



Product Specifications

Capacitive Analog Touch Panel

TC5-12124205

Product Version: V1.2



RoHS Compliance

Issue Date: Oct-02-2008

Document Version: 1.0



1. General Specification:

Item		Specification
(1)	Type	Five-Wire Analog Capacitive
(2)	Size	12.1"
(3)	Input Mode	Finger
(4)	Cable	FFC
(5)	Total Thickness	2.40±0.30 mm
(6)	Frame Size	272.87±0.50 X 206.34±0.50 mm
(8)	View Area	251.67±0.50 X 190.20±0.50 mm
(9)	Active Area	248.87±0.30 X 187.40±0.30 mm
(10)	Tail Length	205.00±6.00 mm

2.1 Environmental Characteristics:

Item		Operation	Storage
(1)	Temperature	-20°C ~ +70°C	-40°C ~ +85°C
(2)	Humidity (Non Condensing)	20%RH ~ 85%RH	10%RH ~ 90%RH

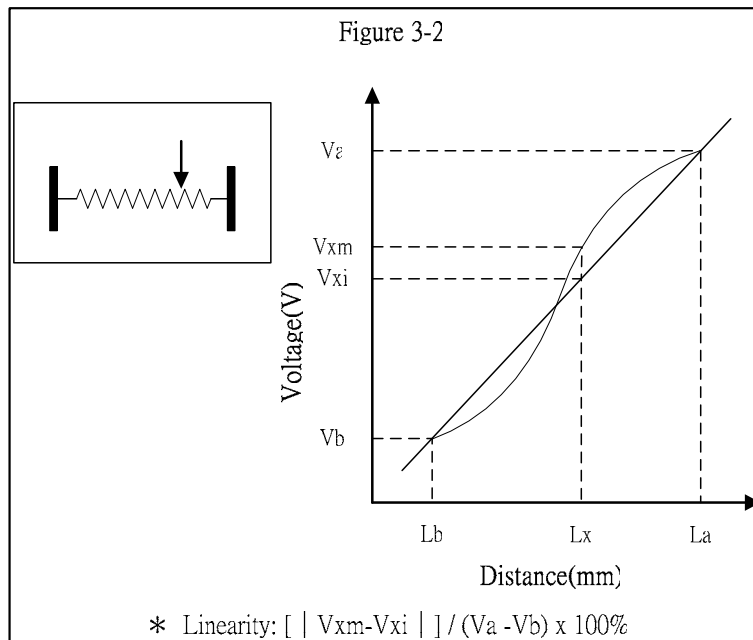
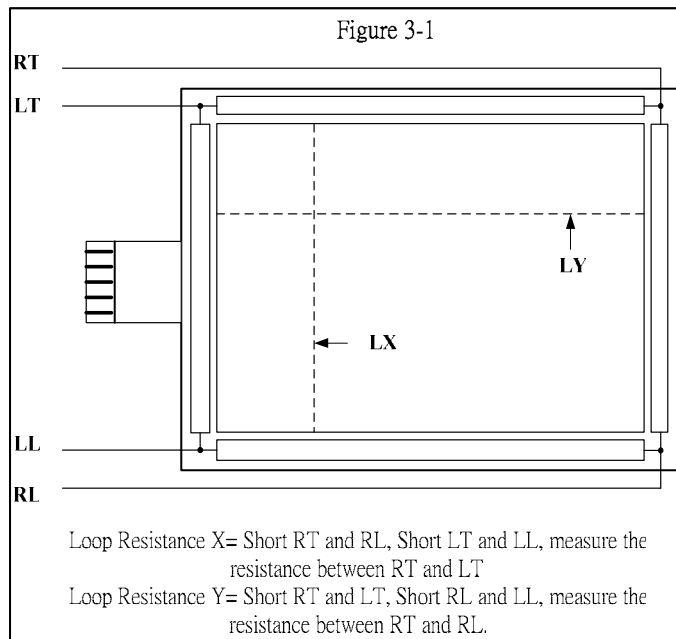
Note: All terms under 1 atmosphere.

2.2 Optical Characteristics:

Item		Specification
(1)	Transparence	≥ 88% ± 2% (Measured by BYK-Gardner)
(2)	Haze	≤ 5% ± 2%

3. Electrical Characteristics:

Item		Specification
(1)	Loop Resistance	X:50-600Ω, Y:50-600Ω (See Figure 3-1)
(2)	Linearity	X ≤ 1.0%, Y ≤ 1.0% (See Figure 3-2)
(3)	Response	According to Integration time of controller
(4)	Insulation	≥ 20MΩ / 25V(DC)
(5)	Endurance	No acting damage at DC 50V/ 60sec



4. Mechanical Characteristics:

	Item	Specification	Condition
Panel	Operating Force	Finger	$\leq 10g$
	Impact	13.0Ø DIA. Steel ball/9g, Height= 30cm	1 time, no damage[Impact at center area]
	Static Load	0.5Kg within 30cm ² area for 30sec	Satisfy(1) of Item 4 and (1),(2),(4) of Item 3
	Hardness	7H pencil, pressure 1N/45°	$\geq 7H$
Tail	Peeling	800g/cm by vertical 90°	Satisfy(1) of Item 3
	Bending	135° 10 times left and right	Satisfy(1) of Item 3

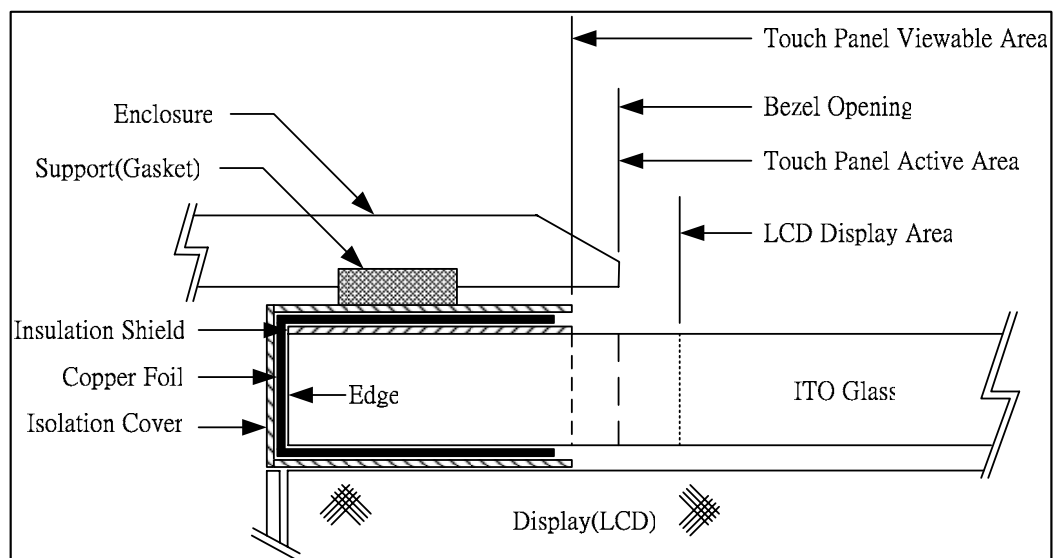
5. Reliability:

Item		Specification	Condition
Panel	High Temperature / Humidity	70°C / 90%RH, 500hrs, then panel is left in normal environment for 4hrs.	Reliability test may cause the film puffed yet the electric characteristics stays intact. (1), (2) of Item 2.2; (1), (4) of Item 3; (2) of Item 3 satisfies $X \leq 2.0\%$, $Y \leq 2.0\%$
	High Temperature	70°C / 240hrs, then panel is left in normal environment for 4hrs.	
	Low Temperature	-40°C / 240hrs, then panel is left in normal environment for 4hrs.	
	Thermal Cycle	-40°C~70°C,[60min /cycle]*10cycles, then panel is left in normal environment for 4hrs.	

6. Durability:

Item		Specification	Condition
Panel	Knock Test	200,000,000 times	Satisfy (1), (2) of Item 2.2; (1), (4) of Item 3; (2) of Item 3 satisfies $X \leq 2.0\%$, $Y \leq 2.0\%$

7. Figure: Touch Screen



8. Caution

- i Cleaning:
 - * Use the neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface. Chemical solvent, acidic, or alkali liquid are not allowed.

- ii Installation:
 - * Bezel edge must be positioned in the area between the active area and view area. The bezel may press the touch screen and cause activation if the edge touches the active area. A gap of approximately 0.5 mm is needed between the bezel and top electrode. It may cause unexpected activation if the gap is too narrow. There is a tolerance of 0.2 to 0.3 mm for the outside dimensions of the touch panel and tail. A gap must be made to absorb the tolerance in the case and connector.

 - * Gasket or cushion pads around the edge of panel are recommended to segregate water and/or dust contamination.

- iii Operating:
 - * Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited.

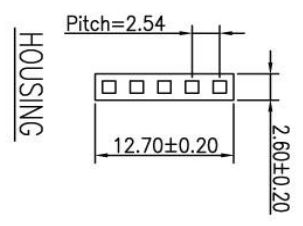
 - * Operate the panel in a steady environment. Abrupt variation on temperature and humidity may caused malfunction of the panel.

 - * Avoid high voltage and/or static charge.

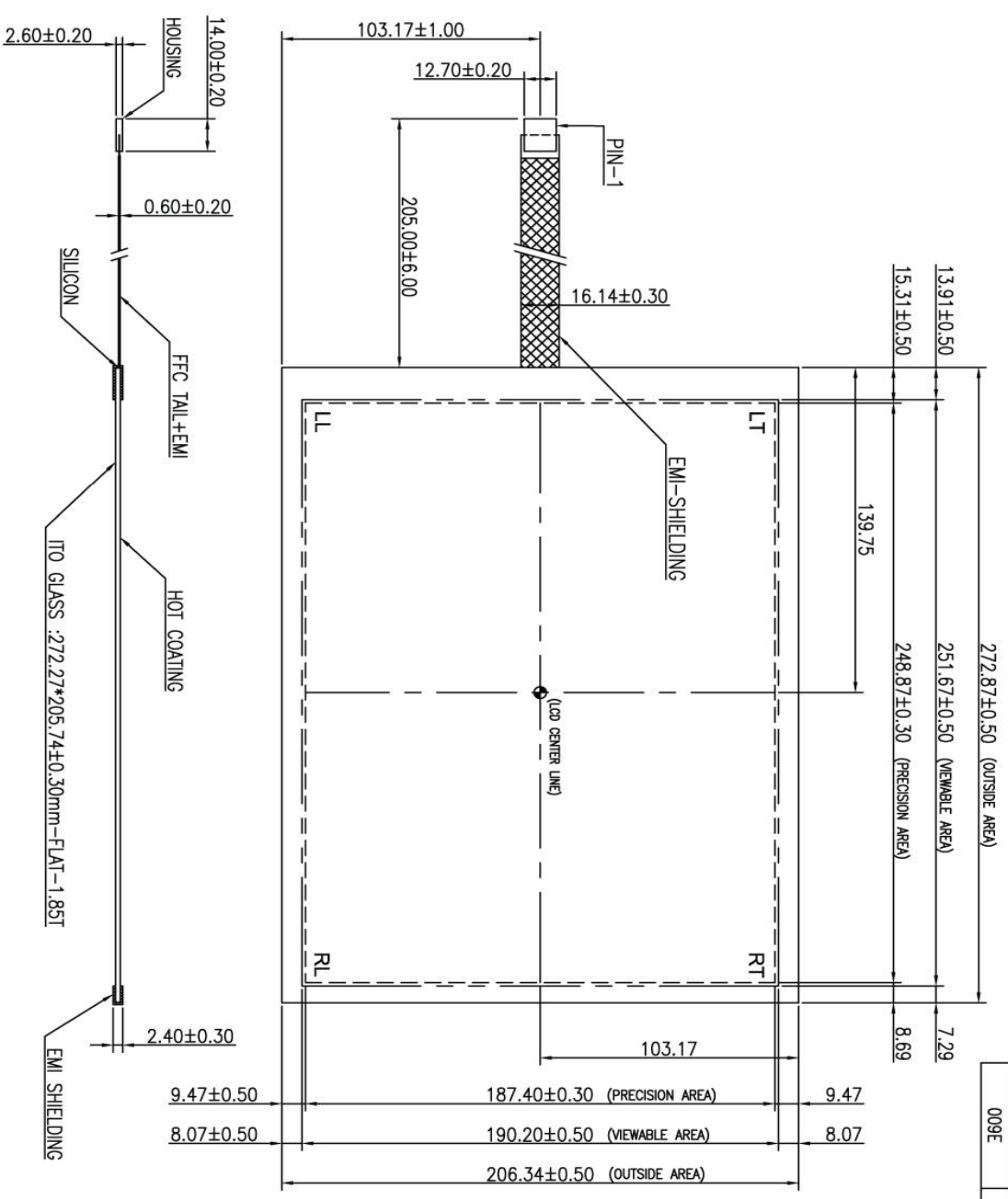
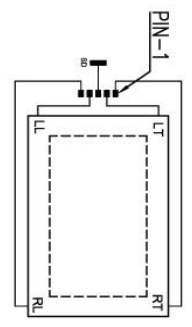
9. Warranty

- * The product is guaranteed for one year after shipping, however, products shall not be guaranteed under the following conditions.
 1. Damages caused by improper handling from clients, including shipping, installation, and integration.
 2. Natural calamity or disaster after receiving the products.
 3. Repaired, modified, disassembled without permission.

TOUCHSCREEN TABULATION	
PART NUMBER	TYPE
009A	CLEAR
009E	ANTIGLARE



PIN NO.	DESIGNATION
1	RT
2	LT
3	SD
4	LL
5	RL



Spectrah Dynamics Inc.		DESCRIPTION	DATE	APPROVED	Rev.
PART NO.	MODEL	Capacitive Touch Unit	Oct. 08, 2008	Evan	D
	TC5-12124205				
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