

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

Specifications for Touch Panel

Model NO: FN101A08-V2.1

Revision: V2.1

Approved For Specifications Only

Approved For Specifications And Sample

| FANNAL | | | CUSTOMER |
|----------|---------|----------|----------|
| PREPARED | CHECKED | APPROVED | APPROVED |
| | | | |

Address: 6th Floor No.77 Xingwang West Road, Hangzhou, Zhejiang, China

Phone: +86 (0)571 85161516

<http://www.fannal.cn>

<http://www.fannal.com>

1. Record of Revision

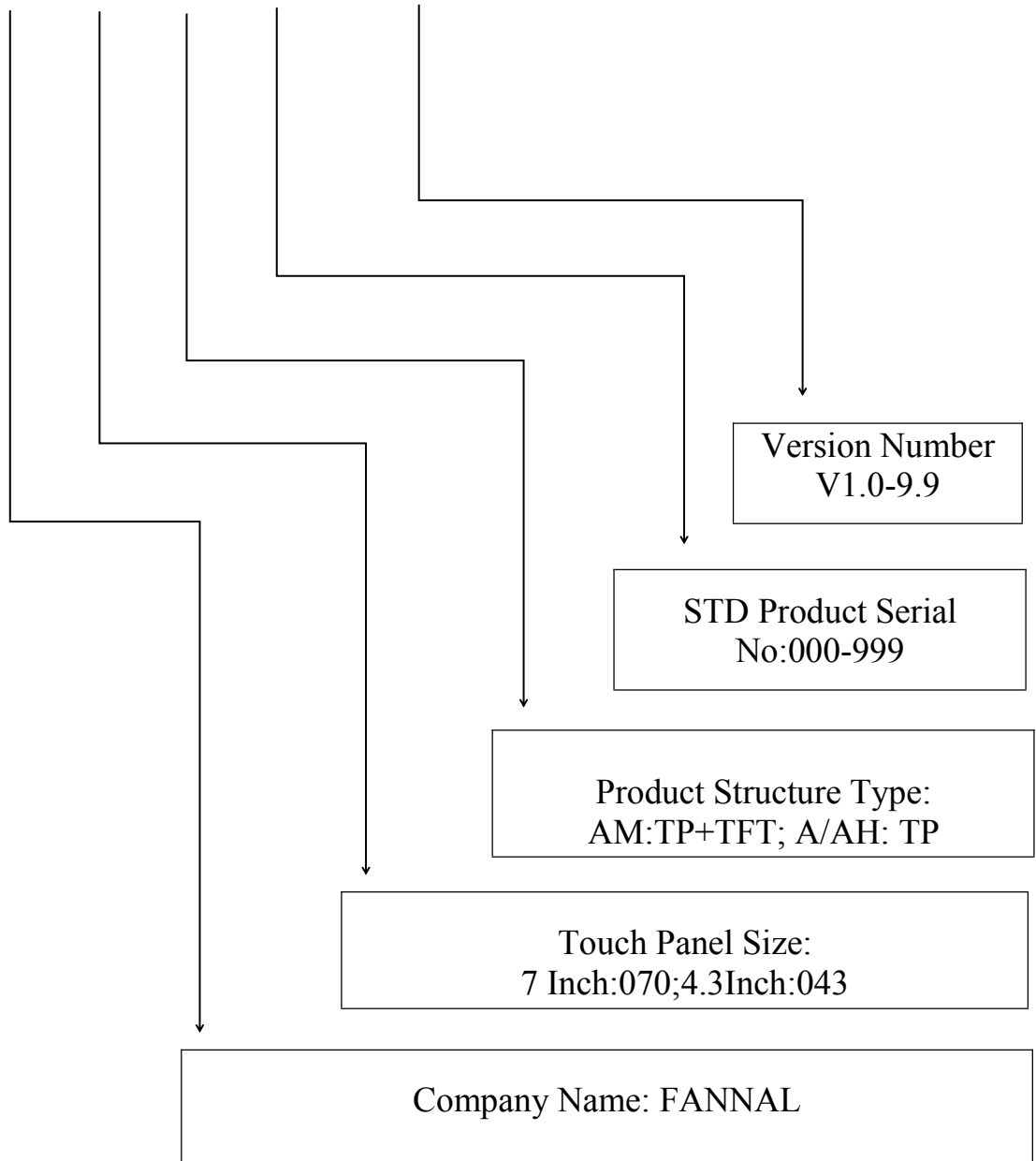
| NO. | Content | Page | Date |
|------------|--------------------------------------------|-------------|-------------|
| 1 | Preliminary Specification was first issued | 2 | 2017/06/26 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

2. Table of Content

| NO. | Content | Page |
|------------|------------------------------|-------------|
| 1 | Record of Revision | 2 |
| 2 | Table of Content | 3 |
| 3 | Module Numbering System | 4 |
| 4 | Application | 5 |
| 5 | Feature | 5 |
| 6 | General Specifications | 5 |
| 7 | Environmental Characteristic | 5 |
| 8 | Optical Characteristic | 6 |
| 9 | IC Specification | 6 |
| 10 | Pin Assignment | 7 |
| 11 | Mechanical Characteristic | 8 |
| 12 | Reliability Test | 9 |
| 13 | Function Test | 9 |
| 14 | Appearance Inspection | 10 |
| 15 | Appearance Specification | 11 |
| 16 | Mechanical Drawing | 12 |
| 17 | Packaging | 13 |
| | | |
| | | |
| | | |
| | | |

3. Module Numbering System

FN 101 A 08 - V2.1



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 |
| 3 | Connector | COF-FPC |

6. General Specification

| NO. | Item | Specifications | Unit |
|-----|-------------------|-----------------------------|------|
| 1 | Touch Panel Size | 10.1(Diagonal) | inch |
| 2 | Structure | G+G | |
| 3 | View Area | 217.96(H)x136.60(V) | mm |
| 4 | Outline Dimension | 257.96(H)x168.60(V)x1.60(D) | mm |

7. Environmental Characteristic

| NO. | Item | Specifications | |
|-----|-----------|----------------|------------------------------|
| | | Temperature | Humidity (Non-Condensing) |
| 1 | Operation | -20~70 °C | 45%-90%RH |
| 2 | Storage | -30~80 °C | 5%-95%RH |

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

8. Optical Characteristic

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

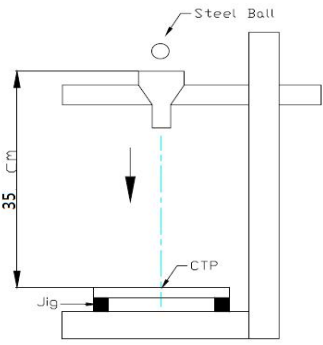
9. IC Specification

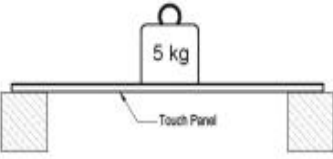
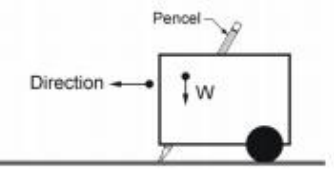
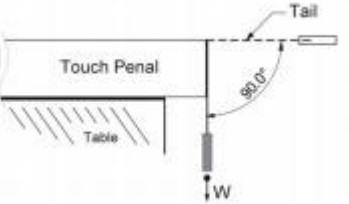
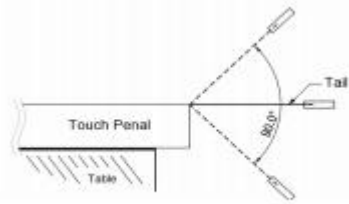
| NO. | Item | Specifications |
|-----|---------------|---------------------|
| 1 | Driver IC | CYTMA568-70BUI-58BB |
| 2 | Detect Points | 5 |
| 3 | Interface | I ² C |
| 4 | Power Supply | 2.8-3.3V |

10. Pin Assignment

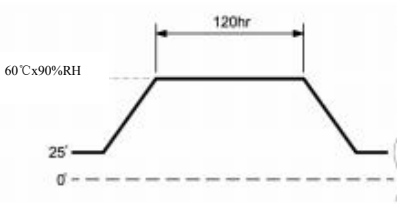
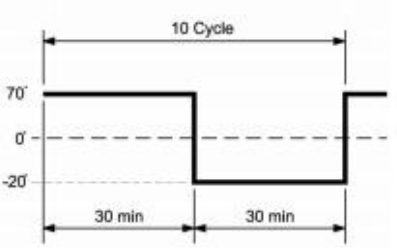
| Pin No. | Symbol | I/O | Description |
|---------|--------|-----|--------------------------------------------------------------------------------|
| 1 | GND | --- | System ground |
| 2 | NC | --- | NO Connection |
| 3 | NC | --- | NO Connection |
| 4 | NC | --- | NO Connection |
| 5 | NC | --- | NO Connection |
| 6 | GND | --- | System ground |
| 7 | SDA | I/O | I ² C data signal |
| 8 | SCL | I/O | I ² C clock signal |
| 9 | RST | I | External reset signal, active low |
| 10 | INT | O | Interrupt signal, active low, asserted to request Host start a new transaction |
| 11 | VDD | --- | Power supply |
| 12 | VDD | --- | Power supply |

11. Mechanical Characteristic

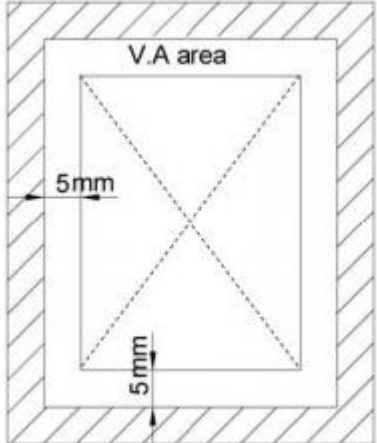
| NO. | Item | Condition | Specifications |
|-----|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------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

| 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 500g/45°  | |
| 5 | Tail Peeling | 500g/cm by vertical 90° for 30sec  | |
| 6 | Tail Bending | 90° 10times left & right  | |

12. Reliability Test

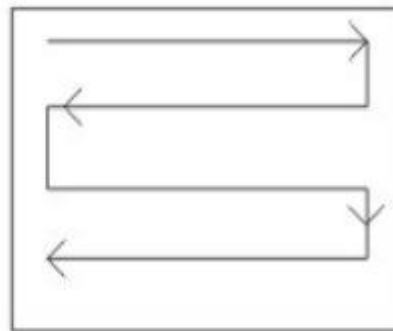
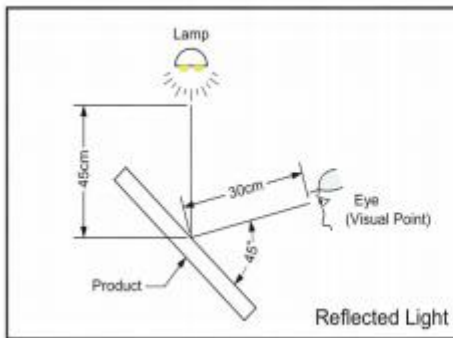
| NO. | Item | Condition | Specifications |
|-----|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1 | Constant Temperature/Humidity | <p>60°C X 90%RH, 120hrs and normalized for 24hrs</p>  | <p>Satisfy-</p> <p>1、Electrical Characteristics</p> |
| 2 | Heat Cycle | 80°C/120hrs and normalized for 24hrs | |
| 3 | Cold Cycle | -30°C/120hrs and normalized for 24hrs | |
| 4 | Thermal Cycle | <p>-20°C~70°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> |  |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

14. Appearance Inspection

The inspection is to be performed with 20W(1200±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) $D \leq 0.3\text{mm}$, $DS \geq 10\text{mm}$, 2) $0.30\text{mm} < D \leq 0.50\text{mm}$, $DS > 10\text{mm}$ 3) $D > 0.50\text{mm}$ | 1) Ignore 2) OK with 5 3) NG |
| 2 | Linear Contamination | 1) $W < 0.05\text{mm}$ 2) $0.05\text{mm} \leq W \leq 0.20\text{mm}$ $L \leq 5\text{mm}$ 3) $W \geq 0.20\text{mm}$ or $L \geq 5\text{mm}$ | 1) Ignore 2) OK with 5 3) NG |
| 3 | Cracks and Chips(Surface) | $X < 0.3\text{mm}$, $Y < 0.3\text{mm}$, $Z < \frac{1}{2}T$ | Ignore |

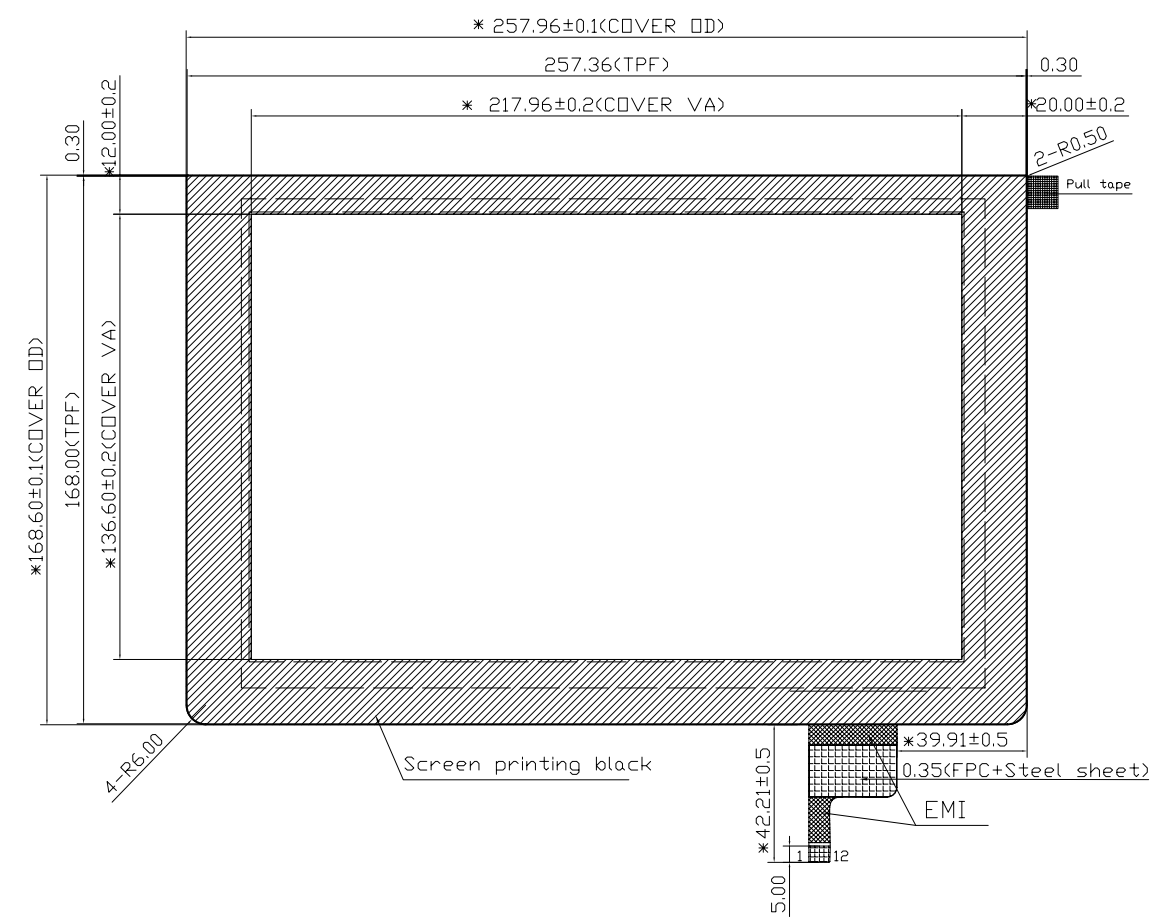
<Endorse>

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.

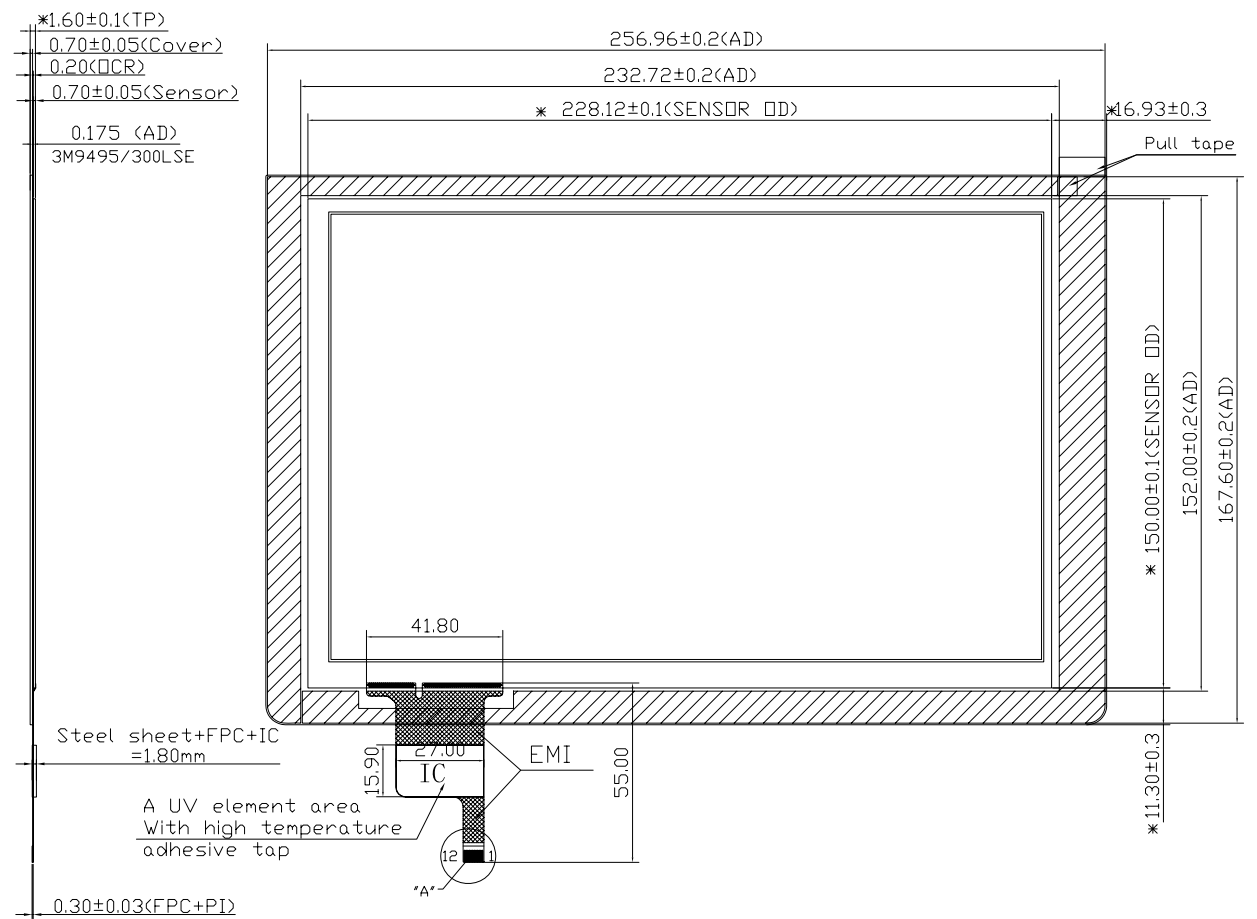
16. Mechanical Drawing

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 | Frist Relesae | 2015-5-28 |
| V2.0 | Cancel pu | 2016-7-28 |
| V2.1 | 更改背胶设计 | 2017-6-8 |



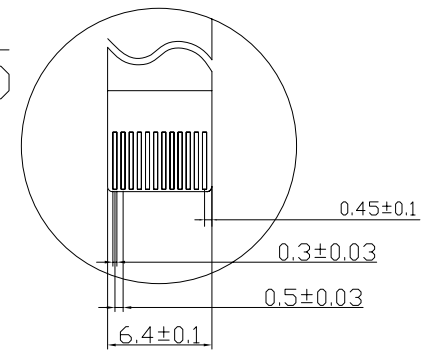
Front view



Side view

Back view

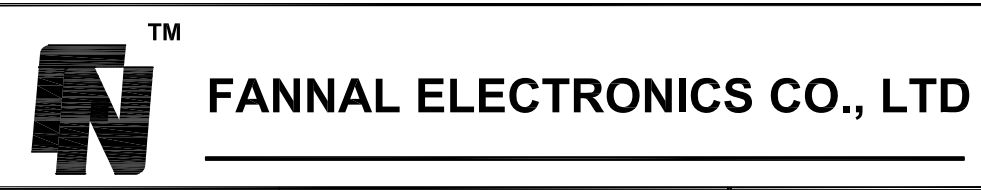
"A" 1:5



| TECHNOLOGR CHARACTERISTICS CTP | |
|--------------------------------|-------------|
| PROPERTY | Requirement |
| IC | CYTMA568-70 |
| NO OF TOUCH: | 5 |
| COVER GLASS Thickness | 0.70mm |
| ITO GLASS Thickness | 0.70mm |
| Surface Hardness | ≥6H |
| Light Transmission | 87%±5% |
| Operating Temperature | -20~70°C |
| Storage Temperature | -30~80°C |
| Operating Humidity | 45%~90%RH |
| Storage Humidity | 5%~95%RH |

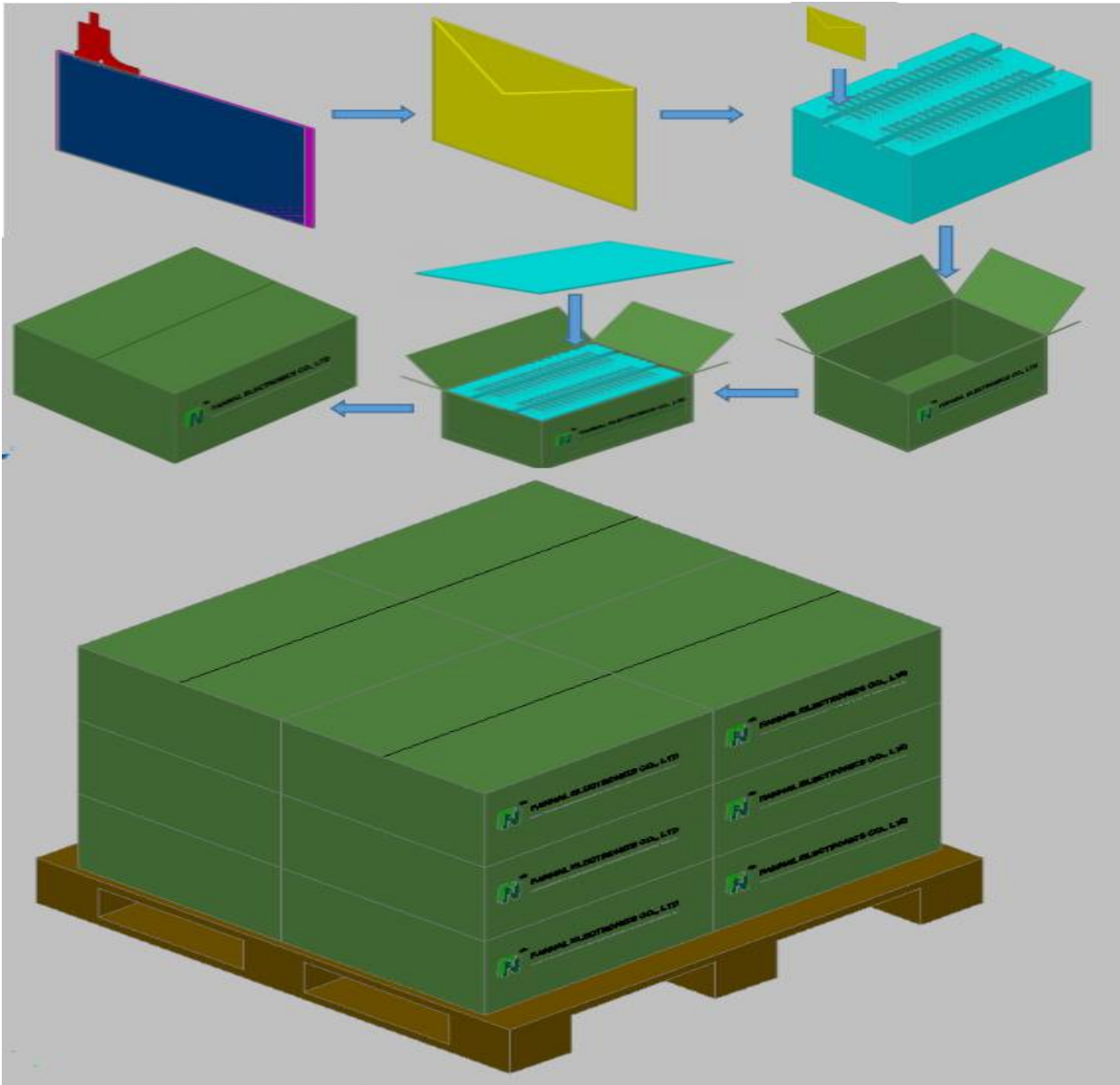
| TPFN101A08-V1.0 IIC PIN DEFINITION | |
|------------------------------------|------------|
| Pin NO. | Definition |
| 1 | GND |
| 2 | NC |
| 3 | NC |
| 4 | NC |
| 5 | NC |
| 6 | GND |
| 7 | SDA(3.3V) |
| 8 | SCL(3.3V) |
| 9 | RST(3.3V) |
| 10 | INT(3.3V) |
| 11 | VDD(3.3V) |
| 12 | VDD(3.3V) |

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



| | | | |
|-------------------------------|------|------|----------|
| MODEL NO:FN101A08-V2.1 | | | |
| THIRD ANGLE PROJECTION | | | |
| | NAME | SIGN | DATE |
| DRAWN: | Hong | | 2017-6-8 |
| CHECKED: | | | |
| APPROVED: | Jeff | | 2017-6-8 |
| PROJECT NO: | | | |
| CUSTOMER NO: | | | |
| FILE NO: | | | |
| SHEET | 1 | OF | 1 |

17. Packaging



SIZE(Carton): 53X36X27.5cm