TFT LCD Approval Specification

FUNAI MPDEL NO.:TLCD100CME20

CMO MODEL NO.: V315B1 - C03

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Record of Revision

Version	Date	Page (New)	Section	Description
Ver.2.0	Oct.22, '07	All	All	Approval Specification was first issued.

1.0 Handling Precautions

- The LCD panel is made of glass and may break or crack if dropped on a hard surface. It is necessary to handle it carefully.
- Since front polarizer is easily damaged, pay attention not to scratch it.
- When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth gently.
- Do not touch the front screen surface when assembling.

2.0 General Description

This specification is applied to the Type V315B1 TFT/LCD cell. This cell is designed for a display unit for TV application.

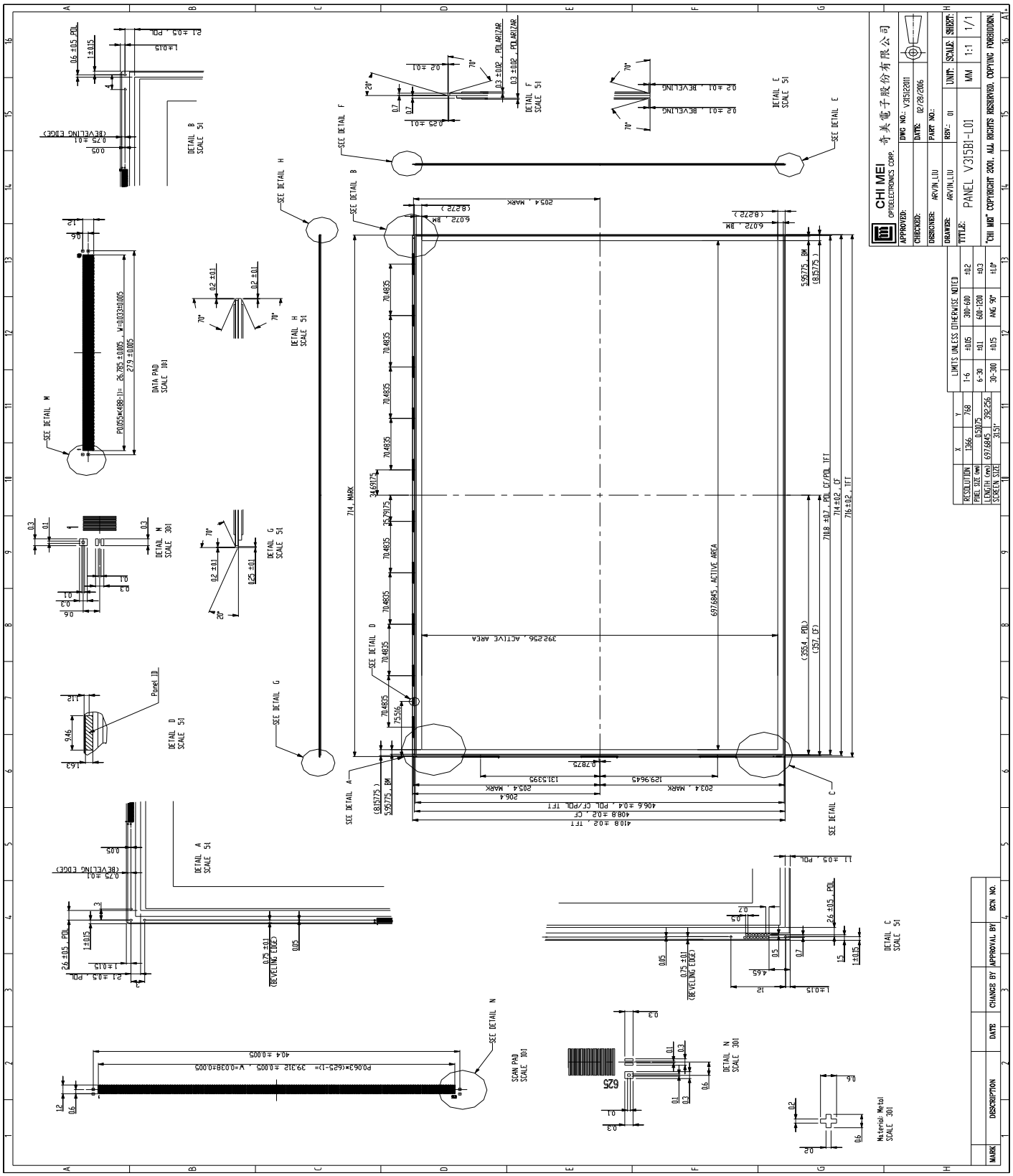
The screen format is intended to support the WXGA (1366(H) x 768(V)) screen

2.1 Characteristics

CHARACTERISTICS ITEMS	SPECIFICATIONS
Screen Diagonal [in]	31.51
Pixels [lines]	1366×768
Active Area [mm]	697.6845 (H) x 392.256 (V)
Sub -Pixel Pitch [mm]	0.17025(H) x 0.51075 (V)
Pixel Arrangement	RGB vertical stripe
Weight [g]	TYP. 1175
Physical Size [mm]	716(W) x 410.8(H) x 2.00(D) Typ.
Display Mode	Transmissive mode / Normally black
Contrast Ratio	1500:1 Typ. (Typical value measured at CMO's module)
Glass thickness (Array/CF) [mm]	0.7 / 0.7
Viewing Angle(CR>20)	+88/-88(H),+88/-88(V) Typ. (CR≥20) (Typical value measured at CMO's module)
Color White	Color Filter R=(0.650, 0.328) G=(0.272, 0.587) B=(0.135, 0.105) W=(0.304, 0.329) *White color is calibrated value measured at Color Filter by C source
Cell Transparency [%]	4.4%Typ. (Typical value measured at CMO's module)
Polarizer (CF side)	Wide View, Anti-glare coating, 710.8 (W) x 406.6 (H). Hardness: 3H
Polarizer (TFT side)	Wide View, 710.8 (W) x 406.6 (H)

3.0 Cell Outline

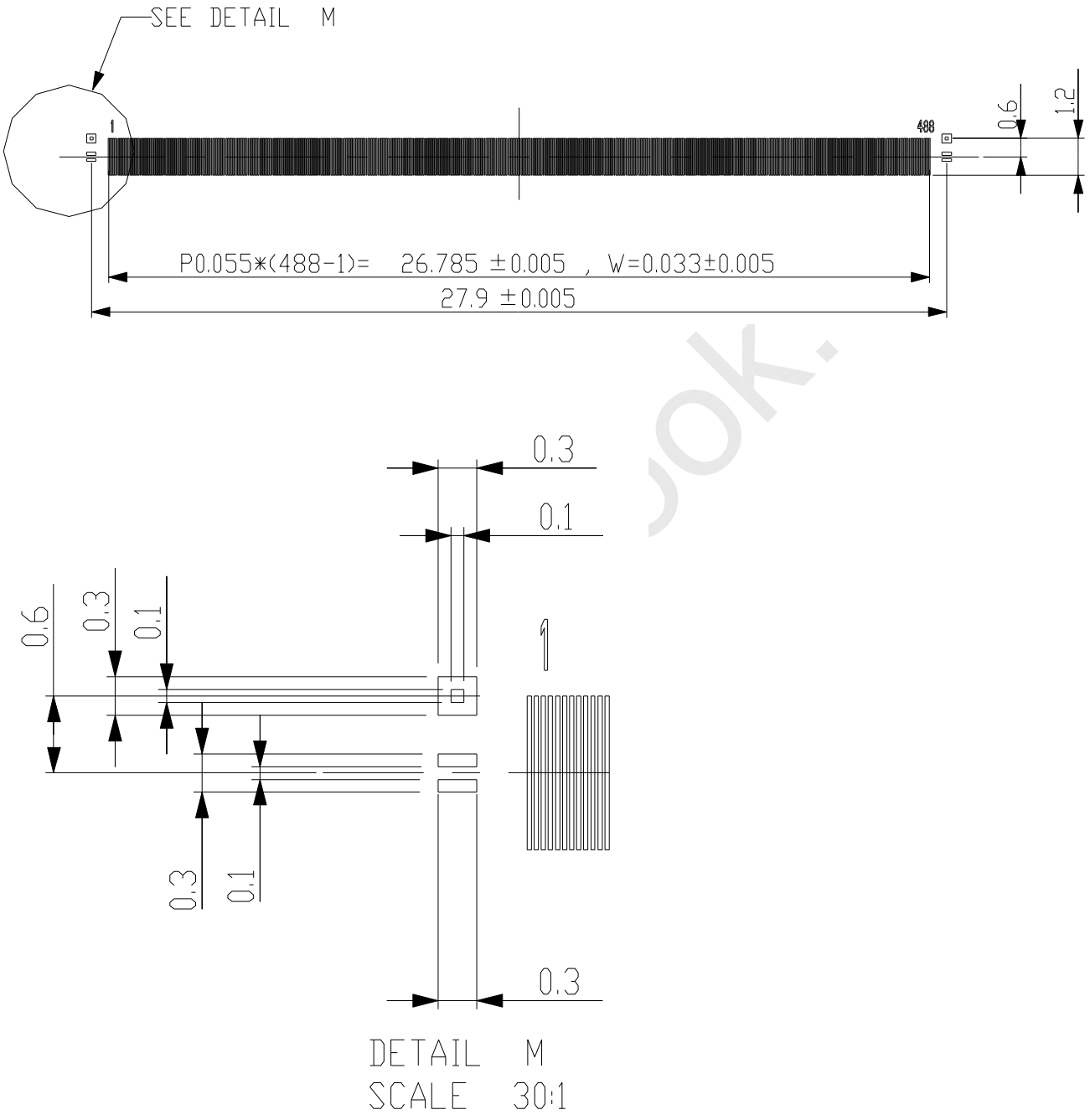
The following figure shows cell outline.



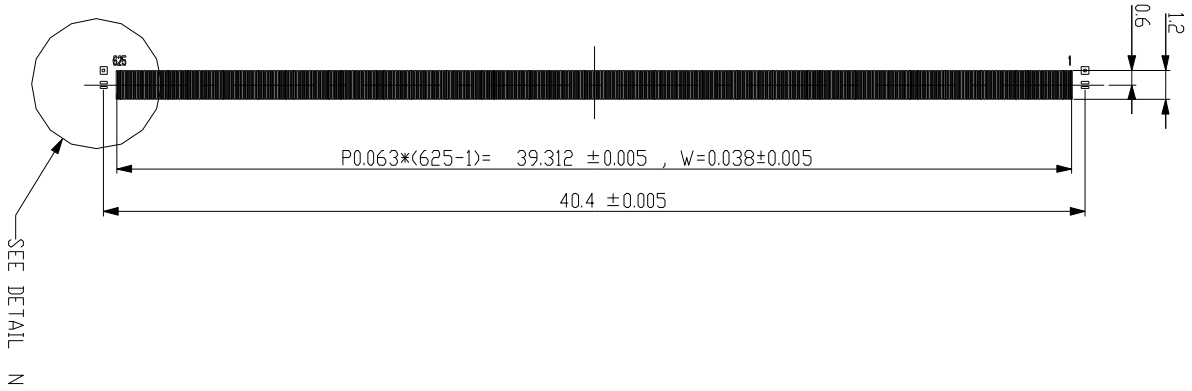
3.1 PAD Design

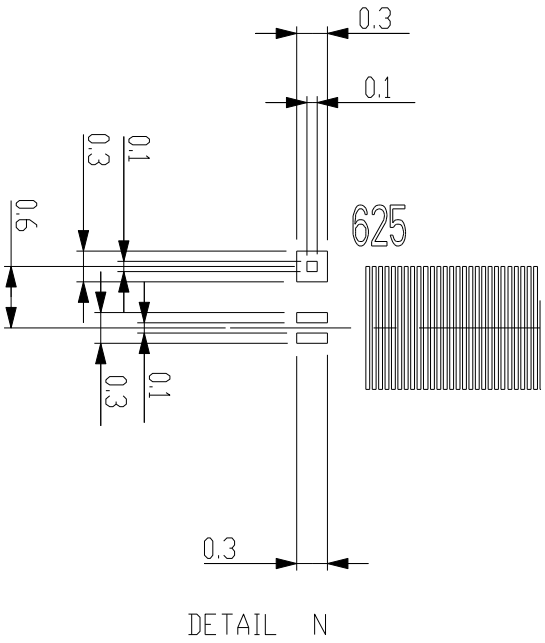
The following figure shows Data & Scan pad design.

[**Data Pad**] Unit [mm]



[Scan Pad] Unit [mm]





DETAIL N

3.2 OLB PAD Assignment

GATE

Scan1/ Scan2

1	Test	40	Vgh	605	Vdd
2	Test	41	Vgh	606	NC
3	NC	42	NC	607	SIN 2
4	NC	43	NC	608	LR
5	Vcom	…	…	609	NC
6	Vcom	69	NC	610	STV 2
7	NC	70	NC	611	NC
8	NC	71	Vst0	612	CPV
9	NC	72	Gate1	613	XAO
10	NC	…	Vst1	614	NC
11	OE	…	Gate2	615	OE
12	NC	…	…	616	NC
13	XAO	578	…	617	NC
14	CPV	579		618	NC
15	NC	580	Gate255	619	NC
16	STV 1	581	Vst255	620	Vcom
17	NC	582	Gate256	621	Vcom
18	LR	583	NC	622	NC
19	SIN 1	584	NC	623	NC
20	NC	585	Vgh	624	Test
21	Vdd	586	Vgh	625	Test
22	Vdd	587	Vgh		
23	Mode 1	588	Vgh		
24	Vss	589	NC		
25	Vss	590	Vee		
26	Vsl	591	Vee		
27	Vsl	592	Vee		
28	Vsl	593	Vee		
29	Vsh	594	NC		
30	Vsh	595	Vsh		
31	Vsh	596	Vsh		
32	NC	597	Vsh		
33	Vee	598	Vsl		
34	Vee	599	Vsl		
35	Vee	600	Vsl		
36	Vee	601	Vss		
37	NC	602	Vss		
38	Vgh	603	Mode 1		
39	Vgh	604	Vdd		

Scan3

1	Test	40	Vgh	605	Vdd
2	Test	41	Vgh	606	NC
3	NC	42	NC	607	SIN 2
4	NC	43	NC	608	LR
5	Vcom	…	…	609	NC
6	Vcom	69	NC	610	STV 2
7	NC	70	NC	611	NC
8	NC	71	Vst0	612	CPV
9	NC	72	Gate1	613	XAO
10	NC	…	Vst1	614	NC
11	OE	…	Gate2	615	OE
12	NC	…	…	616	NC
13	XAO	578	…	617	NC
14	CPV	579		618	NC
15	NC	580	Gate255	619	NC
16	STV 1	581	Vst255	620	Vcom
17	NC	582	Gate256	621	Vcom
18	LR	583	Vst256	622	NC
19	SIN 1	584	NC	623	NC
20	NC	585	Vgh	624	Test
21	Vdd	586	Vgh	625	Test
22	Vdd	587	Vgh		
23	Mode 1	588	Vgh		
24	Vss	589	NC		
25	Vss	590	Vee		
26	Vsl	591	Vee		
27	Vsl	592	Vee		
28	Vsl	593	Vee		
29	Vsh	594	NC		
30	Vsh	595	Vsh		
31	Vsh	596	Vsh		
32	NC	597	Vsh		
33	Vee	598	Vsl		
34	Vee	599	Vsl		
35	Vee	600	Vsl		
36	Vee	601	Vss		
37	NC	602	Vss		
38	Vgh	603	Mode 1		
39	Vgh	604	Vdd		

SIGNAL

Data 1

1	Test	42	Vcom
2	Test	43	Vcom
3	NC	44	NC
4	NC	45	NC
5	Vcom	46	NC
6	Vcom	47	NC
7	NC	48	NC
8	NC	...	NC
9	NC	68	NC
10	NC	69	data1
11	OE	...	...
12	NC	...	...
13	XAO	460	data392
14	CPV	461	data393
15	NC	462	NC
16	STV 1	463	NC
17	NC	464	NC
18	LR	465	NC
19	SIN 1	466	NC
20	NC	467	NC
21	Vdd	468	NC
22	Vdd	469	NC
23	Mode 1	470	NC
24	NC	471	NC
25	Vss	472	NC
26	Vss	473	NC
27	Vsl	474	NC
28	Vsl	475	NC
29	Vsl	476	NC
30	Vsh	477	Vcom
31	Vsh	478	Vcom
32	Vsh	479	NC
33	NC	480	NC
34	Vgl	481	NC
35	Vgl	482	NC
36	Vgl	483	NC
37	NC	484	NC
38	Vgh	485	NC
39	Vgh	486	NC
40	Vgh	487	Test
41	NC	488	Test

Data 2~4

1	Test	42	Vcom
2	Test	43	Vcom
3	NC	44	NC
4	NC	45	NC
5	Vcom	46	NC
6	Vcom	47	NC
7	NC	48	data1
8	NC	...	...
9	NC	68	data21
10	NC	69	data22
11	NC	...	...
12	NC	...	...
13	NC	460	data413
14	NC	461	data414
15	NC	462	NC
16	NC	463	NC
17	NC	464	NC
18	NC	465	NC
19	NC	466	NC
20	NC	467	NC
21	NC	468	NC
22	NC	469	NC
23	NC	470	NC
24	NC	471	NC
25	NC	472	NC
26	NC	473	NC
27	NC	474	NC
28	NC	475	NC
29	NC	476	NC
30	NC	477	Vcom
31	NC	478	Vcom
32	NC	479	NC
33	NC	480	NC
34	NC	481	NC
35	NC	482	NC
36	NC	483	NC
37	NC	484	NC
38	NC	485	NC
39	NC	486	NC
40	NC	487	Test
41	NC	488	Test

Data 5

1	Test	42	Vcom
2	Test	43	Vcom
3	NC	44	NC
4	NC	45	NC
5	Vcom	46	NC
6	Vcom	47	NC
7	NC	48	data1
8	NC	...	...
9	NC	68	data21
10	NC	69	data22
11	NC	...	...
12	NC	...	...
13	NC	460	data413
14	NC	461	data414
15	NC	462	NC
16	NC	463	NC
17	NC	464	NC
18	NC	465	NC
19	NC	466	NC
20	NC	467	NC
21	NC	468	NC
22	NC	469	NC
23	NC	470	NC
24	NC	471	NC
25	NC	472	NC
26	NC	473	NC
27	NC	474	NC
28	NC	475	NC
29	NC	476	NC
30	NC	477	NC
31	NC	478	NC
32	NC	479	NC
33	NC	480	NC
34	NC	481	NC
35	NC	482	NC
36	NC	483	NC
37	NC	484	NC
38	NC	485	NC
39	NC	486	NC
40	NC	487	Test
41	NC	488	Test

Data 6

1	Test	42	NC
2	Test	43	NC
3	NC	44	NC
4	NC	45	NC
5	NC	46	NC
6	NC	47	NC
7	NC	48	data1
8	NC	...	...
9	NC	68	data21
10	NC	69	data22
11	NC	...	...
12	NC	...	...
13	NC	460	data413
14	NC	461	data414
15	NC	462	NC
16	NC	463	NC
17	NC	464	NC
18	NC	465	NC
19	NC	466	NC
20	NC	467	NC
21	NC	468	NC
22	NC	469	NC
23	NC	470	NC
24	NC	471	NC
25	NC	472	NC
26	NC	473	NC
27	NC	474	NC
28	NC	475	NC
29	NC	476	NC
30	NC	477	Vcom
31	NC	478	Vcom
32	NC	479	NC
33	NC	480	NC
34	NC	481	NC
35	NC	482	NC
36	NC	483	NC
37	NC	484	NC
38	NC	485	NC
39	NC	486	NC
40	NC	487	Test
41	NC	488	Test

Data 7~9

1	Test	42	Vcom
2	Test	43	Vcom
3	NC	44	NC
4	NC	45	NC
5	Vcom	46	NC
6	Vcom	47	NC
7	NC	48	data1
8	NC	...	...
9	NC	68	data21
10	NC	69	data22
11	NC	...	...
12	NC	...	...
13	NC	460	data413
14	NC	461	data414
15	NC	462	NC
16	NC	463	NC
17	NC	464	NC
18	NC	465	NC
19	NC	466	NC
20	NC	467	NC
21	NC	468	NC
22	NC	469	NC
23	NC	470	NC
24	NC	471	NC
25	NC	472	NC
26	NC	473	NC
27	NC	474	NC
28	NC	475	NC
29	NC	476	NC
30	NC	477	Vcom
31	NC	478	Vcom
32	NC	479	NC
33	NC	480	NC
34	NC	481	NC
35	NC	482	NC
36	NC	483	NC
37	NC	484	NC
38	NC	485	NC
39	NC	486	NC
40	NC	487	Test
41	NC	488	Test

Data 10

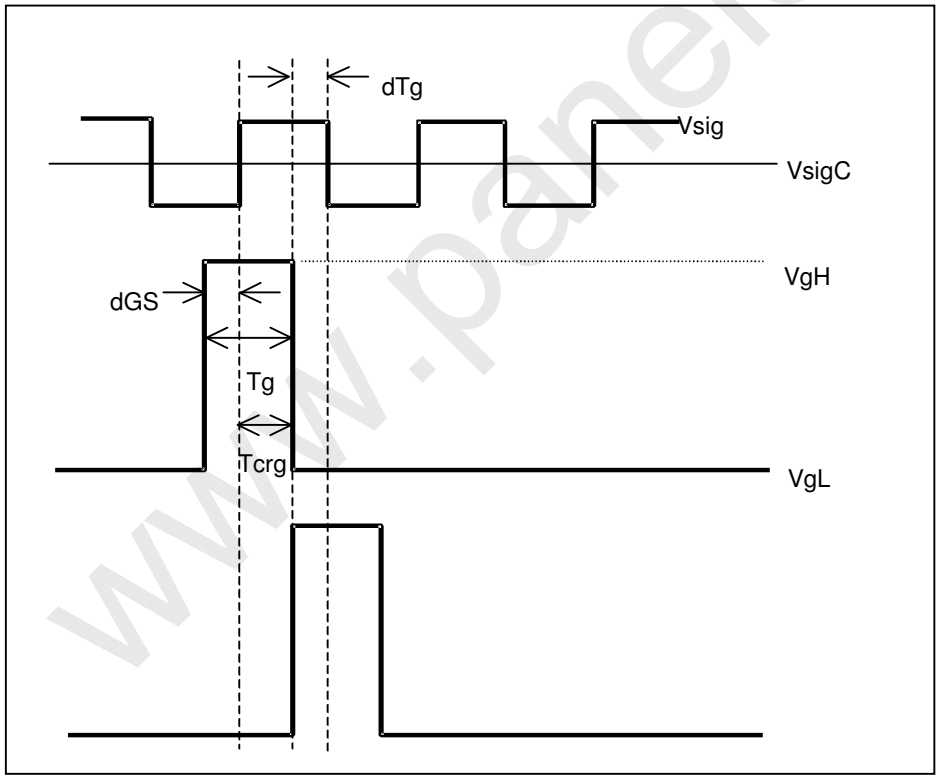
1	Test	42	Vcom
2	Test	43	Vcom
3	NC	44	NC
4	NC	45	NC
5	Vcom	46	NC
6	Vcom	47	NC
7	NC	48	data1
8	NC	...	...
9	NC	...	...
10	NC	...	...
11	NC	440	data393
12	NC	441	NC
13	NC	...	...
14	NC	461	NC
15	NC	462	NC
16	NC	463	NC
17	NC	464	NC
18	NC	465	NC
19	NC	466	NC
20	NC	467	Vgl
21	NC	468	Vgl
22	NC	469	Vcom
23	NC	470	Vcom
24	NC	471	NC
25	NC	472	Vgl
26	NC	473	Vgl
27	NC	474	Vcom
28	NC	475	Vcom
29	NC	476	NC
30	NC	477	Vcom
31	NC	478	Vcom
32	NC	479	NC
33	NC	480	NC
34	NC	481	NC
35	NC	482	NC
36	NC	483	NC
37	NC	484	NC
38	NC	485	NC
39	NC	486	NC
40	NC	487	Test
41	NC	488	Test

Note1: NC is CMO reserve.

3.3 Operating condition

The following table describes operating condition at CMO cell inspection

Item		Cell Inspection Condition
Gate	Vgh	23.0V
	Vgl	-5.5V
	Sig/Com Reverse Time	20.9us
	dGS	-1.1us
	dTg1	5.1us
	Tg(Gate On Time)	14.7us
	Tcrg(Writing Time)	13.7us
Frame Frequency		60Hz
Signal	(Black) Vsig Center	6.71V
	(BWhite) Vsig Center	6.5V
Common	Vcom Center	5.8V
	Vcom Amplitude	0.00V
	Vcom Adjustment	±0.5V
LC	(Black)	0.04V
	(White)	6.5V



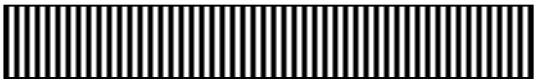
4.0 Storage Conditions

High temperature or humidity may reduce the performance of panel. Please store LCD panel within the specified storage conditions. The recommended storage conditions are 25℃±5℃, 50±10%RH.

5.0 Label and Packaging

5.1 Label

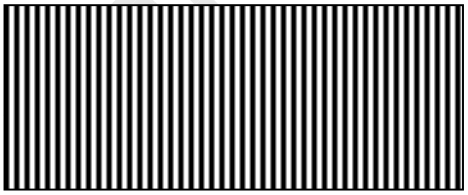
5.1.1 PANEL LABEL



T2243036NY03

5.1.2 PPBOX AND CARTON LABEL

Model Name	V315B1-C03
Panel Type	31WX03
Quantity	22
Case ID	(CMO internal define)
Note	(CMO internal define)
Note1	TLCD100CME20
Note2	



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5.2 Packaging

5.2.1 PACKING SPECIFICATIONS

(1) 22 LCD TV Panels / 1 Box

(2) Box dimensions : 925(L) X 310 (W) X 625 (H)

(3) Weight : approximately 36.5Kg (22 panels per box)

5.2.1 PACKING METHOD

Figures 5-1 and 5-2 are the packing method

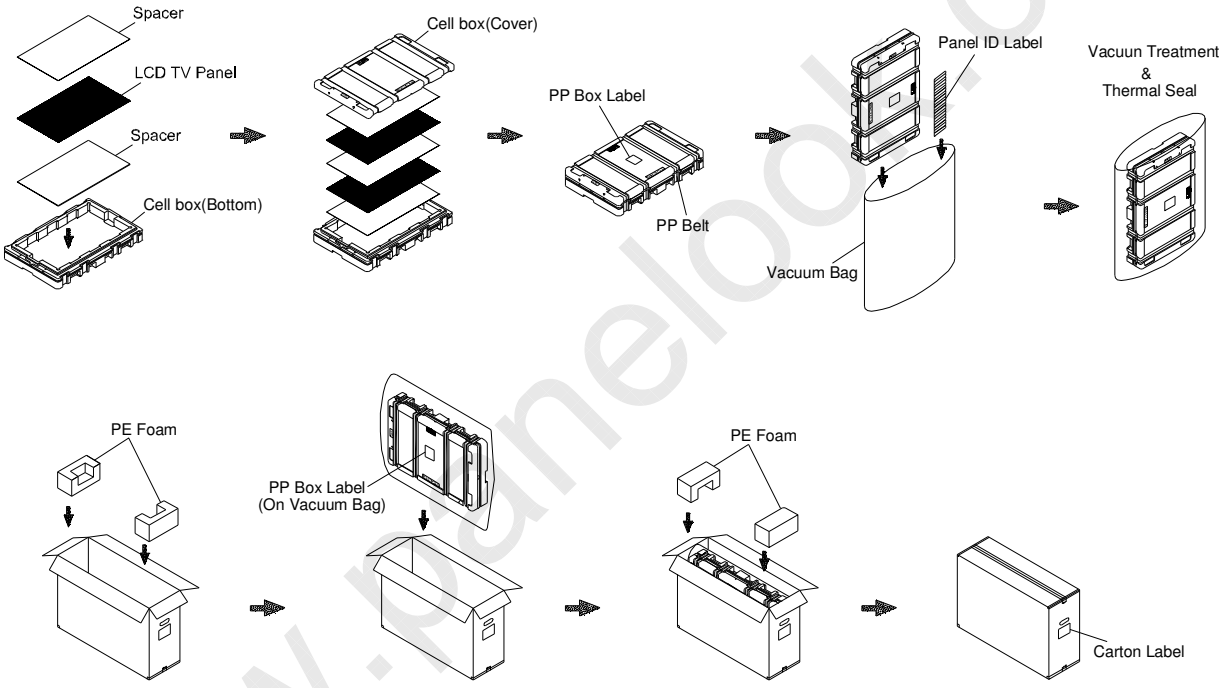

Figure.5-1 packing method

Corner Protector:L1130*50mm*50mm
L800*50mm*50mm
Pallet:L960*W960*H140mm
Pallet Stack:L960*W960*H1390mm
Gross:232kg

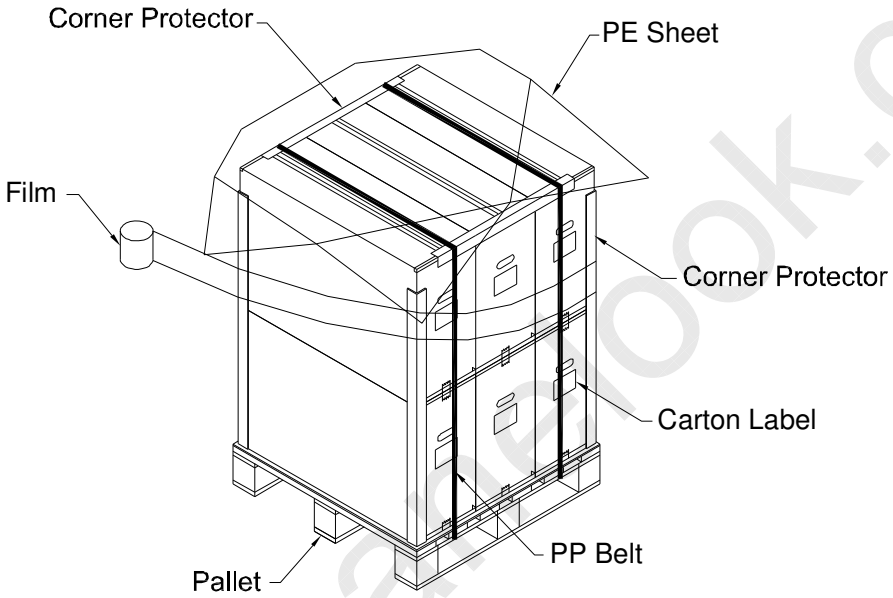

Figure.5-2 packing method

6.0 Others

If any doubt arises in relation to items not defined in this agreement or any articles in this agreement, both parties shall discuss it with sincerity and arrive at a mutual decision.

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