TOP-TOUCH ELECTRONICS CO., LTD

Sample Approval

Supplier Name: Top-Touch Electronics Co., Ltd

Supplier Address: Shenyue Industry Zone, Li guang Village, Guan lan Town, Bao'an District, Shenzhen, China

Part Number: TTW4070049---(T8710FG)

Description: 4 Wires Resistive Type

Top-Touch Approve:

Engineering	Technology	QA	Sales	Approve	Remark

Customer Approve:

Engineering	QA	Project Management	Other

TOP-TOUCH ELECTRONICS CO., LTD

4 Wires Touch Panel
Product Specification

Structure : PET---------- Glare hard coating & Anti-Newton Ring
Glass----------Chemically strengthened ITO glass1.1mm
Dot Pitch--------2.5mm×2.5mm
Connector: FPC(4-Pin)

General Specifications:

Item	Specifications	Unit
Dimensional Outline	168.40±0.2(L) ×105.40±0.2(W)	mm
Viewing Area	157.00(L)×93.40(W)	mm
Active Area	154.90(L) ×91.90(W)	mm

	Touch Panel Specification	Issue No.	
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AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

1. Suitability

This specification suit analog resistance touch panel. Which used in LCD module.

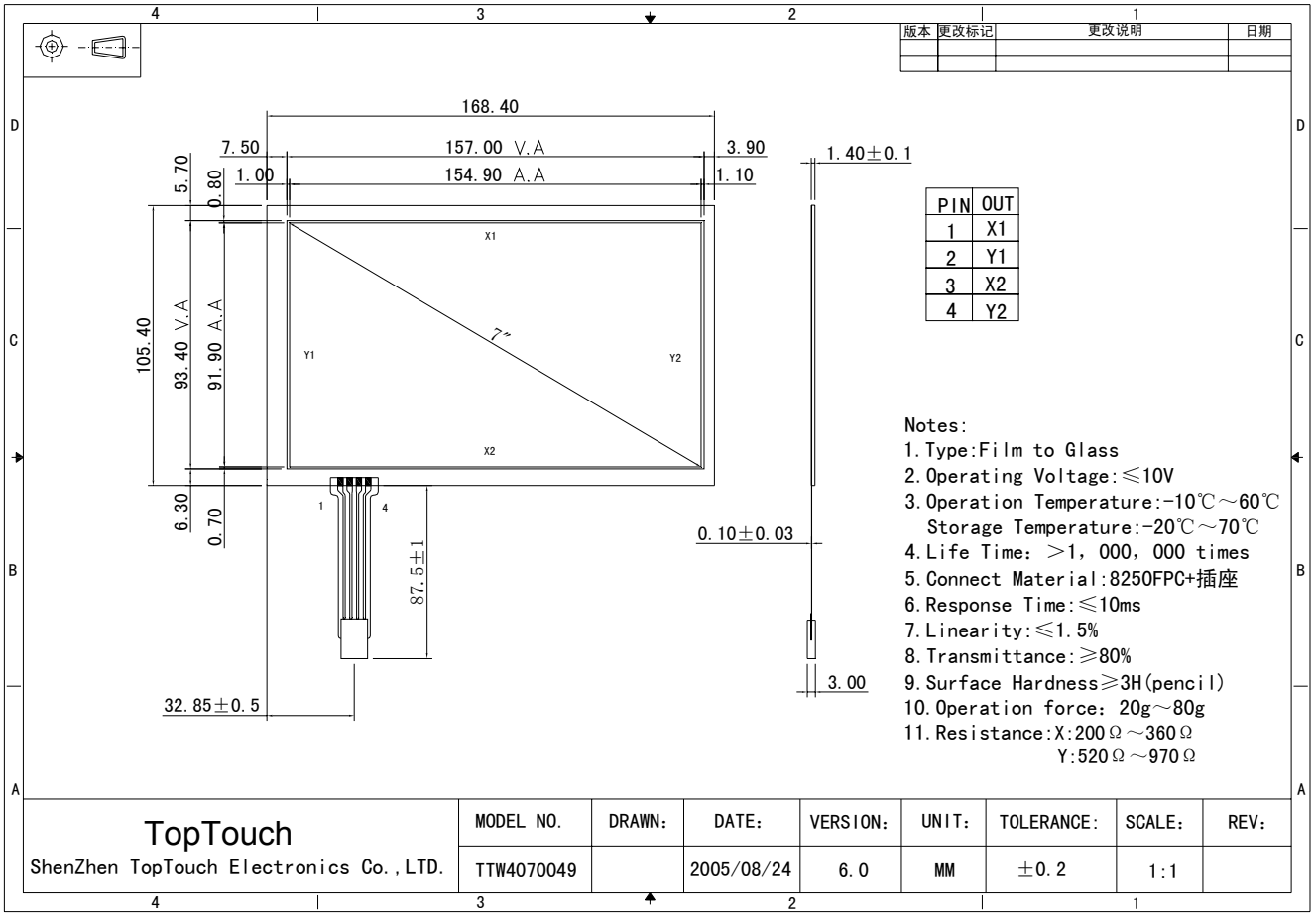
2. Apply To Specification

2.1 Surface Hardness: 3H
2.2 Optical Clarity: 80 %↑
2.3 Operating Temperature: -10℃ ~ 60℃
2.4 Endurance Test strikes: Over 1 million
2.5 Operating Voltage: DC5V
2.6 Resistance: 200Ω ~ 900Ω
2.7 Linearity : <1.5%
2.8 Faceplate Surface: Anti-glare coating
2.9 Operation Pressure: 15 ~ 70g
2.10 Storage Temperature: - 20℃ ~ 70℃
2.11 Message Noise: 5 m sec ~ 15 m sec
2.12 Operating Current: 5mA ~ 25mA
2.13 Isolation Resistance: 20MΩ↑ @ DC 25V

3. Dimension Size

Refer diagram I

DWG No. TTW4070049	



TopTouch ShenZhen TopTouch Electronics Co.,LTD.	MODEL NO.	DRAWN:	DATE:	VERSION:	UNIT:	TOLERANCE:	SCALE:	REV:
	TTW4070049		2005/08/24	6.0	MM	±0.2	1:1	

Model No.				TOP -TOUCH ELECTRONICS CO.LTD	Unit: mm	DATE:	
						Amend Date:	

4. Optical Performance

Light transparency should keep above 80%↑ under the visible wave when the wave length is 550mm.

5. Electrical Performance

5.1 Connector Resistance

300Ω< X Axis <900Ω

200Ω< Y Axis <800Ω

5.2 Insulation Resistance

20MΩ↑ @ DC 25V

5.3 Electrostatic Endurance

No abnormal appearance after 10kv, 100Ω, 250PF electrostatic used.

5.4 Linearity

X Axis : 1.5% ↓

Y Axis : 1.5% ↓

5.5 Operating Voltage

3V ~ 12V DC

5.6 Operating Current

5mA ~ 25mA。

6. Environment Test

6.1 High Temperature Test

After putting panels at 70℃ for 240 hours, then leaving for 24 hours at room temperature.

A. Resistance between leads

300Ω< X Axis <900Ω

200Ω< Y Axis <800Ω

B. Linearity

X Axis : ±1.5%↓

Y Axis : ±1.5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.2 Low Temperature Test

After putting panels at -20℃ for 240 hours, then leaving for 24 hours at room temperature.

A. Resistance between leads

300Ω< X Axis <900Ω

200Ω< Y Axis <800Ω

B. Linearity

X Axis : ±1.5%↓

Y Axis : ±1.5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.3 Temperature and Humidity Test

After putting panels at 40℃,90%RH for 240 hours, then leaving for 24 hours at room temperature.

A. Resistance between leads

300Ω< X Axis <900Ω

250Ω< Y Axis <800Ω

B. Linearity

X Axis : ±1.5%↓

Y Axis : ±1.5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.4 Repetition of High and Low Temperature and Test

After putting panels at the condition of -20℃ for 30 minutes and then 70℃85%RH for 30 minutes and this process is repeated by 20 cycles , then leaving for 24 hours at room temperature.

A. Resistance between leads

300Ω< X Axis <900Ω

200Ω< Y Axis <800Ω

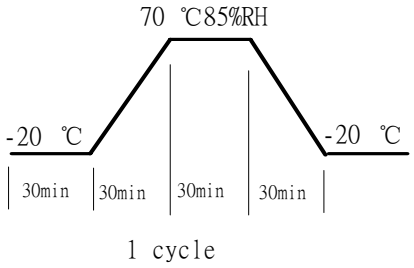
B. Linearity

X Axis : ±1.5%↓

Y Axis : ±1.5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V



6.5 Punching Life

After punching 1,000,000 times with the R8.0 silicon rubber Force：60g，Speed：5/sec

A. Resistance between leads

300Ω< X Axis <900Ω

200Ω< Y Axis <800Ω

B. Linearity

X Axis : ±1.5%↓

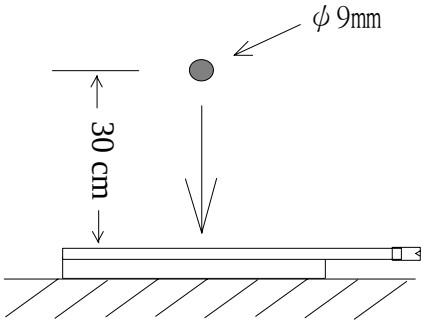
Y Axis : ±1.5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.6 Impact Resistance

No damage when ψ9mm steel ball is dropped on the surface from 30cm height at 1 time.



7. Appearance

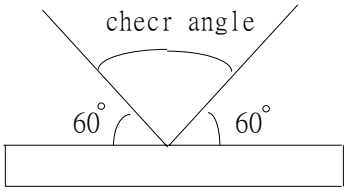
7.1 Inspection condition

(A).The lightness of place: 500 LUX

(B)The distance of eyeshot:30 CM(The panel must be checked under the light transparency condition.)

(C)The angle of eyeshot: >60°

(D)The light source of place : natural sunlight.



7.2 Inspection Standard

Suitable in the visible area. Except dot space.

1.Spot, otherness	∮ ≦0.15mm	Ignorance
	0.15mm≦ ∮ ≦0.25mm	≦2
	∮ >0.25mm	NG
2. Scratch	w≦0.05mm and L≦2.0mm	Ignorance
	w≦0.05mm 2.0mm＜L≦4.0mm	2 or less ＆distance＞5mm
	W>0.05mm or L > 4.0mm	NG
3.Cicatrices (Line) L: Length W: Width	W≦0.03mm	Ignorance
	L≦4mm＆ 0.03mm≦W≦0.05mm	≦2 2 line distance≦10mm
	W＞0.05mm	NG
4. Edge warp	Edge warp≦3mm	allowable
	Edge warp≦2mm	allowable

7.3 Quality inspection standard:

Adapt to AQL MIL-STD-105D

Samples inspection QTY: according to AQL MIL-STD-105D(Charter I)

Inspection Base: according to AQL MIL-STD-105D(Charter II)

Broken seriously(otherness, scrape)0.01% --- Cr (Critical Defect)

Obvious(otherness, scrape)0.65% ---------- Ma(Major Defect)

Not obvious(otherness, scrape)2.5% ---------- Mi(Minor Defect)

8.Packing Detail

8.1 Packing:

Can't have otherness on panel. Pack with EPE material.

8.2 Delivery:

For Avoiding the badly affect to the product quality, shouldn't delivery in the situation of high humidity and unusually high or low temperature

9.Others

(1) If there is any question in specification , the decision depends on conferment between manufacturer and customer.

(2) If there is any change in specification , can't actualize without document permit.

(3) The specification content is different from the individual specification one, decision bases on the latter.