

PROJECTED CAPACITIVE TOUCH PANEL

Product Specification

CUSTOMER		
PRODUCT NUMBER	DTC101-100-01	
CUSTOMER APPROVAL		Date

INTERNAL APPROVALS		
Product Mgr	Doc. Control	Design. Eng
Bruno Recaldini	Luo Luo	Sunny Chen
Date: 21-Oct-14	Date: 21-Oct-14	Date: 21-Oct-14

- Approval for Specification only
- Approval for Specification and Sample

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REVISION RECORD

Rev.	Date	Page	Chapt.	Comment	ECR no.
1.0	21-Oct-14			First Release	

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1 MAIN FEATURES

ITEM	CONTENTS
Touch Type	Projected Capacitive
Simultaneous Touch Points	2
Screen Size	10.1"
Overall Dimensions (without FPC)	239.15 x 146.81 x 1.55 mm
Sensor Active Area	224.62 x 127.18 mm
Structure	GFF (Glass/Film/Film)
Transparency	86% min
Haze	5% Typ.
Hardness	6H
Interface	USB
Supported OS	Windows 7 / Android
IC controller	EXC7200
Operating temperature	-20 ~ 70°C
Storage temperature	-30 ~ 80°C

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2 MECHANICAL SPECIFICATION

2.1 MECHANICAL CHARACTERISTICS

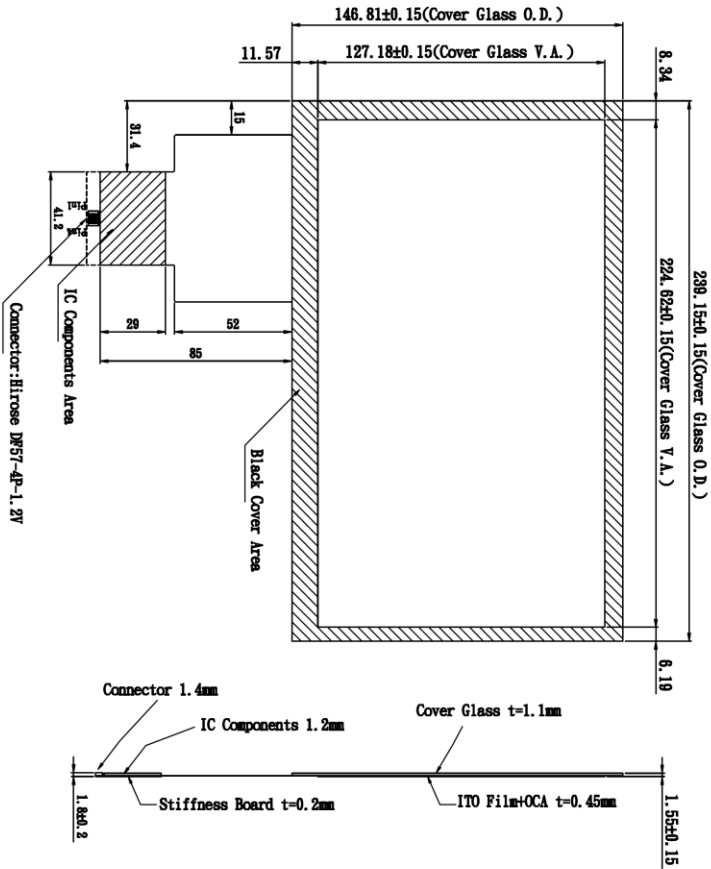
ITEM	CHARACTERISTIC	UNIT
Screen Size	10.1"	
Overall Dimensions (without FPC)	239.15 x 146.81 x 1.55	mm
Sensor Active Area	224.62 x 127.18 mm	mm
Structure	GFF (Glass/Film/Film)	

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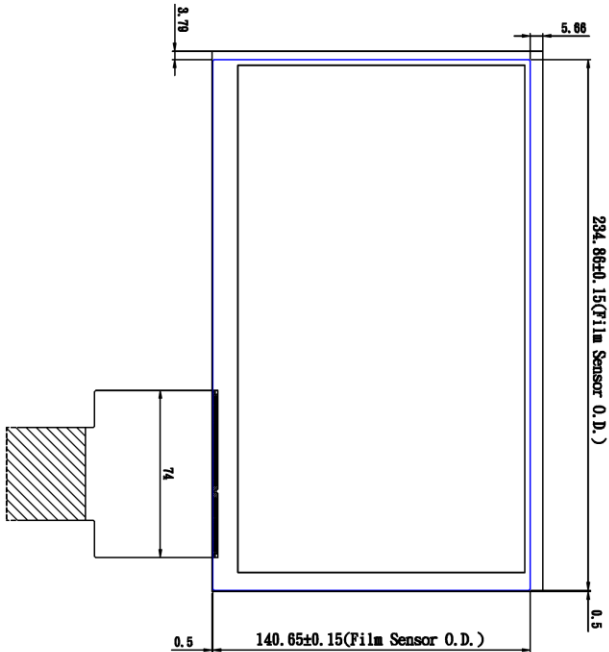
2.2 MECHANICAL DRAWING

- Note:
1. Tolerance: ± 0.3
 2. Pen & Finger Input Type
 3. Surface Hardness: 6H
 4. Transmittance: >85% (JIS-K7105)
 5. Film: Clear Type
 6. Channel Numbers: 38*22°



FRONT VIEW

PIN1	VCC In
PIN2	D-
PIN3	D+
PIN4	GND



BACK VIEW

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3 ELECTRICAL SPECIFICATION

3.1 ABSOLUTE MAXIMUM RATINGS

VSS = 0 V, Ta = 25 °C

Item	Symbol	Min	Max	Unit	Note
Power Supply Voltage	V _{CC}	-0.3	4.0	V	
Operating Temperature	T _{op}	-20	70	°C	
Storage Temperature	T _{st}	-30	80	°C	
Static Electricity	Be sure that you are grounded when handling touch panels.				

3.2 ELECTRICAL CHARACTERISTICS

VSS = 0 V, Ta = 25 °C

Item	Symbol	Condition	Min	Typ	Max	Unit
Power Supply for Logic	V _{CC} -V _{SS}	Ta = 25 °C	2.7	-	3.3	V
Current Consumption	I _{CC}	V _{CC} = 2.7~3.3V	-	-	60	mA

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3.3 INTERFACE PIN ASSIGNMENT

Recommended Connector:

No.	Symbol	I/O/P	Function
1	VCC	P	Power supply voltage
2	D-	I	USB Data Bus
3	D+	I	USB Data Bus
4	GND	P	Ground
5	NC	-	Not connected

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4 QUALITY ASSURANCE SPECIFICATION

4.1 CONFORMITY

The performance, function and reliability of the shipped products conform to the Product Specification.

4.2 DELIVERY ASSURANCE

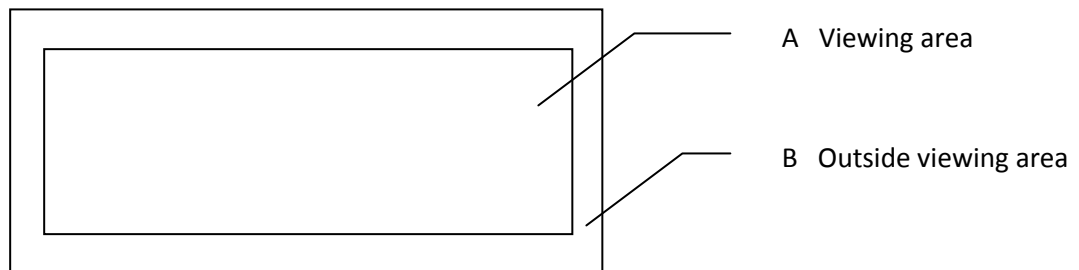
4.2.1 Delivery inspection standards

- MIL-STD-105E, general inspection level II, single sampling level;
- IPC-AA610 rev. C, class 2 electronic assemblies standard

The quality assurance levels are shown below:

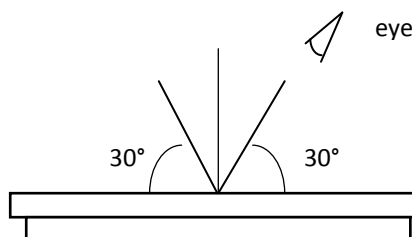
Class	AQL (%)
Critical defect	0.65%
Major defect	1.0%
Minor defect	2.5%
TOTAL	2.5%

4.2.2 Zone definition



4.2.3 Visual inspection

- Inspect under 2x20W or 40W fluorescent lamp (approximately 3000 lux) leaving 25 to 30 cm between the product and the lamp and 30 cm between the product and the eye (measuring position).
- Inspect the product at 30° off vertical line.

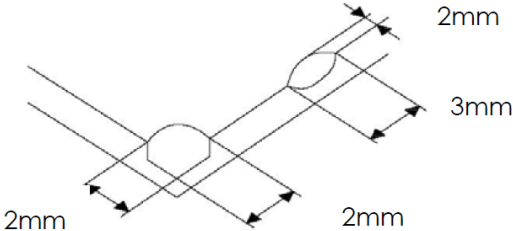


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4.2.3.1 Standard of appearance inspection

Units: mm

Description	Reject criteria
Glass flaw	<p>To be no flaw which size is over the drawing Specified as below. Number of flaw doesn't specify. Traveling flaw is none. The maximal flaw of thickness direction size is the glass thickness.</p> 

Description	Reject criteria		
Spot And Dots	Diameter:	0.9mm<D	zero
		0.7mm<D≤0.9mm	Max: 2 points
		0.5mm<D≤0.7mm	Max: 4 points
		D≤0.5mm	disregard
Scratch	Width:	0.2mm<W	zero
	Width:	0.15mm<W≤0.2mm	Max:2 points
	Length:	L≤8mm	
	Width:	0.1mm<W≤0.15mm	Max:4 points
	Length:	L≤8mm	
Width:	W≤0.1mm	disregard	
Dent/ Fish Eye	Diameter:	0.9mm<D	zero
		0.7mm<D≤0.9mm	Max: 2 points
		0.5mm<D≤0.7mm	Max: 4 points
		D≤0.5mm	disregard
Bubble	Diameter:	0.9mm<D	zero
		0.7mm<D≤0.9mm	Max: 2 points
		0.5mm<D≤0.7mm	Max: 4 points
		D≤0.5mm	disregard
FPC Foreign material	Foreign material can not short two patterns.		
FPC FPC Scratch	Any caused scratch which effects electrical characteristic is prohibited		
FPC FPC Crumple	Any caused crumple which effects electrical characteristic is prohibited		

※ D : Diameter[D=(hor+vert)/2], W : Width, L : Length

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4.3 DEALING WITH CUSTOMER COMPLAINTS

4.3.1 Non-conforming analysis

Purchaser should supply Densitron with detailed data of non-conforming sample.
After accepting it, Densitron should complete the analysis in two weeks from receiving the sample.
If the analysis cannot be completed on time, Densitron must inform the purchaser.

4.3.2 Handling of non-conforming products

If any non-conforming products are found during customer acceptance inspection which Densitron is clearly responsible for, return them to Densitron.
Both Densitron and customer should analyse the reason and discuss the handling of non-conforming products when the reason is not clear.
Equally, both sides should discuss and come to agreement for issues pertaining to modification of Densitron quality assurance standard.

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5 RELIABILITY SPECIFICATION

5.1 RELIABILITY TESTS

Test Item	Test Condition	Evaluation and assessment
High Temperature Storage	70°C, 120 hr	No abnormalities in function* and appearance
Low Temperature Storage	-30°C, 120 hr	No abnormalities in function* and appearance
High Temperature & High Humidity Storage	40°C, 90%RH, 120 hr	No abnormalities in function* and appearance
Thermal Shock Storage	-30°C ~ 70°C (0.5 hr each), 25 cycles	No abnormalities in function* and appearance
ESD	HBM 2kV	No abnormalities in function* and appearance

Samples must be stored at room temperature for 24 hours after the tests, before final inspection is carried out.

* Current consumption < 2 times initial value

5.2 DURABILITY

Item	Description	Note
Input	10 Million times	Within active area, Note (1)

Note (1) Hit the surface 10,000,000 times with a R8.0 silicon rubber.
 - Force: 200gf
 - Speed: 5 times/sec

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6 HANDLING PRECAUTIONS

Storage

Store the products at the temperature and humidity range presented in the specification.

Store the products in the state of package.

Do not expose the product to a direct ray of the sun.

Unpacking

Do not hold FPC/Copper tail to take out touch panels in the package.

Use gloves and finger coat to prevent stains on the touch panel and injury by the sharp edge of the touch panel.

Do not take hold of FPC /Copper tail when handing the touch panel.

Do not pile up touch panels.

Handling

Do not put anything on the touch panel.

Do not fold the FPC /Copper tail.

Clean off the touch panel with alcohol and a soft clothes when necessary

Prevent alcohol from penetrating into the touch panel.

Do not use organic solvents except for alcohol.

Assembly

Avoid excessive force on the touch panel.

Do not give unnecessary strain to the FPC /Copper tail while assembling.

Operation

Do not operate touch panel by applying excessive force.

Do not use a sharp thing for input.

We recommend calibration after long time use.

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