



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**



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## SPECIFICATION

**CUSTOMER :** \_\_\_\_\_

**MODULE NO.:** TST0005R0B4111XXXX00

<b>APPROVED BY:</b> ( FOR CUSTOMER USE ONLY )	<b>PCB VERSION:</b> _____ <b>DATA:</b> _____
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SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2015/10/09		First issue



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# **1.General Specification**

## **1.1. Construction:**

Construction	Materials	Comment
Cover Glass	Toughened glass	Thickness: 0.7mm±0.05mm
Optical clear adhesive	Adhesive	Thickness: 0.175mm±0.05mm
ITO Glass	ITO glass	Double side ITO glass; Thickness: 0.70mm±0.05mm

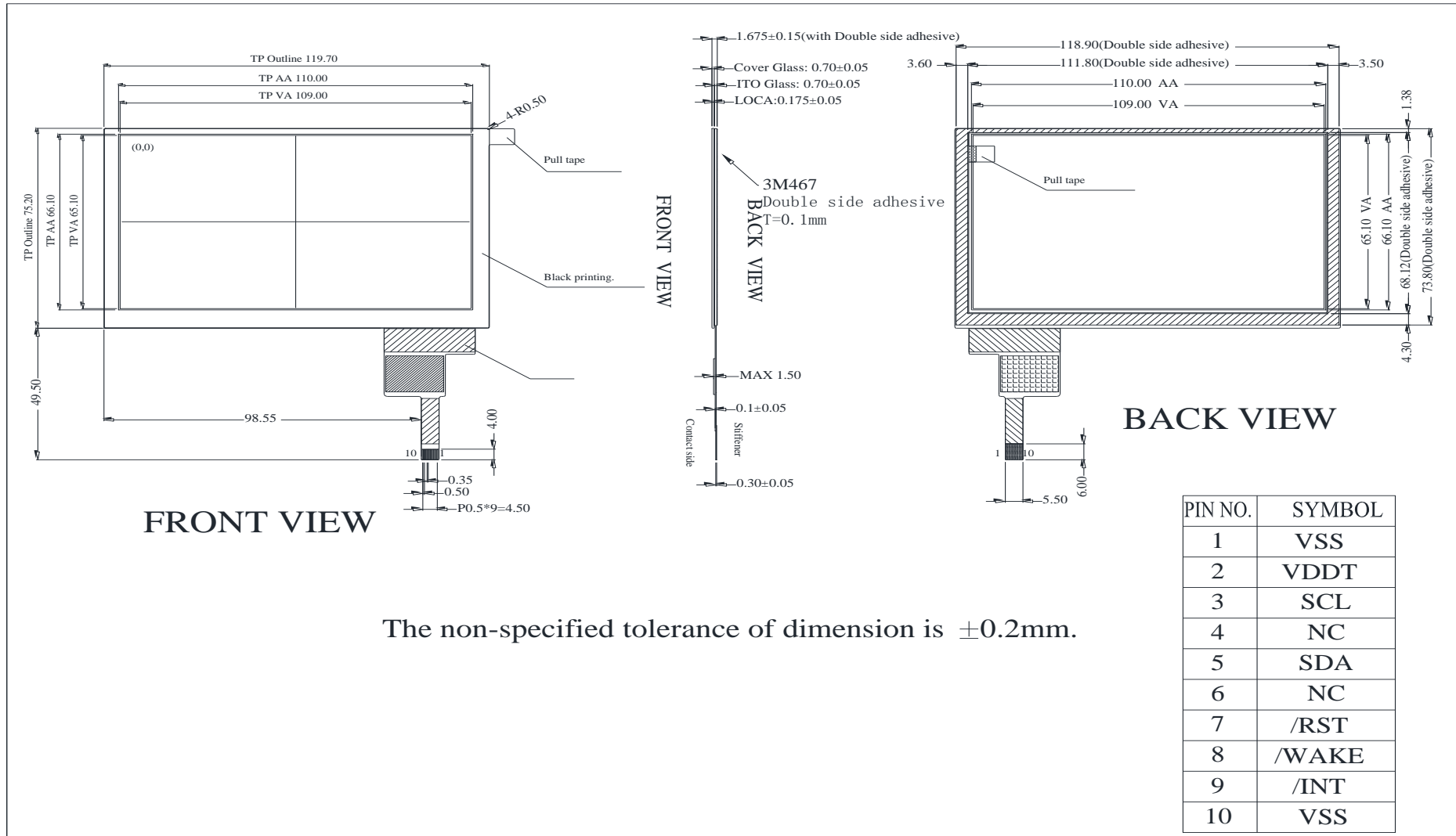
## **1.2. Mechanical characteristics:**

Item	Description	Unit
Touch Module Size	5.0	inch
Outer Dimension	119.7(W)*75.2(L)	mm
View Area	109(W)*65.1(L)	mm
Sensor Area	110(W)*66.1(L)	mm
Touch Module trace number(Tx*Ty)	16*10	
Resolution	1280*800	
Input Type	I2C	
Control Type	FT5216GM7	

## **2.Interface Pin Function**

<b>NO.</b>	<b>Pin Name</b>
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	RST
8	WAKE
9	INT
10	VSS

# 3. Contour Drawing



## 4. Other

### 4.1. Environment Conditions:

Items	Value
Operating temperature & Humidity	-20°C ~+70°C
Storage temperature & Humidity	-30°C ~+80°C

### 4.2. Optical characteristics:

Items	Value
Optical characteristics	Transparency $\geq$ 83%
Hardness	$\geq$ 7H

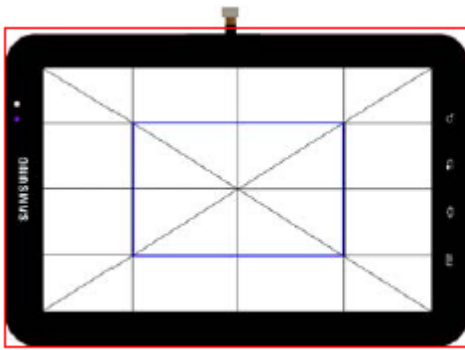
### 4.3. Reliability Test Condition:

No.	Item	Condition	Criterion
1	High Temp. Storage Test	+80°C, 240hours	1. Judge on room temp static 24H No function defect after test. 2. Reliability test may cause the film slightly puffed yet the function stays intact.
2	Low Temp. Storage Test	-30°C, 240hours	
3	High Temp. High Humidity Storage Test	+60°C, 90%RH, 96hours	
4	Thermal Shock Test	[-30°C(0.5Hr)~80°C(0.5Hr)] for a total 10cycle (non-operating)	
5	ESD Test Non-Operating	Air mode: $\pm$ 8KV Contact mode: $\pm$ 6KV	
6	Ball Drop Test	130g steel ball, height: 20cm, drop one time, center point.	
			No Breakage



#### 4.4. Appearance limit standard:

Scope

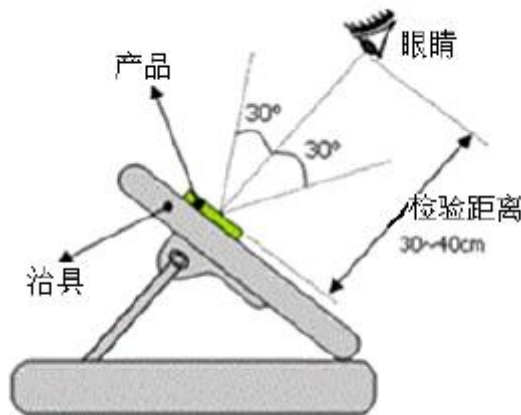


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**Zone definition: That is screen and visible area**

Inspection conditions

- 1) The qualifications of inspectors: good eyesight (over 0.8)
- 2) Test environment: 22±3°C
- 3) Lighting: 30W tri-band light
- 4) Light intensity: 700 ~ 1000Lux;
- 5) Inspection distance and angle: the background of Inspection should be black and white ,and the Products and horizontal platform at a 45 degree angle , the distance between the eyes and the product should be 35 ± 5cm, vertical up and down, left and right turn + / -30 ° angle to test;
- 6) Test mode icon



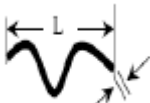





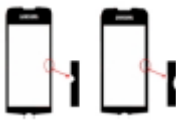
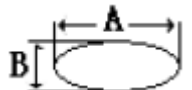


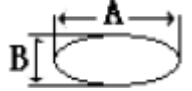

#### 4.5. Inspection attention:

- 1) the Inspection personnel must wear gloves or finger cots, wrist strap, gloves / finger cots replaced once every 2 Hours
- 2) when the Inspectors to take material inspection, hands lifts the products of the edge carefully, and fingers can not touch product visualization area
- 3) The inspector's eyes should continue to see the complex rather than specific peg certain point of view, seized a product of no more than 10S

#### 4.6. Inspection items and criteria:

- 1) Letters represent mean:  $\Phi$  diameter, W width, L the length, N number, DS pitch, T thickness, unit: mm
- 2) Area A standard decision

Item	Size	Example	Criterion
Dot、 Spot	Size: $\Phi=(A+B)/2$ 		$\Phi \leq 0.2\text{mm}$ 、(Ignore)
			$0.2\text{mm} < \Phi \leq 0.25\text{mm}$ , $N \leq 3$ , $DS > 10\text{mm}$
			$\Phi > 0.25\text{mm}$ ,(NG)
Scratch、 Line、 Spot			$W \leq 0.01$ (Ignore)
			$0.01 < W < 0.05$ 、 $L \leq 5$ , $N \leq 4$

			$W > 0.05$ (NG)
Fish eye、Dent	Size: $\Phi = (A+B)/2$	N/A	$\Phi \leq 0.3\text{mm}$ , (Ignore)
			$\Phi > 0.3$ (NG)
Chipping	Size		$X \leq 2\text{mm}$ , $Y \leq 2\text{mm}$ , $Z \leq 1/2t$
Edge Pinhole	Size: $\Phi = (A+B)/2$ 		$D \leq 0.2\text{mm}$ , (Ignore)
Edge non printing	Size: $\Phi = (A+B)/2$ 		$\Phi \leq 0.3$ After the assembly does not affect the appearance
CG	N/A		(NG)
Bubble	Size: $\Phi = (A+B) / 2$  N/A		$\Phi \leq 0.2$ (Ignore)
			$0.2 < \Phi \leq 0.3, N \leq 3$
			$0.3 < \Phi \leq 0.5$ , $N \leq 1$
			$\Phi > 0.5$ (NG))

Remark : The dirty attach to T/P surface can be wiped out, is considered as a qualified product.

#### 4.7. Package & Transportation:

##### 1) Package

Use cardboard box to package, inside of box using blister tray.

##### 2) Transportation

Can not transport the product under the environment that may destroy the quality of product, such as, high humidity, extraordinarily high or low temperature.

#### 4.8. Precautions for use:

##### 1) Cautions for storage

Store the product at the temperature and humidity mentioned in the specification in a state of package with care not to expose the products to the direct sunlight or stresses.

##### 2) Cautions for unpacking

Check in the vertical direction before unpacking.

##### 3) Cautions for handling

1. Transparency is an important factor for the transparent touch panel. So, please wear clean finger sacks, gloves and mask to protect the products from fingerprint or stain, and also hold the portions other than the view area when handling.

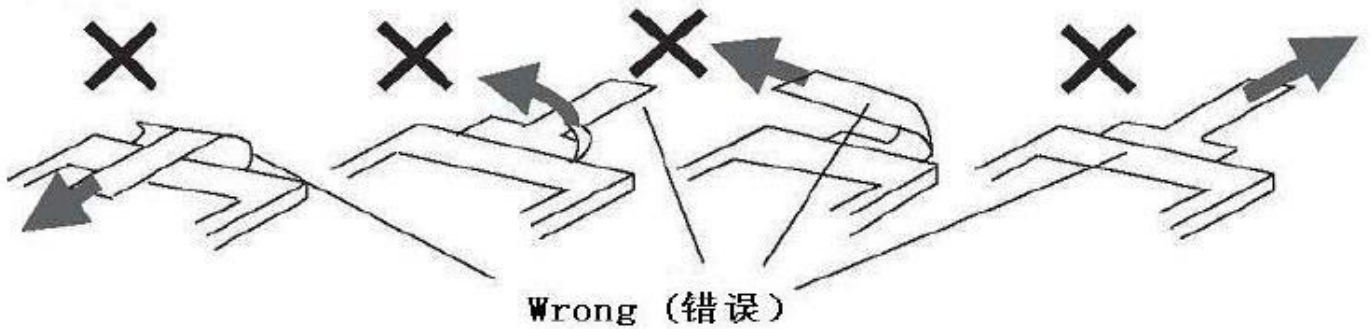
2. The glass edges are not chamfered. So, use finger sacks or gloves to protect from injury by sharp edges when handling the products.

##### 4) Cautions for installing and assembling

1. Do not give excessive strain to the transparent touch panel.

2. Do not apply excessive forces to the Flexible pattern.

3. In order not to apply load on the display, provide a clearance of at least 0.3mm between touch panel and display.



4. The transparent touch panel is provided with an air groove. Therefore please design surrounding structure not to store any liquid nor any fine particles.

5. Wipe off the stain on the transparent touch panel by using soft cloth moistened with ethanol. Take care not to allow ethanol to soak into the joint of upper Film and bottom glass. It may otherwise cause peeling or defective operation. Do not use any organic solvent or detergent other than ethanol.

5) Cautions for operation

1. Operate it with a polyacetal pen (tip R0.8 or over ) or the finger without applying excessive load.

2. The input position may be fluctuated a little through long-time use. It is desirable to provide an zero-adjustment function by using a circuit and software.

3. Do not stack and place touch screen.

#### 4.9. Others:

1) Any question about this standard should discuss each other and answer it.

2) Any change of this standard should be approved by both parties. It can not be changed if not approved.

3) If having difference between general standard and specific standard, we adopt specific standard.

4) Providing one year warranty under the operation condition meet the standard procedure and electrical properties.