

# Transparent LCD Terminal & Device Test Method Difference

China  
IEC/TC100 Discussion

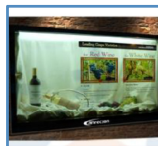
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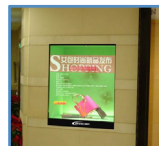
## 1. The necessity of transparent LCD terminal standard established

Transparent LCD terminal gives consumers a new shopping experience, also attracted users to use it actively, even attracts a lot of display manufacturers to seize this emerging market.

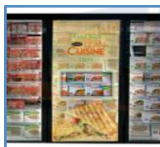
With such a huge market demand of transparent LCD terminal and the blank of industry standards, there is an urgent need to develop a standard for the test methods and technical requirements. To promote product performance and market demand, and to create more economic and social benefits.



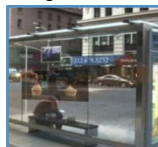
Merchandise figures show



Luxury show



Commercial refrigerator



Bus station show



Airport VIP-room window



Store display



Restaurant Show



Transparent elevator



Vending machine

## 2. Transparent LCD terminal standard main content

### Transparent LCD Terminal Test Method

**This standard mainly include :**

- appearance inspection method,
- display characteristic test method,
- environmental test method,
- etc.

### 3. Transparent LCD terminal & device optic test difference

#### The difference test item of terminal & device

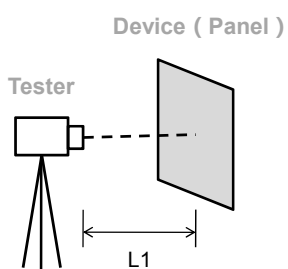
- The test of device mainly included the parameter of process, however, the test of terminal mainly included the overall effect of each application scenario.
- Some parameters in the terminal don't show up in the device, need to add and built corresponding test methods.

	Parameter Requirements		Remark
	Trans-LCD Device	Trans-LCD Terminal	
Luminance	No	Yes	Device no need to consider BLU; Terminal ( Showcase ) including BLU , need to consider different application scenarios
Luminance Uniformity	No	Yes	
Luminance Viewing Angle	No	Yes	
Color Viewing Angle	No	Yes	Terminal ( Showcase ) application scenarios
Splice Property	No	Yes	2*2, 3*3 or more showcase splice
System Property	No	Yes	Environmental requirement of the whole system
Viewing Distance	No	Yes	Terminal ( Showcase ) application scenarios
.....			

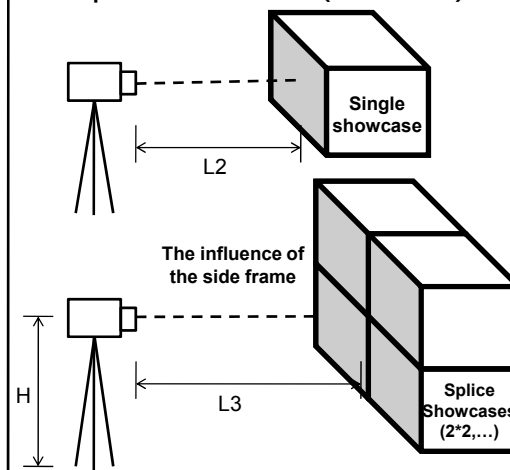
### 3. Transparent LCD terminal & device optic test difference

#### Optic test position & distance difference

Transparent LCD Device



Transparent LCD Terminal ( Showcase )

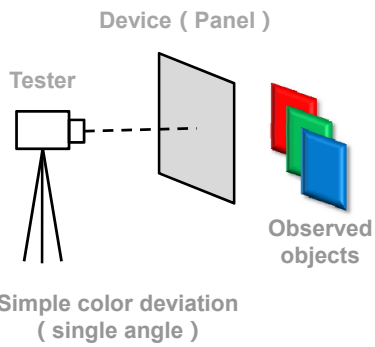


★ Considering the actual application situation of transparent LCD terminal, it's position to the viewer is different from the transparent LCD device.

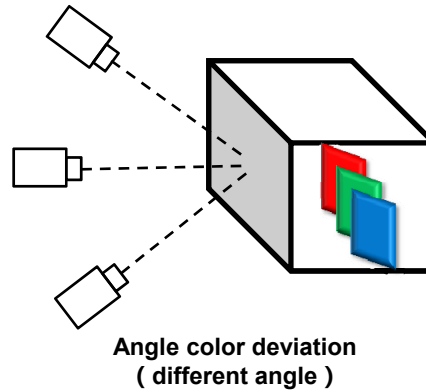
3. Transparent LCD terminal & device optic test difference

**Transparent LCD terminal angle color deviation**

Transparent LCD Device



Transparent LCD Terminal ( Showcase )

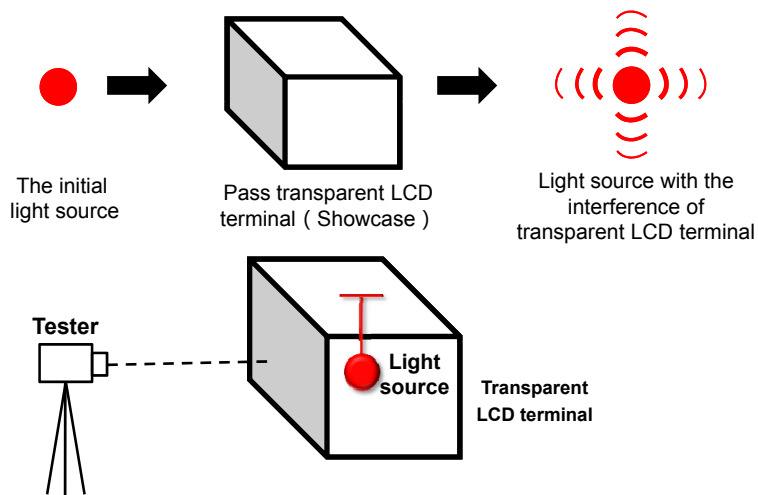


★ Actual application situation of transparent LCD terminal :  
Observe the objects ( showcase ) in different angle

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3. Transparent LCD terminal & device optic test difference


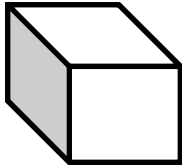
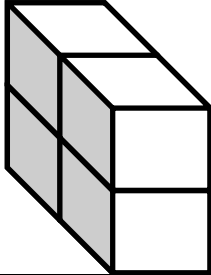
**Transparent LCD terminal light interference test**



★ Actual application situation of transparent LCD terminal :  
Exhibition light source put in the LCD terminal (showcase)

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4. Transparent LCD terminal & device environmental test difference

Environmental Test Item		Transparent LCD Device	Transparent LCD Terminal (Showcase)	
			Single	Splice(2*2,...)
Model				
Reliability Test	Temperature	Work / Storage temperature of panel	Work / Storage temperature of the whole system	
	Intensity	Vibration / Drop test of single panel	Splice test, Flatness test	

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5. Transparent LCD terminal test item contents

**Optic test item :**

- Response Time
- Contrast Ratio
- Viewing Angle
- Angle Color Deviation
- Crosstalk
- Transmittance Ratio
- Haze
- Mirror Reflectivity
- Light Interference Test
- .....

**Environmental test item :**

- High Temp. Running Test
- High Temp. Storage Test
- Low Temp. Test
- Low Temp. Storage Test
- Temp. Change Test
- Splice Test
- Flatness Test
- .....

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END

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**THANKS**

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