

杭州凡诺电子有限公司
FANNAL ELECTRONICS CO., LTD

Specifications for Touch Panel

Model NO: FN090AH001-V1.0

Revision: V1.0

- Approved For Specifications Only
 Approved For Specifications And Sample

FANNAL			CUSTOMER
PREPARED	CHECKED	APPROVED	APPROVED

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1. Record of Revision

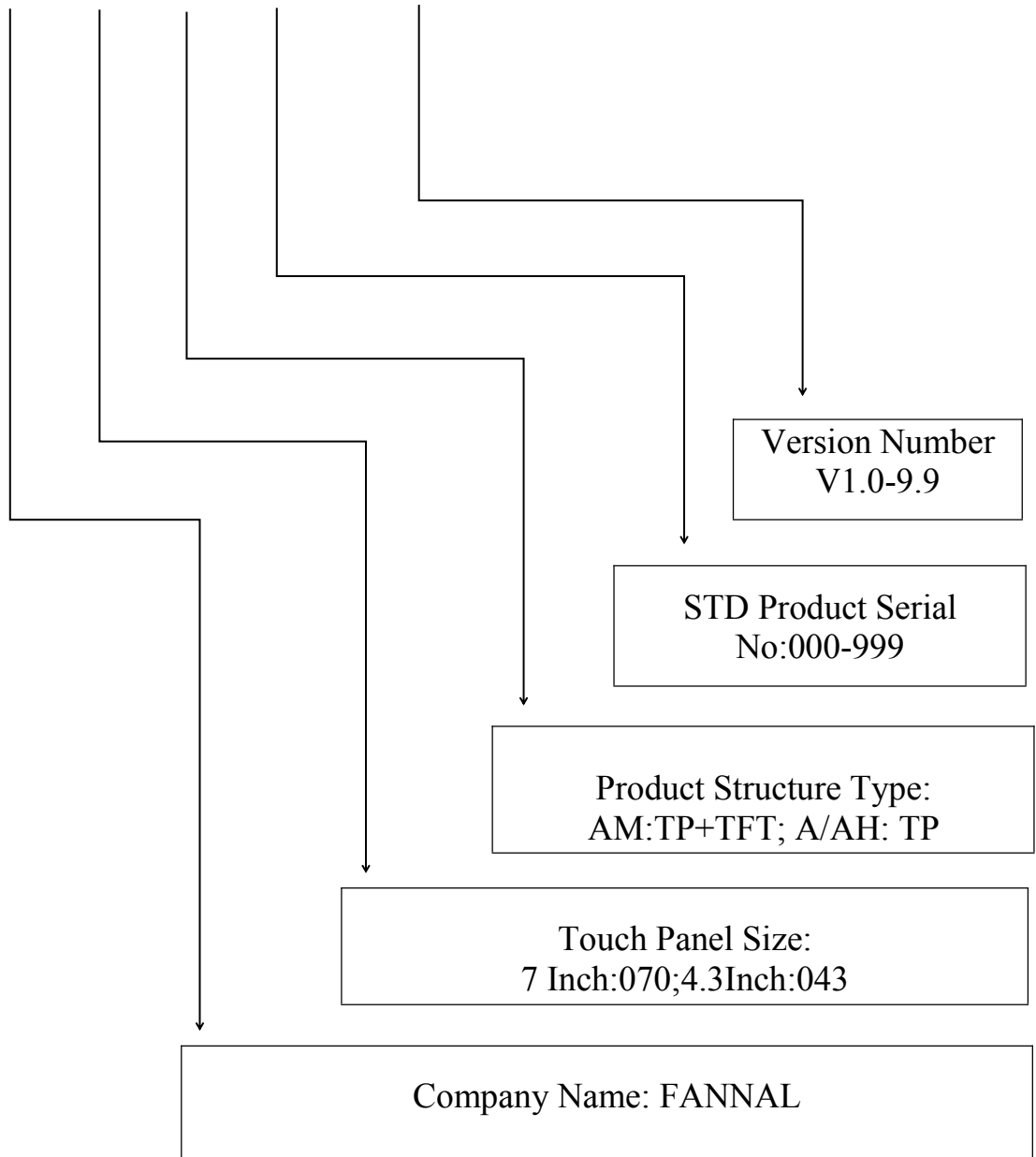
NO.	Content	Page	Date
1	Preliminary Specification was first issued	2	2016/9/11

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3. Module Numbering System

FN 090 AH 001- V1.0



4. Application

This improved projected capacitive touch panel module is applied to industrial applications which required touch input.

Industrial control, medical devices and automation industries (transportation, military, smart home, and others)

5. Feature

NO.	Item	Specifications		
1	Type	Projected Capacitive		
2	Input Mode	Finger	Gloved Finger	Passive stylus
3	Connector	COF-FPC		

6. General Specification

NO.	Item	Specifications	Unit
1	Touch Panel Size	9.0(Diagonal)	inch
2	Structure	G+G	
3	View Area	196.64(H)x118.30(V)	mm
4	Outline Dimension	231.50(H)x156.99(V)x3.08(D)	mm

7. Environmental Characteristic

NO.	Item	Specifications	
		Temperature	Humidity (Non-Condensing)
1	Operation	-30~80℃	45%-90%RH
2	Storage	-40~90℃	5%-95%RH

Note: Testing environment is under normal atmospheric pressure. When the ambient temperature is above 65℃, the humidity is allowed to be below 50%RH

8. Optical Characteristic

NO.	Item	Specifications
1	Transparency	87%±5%
2	Haze	>3%

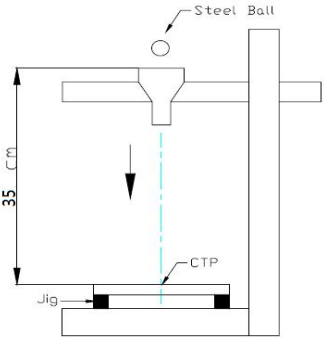
9. IC Specification

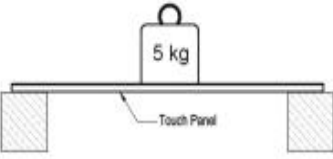
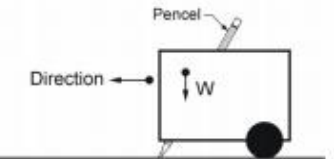
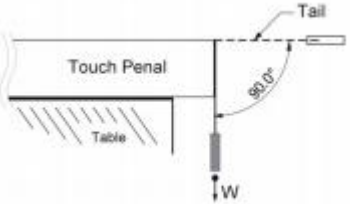
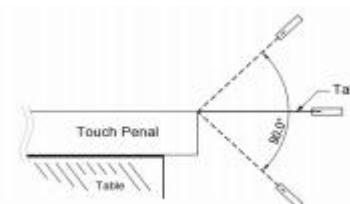
NO.	Item	Specifications
1	Driver IC	CYTMA568
2	Detect Points	5
3	Interface	I ² C
4	Power Supply	2.8-3.3V

10. Pin Assignment

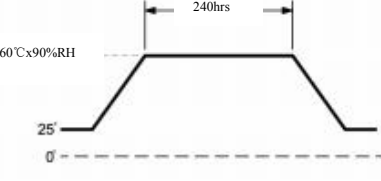
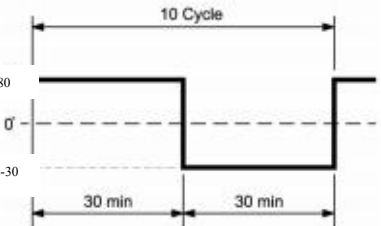
Pin No.	Symbol	I/O	Description
1	RST	I	External reset signal, active low
2	VDD	---	Power supply
3	GND	---	System ground
4	INT	O	Interrupt signal, active low, asserted to request Host start a new transaction
5	SCL	I/O	I ² C clock signal
6	SDA	I/O	I ² C data signal

11. Mechanical Characteristic

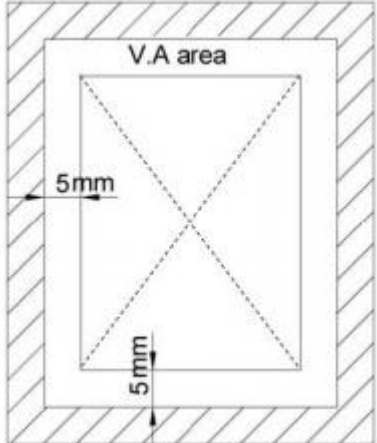
NO.	Item	Condition	Specifications
1	Operating Force	Finger \leq 10g	<p>Satisfy-</p> <p>1.Optical Characteristics 2.Electrical Characteristics</p> <p>Appearance-</p> <p>1.Ignore test area 2.No mechanical damage</p>
2	Impact	<p>30.0ΦDIA.Steel Ball/132g/Height=35cm/1 time, Impact at center area</p> 	

NO.	Item	Condition	Specifications
3	Static Load	5000g within 10cmΦ area for 30sec 	Satisfy- 1. Optical Characteristics 2. Electrical Characteristics Appearance- 1. Ignore test area 2. No mechanical damage
4	Hardness	6H pencil, pressure 750g/45° 	
5	Tail Peeling	500g/cm by vertical 90° for 30sec 	
6	Tail Bending	90° 10times left & right 	

12. Reliability Test

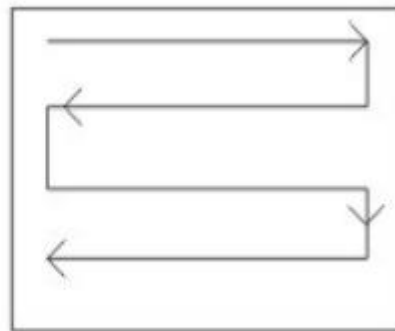
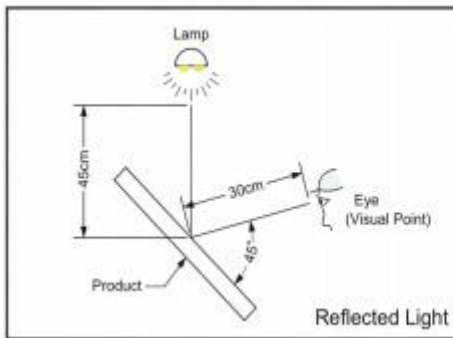
NO.	Item	Condition	Specifications
1	Constant Temperature/Humidity	<p>60°C X 90%RH, 240hrs and normalized for 24hrs</p> 	<p>Satisfy-</p> <p>1、Electrical Characteristics</p>
2	Heat Cycle	90°C/240hrs and normalized for 24hrs	
3	Cold Cycle	-40°C/240hrs and normalized for 24hrs	
4	Thermal Cycle	<p>-30°C~80°C [30min/cycle]*10cycles and normalized for 24hrs</p> 	

13. Function test

<p>Function Test</p>	<p>Test Method: Use $\Phi 8$ copper stick to draw the square diagonal line.</p> <p>Test Area: 5mm inward view area.</p> <p>Disapproval Criteria: It is NG when we see the off-liner or jumping out spec shift.</p>	
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14. Appearance Inspection

The inspection is to be performed with two 20W(1800±500 LUX)fluorescent lamp lighting from the back or side.The panel is to be placed 30cm away from eyes.(Figure 13-1)



15. Appearance Specification

NO.	Item	Specifications	Judgment
1	Dot Contamination	1) $D \leq 0.2\text{mm}$, $DS \geq 10\text{mm}$ 2) $0.20\text{mm} < D \leq 0.50\text{mm}$, $DS > 10\text{mm}$ 3) $D > 0.50\text{mm}$	1) Ignore 2) OK with 5 3) NG
2	Linear Contamination	1) $W < 0.05\text{mm}$ 2) $0.05\text{mm} \leq W \leq 0.10\text{mm}$ $L \leq 5\text{mm}$ 3) $W \geq 0.10\text{mm}$ or $L \geq 5\text{mm}$	1) Ignore 2) OK with 5 3) NG
3	Cracks and Chips(Surface)	$X < 0.2\text{mm}$, $Y < 0.2\text{mm}$, $Z < \frac{1}{2}T$	Ignore

<Endorse>

1. All cosmetic defects are not accounted if found outside Active Area.
(except for glass breakage, corner flaw, edge flaw, crack, etc. Please follow Appearance Inspection criteria upon inspection)

2. D=Diameter / W=Width / L=Length

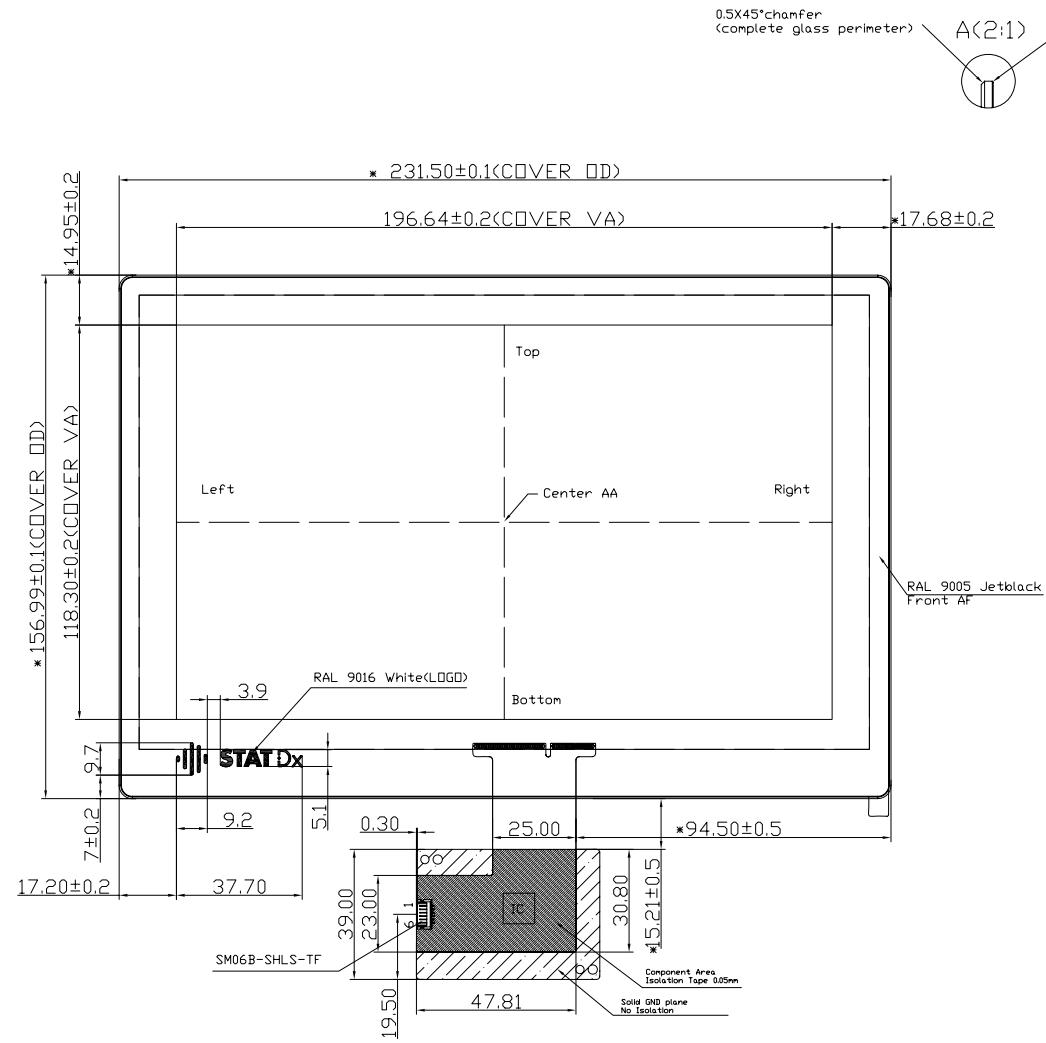
3. Tail: Slight bend mark is allowed on the tail; crack or tear is not allowed.

4. Particle Spots: Flaws found coating if transparent, please follow Particle Spots specification.

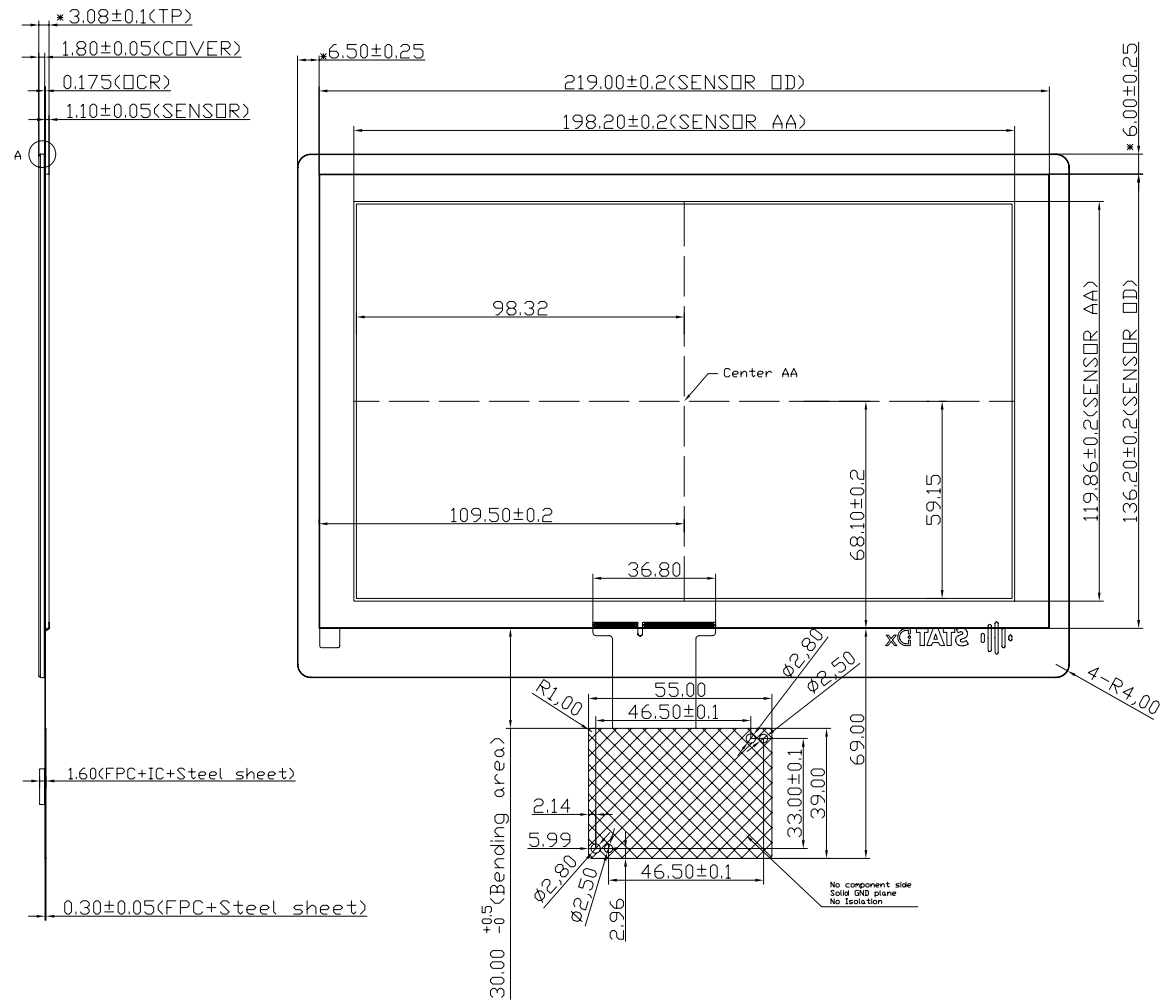
16. Mechanical Drawing

THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO FANNAL AND SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF FANNAL

Rev	Revision note	Date
V1.0	First Release	2016-8-18



Front view



Side view

Back view

TECHNOLOGY CHARACTERISTICS CTP	
PROPERTY	Requirement
IC	CYTMA568-56
NO OF TOUCH	5
COVER GLASS Thickness	1.80mm
ITO GLASS Thickness	1.10mm
Surface Hardness	≥6H
Light transmission	87%±5%
Operating temperature	-30-80°C
Storage temperature	-40-90°C
Operating Humidity	45-90%RH
Storage Humidity	5-95%RH

IIC PIN DEFINITION	
Pin NO.	Definition
1	RST(3.3V)
2	VDD(3.3V)
3	GND
4	INT(3.3V)
5	SCL(3.3V)
6	SDA(3.3V)

NOTES:
 *Important dimensions
 TOLERANCE UNLESS: x.x ±0.2
 OTHERWISE SPECIFIED: x.xx ±0.1
 DIMENSIONS IN MM: ANGULAR:±1°

RoHS



MODEL NO: FN090AH001-V1.0

THIRD ANGLE PROJECTION

	NAME	SIGN	DATE
DRAWN:	Hong		2016-8-24
CHECKED:			
APPROVED:	Jeff		2016-8-24

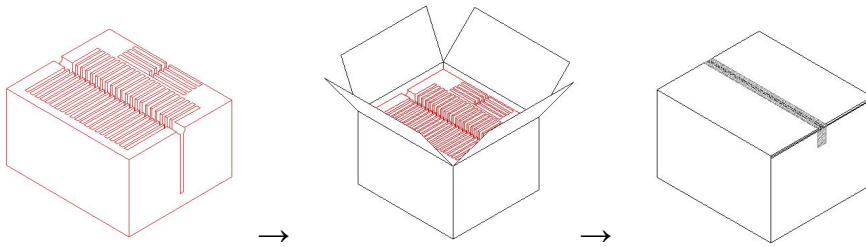
PROJECT NO:

CUSTOMER NO:

FILE NO: REV:1

SHEET 1 OF 1

17. Packaging



SIZE: 53X36X27.5cm