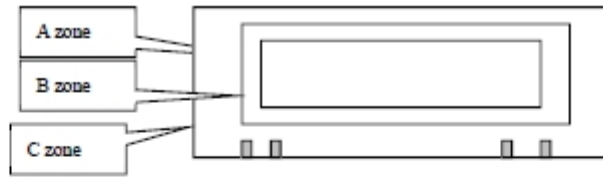


# GENERAL FAILURE SPECIFICATION FOR OUR STANDARD LCD-PANELS

## 1.0 DEFECT SIZE



A zone: pattern area    B zone: view area    C zone: out of view area

Description of defect	Illustration
$\text{Dot Diameter} = \frac{L_{\max} + L_{\min}}{2}$	
Line Length = L Line Width = W	

## 2.0 SPECIFICATION

### 2.1 Cosmetic

- Protective film: The film can be peeled off, not any draft on the surface.
- Dimension: The mechanical dimension is defined in the counter drawing.
- Dirty  
 Dirt visible and cannot be wiped with dry soft cloth on the LCD surface including the contact edge is not allowed, otherwise is ok.  
 Dirt which can dirty the LCD in the packaging box is not allowed.

### 2.2 Defect with Polarizer (within the Viewing Area)

#### Inspection Conditions:

- Temperature: 15°C ~ 25°C (Room temperature)
- Humidity: <65%
- Checking tools: Polarizer, Light table
- Inspection time: ~ 5sec/pc
- Distance from LCD: ~30cm
- Luminance: 800~1,000 Lux

#### Dot Defects

(White spot, black spot within the VA, spot or air bubble between glass and polarizer)

No.	Diameter	Judgment
a.	>0.30mm	not allowed
b.	0.25mm < d ≤ 0.30mm distance > 30mm	max.: 1
	0.10mm < d ≤ 0.25mm distance > 30mm	max.: 3
c.	≤ 0.10mm accumulations	not counted not allowed

# GENERAL FAILURE SPECIFICATION FOR OUR STANDARD LCD-PANELS

## Line Defects:

(Fibre on glass or on polarizer)

No.	L & W	Judgment
a.	$L > 3.5\text{mm}$ or $W > 0.05\text{mm}$	not allowed
b.	$L \leq 3.5\text{mm}$ and $0.02 < W \leq 0.05\text{mm}$ distance $> 30\text{mm}$	max: 3
c.	$W \leq 0.02\text{ mm}$	not counted
	Accumulations	not allowed

- Scratch on polarizer surface (not remarkable, 30cm distance) is acceptable
- Rainbow less than two kind of color along vertical direction
- Air bubble in cell, leakage is not allowed
- ITO layer visibility refer to accepted samples

### 2.3 Defect with Polarizer (Out of Viewing Area C Zone)

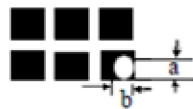
- Leakage, air bubble in cell: Not allowed
- Sealing:

No.	Defect	Judgment
a.	Width	0.5~1.0mm
b.	50% reduction of sealing frame width	not allowed
c.	Air bubble: $W > 1/2$ sealing frame width or $L > 3\text{mm}$	not allowed

- Air bubble between glass surface and polarizer: Diameter  $< 1\text{mm}$

### 2.4 Defect with Electrical Driving Method

- Pinhole, Deformation



$$\text{Pinhole: } D = \frac{a + b}{2}$$

Deformation  $< 20\%$  width of digital or character.

- Overconnection outside of the sealing frame is not allowed.
- Missing Segment is not allowed.
- Short Circuit is not allowed.
- Misadjustment of front / back planes:  $< 0.03\text{mm}$ .
- Slow Response is not allowed (pls refer to samples).
- Uneven contrast is not allowed.
- Crosstalk: Pls refer to samples.

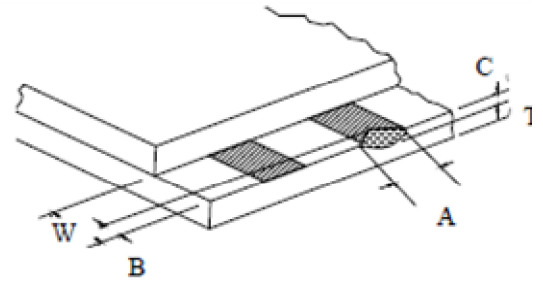
# GENERAL FAILURE SPECIFICATION FOR OUR STANDARD LCD-PANELS

## 2.5 Chip or broken Glass (Acceptance Level)

- Contact Edge:

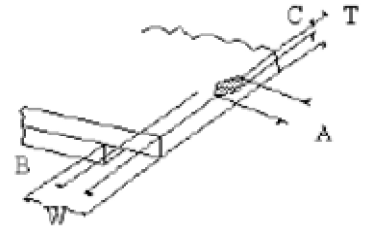
a. ITO layer

C	A	B
$C \leq T/2$	$\leq 10$	$\leq 0.5$
$T/2 < C \leq T$	$\leq 5$	$\leq 0.5$



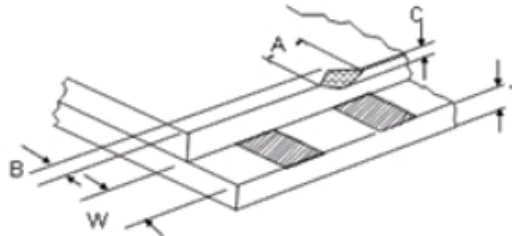
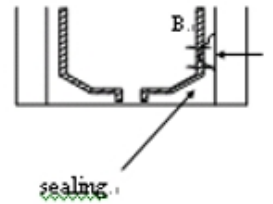
b. Without ITO layer

C	A	B
$C \leq T/2$	$\leq 10$	$\leq 1.0$
$T/2 < C \leq T$	$\leq 5$	$\leq 0.5$

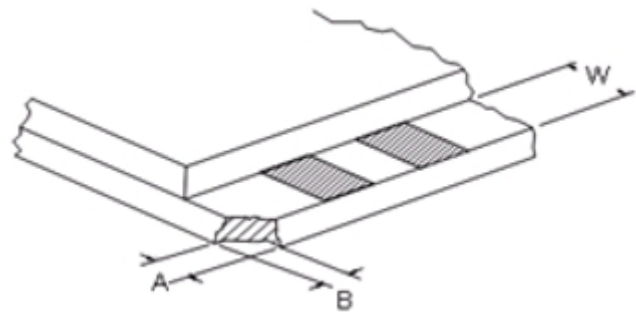


- Glass Chips:

$B^{\circ}$	$A^{\circ}$	$C^{\circ}$
B not touched the sealing	$\leq 10^{\circ}$	$\leq T/2^{\circ}$
B not touched the sealing	$\leq 5^{\circ}$	$T/2 < C < T^{\circ}$
B touched the sealing	$\leq 3^{\circ}$	$\geq T^{\circ}$



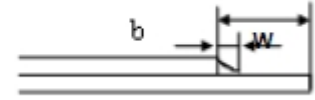
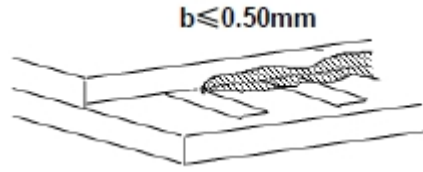
- Glass Chips of Corner:



$$A+B \leq 4$$

# GENERAL FAILURE SPECIFICATION FOR OUR STANDARD LCD-PANELS

- Bulges:



- Glass Crack, Glass Scratch (remarkable) is not allowed

## 2.6 Connected Method and Display Mode

- Refer to the counter drawing

APPLICATION - NOTE  
APPLICATION - NOTE