



TOP-TOUCH ELECTRONICS CO., LTD

Sample Approval

Supplier Name: Top-Touch Electronics Co., Ltd

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

Part Number: TTW5151009--- (T5070FG)

Description: 5 Wires Resistive Type

Top-Touch Approve:

Engineering	Technology	QA	Sales	Approve	Remark

Customer Approve:

Engineering	QA	Project Management	Other

5 Wires Touch Panel Product Specification

Structure : PET-----Glare hard coating & Anti-Newton Ring
Glass----- ITO glass1.8 mm
Dot Pitch-----5.0mm×5.0mm
Connector: FPC(5-Pin)

General Specifications:

Item	Specifications	Unit
Dimensional Outline	322.00±0.3(L) ×247.00±0.3(W)	mm
Viewing Area	308.50(L)×235.00 (W)	mm
Active Area	303.00(L) ×228.00(W)	mm

		Touch Panel Specification	Issue No.		
SET	Index		Page	1	
	1. Index	. . . . .	01		
	2. Apply To Specification	. . . . .	02		
	3. Dimension	. . . . .	03		
	4. Optical Performance	. . . . .	04		
	5. Electrical Performance	. . . . .	04		
	6. Trust Test	. . . . .	05	06	
	7. Appearance Inspection Standard	. . . . .	07		
	8. Packing & Others	. . . . .	08		
AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

	Touch Panel Specification	Issue No.			
SET	Apply To Specification	Page	2		
<p>1. Suitability This specification suit analog resistance touch panel.</p> <p>2. Apply To Specification</p> <p>2.1.Surface Hardness: 3H</p> <p>2.2. Optical Clarity: 80 %↑</p> <p>2.3 Operating Temperature: -10°C ~ 60°C</p> <p>2.4 Endurance Test strikes: Over 10 million</p> <p>2.5 Operating Voltage: DC5V</p> <p>2.6 Resistance: 30Ω ~ 300Ω</p> <p>2.7 Linearity: < 5%</p> <p>2.8 Faceplate Surface : Anti-glare coating</p> <p>2.9 Operation Pressure : 15 ~ 70g</p> <p>2.10 Storage Temperature: -20°C ~ 70°C</p> <p>2.11 Message Noise: 5 m sec ~ 15 m sec</p> <p>2.12 Operating Current: 5mA ~ 25mA</p> <p>2.13 Isolation Resistance: 20MΩ↑ @DC25V</p> <p>3. Dimension Size Refer diagram I</p>					
AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

	Touch Panel Specification	Issue No.			
SET	Optical & Electrical	Page	4		
<p>4. Optical Performance Light transparency should keep above 80%↑ under the visible wave when the wave length is 550nm.</p> <p>5. Electrical Performance</p> <p>5.1 Connector Resistance 30Ω < X Axis < 300Ω 30Ω < Y Axis < 300Ω</p> <p>5.2 Insulation Resistance 20MΩ↑ @ DC 25V</p> <p>5.3 Electrostatic Endurance No abnormal appearance after 10kv, 100Ω, 250PF electrostatic used.</p> <p>5.4 Linearity X Axis: 5% ↓ Y Axis: 5% ↓</p> <p>5.5 Operating Voltage 3V ~ 12V DC</p> <p>5.6 Operating Current 5mA ~ 25mA °</p>					
AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

	Touch Panel Specification	Issue No.	
SET	Reliability Test	Page	5

6. Environment Test

6.1 High Temperature Test

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

A. Resistance between leads

30Ω < X Axis < 300Ω

30Ω < Y Axis < 300Ω

B. Linearity

X Axis : ±5%↓

Y Axis : ±5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.2 Low Temperature Test

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

A. Resistance between leads

30Ω < X Axis < 300Ω

30Ω < Y Axis < 300Ω

B. Linearity

X Axis : ±5%↓

Y Axis : ±5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.3 Temperature and Humidity Test

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

A. Resistance between leads

30Ω < X Axis < 300Ω

30Ω < Y Axis < 300Ω

B. Linearity

X Axis : ±5%↓

Y Axis : ±5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

	Touch Panel Specification	Issue No.	
SET	Reliability Test	Page	6

6.4 Repetition of High and Low Temperature and Test

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

A. Resistance between leads

30Ω < X Axis < 300Ω

30Ω < Y Axis < 300Ω

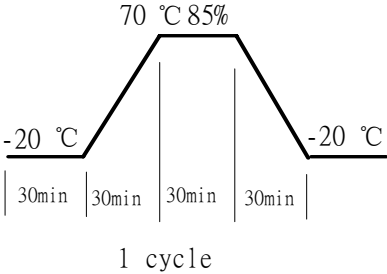
B. Linearity

X Axis : ±5%↓

Y Axis : ±5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V



6.5 Punching Life

After punching 10,000,000 times with the R8.0 silicon rubber Force : 60g , Speed : 5/sec

A. Resistance between leads

30Ω < X Axis < 300Ω

30Ω < Y Axis < 300Ω

B. Linearity

X Axis : ±5%↓

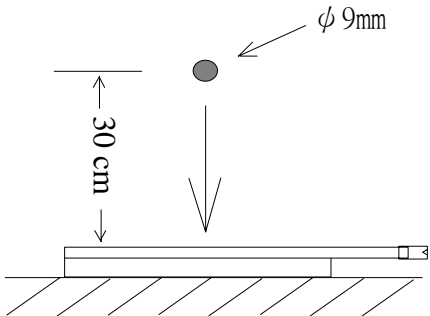
Y Axis : ±5%↓

C. Insulation Resistance

20MΩ↑ @ DC25V

6.6 Impact Resistance

No damage when φ9mm steel ball is dropped on the surface from 30cm height at 1 time.

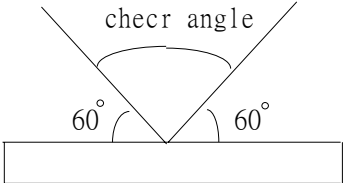


AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

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	$\phi \cong 0.15\text{mm}$	Ignorance
	$0.15\text{mm} \cong \phi \cong 0.25\text{mm}$	$\cong 2$
	$\phi > 0.25\text{mm}$	NG
2. Scratch	$w \cong 0.05\text{mm}$ and $L \cong 2.0\text{mm}$	Ignorance
	$w \cong 0.05\text{mm}$ $2.0\text{mm} < L \cong 4.0\text{mm}$	2 or less & distance > 5mm
	$W > 0.05\text{mm}$ or $L > 4.0\text{mm}$	NG
3.Cicatrices (Line) L: Length W: Width	$W \cong 0.03\text{mm}$	Ignorance
	$L \cong 4\text{mm}$ & $0.03\text{mm} \cong W \cong 0.05\text{mm}$	$\cong 2$ 2 line distance $\cong 10\text{mm}$
	$W > 0.05\text{mm}$	NG
4. Edge warp	Edge warp $\cong 3\text{mm}$	allowable
	Edge warp $\cong 2\text{mm}$	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)

AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					

	Touch Panel Specification		Issue No.		
SET	Packing & Others		Page	8	
<p>8.Packing Detail</p> <p>8.1 Packing: Can't have otherness on panel. Pack with EPE material.</p> <p>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</p> <p>9.Others</p> <p>(1) If there is any question in specification , the decision depends on conferment between manufacturer and customer.</p> <p>(2) If there is any change in specification , can't actualize without document permit.</p> <p>(3) The specification content is different from the individual specification one, decision bases on the latter.</p>					
AMEND NO		TOP-TOUCH ELECTRONICS CO., LTD	APPROVAL BY	CHECK BY	PREPARE BY
AMEND DATE					
PUBLISH DATE					