



RAYSTAR

曜凌光電股份有限公司

住址: 42878 台中市大雅区科雅路 25 號 5F WEB: <http://www.Raystar-Optronics.com>
5F., No.25, Keya Rd., Daya Dist., Taichung E-mail: sales@raystar-optronics.com
City 428, Taiwan Tel:886-4-2565-0761 Fax : 886-4-2565-0760

TST0007R0G4111XXX00

SPECIFICATION

CUSTOMER:

APPROVED BY	
PCB VERSION	
DATE	

FOR CUSTOMER USE ONLY

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

Release DATE:

Revision History

VERSION	DATE	REVISED PAGE NO.	Note
0	2016/10/09		First issue

RAYSTAR OPTRONICS

Contents

- 1.General Specification
- 2.Interface Pin Function
- 3.Contour Drawing
- 4.Other

RAYSTAR OPTRONICS

1. General Specification

1.1. Scope :

The purpose of this specification is to define the general provisions and quality requirements that apply to the supply of capacitive-type multi-touch function TOUCH SENSOR MODULE. This document, together with the Module Assembly Drawing, is the highest-level specification for this product. It describes the product, identifies supporting documents and contains specifications.

1.2. Function :

TOUCH SENSOR MODULE is a capacitive-type that customer uses to compliance with flat panel display like TFT-LCD. Once user touches it by FINGER, the circuitry for this TOUCH SENSOR indicates coordinates point at the contact point.

1.3. Construction :

Construction	Materials	Comment
Cover Glass	Toughened	Thickness: 0.7 mm±0.05 mm
Optically clear adhesive OCA/LOCA	Adhesive	Thickness =0.175mm±0.05 mm
ITO Glass	ITO glass	Double side ITO glass ;Thickness:0.7 mm±0.05 mm

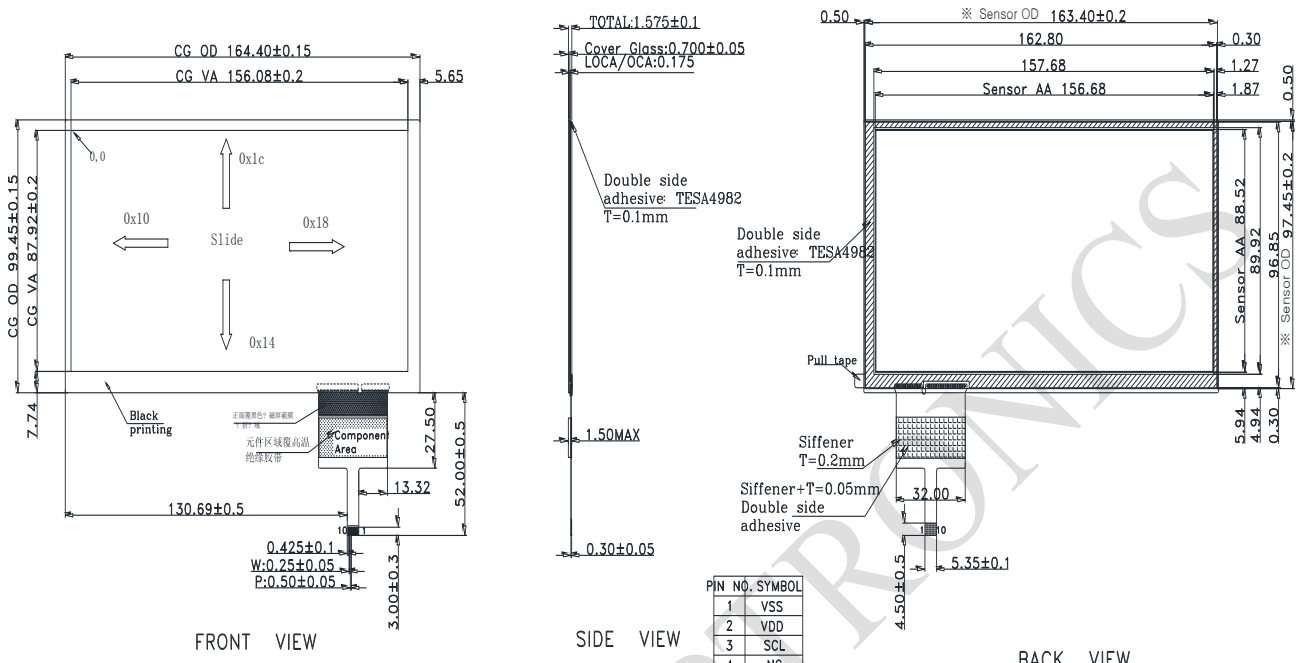
1.4. Mechanical characteristics:

Item	Description	Unit
Touch module size	7.0	inch
Outline dimension	164.4(W) X99.45(L)	mm
View Area	156.08(W) X87.92(L)	mm
Sensor area	156.68(W) X88.52(L)	mm
Touch Module trace number(Tx*Ty)	20*12	
Resolution	1792*1024	
Input type	I2C	
Control type	FT5306	

2.Interface Pin Function

PIN No	Symbol	Function
1	VSS	Ground for analog circuit
2	VDD	Power Supply : +3.0V
3	SCL	I2C clock input
4	NC	No connect
5	SDA	I2C data input and output
6	NC	No connect
7	RST	External Reset, Low is active
8	WAKE	External interrupt from the host
9	INT	External interrupt to the host
10	VSS	Ground for analog circuit

3. Contour Drawing



PIN NO.	SYMBOL
1	VSS
2	VDD
3	SCL
4	NC
5	SDA
6	NC
7	/RST
8	/WAKE
9	/INT
10	VSS

4. Other

4.1. Environment Conditions:

Item	Value
Operating temperature & humidity	-20°C ~+70°C
Storage temperature & humidity	-30°C ~+80°C

4.2. Optical Characteristics:

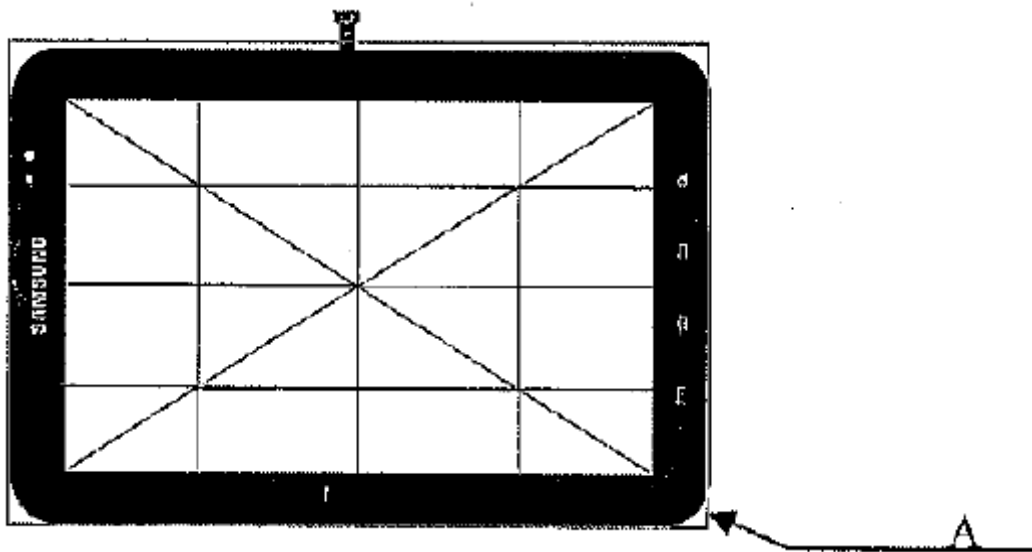
Item	Value
Optical characteristics	Transparency≥83%
Hardness	≥7H

4.3. Reliability Test Condition

NO.	Item	Condition	Remark
1	High temp. Storage Test	+80°C, 240 hours	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, 240 hours	
3	High temp. high humidity Storage test	+60°C, 90%RH, 240 hours	
4	Thermal shock test	-30°C←(15min)→80°C, 50 cycles	
5	ESD Test non-operating	Air mode: ±8KV Contact mode: ±4KV	
6	Ball drop test	130g steel ball, height: 20cm, drop one time, center point.	No breakage

4.4. Appearance limit standard

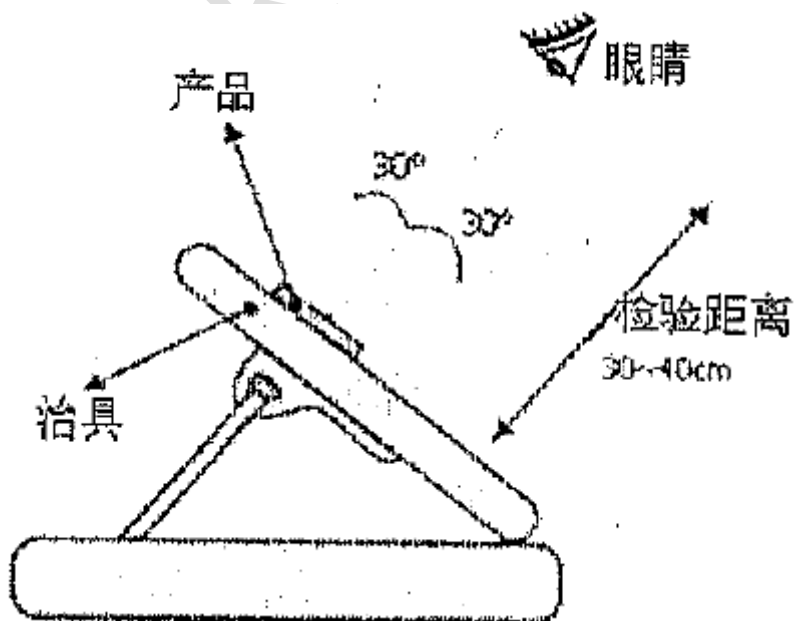
Scope:



Zone definition: That is screen and visible area

Inspection conditions:

- 1) The qualifications of inspectors: good eyesight (over 0.8)
- 2) Test environment: $22\pm 3^{\circ}\text{C}$
- 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 $35\pm 5\text{cm}$, vertical up and down, left and right turn $\pm 30^{\circ}$ angle to test.
- 6) Test mode icon:



Inspection attention:

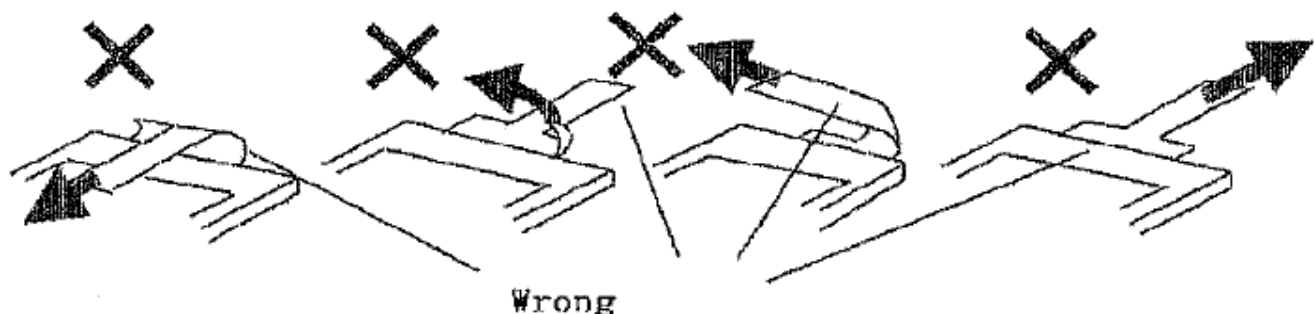
- 1) The inspection personnel must wear gloves or finger cots, wrist strap, gloves/finger cots replaced once every 2 Hours
- 2) When the inspectors to take material inspection, hands lifts the products of the edge carefully, and fingers can not touch product visualization area
- 3) The inspector's eyes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

Package & Transportation:

- 1) Package
Use cardboard box package, inside of box using paper box.
- 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.

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 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.

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.