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 APOLLO DISPLAY
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 DISTEC



 DISPLAY
TECHNOLOGY



Datasheet

Distec

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%\$'%`K]XY D7 5 D`Hci W `DUbY

7 C: žI G6 `bHyfZJWž<-8

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TP-DD1010-D05

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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
Cover Glass	Strengthened glass	Thickness : 0.7mm
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
Cover lens OD	251(L)×174(W)×0.7MM(T)	
View Area	218 (L) × 136.8 (W)	
Active Area	219.6 (L) × 138.4 (W)	
Sensor OD	230(L) ×154.5 (W) × 0.425M (T)	
Total thickness	1.13MM	

3.2 Electric characteristics

Item	Specifications	Note
Operation Voltage	5V	
(Number of touch point)	10 Points	
Controller	ILI2511	
Interface	USB	
Power Consumption	Active Mode: 150mA (Max.) Idle Mode: 90mA (Typ.)	

(Pin Configuration):

Interface	USB
PIN	ASSIGNMENT
1	VDD
2	D-
3	D+
4	GND
5	NC
6	NC



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3.3 Optical characteristics

Items	Specifications	Note
Transparency	≥86%	
Glass Surface	Glare	

3.4 Mechanical characteristics

Items	Value	Note
Hardness	≥6H	



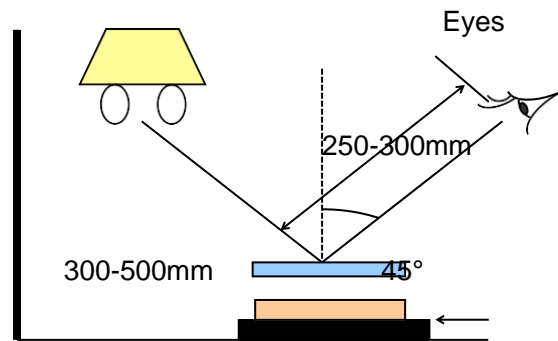
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4、 Appearance Inspection Standards

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 : $22 \pm 5^{\circ}\text{C}$	humidity : $50 \pm 10\%$

A source of light (12-20W)



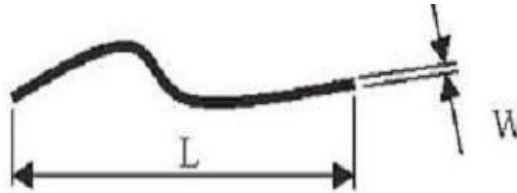
(Remark: D=diameter ; L=length ; W=width ; GT=glass thickness)



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4.2 Touch panel view area

4.2.1 Scratch



Standards	Judgments
$W \leq 0.05, L \leq 5\text{mm}$	Ignored and passed.
$W \leq 0.15, L \leq 8\text{mm}$	Two are allowed, and the distance between two defects must be longer than 40 mm.
$W > 0.15\text{mm}, L > 8\text{MM}$	The TP is regarded as a defect.

4.2.2 Granular sundry

Standards	Judgments
$0.15\text{mm} < D \leq 0.20\text{mm}$	Ignored and passed
$0.2\text{mm} < D \leq 0.40\text{mm}$	Three are allowed, and the distance between two defects must longer than 40 mm.
$D > 0.4\text{mm}$	The T/P is regarded as a defect.



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4.2.3 Linear Foreign Matter

Standards	Judgments
$W \leq 0.05, L \leq 5\text{mm}$	Ignored and passed.
$W \leq 0.15, L \leq 8\text{mm}$	Two are allowed, and the distance between two defects must be longer than 40 mm.
$W > 0.15\text{mm}, L > 8\text{MM}$	The T/P is regarded as a defect.

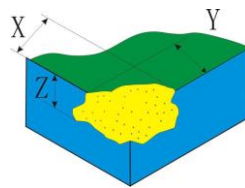


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4.3 Fragmentation And Crack

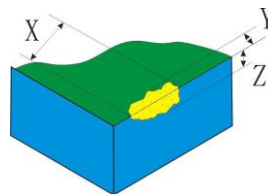
Corner fragment: $X < 2.0\text{mm}$ and $Y < 2.0\text{mm}$ and $Z < \text{GT}$ it is ignored

- 1) Corner fragment in the golden finger that seriously affects the product function is regarded as a defect.
- 2) Corner fragment in the circuit that seriously affects product function is regarded as a defect.



Edge fragment: $X < 5.0\text{mm}$ and $Y < 1.0\text{mm}$ and $Z < \text{GT}$ it is ignored

- 1) Edge fragment in the golden finger that seriously affects the product function is regarded as a defect.
- 2) Edge fragment in the circuit that seriously affects product function is regarded as a defect.





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5、 Reliability Specifications

No.	Item	Test Condition	Note
1	High Temperature Operating	80°C	Inspect function
2	Low Temperature Operating	-30°C	Inspect function
3	High Temperature\ High Humidity	60°C , 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 ~ 70°C,≤80% RH	
6	Storage temperature and humidity	-30 ~ 80°C,≤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

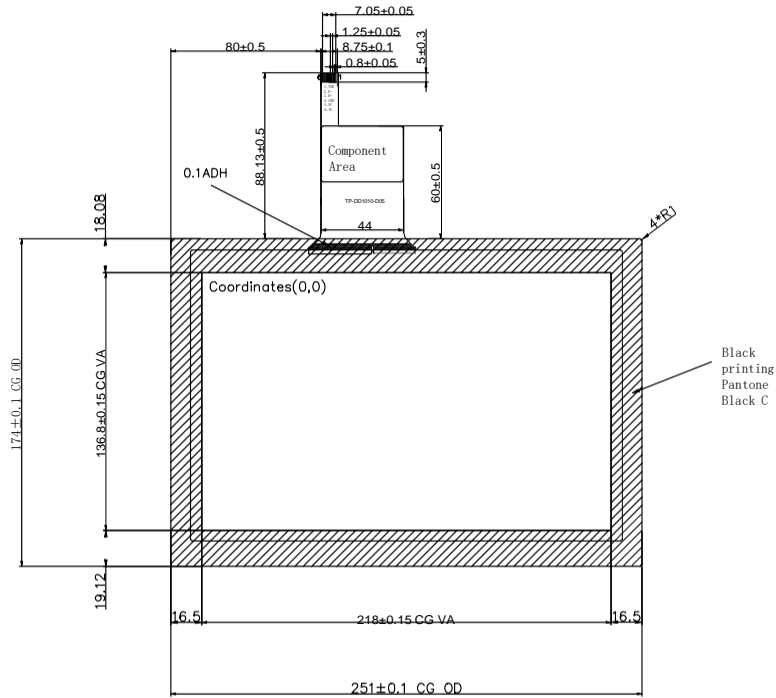


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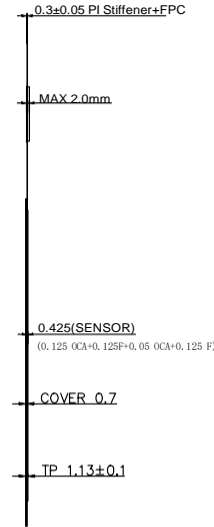
6 、 Attachment

6.1 Engineering drawing

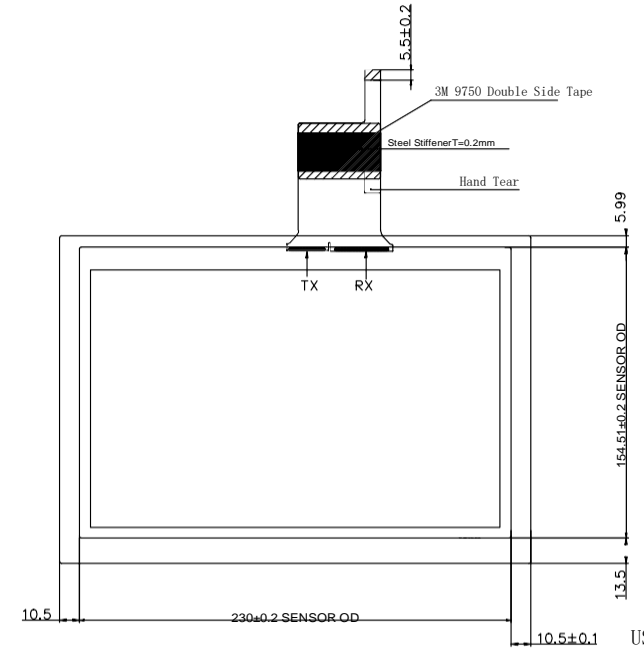
Front View



Side View



Back View



USB Interface

PIN#	Signal
1	VDD
2	D-
3	D+
4	GND
5	NC
6	NC

Specification:

1. G+F+F
2. IC:ILI2511 USB Interface
3. Working Voltage: 5 V
4. Hardness:6H
5. Transmittance: ≥86%
6. Working Temperature: -30°C~+70°C
7. Working Humidity: 0% to 80%
8. Storage Temperature: -30°C to +80°C
9. Storage Humidity: 0% to 90%
10. Without individual tolerance:±0.2mm
11. Surface: Glare

Unit	mm		10.1" Projected Capacitive Touchscreen
Size	A4		
Scale	1:1		
Approved By		PRJ (3)	Part No.
Check By			TO-09-015R1.3
Design By	XC	2018-04-23	Production Number
			TP-DD1010-D05

DT:

FM:

TO:



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7、 Special & Notice Precaution

7.1 Special & Notice Precaution

- (1) Avoid product crease or blending (Specially the product was blended over than 30°, it can deadly effect products' operation.)
- (2) Do not overlap or stress the product.
- (3) Avoid aculeated thing to prick product.
- (4) Do not use finger to touch Viewing Area directly, Prevent fingerprint or dirty attach on the Viewing Area, Clean the product using soft and neatness' fabric. After the product was attached protect film for a period of time, the protect glue can leave in the surface, At this time it can use alcohol clean them. Do not use another organic acid solution or alkaline solution clean the product, except ethanol .
- (5) Do not elongate or blend the FPC, When assemble the product , Do not apply excessive forces to the flexible pattern.
- (6) Product's top and bottom edge compared with the left and right edge can easy to cause characteristic defect, Avoid to stress the area of VA appearance.
- (7) Do not use another organic acid solution or alkaline solution clean the product, except ethanol.
- (8) To protect products in packaging transportation engineering or before the customer assembly, the scrape contaminated the product. When the product outgoing , both side of TP affix low viscosity protective film. Due to the outside environment impact, After a period of time TP surface was effected by low viscosity protective film, It may appear white mist phenomenon, just slightly wipe the dirt, not return.

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