Shenzhen Leadtek Electronics Co.,Ltd

PRODUCT SPECIFICATION

TFT-LCD MODULE

Module No：LTK070WSHCT15-V1

☑ Preliminary Specification

☐ Approval Specification

Designed by	Checked by	Approved by
jona	tom	lan

Final Approval by Customer

Approved by	Comment

※The specification of “TBD” should refer to the measured value of sample . If there is difference between the design specification and measured value, we naturally shall negotiate and agree to solution with customer.

Table Of Contents

1.Document Revision History

Version	Contents	Date	Note
V0	Original	2022.09.27	
V1	Modify the position of the cover as well as the color	2023.07.12	

2. General Information

ITEM	STANDARD VALUES	UNITS
LCD type	7.0”TFT	--
Dot arrangement	1024×3(RGB)×600	dots
Color Pixel Arrangement	RGB vertical stripe	--
Display Mode	IPS / Transmissive / Normally black	--
Viewing Direction	80/80/80/80	--
Interface	LVDS	--

CTP

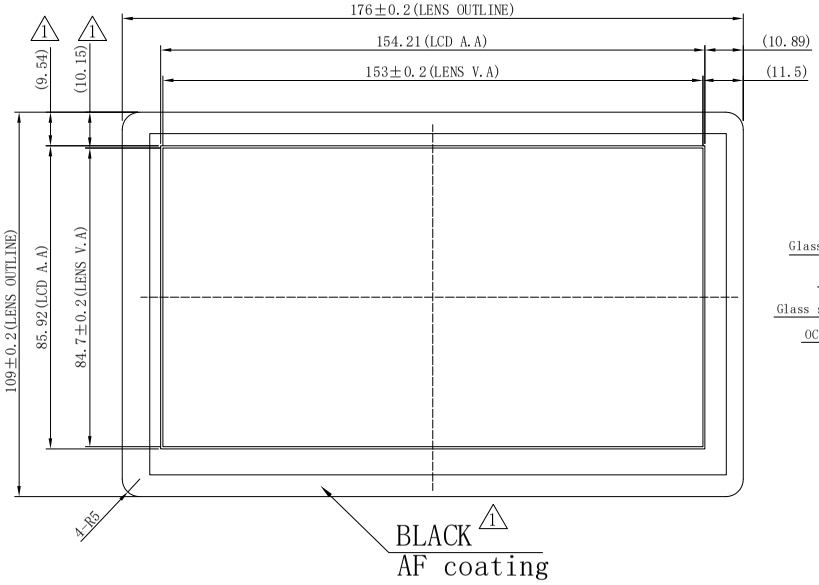
ITEM	STANDARD VALUES	UNITS
CTP type	G+G	--
Surface Hardness	6H	--
CTP Driver IC	FT5446DQS-Q03	--
CTP Interface	I2C	--

Description

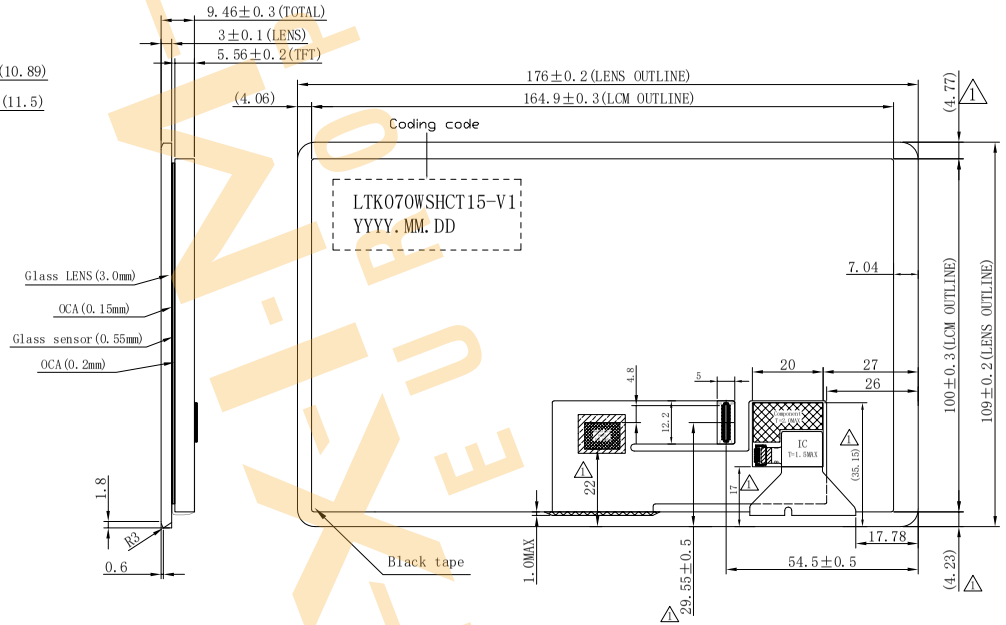
Outline dimension	176.00(W)×109.00(H)×9.46(T)	mm
Active area	154.21(W)×85.92(H)	
LENS V.A	153.0(W)×84.7(H)	mm
TFT Dot pitch	0.1506 (W)×0.1432 (H)	mm
Weight	TBD	g

3. External Dimensions

Front View 正视图



Side View 侧视图



Back View 背视图

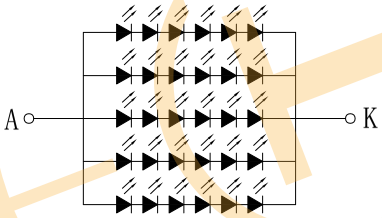
PIN	SYMBOL	PIN	SYMBOL
1	VDD5V	26	L/R
2	A	27	SELB
3	A	28	DIM□
4	K	29	RXIN3-
5	K	30	NC
6	GND	31	RXIN3+
7	NC	32	NC
8	CTP_VCC	33	RCLKIN-
9	TFT_VCC	34	NC
10	/RESET	35	RCLKIN+
11	NC	36	NC
12	NC	37	RXIN2-
13	GND	38	NC
14	NC	39	RXIN2+
15	GND	40	NC
16	NC	41	RXIN1-
17	NC	42	NC
18	NC	43	RXIN1+
19	NC	44	CTP_RST
20	NC	45	RXIN0-
21	NC	46	CTP_INT
22	STBYB	47	RXIN0+
23	NC	48	CTP_SCL
24	NC	49	CTP_SDA
25	U/D	50	GND

CTP NOTE:
1. G+G+FPC+OCA
   LENS GLASS: 3.0mm
   SENSOR GLASS: 0.55mm
   IC: FT5446DQS-Q03
2. Operation Voltage: 2.8V-3.3 V
3. Transmittance: ≥82%
4. The cover hardness: 6H

COVER GLASS (3.0mm)
OCA (0.15mm)
GLASS SENSOR (0.55mm)
OCA (0.2mm)
LCM (3.3mm)

CTP+LCM □CA B□NDING

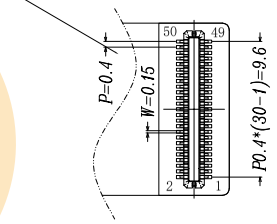
TFT NOTES:
1. DISPLAY TYPE: 7.0″ TFT IPS 1024*RGB*600 TRANSMISSIVE/Normally Black
2. VIEWING DIRECTION: 80/80/80/80(U/D/L/R @ CR>10)
3. Luminance (LCM+CTP) : 900 cd/m²(TYP),with APCF Uniformity≥80%
4. OPERATING TEMP: -20° C~+70° C
5. STORAGE TEMP: -30° C~+80° C
6. UNMARKER TOLERANCE: ±0.20 refenerce()
7. REQUIREMENTS ON ENVIRONMENTAL PROTECTION: RoHS



IF=100mA, VF=19.2V(TYP)

Customer:DF37NC-50DS-0.4V

LCM-CN:DF37C-50DP-0.4V



A SC 1:4

PIN	SYMBOL
1	GND
2	VCC(3.3V)
3	GND
4	RST(3.3V)
5	INT(3.3V)
6	SCL(3.3V)
7	SDA(3.3V)
8	GND

REV	DESCRIPTION	DATE	NAME
1	Modify the position of the cover as well as the color	2023.07.12	JACK
0	NEW	2022.09.27	IAN

LEADTEK COMPANY LIMITED

LEADTEK DISPLAY

SCALE:1/1	UNIT:mm	PAGE:1/1		Approve	Check	Drawn
Part No:	LTK070WSHCT15		VER:V1	IAN	JONA	JACK
Customer No:						

4. Interface Description

Pin NO.	SYMBOL	DESCRIPTION
1	VDD5V	5V for generating VGL,…
2	A	Power for LED backlight (Anode).
3	A	Power for LED backlight (Anode).
4	K	Power for LED backlight (Cathode).
5	K	Power for LED backlight (Cathode).
6	GND	Power ground.
7	NC	No connection
8	CTP_VCC	Power Voltage for CTP(2.5~3.3V).
9	TFT_VCC	Power Voltage for TFT(2.5~3.3V).
10	/RESET	Device reset signal.
11	NC	No connection
12	NC	No connection
13	GND	Power ground.
14	NC	No connection
15	GND	Power ground.
16	NC	No connection
17	NC	No connection
18	NC	No connection
19	NC	No connection
20	NC	No connection
21	NC	No connection
22	STBYB	Standby mode, Normally pulled high: STBYB=”1”: Normally operation STBYB=”0”: Display turn off, all output are High-Z
23	NC	No connection
24	NC	No connection
25	U/D	Vertical inversion. See note 2.
26	L/R	Horizontal inversion. See note 2.
27	SELB	6bit/8bit mode select. See note 1. 1:6bit，0:8bit
28	DIMO	Backlight CABC controller signal output
29	RXIN3-	-LVDS differential data input
30	NC	No connection
31	RXIN3+	+LVDS differential data input
32	NC	No connection
33	RXCLKIN-	-LVDS differential clock input
34	NC	No connection
35	RXCLKIN+	+LVDS differential clock input
36	NC	No connection
37	RXIN2-	-LVDS differential data input
38	NC	No connection
39	RXIN2+	+LVDS differential data input
40	NC	No connection
41	RXIN1-	-LVDS differential data input

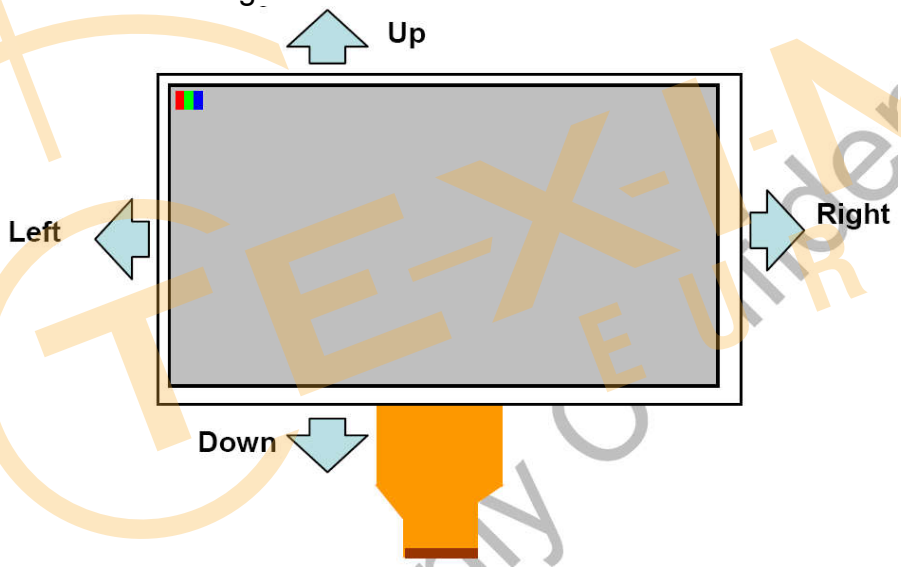
42	NC	No connection
43	RXIN1+	+LVDS differential data input
44	CTP_RST	Reset pin. Active low to enter reset state.
45	RXIN0-	-LVDS differential data input
46	CTP_INT	Interruption signal.
47	RXIN0+	+LVDS differential data input
48	CTP_SCL	I2C_clock.
49	CTP_SDA	I2C_data.
50	GND	Power ground.

【Note1】 If LVDS input data is 6 bits ,SELB must be set to High;
If LVDS input data is 8 bits ,SELB must be set to Low.

【Note2】L/R：left or right setting
U/D：up or down setting

L/R	U/D	Data shifting
VCC	GND	Left→Right，Up→Down(default)
GND	GND	Right→Left，Up→Down
VCC	VCC	Left→Right，Down→Up
GND	VCC	Right→Left，Down→Up

Definition of scanning direction.



5. Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit
Supply Voltage for TFT	TFT_VCC	-0.3	3.6	V
Supply Voltage for CTP	CTP_VCC	-0.3	3.6	
Input Voltage	Vin	-0.3	VCI+0.5	V

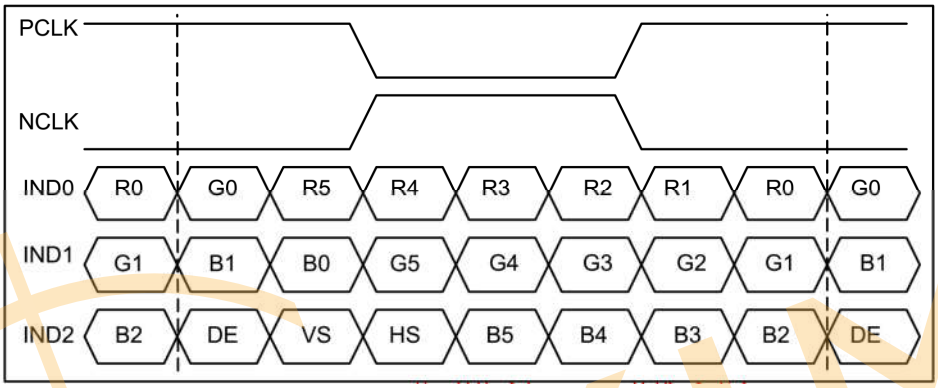
6. DC Characteristics

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Supply Voltage for TFT	TFT_VCC	2.5	2.8	3.3	V	-
Supply Voltage for CTP	CTP_VCC	2.5	2.8	3.3	V	-
Input High Voltage	V_{IH}	0.7VCC	-	VCC	V	Digital input pins
Input Low Voltage	V_{IL}	GND	-	0.3VCC	V	Digital input pins
Output High Voltage	V_{OH}	0.8VCC	-	VCC	V	Digital output pins
Output Low Voltage	V_{OL}	GND	-	0.2VCC	V	Digital output pins
I/O Leak Current	I_{LI}	-1.0	-	1.0	uA	-

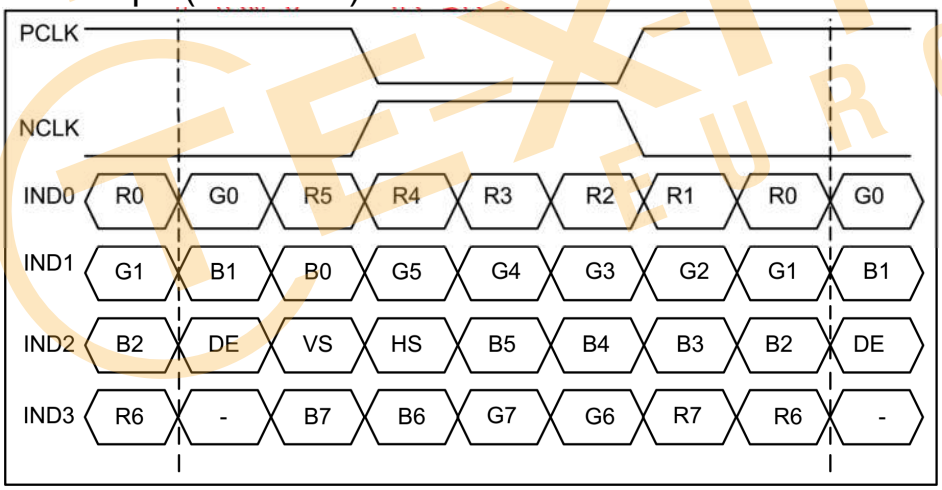
7. Timing Characteristics

7.1 Data Input Format for LVDS

6-bit LVDS input(HSD="H")



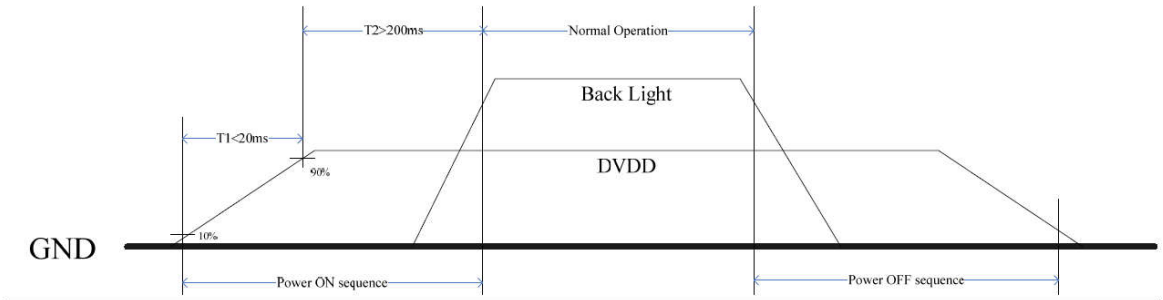
8-bit LVDS input(HSD="H")

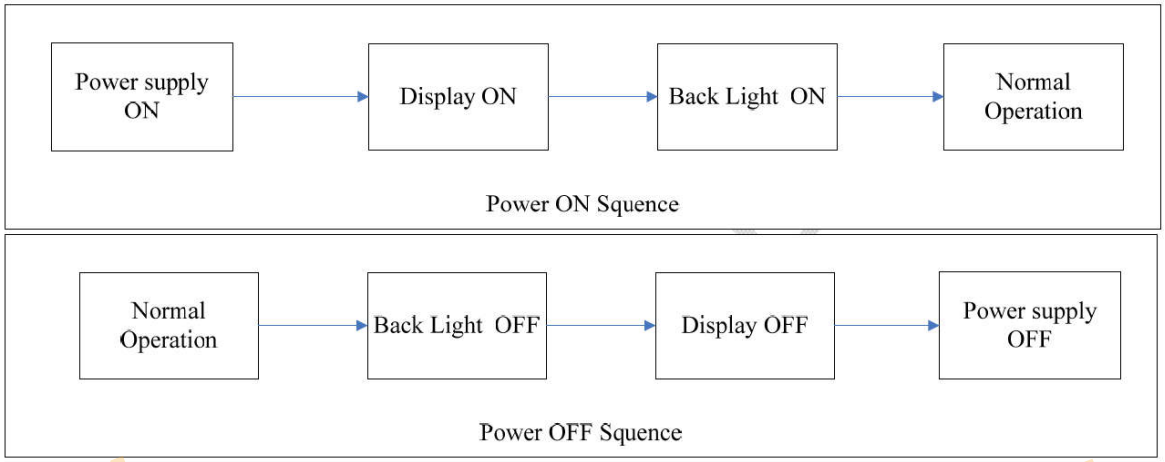


7.2 Timing

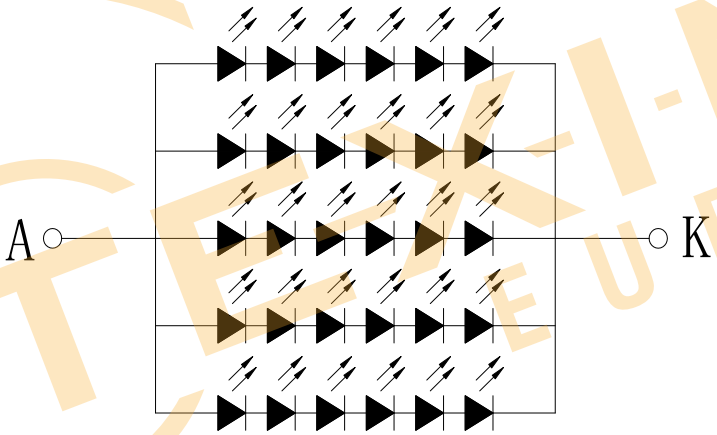
Parameter	Symbol	Min	Typ	Max	Unit	Remark
Clock frequency	fclk	40.8	51.2	67.2	MHz	Frame rate=60Hz
Horizontal display area	thd		1024		DCLK	
HS period time	th	1114	1344	1400	DCLK	
HS Blanking	thbp+thfp	90	320	376	DCLK	
Vertical display area	tvd		600		H	
VS period time	tv	610	635	800	H	
VS Blanking	tvbp+tvfp	10	35	200	H	

7.3 POWER ON/OFF SEQUENCE





8. Backlight Charasterics

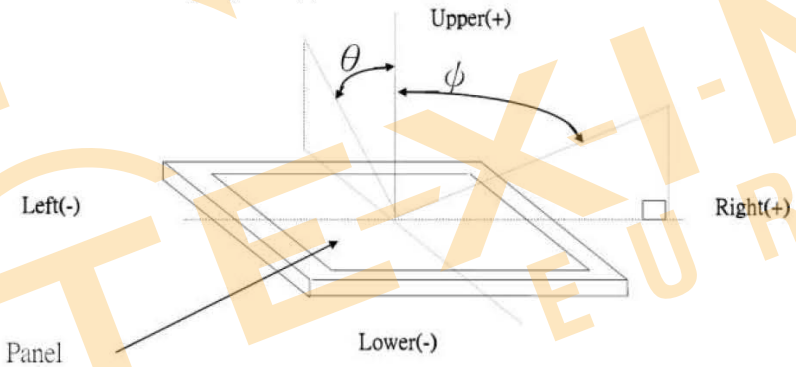


Item	Symbol	MIN	TYP	MAX	UNIT	Test Condition
Supply Voltage	Vf	18.0	19.2	20.4	V	If=100mA
Supply Current	If	-	100	-	mA	-
Luminous Intensity	-	-	900	-	Cd/m^2	If=100mA
Life Time	-	20000	-	-	Hr	If=100mA
Backlight Color	White					

9. Optical Characteristics

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit	Remark
Viewing Angle range	Horizontal	Θ_3	CR > 10	-	80	-	Deg.	WV-Pol Note 1
		Θ_9		-	80	-	Deg.	
	Vertical	Θ_{12}		-	80	-	Deg.	
		Θ_6		-	80	-	Deg.	
Luminance Contrast ratio		CR	Θ = 0°	-	800	-		Note 2
Cell Transmittance		Tr		4.8	5.0	-	%	Base on C Light Note 3
White Chromaticity		x_w		TYP. - 0.03	0.308	TYP. + 0.03		Note 4 Base on C Light
		y_w			0.336			
Reproduction of color (C light)	Red	R_x			0.599			
		R_y			0.338			
	Green	G_x			0.299			
		G_y			0.550			
	Blue	B_x			0.139			
		B_y			0.131			
Color Gamut (C light)				-	50	-	%	
Response Time (Rising + Falling)		T_{RT}	Ta= 25° C Θ = 0°	-	30	40	ms	Note 5

Note 1. Definition of view angle(θ，ψ)：



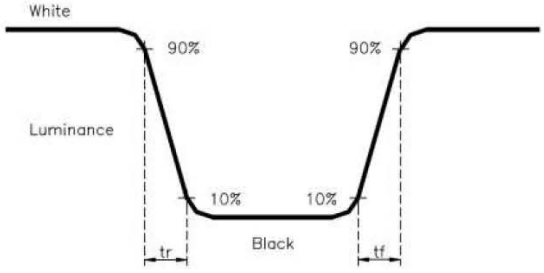
Note 2. Definition of Contrast Ratio：

CR = White Luminance (ON) / Black Luminance (OFF)

Note 3. Transmittance is the Value with Polarizer.

Note 4. The color chromaticity coordinates specified in Table 6 shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.

Note 5. The electro-optical response time measurements shall be made as FIGURE 6 by switching the “data” input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr, and 90% to 10% is Td.



10. Reliability Test Conditions And Methods

NO.	TEST ITEMS	TEST CONDITION	INSPECTION AFTER TEST
①	High Temperature Storage	80℃±2℃×96Hours	Inspection after 2~4hours storage at room temperature,the samples should be free from defects: 1,Air bublle in the LCD. 2,Sealleak. 3,Non-display. 4,Missing segments. 5,Glass crack. 6,Current IDD is twice higher than initial value. 7,The surface shall be free from damage. 8,The electric charateristic requirements shall be satisfied.
②	Low Temperature Storage	-30℃±2℃×96Hours	
③	High Temperature Operating	70℃±2℃×96Hours	
④	Low Temperature Operating	-20℃±2℃×96Hours	
⑤	Temperature Cycle(Storage)	-20℃ ⟺ 25℃ ⟺ 70℃ (30min) (5min) (30min) 1cycle Total 10cycle	
⑥	Damp Proof Test (Storage)	50℃±5℃×90%RH×96Hours	
⑦	Vibration Test	Frequency:10Hz~55Hz~10Hz Amplitude:1.5M X,Y,Z direction for total 3hours (Packing Condition)	
⑧	Drooping Test	Drop to the ground from 1M height one time every side of carton. (Packing Condition)	
⑨	ESD Test	Voltage:±8KV,R:330Ω,C:150PF,Air Mode,10times	

REMARK:
1,The Test samples should be applied to only one test item.
2,Sample side for each test item is 5~10pcs.
3,For Damp Proof Test,Pure water(Resistance＞10MΩ)should be used.
4,In case of malfunction defect caused by ESD damage,if it would be recovered to normal state after resetting,it would be judge as a good part.
5,EL evaluation should be excepted from reliability test with humidity and temperature:Some defects such as black spot/blemish can happen by natural chemical reaction with humidity and Fluorescence EL has.
6,Failure Judgment Criterion:Basic Specification Electrical Characteristic,Mechanical Characteristic,Optical Characteristic.

11. Handling Precautions

11.1 Mounting method

The LCD panel of LTK LCD module consists of two thin glass plates with polarizes which easily be damaged. And since the module in so constructed as to be fixed by utilizing fitting holes in the printed circuit board.

Extreme care should be needed when handling the LCD modules.

11.2 Caution of LCD handling and cleaning

When cleaning the display surface, Use soft cloth with solvent [recommended below] and wipe lightly

- Isopropyl alcohol
- Ethyl alcohol

Do not wipe the display surface with dry or hard materials that will damage the polarizer surface.

Do not use the following solvent:

- Water
- Aromatics

Do not wipe ITO pad area with the dry or hard materials that will damage the ITO patterns

Do not use the following solvent on the pad or prevent it from being contaminated:

- Soldering flux
- Chlorine (Cl) , Salfur (S)

If goods were sent without being sili8con coated on the pad, ITO patterns could be damaged due to the corrosion as time goes on.

If ITO corrosion happen by miss-handling or using some materials such as Chlorine (Cl), Salfur (S) from customer, Responsibility is on customer.

11.3 Caution against static charge

The LCD module use C-MOS LSI drivers, so we recommended that you:

Connect any unused input terminal to Vdd or Vss, do not input any signals before power is turned on, and ground your body, work/assembly areas, assembly equipment to protect against static electricity.

11.4 packing

- Module employ LCD elements and must be treated as such.
- Avoid intense shock and falls from a height.
- To prevent modules from degradation, do not operate or store them exposed direct to sunshine or high temperature/humidity

11.5 Caution for operation

- It is an indispensable condition to drive LCD's within the specified voltage limit since the higher voltage then the limit cause the shorter LCD life.
- An electrochemical reaction due to direct current causes LCD's undesirable deterioration, so that the use of direct current drive should be avoided.
- Response time will be extremely delayed at lower temperature then the operating temperature range and on the other hand at higher temperature LCD's how dark color in them. However those phenomena do not mean malfunction or out of order with LCD's, which will come back in the specified operation temperature.
- If the display area is pushed hard during operation, some font will be abnormally displayed but it resumes normal condition after turning off once.
- A slight dew depositing on terminals is a cause for electro-chemical reaction resulting in terminal open circuit.

Usage under the maximum operating temperature, 50%Rh or less is required.

11.6 storage

In the case of storing for a long period of time for instance, for years for the purpose or replacement use, the following ways are recommended.

- Storage in a polyethylene bag with the opening sealed so as not to enter fresh air outside in it . And with no desiccant.
- Placing in a dark place where neither exposure to direct sunlight nor light's keeping the storage temperature range.
- Storing with no touch on polarizer surface by the anything else.
  [It is recommended to store them as they have been contained in the inner container at the time of delivery from us

11.7 Safety

- It is recommendable to crash damaged or unnecessary LCD's into pieces and wash off liquid crystal by either of solvents such as acetone and ethanol, which should be burned up later.
- When any liquid leaked out of a damaged glass cell comes in contact with your hands, please wash it off well with soap and water

12. Precaution For Use

12.1

A limit sample should be provided by the both parties on an occasion when the both parties agreed its necessity. Judgment by a limit sample shall take effect after the limit sample has been established and confirmed by the both parties.

12.2

On the following occasions, the handing of problem should be decided through discussion and agreement between responsible of the both parties.

- When a question is arisen in this specification
- When a new problem is arisen which is not specified in this specifications
- When an inspection specifications change or operating condition change in customer is reported to LTK LCD , and some problem is arisen in this specification due to the change
- When a new problem is arisen at the customer's operating set for sample evaluation in the customer site.

13. Packing Method

TBD

LEADTEK DISPLAY

深圳市丽台电子有限公司

Shenzhen Leadtek Electronics Co.,Ltd

Quality inspection standards

品质允收标准

MODEL No. / 产品型号： **Applies 5.0~9.0 TFT-LCD Panel**
UPDATED DATE / 生效日期： **2022-05-20**
VERSION / 版 本： **A0**
Customer Signature/客户签字： _____

RECORD OF REVISION/修订履历：

Version 版本	Revision Record 修订内容	Compile 修订者	Date of Revision 修订日期
V0	首发/Starting	Green	2022.05.20

1.Scope 1适用范围

This document shall be applied to 5.0~9.0 TFT-LCD Panel.

本文件适用于5.0~9.0 TFT-LCD Panel.

2.Inspection and Environment onditions/检查条件与环境

2. 1 Inspection Conditions 检查条件:

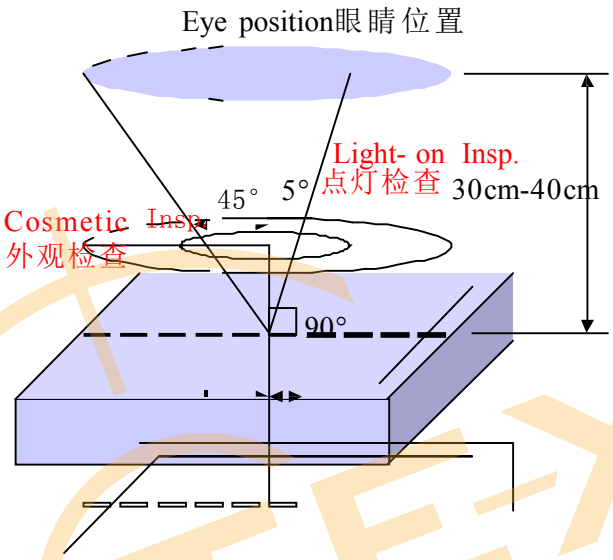
(1) Inspection Distance检测距离: 35 cm±5cm

(2) Each picture /每个画面：2~3 secs/秒，Cosmetic Inspection/外观10~12 secs/秒

(3) View Angle观看角度:

Light-on Inspection Angle点灯检验角度 ： ±45°

Cosmetic Inspection Angle外观检验角度 ： ±45°



(Perpendicular to LCD panel surface垂直于液晶显示表面)

2.2 Environment Conditions环境条件:

Ambient Temperature 温度		25℃±5℃
Ambient Humidity 湿度		55±5%RH
Ambient Illumination 亮度	Cosmetic Inspection 外观检验	800-1000 Lux
	Functional Inspection 点灯检验	200~300Lux

2.3 Sampling Conditions 抽样条件:

(1) Lot Size ： Quantity of shipment lot per model/.

批量：单次运送单一机型数量

(2) Sampling Method ：
抽样方法：

Sampling Plan 抽样计划		GB2828/2003
		Normal Inspection, Single Sampling 正常检验、单次抽样
		Geneal II Inspection 普通二级
AQL	Major Defect 主要缺点	0.25
	Minor Defect 次要缺点	0.65

(3) The classification of Major(MA) and Minor(MI) defects is shown as 3. Inspection Criteria.
主缺(MA)及次缺(MI)定义于"3.检查标准"

3.Terms and Definitions/术语和定义

3.1 Classification of defects缺陷的分类:

Major defects: A major defect is a defect that is likely to result in failure, or to reduce materially the usability of the product for its intended purpose.

主要缺陷：会导致产品功能失效或减少产品可用性的缺陷。

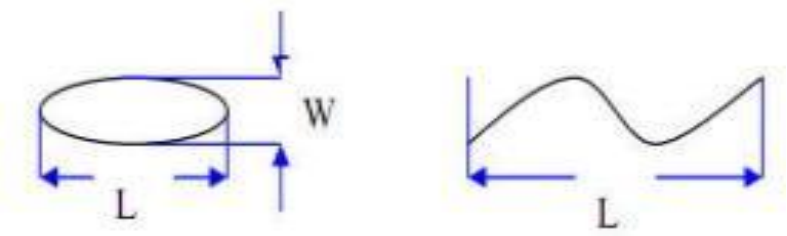
Minor defects: A minor defect either is a defect that is not likely to reduce materially the usability of the product for its intended purpose, or is a departure from an established having little bearing on the effective use or operation of the product.

次要缺陷：不会导致产品功能失效，不会减少产品的有效使用和操作。

3.2 Extraneous substances that can be wiped out ,like Finger point,Particles are not cnsidered as a defect . 可以被擦拭干净的表面物质不视为缺陷 (如手指印，尘粒) 。

3.3 Defects on the Black Matraix(outside ofActive Area) are not considered as a defect . BM 区域 (AA 区以外) 的缺陷不视为缺陷。

3.4 Size of circular defect,is defined by diameter"D" 。The defect average diameter D=1/2(W+L) 圆形缺陷的大小是由直径 D 定义的。缺陷的平均直径 D=1/2(W+L)



3.5 When defect size L≥2W,the defect count as liner type defect.Size of linear defect is defined by length(L) and the maximum width(W).

当缺陷尺寸 L≥2W 时，被视为线状缺陷。线状缺陷是由长度 (L) 和最大宽度 (W) 定义的。 3.6 3.6 Mura criteria :judged by ND filter6%,and can't be seen under at ND filter 6% .

3.6 MURA 判断标准：使用 ND6%判定，且透过 ND6% ，遮住不可见.

3.7 Dot defect is defind as the defective area of the dot is larger than 50% of the dot area and is visible through 6% ND filter

DOT 定义为点缺陷面积大于 50% DOT 面积, 且透过 ND6%遮住是可见的.

The drawing of 1/2 area sub-pixel definition: The 1/2 area sub-pixel can be defined as below one or more of specific shapes

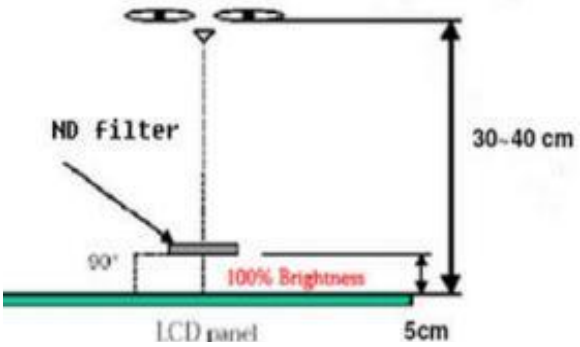
1/2 面积的子像素定义绘图：1 / 2 面积的子像素可以定义为如下一个或多个特定形状图：

3.8 A dot defect that is smaller than the defined dot defect will be treated as small bright dot. 细碎亮点：小于"DOT 定义"的点缺陷视为细碎亮点。

I 区与 O 区比例：1：2：1

3.9 Inspection method of ND Filter - holding ND filter in front of the panel around 5cm and examine the panel from 35±5 cm in the front view for 2~3 second.

ND 卡的检查方法：在面板上方大约 5CM 处握住 ND 卡，眼睛距离面板 30-40CM ，通过 2~3 秒观察。



4. Inspection Criteria 检验标准

4.1 Appearance Inspection specification 外观检查规格:

Judge area 区域	Judge item 项目	Specification inspection 检查规格	Judge criterion	
			Major	Minor
Silicone 硅胶	Silicone spread 硅胶涂布	The height can't over C/F , color filter , or gomu 高度不能过超 C/F		MI
	Silicone residue 硅胶残余	Can't cover polarizer, FPC …etc. 不能覆盖 POL, FPC 等		MI
LCD 玻璃	Wire(on Array) 线路	No damage 不能损伤	MA	
	Edge 边缘	No extended crack 不可有延伸性裂纹	MA	
PCBA Connector FPC/FFC	Appearance 外观	Scratch or damage result in copper expose is not allowed 划伤或损伤不允许导致出现露铜		MI
	Component 零件	No damage 不能损伤	MA	
	Connection status 连接状况	Need correct connection 需要正确连接	MA	
	Broken 破裂	Not allowable 不允许	MA	
	Folding sign 对位记号折叠	Not allowable 不允许	MA	
POL 偏光片	Scract on the polarizer 偏光片划伤	1.W≤0.07mm; L≤5mm, Ignore (忽略)		MI
		2.0.07mm<W≦0.15mm ; L≤5mm ; N≤4 ; DS≥10mm		
		3.0. 15mm＜W; 5mm＜ L , Not allowable不允许		

Judge area 区域	Judge item 项目	Specification inspection 检查规格	Judge criterion	
			Major	Minor
POL 偏光片	Dent on the polarizer 偏光片凹痕	1.D＜0. 20mm，Ignore（忽略）		MI
		2.0.20mm＜D≤0.40mm；N≤4；DS≥10mm		
		3.0.40mm＜D，Not allowable不允许		
	POL Linear bubble 线状气泡	1.W≤0.07mm；L≤5mm，Ignore（忽略）		MI
		2.0.07mm<W≦0.15mm ; L≤5mm ; N≤4 ; DS≥10mm		
		3.0. 15mm＜W；5mm＜ L，Not allowable不允许		
	POL dot bubble 点状气泡	1.D＜0. 20mm，Ignore（忽略）		MI
		2.0.20mm＜D≤0.40mm；N≤4；DS≥10mm		
		3.0.40mm＜D，Not allowable不允许		
	POL edge bubble 片边缘气泡	1. The display area is 1/2BM outside，Not allowable 显示区往外 1/2BM 区域内，不允许 2. The display area is outside the outer 1/2BM area，Not allowable 显示区往外1/2BM区域以外，不管控		MI

Judge area 区域	Judge item 项目	Specification inspection 检查规格	Judge criterion	
			Major	Minor
TP&CG	Foreign Material in spot shape 点状异物	1.D≤0.20mm；Ignored（忽略） 2.0.20mm＜D≤0.40mm；N≤4；DS≥10mm 3.D＞0.40mm；Not allowable不允许		MI
	Fisheye/bubbles 鱼眼/气泡	1.D≤0.20mm；Ignored（忽略） 2.0.20mm＜D≤0.40mm；N≤4；DS≥10mm 3.D＞0.40mm；Not allowable不允许		MI
	Scratches on the surface 表面划伤	1.W≤0.07mm；Ignored（忽略） 2.0.07mm<W≤0.15mm，L≤5mm；N≤4；DS≥10mm 3.W＞0.15mm，L＞5mm；Not allowable不允许		MI
	Collapse corner、Crash edge 崩角、崩边	Product front:/产品正面： collapse corners, collapsed edges are not allowed 崩角、崩边不允许； Product back/产品背面： X≤ 0.5 , Y≤0.5，Z≤1/2T；N≤4；DS≥10mm	MA	
	Printed fonts/LOGO 丝印/LOGO	Printed fonts/LOGO clarity、complete、content right 字体/LOGO丝印清晰、完整、内容正确		MI
	Broken 破损	Not allowable不允许	MA	
	Dirty surfaces 表面脏污	Dirt cannot be wiped， Not allowable 不可擦拭的脏污，不允许		MI
	IR hole IR孔	Black spots/黑点： W ≤0.15mm，N≤2，Not visible against a black background/黑色背景下不可见		MI
		IR hole Scratches： 1.W＜0.05mm，Ignored（忽略） （Dense points Not allowable 不允许密集）； 2.0.05mm＜W≤0.07mm；L≤2mm；N≤2； 3.W＞0.07mm，L＞2mm，Not allowable 不允许		MI

4.2 Electrical Inspection specification电性检查规格:

Item 项目	Judgment Criteria 判定标准	Judge criterion	
		Major	Minor
LCD Bright /Dark dot 玻璃亮点/暗点	1.D≦0. 20mm， Ignored（忽略），Not dense（不可密集） 2.0.20mm<D≦0.40mm ； N≦4 ； DS≥10mm 3.D＞0.40mm ，Not allowed/不允许		MI
Mura	Invisible through 6% ND filter，200~300Lux 透过ND6% 遮住 ， 目测不可见即为OK， 200~300Lux		MI
Small bright dot 细碎亮点	Not allowed if it can be observed through ND Filter6% 透过ND6%目测看得见，不允许		MI
ZBD Rate 玻璃亮点比率	90:10		MI
Light Leakage 漏光	Invisible through 6% ND filter，OK 透过ND6%遮住目测不可见即为OK If necessary,set up set up Limit Sample. 如果有必要，可制订限度样品		MI
Bubble in Cell (LC Bubble/Actice Area) CELL气泡 (AA区LCD气泡)	Eyes should not find it . 目视观察不可见，视为 OK	MA	

Item 项目	Judgment Criteria 判定标准	Judge criterion	
		Major	Minor
Foreign Material in spot shape 点状异物	1.D≦0.20mm， Ignored（忽略） 2.0.20mm<D≦0.40mm ； N≦4； DS≥10mm 3.D＞0.40mm ， Not allowable/不允许		MI
Foreign Material in line or spiral shape 线状异物	1.W≦0.07mm ， Ignored（忽略） 2. 0.07mm<W≦0.15mm ； L≤5mm ； N≦4 3.W＞0.15mm ； L＞5mm ， Not allowable/不允许		MI
White dot in back-light 白点	1.D≦0. 20mm，Ignored（忽略） 2.0.20mm<D≦0.40mm ； N≦4 ； DS≥10mm 3.D＞0.40mm ， Not allowed/不允许		MI
TP no touch 无触摸	Not allowable 不允许	MA	
Abnormal Disply 显示异常	Not Allowed 不允许	MA	
NO display 无显示	Not Allowed 不允许	MA	
Line Defect 缺线	Not Allowed 不允许	MA	
Angle of view error 视角错误	Not Allowed 不允许	MA	
Tect crostalk 不消失的残影	Not Allowed 不允许	MA	

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Texim Europe B.V. its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Texim”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Texim makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

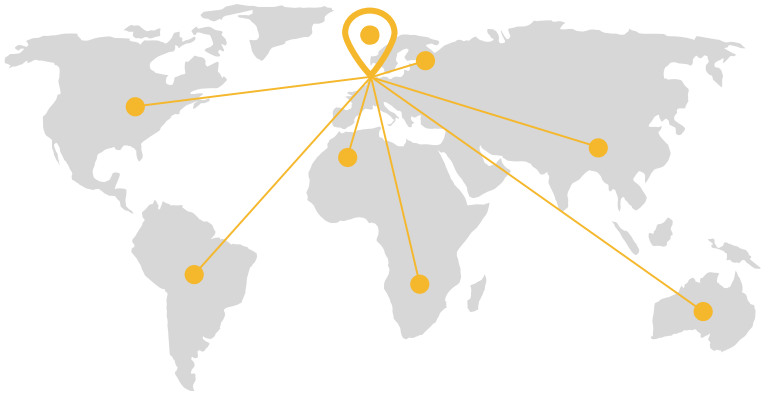
Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.

Texim Europe - contact details



Headquarters & Warehouse

Elektrostraat 17
NL-7483 PG Haaksbergen
The Netherlands

T: +31 (0)53 573 33 33
E: info@texim-europe.com
Homepage: www.texim-europe.com

The Netherlands

Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
E: nl@texim-europe.com

Belgium

Zuiderlaan 14, box 10
B-1731 Zellik

T: +32 (0)2 462 01 00
E: belgium@texim-europe.com

UK & Ireland

St Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
E: uk@texim-europe.com

Germany

Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
E: germany@texim-europe.com

Germany

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: muenchen@texim-europe.com

Austria

Warwitzstrasse 9
A-5020 Salzburg

T: +43 (0)662 216 026
E: austria@texim-europe.com

Nordic

Stockholmsgade 45
2100 Copenhagen

T: +45 88 20 26 30
E: nordic@texim-europe.com

Italy

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: italy@texim-europe.com