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Datasheet

Distec

TF-DD-0430-A01

4.3" PCAP Touch Foil

TO-09-091



TF-DD0430-A01

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1、 Revision sheet

| Revision No. | Date | Content | | Reason | Sig. |
|--------------|------------|---------|-------|---------------|------|
| | | Before | After | | |
| REV.1 | 2018.10.18 | -- | -- | First edition | |
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Remark:



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2、 Sample Specification

2.1 Product Name

Capacitive Touch Panel

2.2 Purpose

The purpose of this specification is to define the general provisions and quality requirements that apply to the supply of capacitive touch panel. This document and the Module Assembly Drawing are the highest-level specification for this product. It concludes description of product, supporting documents and related specifications.

2.3 Function

TOUCH SENSOR MODULE is a capacitive-type that customer uses on the flat panel display likes TFT-LCD. Once user touches it by finger, the circuitry of this TOUCH SENSOR indicates corresponding point at the contact area.

2.4 Construction

| Construction | Materials used | Comment |
|--------------|----------------|---------------------|
| Adhesive | OCA1 | Thickness : 0.125mm |
| | OCA2 | Thickness : 0.05mm |
| SENSOR | ITO FILM | Thickness : 0.125mm |
| | ITO FILM | Thickness : 0.125mm |



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3、General Specifications

3.1 Size of product

| Item | Specifications (mm) | Note |
|-----------------|-------------------------------------|------|
| Active Area | 98.3 (L) × 57.1 (W) | |
| Sensor OD | 104.5(L) × 66.2 (W) × 0.425 (T) | |
| Total thickness | 0.425±0.10 | |

3.2 Electric characteristics

| Item | Specifications | Note |
|-------------------------|----------------|------|
| Operation Voltage | 3.3V | |
| (Number of touch point) | 5 Points | |
| Controller | GT911 | |
| Interface | I2C | |

(Pin Configuration):

| PIN | ASSIGNMENT |
|-----|------------|
| 1 | VDD |
| 2 | SDA |
| 3 | SCL |
| 4 | GND |
| 5 | INT |
| 6 | RESET |



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3.3 Optical characteristics

| Items | Specifications | Note |
|--------------|----------------|------|
| Transparency | ≥85% | |



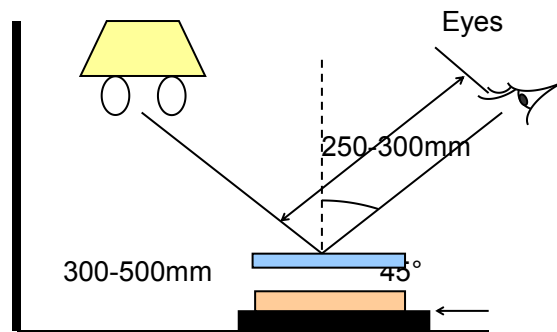
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4、 Appearance Inspection Standards

4.1 Appearance inspection conditions

| Items | Specifications | |
|------------------------|---------------------------------|------------------------|
| Source of light | 800-1500LUX | |
| Inspection Distance | 25-30cm (see following drawing) | |
| Inspection Time | ≤10s/pcs | |
| Inspection Environment | Temperature : 22 ± 5°C | humidity : 50 ± 10% |

A source of light (12-20W)



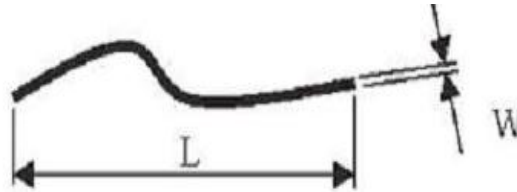
(Remark: D=diameter ; L=length ; W=width ; GT=glass thickness)



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4.2 Touch panel view area

4.2.1 Scratch



| Standards | Judgments |
|------------------------------------|---|
| $W \leq 0.03, L \leq 2\text{mm}$ | Two are allowed, and the distance between two defects must longer than 20 mm. |
| $W \leq 0.05, L \leq 2\text{mm}$ | One is allowed and passed. |
| $W > 0.5\text{mm}, L > 2\text{MM}$ | The TP is regarded as a defect. |

4.2.2 Granular sundry

| Standards | Judgments |
|--|---|
| $D \leq 0.15\text{mm}$ | Ignored and passed |
| $0.15\text{mm} < D \leq 0.20\text{mm}$ | Two are allowed, and the distance between two defects must longer than 20 mm. |
| $0.2\text{mm} < D \leq 0.25\text{mm}$ | One are allowed, and Passed |
| $D > 0.25\text{mm}$ | The T/P is regarded as a defect. |



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4.2.3 Linear Foreign Matter

| Standards | Judgments |
|-------------------------------------|---|
| $W \leq 0.03, L \leq 2\text{mm}$ | Two are allowed, and the distance between two defects must longer than 20 mm. |
| $W \leq 0.05, L \leq 2\text{mm}$ | One is allowed and passed. |
| $W > 0.05\text{mm}, L > 2\text{MM}$ | The T/P is regarded as a defect. |

4.2.4 OCA bubbles and distortion

| Standards | Judgments |
|---|---|
| V/A Dot-like air-bubble, numbers $\leq 3, D \leq 0.3\text{mm}$ are allowed, OCA Slight wave does not cause film distortion, It is accepted. | OCA Dot-like air-bubbles are measured with gauge, OCA Slight wave need to check under lights of 250~300mm whether it causes the film distortion or not. |



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5、 Reliability Specifications

| No. | Item | Test Condition | Note |
|-----|------------------------------------|--|------------------|
| 1 | High Temperature Operating | 80℃ | Inspect function |
| 2 | Low Temperature Operating | -30℃ | Inspect function |
| 3 | High Temperature\ High Humidity | 60℃, 90% RH, 120H | Inspect function |
| 4 | Vibration resistance | The requirements in “Operation force” of the item 3-1 Mechanical Characteristics and 6 Electric characteristics shall be of 20 m/s ² , 10 Hz to 55 Hz (1 min) is given for 30 min .each in the directions of X , Y , Z; | Inspect function |
| 5 | Operating temperature and humidity | -30~80℃, ≤80% RH | |
| 6 | Storage temperature and humidity | -30~80℃, ≤90% RH | |
| 7 | FPC bending test | total cycles:3cycles ,bending range: 0°->+90°->-90°->0° | Pass |
| 8 | Drop-test-with package | Packing weight, 0-20kg, drop height 30cm | Pass |
| 9 | Drop-test-with Finished product | The product is suspended, 60 g balls, 30cm height of free falling, product of intermediate cracks | Pass |



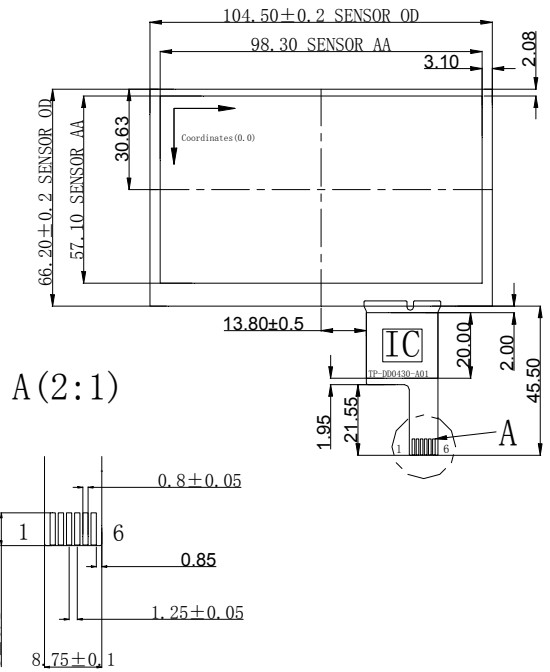
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6 、 Attachment

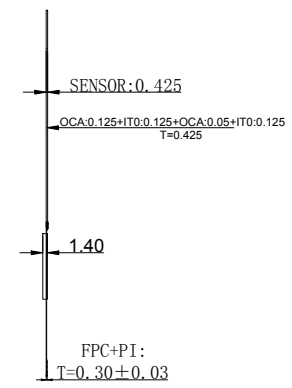
6.1 Engineering drawing

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |

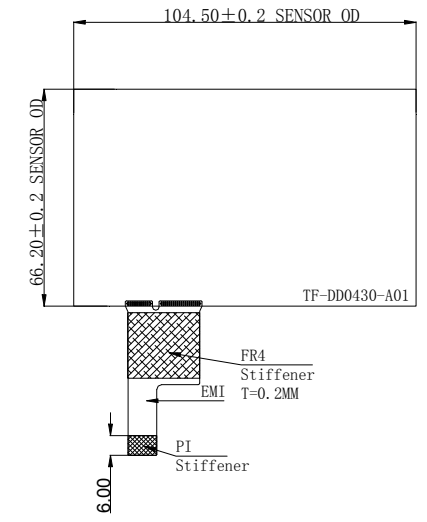
Front View



Side View



Back View



I2C Interface

| PIN# | Signal |
|------|--------|
| 1 | VDD |
| 2 | SDA |
| 3 | SCL |
| 4 | GND |
| 5 | INT |
| 6 | RESET |

Specification:

1. F+F
2. IC:GT911
3. Working Voltage : 3.3 V
4. Transmittance : ≥85%
5. Working Temperature: -30°C~+80°C
6. Working Humidity: 0% to 80%
7. Storage Temperature: -30°C to +80°C
8. Storage Humidity: 0% to 90%
9. Without individual tolerance:±0.2mm
10. OCA:0.125MM

| | | | |
|-------------|-------------|------------|---|
| Unit | mm | | 4.3" Projected Capacitive Touch Foil |
| Size | A4 | | |
| Scale | 1:1 | | |
| Approved By | | | Part No. |
| Check By | | | TO-09-091 |
| Design By | KING | 2018-07-05 | Production Number |
| | | | TF-DD0430-A01 |

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