

5.0”, 4 Wire Touch Panel

Product Specification

PRODUCT NUMBER	DTS408-0500-00
-----------------------	-----------------------

Product Mgr	Quality Mgr	Engineering	Document Control
Date:	Date:	Date:	Date:

TABLE OF CONTENTS

1	MAIN FEATURES.....	4
2	MECHANICAL DRAWING.....	5
3	OPTICAL PERFORMANCE	6
4	ELECTRICAL PERFORMANCE	6
5	ENVIRONMENTAL TEST	7
5.1	HIGH TEMPERATURE TEST	7
5.2	LOW TEMPERATURE TEST	7
5.3	TEMPERATURE AND HUMIDITY TESTS.....	8
5.4	TEMPERATURE CYCLE TESTS	8
5.5	PUNCHING LIFE	9
5.6	IMPACT RESISTANCE	9
6	APPEARANCE AND INSPECTION STARDARDS	10
6.1	INSPECTION CONDITION	10
6.2	INSPECTION STANDARD.....	10

REVISION RECORD

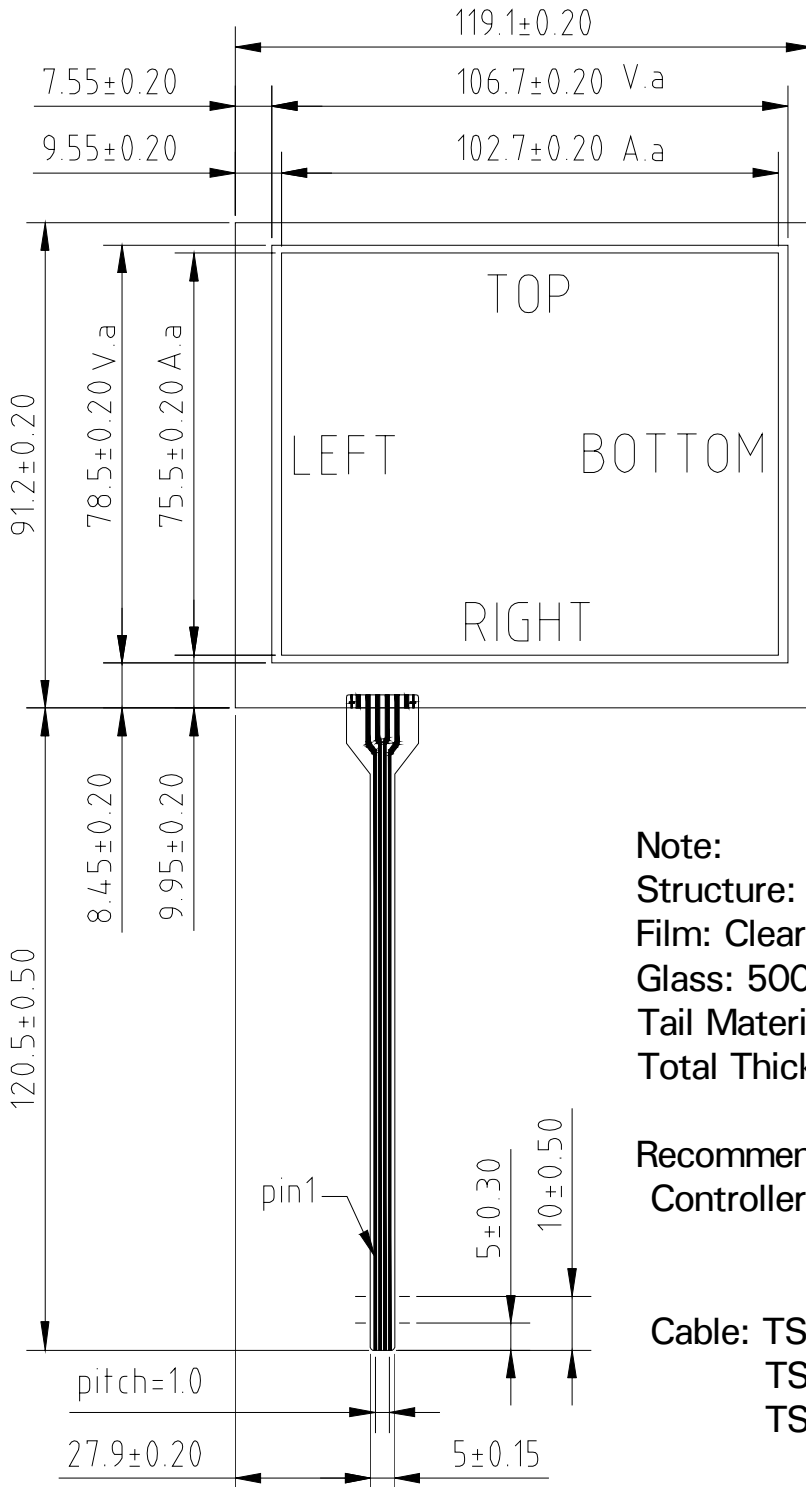
Rev.	Date	Page	Par.	Comment	ECN no.
A	07/31/06	--	--	Initial DCA Release	E3189
B	06/30/08	5	2	Changed Recommended Touch Decoder; Controller and Cable.	E3762

1 Main Features

UNIT=MM

ITEM	CONTENTS
Overall Dimension	119.1 (W) x 91.2 (H) x 1.4 (D)
Viewing Area	106.7 (W) x 78.5 (H)
Active Area	102.7 (W) x 75.5 (H)
ROHS Compliant	Yes
Surface Hardness	3H
Optical Clarity	80%
Operation Temperature	-10°C ~ 60°C
Storage Temperature	-20°C ~ 70°C
Endurance Test Strikes	+ 1 Million
Operating Voltage	5VDC, Nominal
Resistance	200Ω-900Ω
Linearity	<1.5%
Faceplate Surface	<input type="checkbox"/> ITO Film without hard-coating <input type="checkbox"/> ITO Film with hard-coating <input checked="" type="checkbox"/> ITO Film with anti-glare <input type="checkbox"/> ITO Film with anti-Newton ring <input type="checkbox"/> ITO Film with hard-coating and anti-Newton ring <input type="checkbox"/> ITO Film with anti-glare and anti-Newton ring
Operating Pressure	15~70g
Message Noise	5m sec ~ 15m sec
Type	Film to Glass

2 Mechanical Drawing



Note:

Structure: Film + Glass + Tail.

Film: Clear hardcoating 400 ohm/ T = 0.188 mm.

Glass: 500 ohm/ T = 1.10 mm.

Tail Material: FPC.

Total Thickness: 1.40 ± 0.150 mm.

Recommended Touch Decoder Kit:

Controller: TSC400-11F-000 (USB)

TSC600-01A-000 (RS-232)

Cable: TSCP-0F10-000 (PIN to ZIF cable)

TSCC-1E-000 (USB External cable)

TSCC-0E-000 (RS-232 External cable)

3 Optical Performance

Light transparency should be kept above 80% under the visible wave length when the wave length is 550nm.

4 Electrical Performance

Test Item	Test Condition
Connector Resistance	300Ω<X Axis: 900Ω
	200Ω<Y Axis: 800Ω
Insulation Resistance	20MΩ @25V DC
Electrostatic Endurance	No abnormal appearance after 10kv, 100Ω, 250PF electrostatic used.
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Operating Voltage	3V ~ 12V DC
Operating Current	5mA ~ 25mA

5 Environmental Test

5.1 High Temperature Test

After running the panels at 70°C for 240 hours, leave it for 24 hours at room temperature.

Test Item	Test Condition
Resistance between leads	300Ω<X Axis: <900Ω
	200Ω<Y Axis: <800Ω
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Insulation Resistance	20MΩ @25V DC

5.2 Low Temperature Test

After running the panels at -20°C for 240 hours, leave it for 24 hours at room temperature.

Test Item	Test Condition
Resistance between leads	300Ω<X Axis: <900Ω
	200Ω<Y Axis: <800Ω
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Insulation Resistance	20MΩ @25V DC

5.3 Temperature and Humidity Tests

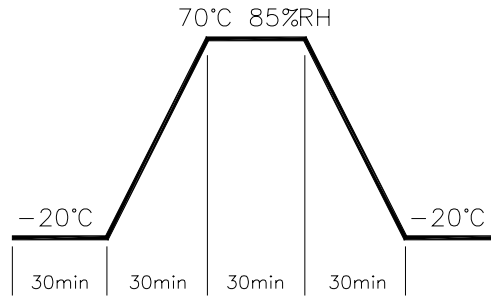
After running the panels at 40°C,90%RH for 240 hours, leave it for 24 hours at room temperature.

Test Item	Test Condition
Resistance between leads	300Ω<X Axis: <900Ω
	250Ω<Y Axis: <800Ω
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Insulation Resistance	20MΩ @25V DC

5.4 Temperature Cycle Tests

After running the panels at the condition of -20°C for 30 minutes → +70°C @85%RH for 30 minutes, repeated 20 cycles, leave it for 24 hours at room temperature.

Test Item	Test Condition
Resistance between leads	300Ω<X Axis: <900Ω
	200Ω<Y Axis: <800Ω
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Insulation Resistance	20MΩ @25V DC



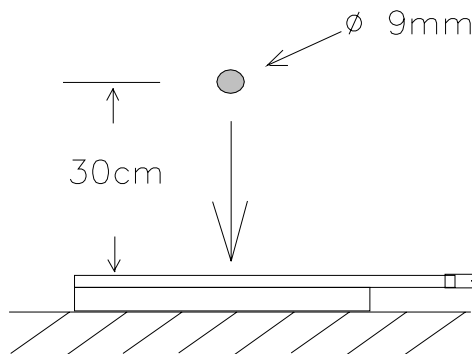
5.5 Punching Life

After punching 1,000,000 times with the R8.0 silicone rubber Force: 60g, Speed: 5/sec.

Test Item	Test Condition
Resistance between leads	300Ω<X Axis: <900Ω
	200Ω<Y Axis: <800Ω
Linearity	X Axis: 1.5%
	Y Axis: 1.5%
Insulation Resistance	20MΩ @25V DC

5.6 Impact Resistance

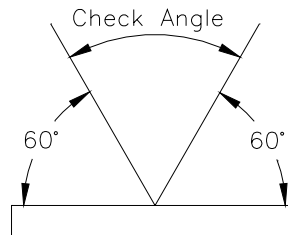
No damage when the Ø9mm steel ball is dropped on the surface from 30cm height for 1 cycle.



6 Appearance and Inspection Standards

6.1 Inspection Condition

- (A).The brightness of the area: 500 LUX
 (B)The distance of eyeshot:30 CM(The panel must be checked under the light transparency condition.)
 (C)The angle of eyeshot: 60°
 (D)The light source of the area: natural sunlight.



6.2 Inspection Standard

Suitable in the visible area, except dot space.

1. Spot, otherness	$\xi \leq 0.5\text{mm}$	Ignored
	$\xi > 0.5\text{mm}$	NG
2. Rub	$\xi \leq 1.0\text{mm}$	Ignored
	$1.0\text{mm} < \xi \leq 1.5\text{mm}$	2 points above & distance >50mm
	$\xi > 1.5\text{mm}$	NG
3. Cicatrices (Line) L: Length W: Width	$L < 10.0\text{mm}$ & $0.15\text{mm} < W \leq 0.2\text{mm}$	1 line is allowable 2 lines are reject 2 points above & distance >50mm
	$W \leq 0.15\text{mm}$	Ignored
	$W > 0.20\text{mm}$	NG
4. Edge Warp	Edge Warp $\leq 0.5\text{mm}$	Ignored
	Edge Warp $> 0.5\text{mm}$	NG