LCD / LCM SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

Represented by:

first FC components

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Winstar Display Co., LTD
華凌光電股份有限公司

SPECIFICATION

CUSTOMER : _____

MODULE NO.: TST0015R6B4111XXXX00

APPROVED BY:	
(FOR CUSTOMER USE ONLY)	PCB VERSION: DATA:

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2024/7/10		First issue

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MODLE NO：

RECORDS OF REVISION			DOC. FIRST ISSUE
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1.General Specification

1.1. Type: Capacitive touch panel

1.2. Input mode: finger

1.3. Structure and material:

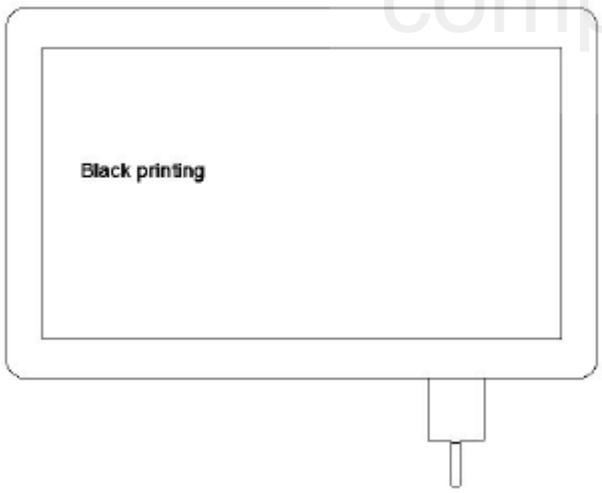
Structure	Material	Thickness	Remark
Cover lens	Soda lime	1.1mm	
OCA	COF	0.2mm	
Sensor	ITO glass	0.7mm	
D.S.T	VHB	1.2mm	

1.4. Dimension:

Item	Description	Unit
Outline dimension	393.8*245.9	mm
Active area	346.16*195.59	mm
View area	345.16*194.59	mm
Total thickness	2.0	mm
Length of FPC	72.07	mm

1.5. Appearance：

The final appearance of product should follow the drawing or sample confirmed by customer.



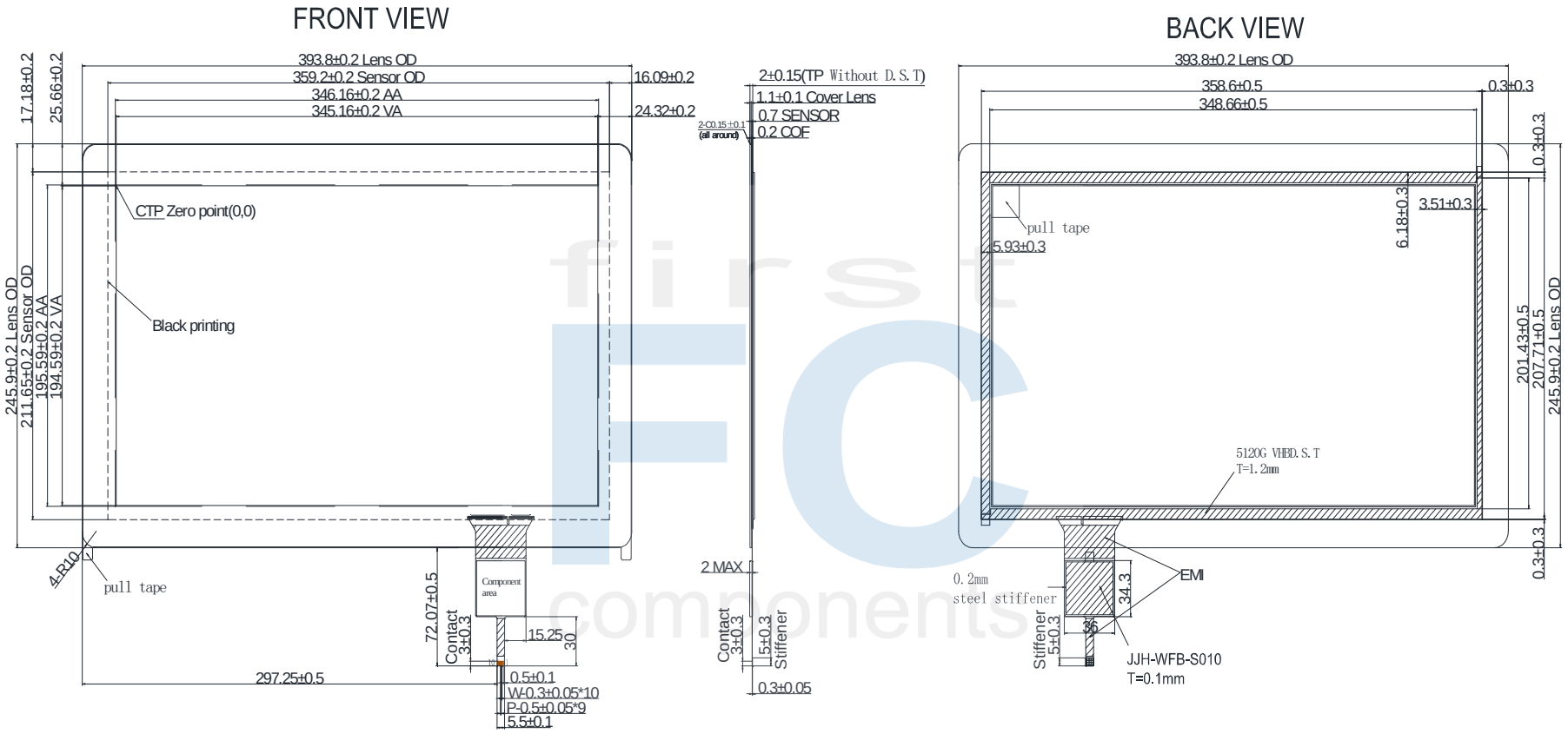
All specification should follow the confirmed drawing or sample

2.Electrical Characteristics

Item	Specification
IC model	ILI2511
Interface	IIC&USB
Supply voltage	IIC:3.3V(2.7~3.3V)，USB:5V(4.75~5.25V)
power waste	IIC：MAX.150mA，USB：MAX.150mA
Fingers supported	10 Fingers
FW	NTR-477-FW-V02
Test version	IIC:NTR-477-V02-TEST-IIC.ini USB:NTR-477-V02-TEST-USB.ini
Resolution	16384*16384
Firmware Version	0x06.0x00.0x00.0x00.0xFF.0xFF.0xFF.0xFF

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3.Contour Drawing



1. TOUCH PANEL PIN ASSIGNMENT

1	USB_VSS	6	SDA
2	USB_VDD 5V	7	SCL
3	USB_D+	8	RST
4	USB_D-	9	INT
5	VSS	10	VDDT 3.3

2.TOLERANCE NO SPECIFIED: ±0.2mm

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4.Other

4.1. Environmental characteristics:

Item	Specification
Operating Temp.	-30℃～85℃ (humidity≤90%RH No dew fall)
Storage Temp.	-40℃～90℃ (humidity≤90%RH No dew fall)

4.2. Optical characteristics:

Item	Specification	Remark
Light transmission	≥85%	

4.3. Reliability & Durability test

Reliability test

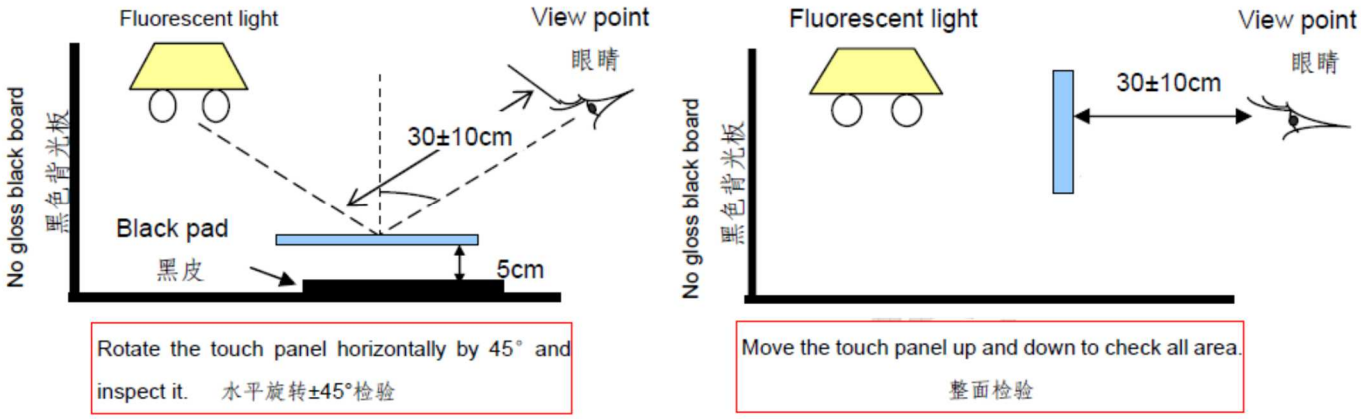
Item	Condition	Criteria
High temperature storage	90℃ for 240H	After the above test, the touch panel is to be exposed at room condition for 24H or more. Touch function is normal.
Low temperature storage	-40℃ for 240H	
High temperature &high humidity storage	60℃,90%RH for 240H	
Thermal shock	(-40℃ (0.5H) ～90℃ (0.5H)· 20 cycles)	

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4.4. Appearance specification

4.4.1 Condition of inspection

The inspection should be conducted at the fluorescent light(800-1200lux) ,and at a distance of around 30cm between TP and inspector's eye.

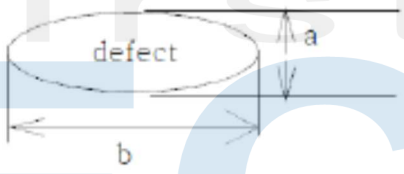


4.4.2 Area of inspection

Any defects that are not in view area should be ignored unless it affects electrical performance.

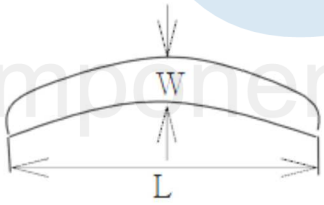
4.4.3 Defects description

1. Dot , D=(a+b)/2



[Fig.1] Dot Defect

2. Linear



[Fig.2] Line Defect

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4.4.4 Standards

1. Linear objects

Description	Criteria
W<0.1mm, L≤10mm	Ignore
0.1mm≤ W≤0.15mm,L≤10mm	3 or less , distance over 10mm, Ignore
W>0.15mm	NG

2. Scratch

Description	Criteria
W<0.1mm	Ignore
0.1mm≤ W≤0.15mm,L≤10mm	5 or less, distance over 10mm, Ignore
W>0.15mm;L>10mm	NG

3. Foreign particles

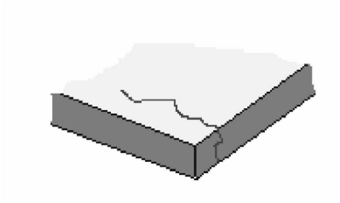
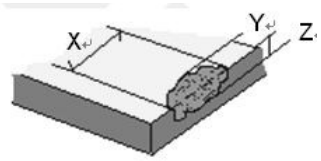
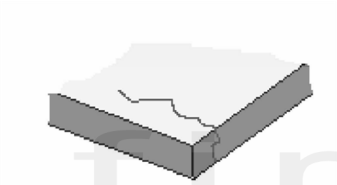
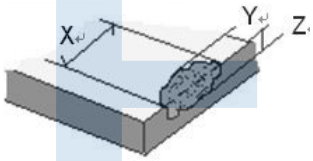
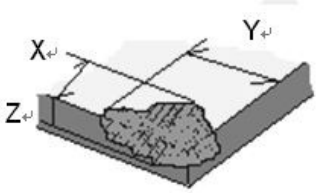
Description	Criteria
D≤0.2mm	Ignore
0.2mm≤ D≤0.4mm	5 or less, distance over 10mm, Ignore
0.4mm≤ D≤0.6mm	Allowed 1 dot
D>0.6mm	NG

4. Fisheye & dent

Description	Criteria
D≤0.2mm	Ignore
0.2mm≤ D≤0.6mm	5 or less, distance over 10mm, Ignore
D>0.6mm	NG

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5. Glass damage

Item	Description	Criteria
Cover glass	Edge damage 	(X≤1 · Y≤0.5 · Z≤1/2GT, Ignore)
	Edge damage 	(X≤1 · Y≤0.5 · Z≤1/2GT, Ignore ; X≤3 · Y≤0.5 · Z≤1/2GT · each edge N≤3)
	Crack 	NG
Sensor glass	Conner damage 	(X≤3 · Y≤3 · Z≤GT, Ignore)
	Edge damage 	(X≤3 · Y≤3 · Z≤GT, Ignore)
	Crack 	NG

6.Cover lens

Description	Criteria
Chromatics	According to the limited sample or standard colour
Icon & Script	According to the the confirmed drawing or limited sample
White/diachronic specks in the printing area	Script area: Ø<0.2mm, other area: Ø<0.4mm; 5 or less ,distance over 10mm, Ignore）
Lumps in the printing area	Script area: Ø<0.2mm,other area: Ø<0.4mm ; 5 or less ,distance over 10mm, Ignore

4.7. Cautions

4.7.1 Storage

*Store product in room condition. Avoid exposing product to direct sunlight or contact with acid, alkali or other types of solution.
*Do not pile or place heavy objects on top of product.
*Handle product with care. Avoid dropping, bumping or colliding.

4.7.2 Handling and cleaning

*Wear finger-cots and masks when handling product. Avoid direct contact with product surface in case of stains.
*Do not pull FPC in case of damage when handling product.
*Product can be cleaned with soft cloth. Soak cloth in a solution of neutral detergent or alcohol, wipe surface of the product with it.

4.7.3 Operating

Avoid operating with hard and sharp objects in case of damage to product.

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4.8. Warranty

4.8.1 Warranty Period

The warranty period is limited to 1 year from the date of shipping. The warranty for the initial defection such as appearance defection is limited to 3 months.

4.8.2 Warranty Target

Any defected parts under proper use will be examined by the supplier and replaced by the new parts if the defection is considered to be caused by the supplier.

The warranty only covers the product itself and does not cover any damage to others caused by using this product. Onsite repair or replacement is not supported.

4.8.3 Warranty Exceptions

Following conditions are not covered with the warranty.

Any malfunctions and damages during transportation and transfer by the user.

Any malfunctions and damages caused by a natural disaster or a fire.

Any malfunctions and damages caused by static electricity.

Any malfunctions and damages caused by the failure of the associated equipment.

If the product is remodeled, disassembled or repaired by the user.

If the product is glued onto the equipment and uninstalled.

Any malfunctions and damages caused by an improper usage and handling against the specifications and notes.

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