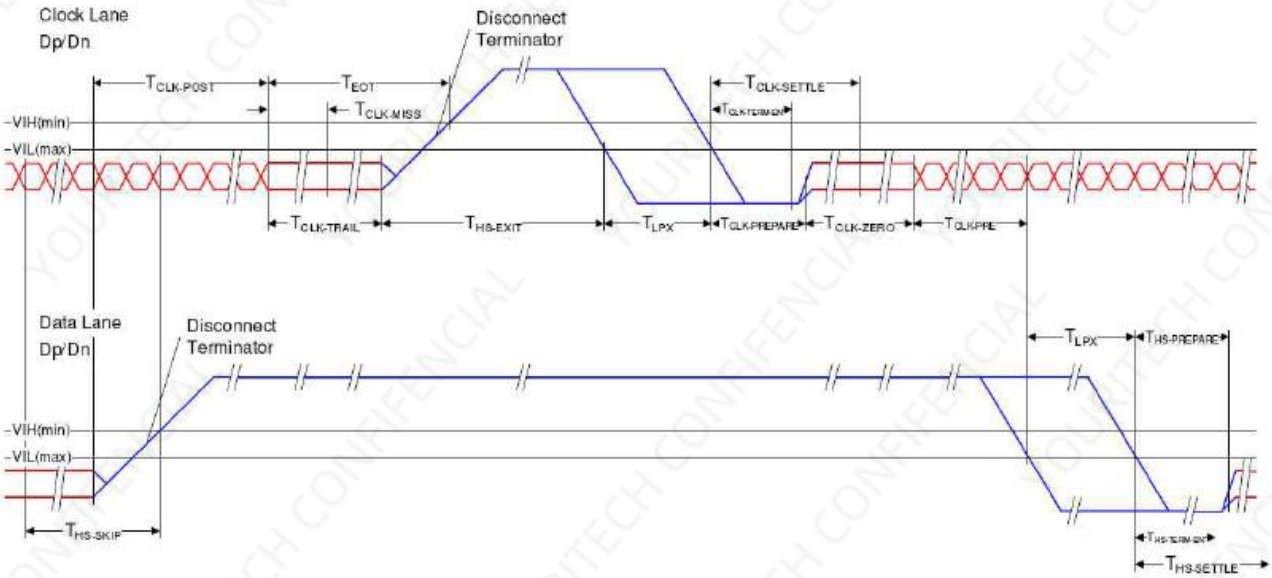
3.4.4 High-speed Clock Transmission:

(VDD= 2.7V to 3.6V, AVDD= 7V to 10V, GND=AGND= 0V, TA= -20 to +85°C)

Parameter	Symbol	Min	Typ	Max	Units
Time that the transmitter shall continue sending HS clock after the last associated Data Lane has transitioned to LP mode	$T_{CLK-POST}$	60+52UI	-	-	ns
Detection time that the clock has stopped toggling	$T_{CLK-MISS}$	-	-	60	ns
Time to drive LP-00 to prepare for HS clock transmission	$T_{CLK-PREPARE}$	38	-	95	ns
Minimum lead HS-0 drive period before starting Clock	$T_{CLK-PREPARE}$ +$T_{CLK-ZERO}$	300	-	-	ns
Time to enable Clock Lane receiver line termination measured from when Dn cross VIL,MAX	$T_{HS-TERM-EN}$	-	-	38	ns
Minimum time that the HS clock must be set prior to any associated date lane beginning the transmission from LP to HS mode	$T_{CLK-PRE}$	8	-	-	UI
Time to drive HS differential state after last payload clock bit of a HS transmission burst	$T_{CLK-TRAIL}$	60	-	-	ns

Note:
The DSI host processor shall support continuous clock on the Clock Lane for NT chip that require it, so the host processor needs to keep the HS serial clock running.



4. Optical Specifications

Item	Symbol	Condition	Values			Unit	Remark
			Min.	Typ.	Max.		
Viewing angle (CR≥ 10)	θ_L	Φ=180°(9 o'clock)	80	85	-	degree	Note 1
	θ_R	Φ=0°(3 o'clock)	80	85	-		
	θ_T	Φ=90°(12 o'clock)	80	85	-		
	θ_B	Φ=270°(6 o'clock)	80	85	-		
Response time	T_{ON+} T_{OFF}	Normal θ=Φ=0°	-	27	35	msec	Note 2
Contrast ratio	CR		-	900	-	-	Note 3
Color chromaticity	W_X		0.26	0.31	0.36	-	Note 4 Note 5 Note 6
	W_Y		0.30	0.35	0.40	-	
Luminance for LCD （central point）	L		1100	1200	-	cd/m²	Note 6
Luminance for Assembly （central point）	L		935	1000	-	cd/m²	Note 6
Luminance uniformity	Y_U		75	80	-	%	Note 7

The test systems refer to Note 2.

Note 1: Definition of viewing angle range

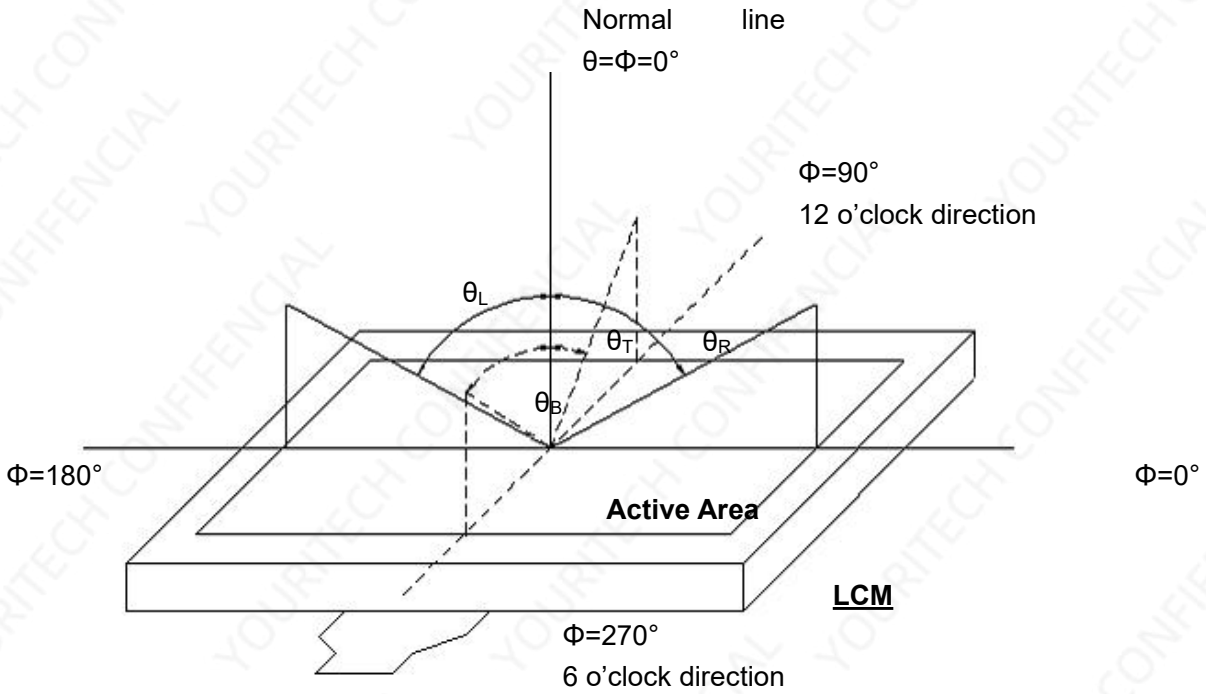


Fig. 4-2 Definition of viewing angle

Note 2: Definition of Response time

The response time is defined as the LCD optical switching time interval between "White" state and "Black" state. Rise time (T_{ON}) is the time between photo detector output intensity changed from 90% to 10%. And fall time (T_{OFF}) is the time between photo detector output intensity changed from 10% to 90%.

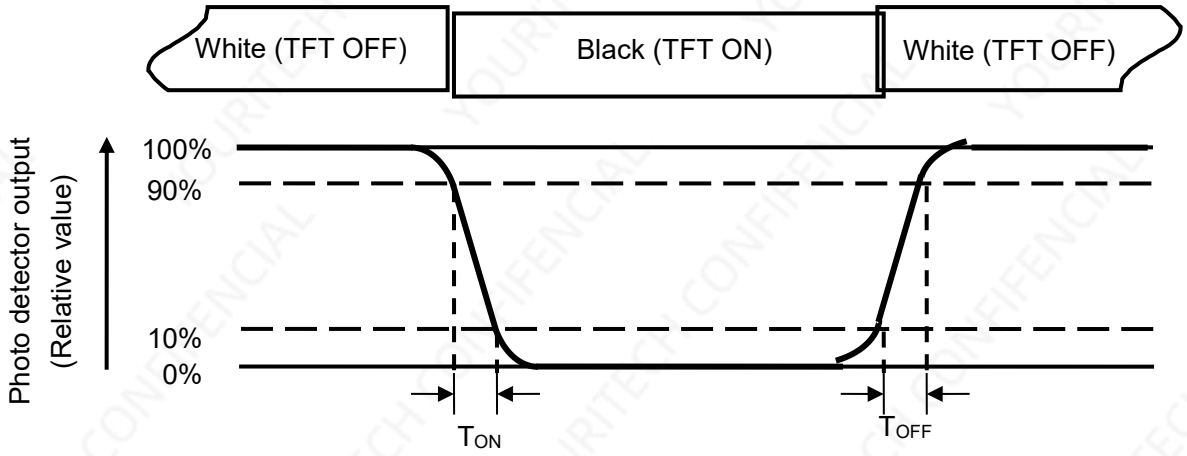


Fig. 4- 3 Definition of response time

Note 3: Definition of contrast ratio

$$\text{Contrast ratio (CR)} = \frac{\text{Luminance measured when LCD on the "White" state}}{\text{Luminance measured when LCD on the "Black" state}}$$

Note 4: Definition of optical measurement system.

The optical characteristics should be measured in dark room. After 30 minutes operation, the optical properties are measured at the center point of the LCD screen. (Viewing angle is measured by ELDIM-EZ contrast/Height :1.2mm, Response time is measured by Photo detector TOPCON BM-7, other items are measured by BM-5A/ Field of view: 1° /Height: 500mm.) or CA-210.

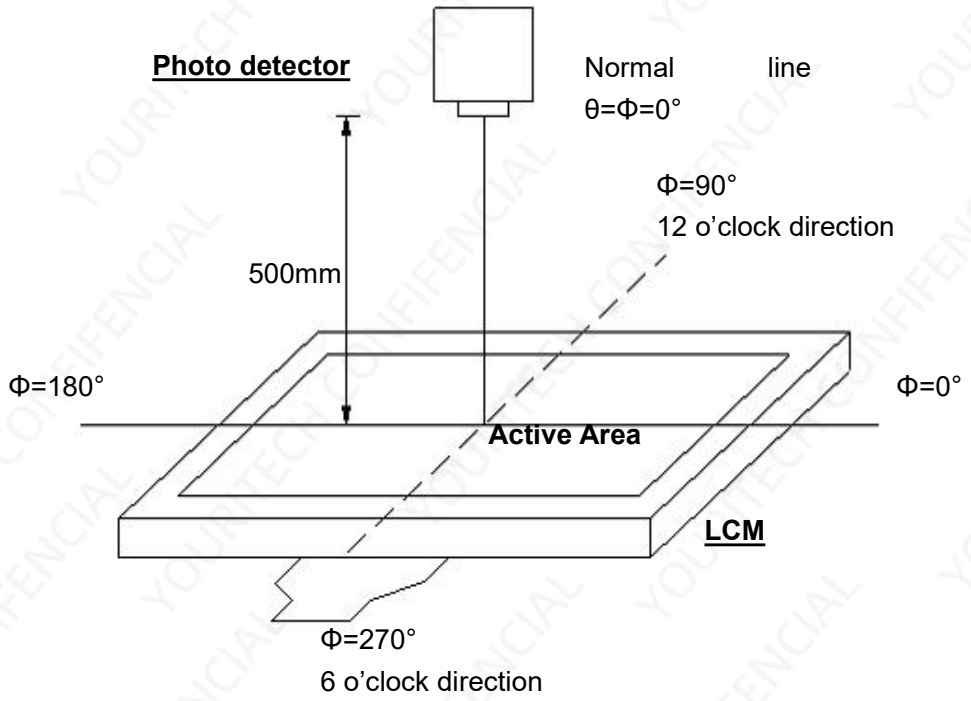


Fig. 4-3 Optical measurement system setup

Note 5: Definition of color chromaticity (CIE1931)
Color coordinates measured at center point of LCD.

Note 6: All input terminals LCD panel must be ground while measuring the center area of the panel.
The LED driving condition is I_L=150mA .

Note 7: Definition of Luminance Uniformity
Active area is divided into 9 measuring areas(Refer to Fig. 4-4).
Every measuring point is placed at the center of each measuring area.

$$Luminance\ \ Uniformity\ (Yu) = \frac{B_{min}}{B_{max}}$$

L-------Active area length W----- Active area width

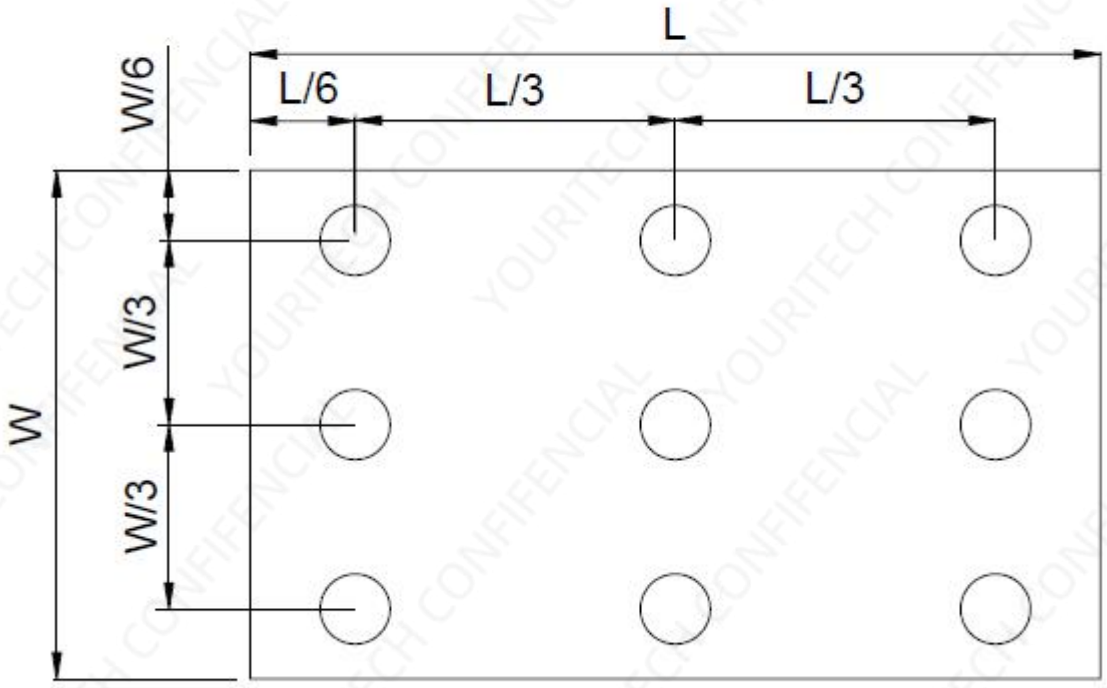


Fig. 4-4 Definition of measuring points

B_{MAX}: The measured maximum luminance of all measurement position.

B_{MIN}: The measured minimum luminance of all measurement position.

5. Reliability Test Items

Item	Test Conditions	Criterion
High Temperature Storage	Ta = 60℃ 240hrs	A,B,C,D,E
Low Temperature Storage	Ta = -20℃ 240hrs	A,B,C,D,E
High Temperature Operation	Ts = 50℃ 240hrs	A,B,C,D,E
Low Temperature Operation	Ta =-0℃ 240hrs	A,B,C,D,E
Operate at High Temperature and Humidity	+40℃, 90%RH 240hrs	A,B,C,D,E
Thermal Shock(non operation)	-20℃/30 min ~ +60℃/30 min for a total 100 cycles, Start with cold temperature and end with high temperature.	A,B,C,D,E
Vibration Test	Sweep:10Hz~55Hz~10Hz 2G 2 hours for each direction of X. Y. Z. (6 hours for total)	A,B,C,D,E
Package Vibration Test	Random Vibration : 0.015G*G/Hz from 5-200HZ, -6dB/Octave from 200-500HZ 2 hours for each direction of X. Y. Z. (6 hours for total)	A,B,C,D,E
Package Drop Test	Height:60 cm 1 corner, 3 edges, 6 surfaces	A,B,C,D,E
Electro Static Discharge	Contact=+/-4KV, Air=+/-8KV,(R=330R,C=150pF), 1 sec,9point,10times/point;	A,B,C,D,E

※Criterion:

A.LCM each function is OK,.

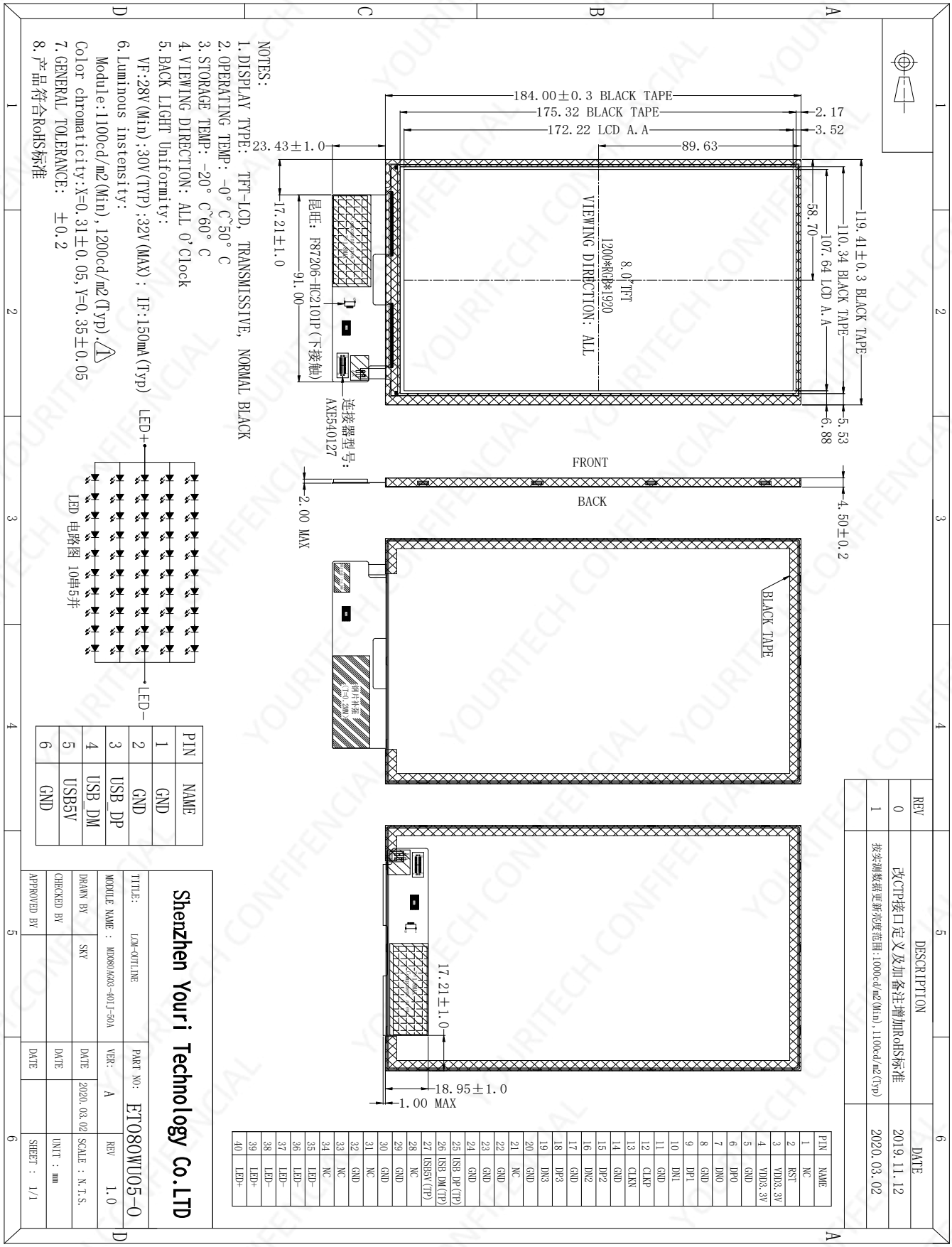
B.LCM appearance inspection without abnormalities (Including scratch, damage, corrosion and serious deformation)

C.LCM brightness above the Min. value of Spec.

D. Luminance uniformity above the Min. value of Spec.

E. Color chromaticity within tolerance range

6. LCD Module Mechanical Drawing



NOTES:

1. DISPLAY TYPE: TFT-LCD, TRANSMISSIVE, NORMAL BLACK
2. OPERATING TEMP: -0° C~50° C
3. STORAGE TEMP: -20° C~60° C
4. VIEWING DIRECTION: ALL O'Clock
5. BACK LIGHT Uniformity:
   VF:28V(Min);30V(TYP);32V(MAX); IF:150mA(Typ)
6. Luminous instensity:
   Module:1100cd/m2(Min),1200cd/m2(Typ).
   Color chromaticity:X=0.31±0.05,Y=0.35±0.05
7. GENERAL TOLERANCE: ±0.2
8. 产品符合RoHS标准

PIN	NAME
1	GND
2	GND
3	USB_DP
4	USB_DM
5	USB5V
6	GND

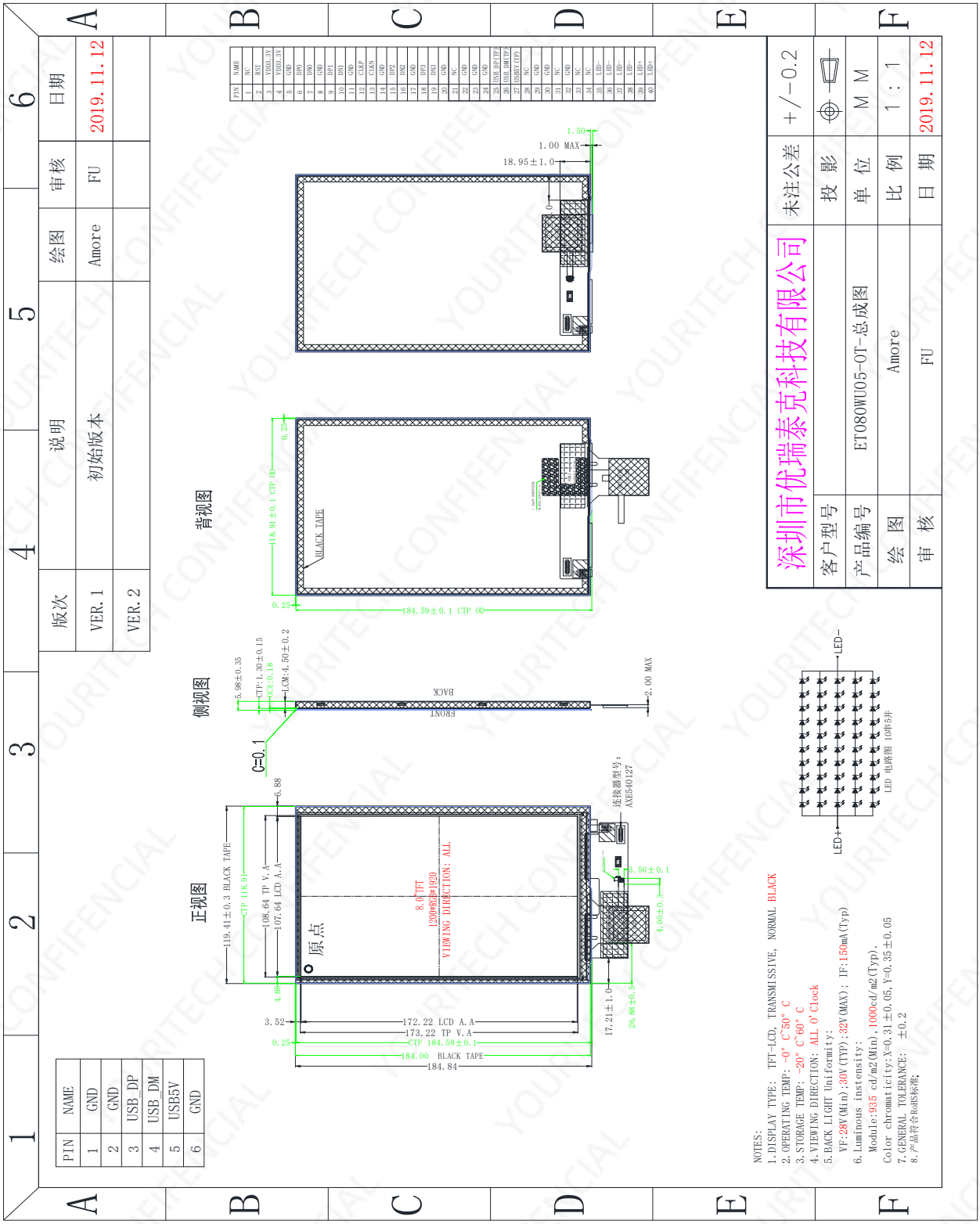
PIN	NAME	PIN	NAME
1	NC	21	NC
2	RST	22	GND
3	VDD3.3V	23	GND
4	VDD3.3V	24	GND
5	GND	25	USB_DP(TP)
6	DP0	26	USB_DM(TP)
7	DN0	27	USB5V(TP)
8	GND	28	NC
9	DP1	29	GND
10	DN1	30	GND
11	GND	31	NC
12	CLKP	32	GND
13	CLKN	33	NC
14	GND	34	NC
15	DP2	35	LED-
16	DN2	36	LED-
17	GND	37	LED-
18	DP3	38	LED+
19	DN3	39	LED+
20	GND	40	LED+

REV	DESCRIPTION	DATE
0	改CTP接口定义及加备注增加RoHS标准	2019.11.12
1	按实测数据更新亮度范围:1000cd/m2(Min),1100cd/m2(Typ)	2020.03.02

Shenzhen Youri Technology Co.LTD

TITLE:	LCM-OUTLINE	PART NO:	ET080WU05-O
MODULE NAME :	MD0804G03-40IJ-50A	VER:	A
DRAWN BY	SKY	DATE	2020.03.02
CHECKED BY		DATE	
APPROVED BY		DATE	
REV	1.0		
SCALE :	N.T.S.		
UNIT :	mm		
SHEET :	1/1		

7. Assembly Mechanical Drawing



8. Package Drawing

TBD

9. General Precautions

9.1. Safety

Liquid crystal is poisonous. Do not put it in your mouth. If liquid crystal touches your skin or clothes, wash it off immediately by using soap and water.

9.2. Handling

1. The LCD panel is plate glass. Do not subject the panel to mechanical shock or to excessive force on its surface.
2. The polarizer attached to the display is easily damaged. Please handle it carefully to avoid scratch or other damages.
3. To avoid contamination on the display surface, do not touch the module surface with bare hands.
4. Keep a space so that the LCD panels do not touch other components.
5. Put cover board such as acrylic board on the surface of LCD panel to protect panel from damages.
6. Transparent electrodes may be disconnected if you use the LCD panel under environmental conditions where the condensation of dew occurs.
7. Do not leave module in direct sunlight to avoid malfunction of the ICs.

9.3. Static Electricity

1. Be sure to ground module before turning on power or operating module.
2. Do not apply voltage which exceeds the absolute maximum rating value.

9.4. Storage

1. Store the module in a dark room where must keep at 25±10℃ and 65%RH or less.
2. Do not store the module in surroundings containing organic solvent or corrosive gas.
3. Store the module in an anti-electrostatic container or bag.

9.5. Cleaning

1. Do not wipe the polarizer with dry cloth. It might cause scratch.
2. Only use a soft sloth with IPA to wipe the polarizer, other chemicals might permanent damage to the polarizer.