



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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WEB: <https://www.winstar.com.tw> E-mail: sales@winstar.com.tw

SPECIFICATION

CUSTOMER : _____

MODULE NO.: TST0007R0K1241XXXX00

| | |
|--|--|
| APPROVED BY: (FOR CUSTOMER USE ONLY) | PCB VERSION: _____ DATA: _____ |
|--|--|

| SALES BY | APPROVED BY | CHECKED BY | PREPARED BY |
|----------|-------------|------------|-------------|
| | | | |

| VERSION | DATE | REVISED PAGE NO. | SUMMARY |
|---------|------------|---------------------|-------------------------|
| A | 2015/02/11 | | Modify Contour Drawing. |



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MODLE NO :

RECORDS OF REVISION

DOC. FIRST ISSUE

| VERSION | DATE | REVISED PAGE NO. | SUMMARY |
|---------|------------|------------------|-------------------------|
| 0 | 2014/08/14 | | First issue |
| A | 2015/02/11 | | Modify Contour Drawing. |

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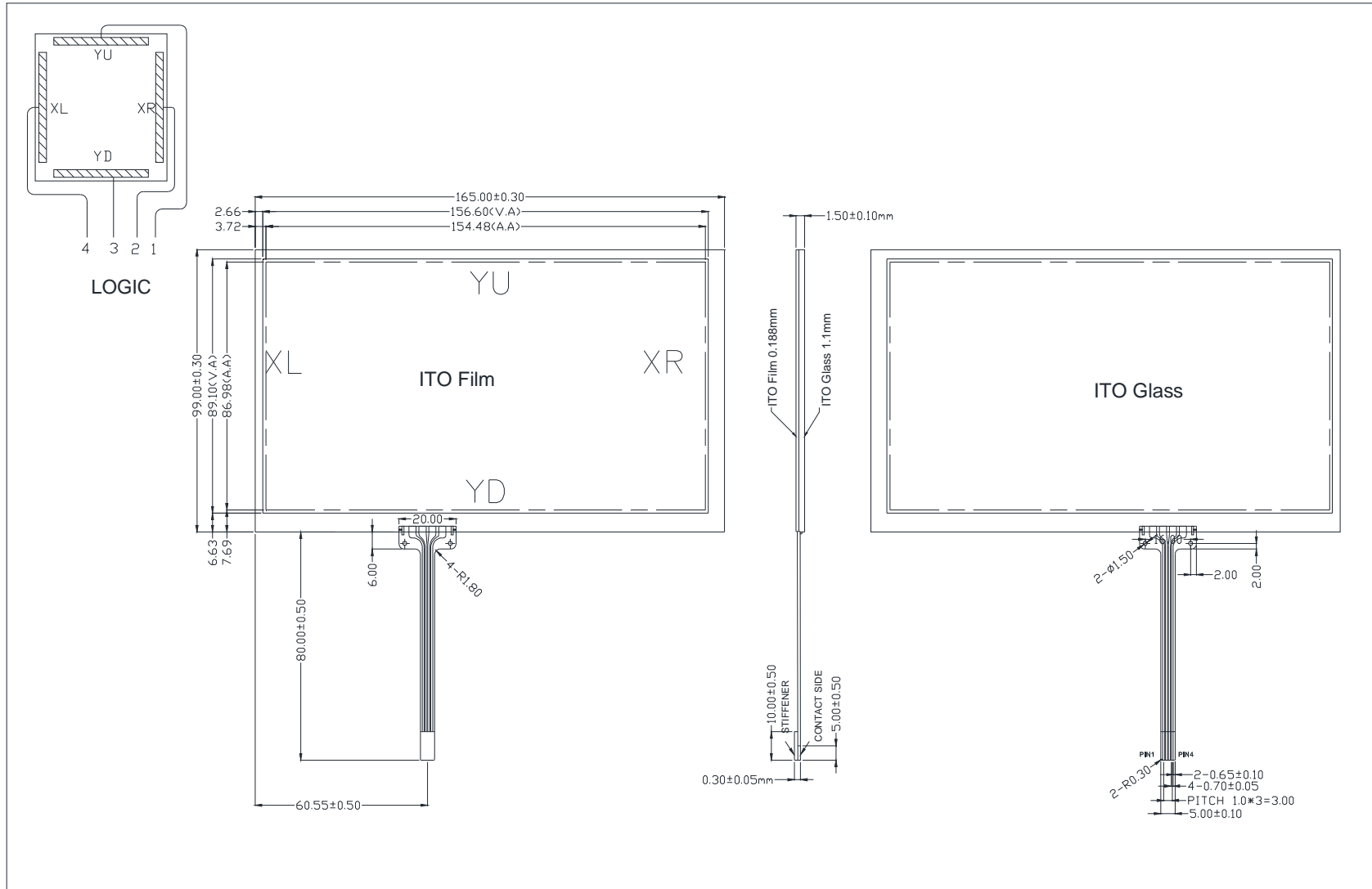
1. General Specification

| 1.1. ITEM | STANDARD VALUE | UNIT |
|-------------------|----------------|------|
| Outline dimension | 165.0*99.0±0.3 | mm |
| View area | 156.6*89.1 | mm |
| Active area | 154.48*86.98 | mm |
| Total thickness | 1.5±0.1 | mm |

2.Electrical Characteristics

- 1、 Driving condition: DC3~7V;
- 2、 Loop resistance: X: 430~910Ω Y: 150~530Ω
- 3、 Linearity: $\leq\pm 1.5\%$
- 4、 Insulation resistance: $> 10M\Omega$, At DC 25V;
- 5、 Insulation ability: $\geq 60\text{sec.}$ At DC 25V
- 6、 Chatting time: $< 10\text{ms}$

3. Contour Drawing



4.Other

4.1. Product type

Resistance type analogy type

Film/Glass type

Criteria of materials

Upper electrode

Base material: ITO FILM

Type: clear and anti-newton ring coating

Thickness: $188 \pm 10\mu\text{m}$

Resistance: $400 \pm 100 \Omega / \text{sq}$

Lower electrode

Base material: ITO FILM (ITO strengthen glass)

Thickness: $1.1 \pm 0.1\text{mm}$

Resistance: $400 \pm 100 \Omega / \text{sq}$

Mechanical characteristics

Input method: Pen

Operating force: 30~80g A.A area shrunk within 3mm

Shape of pen end : $\varnothing 0.3\text{mm} \sim \varnothing 0.5\text{mm}$

Hardness of Surface : Hard Surface $\geq 3\text{H}$ [JIS K5400]

Heat Seal intensity: X>2 kg f、Y>500g f、Z>150g f,

Optical characteristics

Total transmittance: >75% [JISK 7105]

Processing environment

Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

Operating humidity: $\leq 90\% \text{RH}$

Storage temperature: $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$

Storage humidity: $< 90\% \text{RH}$

Environmental test

High temperature: $+70^{\circ}\text{C}$, 120hr.

Low temperature: -20°C , 120hr.

High temp./ high humidity test : 70°C & 90%, 120hr.

High low temperature test : -30°C 30min / $+80^{\circ}\text{C}$ 30min, this is the test of 1 cycle with 24hr. (30min in either temperature increase). Taken out from environmental measurement machine, and placed 24hr in room temperature before test. The followings conditions are necessary:

▲ Closed impedance

$430\Omega < \text{X Axis} < 910\Omega$

$150\Omega < \text{Y Axis} < 530\Omega$

▲ Linearity error

X Axis: $\leq \pm 1.5\%$

Y Axis: $\leq \pm 1.5\%$

▲ Insulation impedance

$> 10\text{M}\Omega @ \text{DC } 25\text{V}$

Notes life $\geq 2 \times 10^4$ words min

Shape of pen end: R0.8mm Materials of pen: poly acetal resin written

Load : 150g Speed : 60mm/s

Sliding range: A.A area shrunked within 3mm

Underlined 100.000 times in a fixed position of TOUCH PANEL . If sliding back and force, it counts twice

The following conditions are necessary:

▲ Closed impedance

$430\Omega < X \text{ Axis} < 910\Omega$ $150\Omega < Y \text{ Axis} < 530\Omega$

▲ Linearity error

X Axis: $\leq \pm 1.5\%$ Y Axis: $\leq \pm 1.5\%$

▲ Insulation impedance

$> 10M\Omega @ DC 25V$

Notes life $\geq 2 \times 10^6$ times min

Shape of pen end: R0.8mm Materials of pen: SIR60°

Load : 150g Frequency : 60mm/s

Click range: A.A area shrunked within 3mm

Pointed-making 1million times in a fixed position of TOUCH PANEL. The following conditions are necessary:

▲ Closed impedance

$430\Omega < X \text{ Axis} < 910\Omega$ $150\Omega < Y \text{ Axis} < 530\Omega$

▲ Linearity error

X Axis: $\leq \pm 1.5\%$ Y Axis: $\leq \pm 1.5\%$

▲ Insulation impedance

$> 10M\Omega @ DC 25V$