CHI MEI OPTOELECTRONICS CORP.

Doc No.: 400029042
Issued Date: Jan 23, 2009
Model No.: N134B6 -L16
Preliminary

TFT LCD Preliminary Specification

MODEL NO.: N134B6 – L16

Customer : _____

Approved by : _____

Note :

記錄	工作	審核	角色	投票
2009-02-05 17:27:28 CST	PMMD III Director	annie_hsu(徐凡琇 /56522 / 54873)	Director	Accept

Version 1.0

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REVISION HISTORY

Version	Date	Page (New)	Section	Description
Ver 0.0	Dec. 19,'08	All	All	Tentative specification first issued.
Ver 1.0	Jan. 23,'09	All	All	Preliminary Specification first issued.

1 GENERAL DESCRIPTION

1.1 OVERVIEW

N134B6-L16 is a 13.4" TFT Liquid Crystal Display module with LED Backlight unit, 40 pins LVDS interface, and cover sets. This module supports 1366 x 768 Wide-XGA mode and can display 262,144 colors. The optimum viewing angle is at 6 o'clock direction.

1.2 FEATURES

- Aspect ratio 16:9 and WXGA (1366 x 768 pixels) resolution
- 3.3V LVDS (Low Voltage Differential Signaling) interface with 1 pixel/clock
- Meet RoHS requirement
- LED Backlight
- Assembly with cover sets.

1.3 APPLICATION

- TFT LCD Notebook

1.4 GENERAL SPECIFICATI0NS

Item	Specification	Unit	Note
Active Area	296.422 (H) x 166.656 (V) (13.4" diagonal)	mm	(1)
Viewing Area	299.422 (H) x 169.656 (V)	mm	
Driver Element	a-si TFT active matrix	-	-
Pixel Number	1366 x R.G.B. x 768	pixel	-
Pixel Pitch	0.217 (H) x 0.217 (V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	262,144	color	-
Transmissive Mode	Normally white	-	-
Surface Treatment	Hard coating (3H), glare type	-	-

1.5 MECHANICAL SPECIFICATIONS

Item		Min.	Typ.	Max.	Unit	Note
Module Size	Horizontal(H)	339.5	340	340.5	mm	(1)
	Vertical(V)	271	271.5	272	mm	
	Depth(D)	9.6	9.9	10.2	mm	
Weight		434.4	449.4	464.4	g	

Note (1) Please refer to the attached drawings for more information of front and back outline dimensions.

2 ABSOLUTE MAXIMUM RATINGS

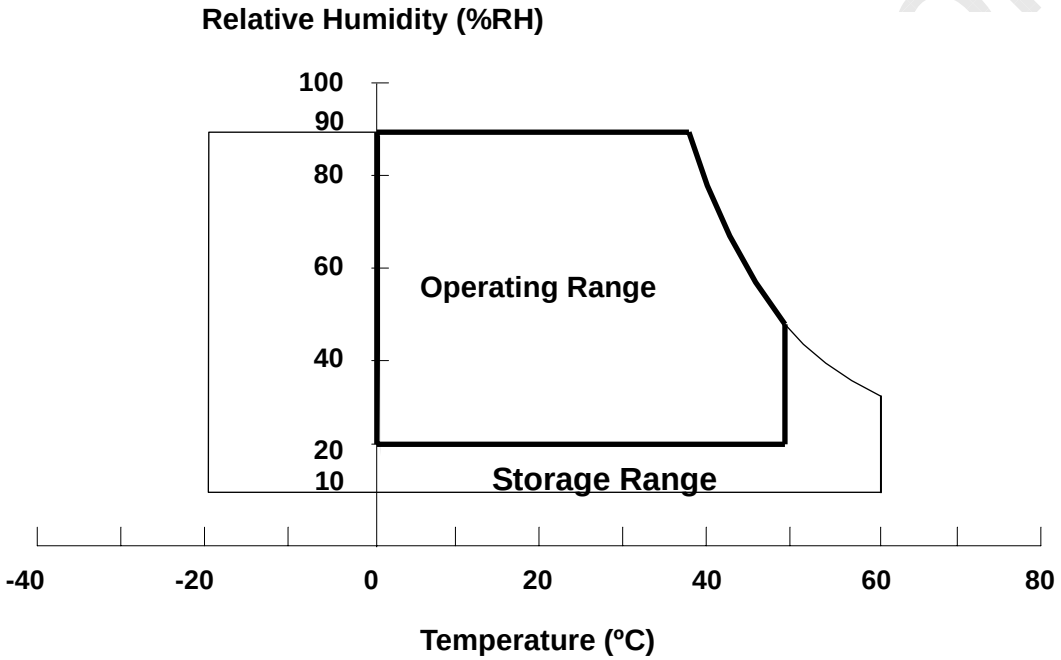
2.1 ABSOLUTE RATINGS OF ENVIRONMENT

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Storage Temperature	T_{ST}	-20	+60	ºC	(1)
Operating Ambient Temperature	T_{OP}	0	+50	ºC	(1), (2)
Shock (Non-Operating)	S_{NOP}	-	TBD	G/ms	(3), (5)
Vibration (Non-Operating)	V_{NOP}	-	TBD	G	(4), (5)

Note (1) (a) 90 %RH Max. (Ta ≦ 40 ºC).

(b) Wet-bulb temperature should be 39 ºC Max. (Ta > 40 ºC).

(c) No condensation.



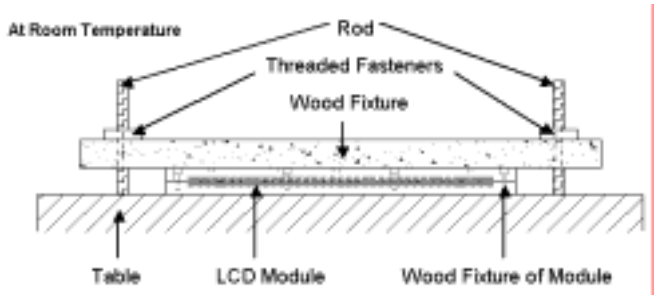
Note (2) The temperature of panel display surface area should be 0 ºC Min. and 60 ºC Max.

Note (3) 1 time for ± X, ± Y, ± Z. for Condition (TBD G / 2ms) is half Sine Wave,.

Note (4) 10 ~ 500 Hz, 30 min/cycle,1cycles for each X, Y, Z axis.

Note (5) At testing Vibration and Shock, the fixture in holding the module has to be hard and rigid enough so that the module would not be twisted or bent by the fixture.

The fixing condition is shown as below:



2.2 ELECTRICAL ABSOLUTE RATINGS

2.2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	Vcc	-0.3	+4.0	V	(1)
Logic Input Voltage	V_{IN}	-0.3	Vcc+0.3	V	

2.2.2 BACKLIGHT UNIT

Item	Symbol	Value		Unit	Note
		Min.	Max.		
LED Light Bar Power Supply Voltage	V_L	-45	30.6	V	(1), (2)
LED Light Bar Power Supply Current	I_L	0	210	mA	

Note (1) Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.

Note (2) Specified values are for LED (Refer to Section 3.2 for further information).

3 ELECTRICAL CHARACTERISTICS

3.1 TFT LCD MODULE

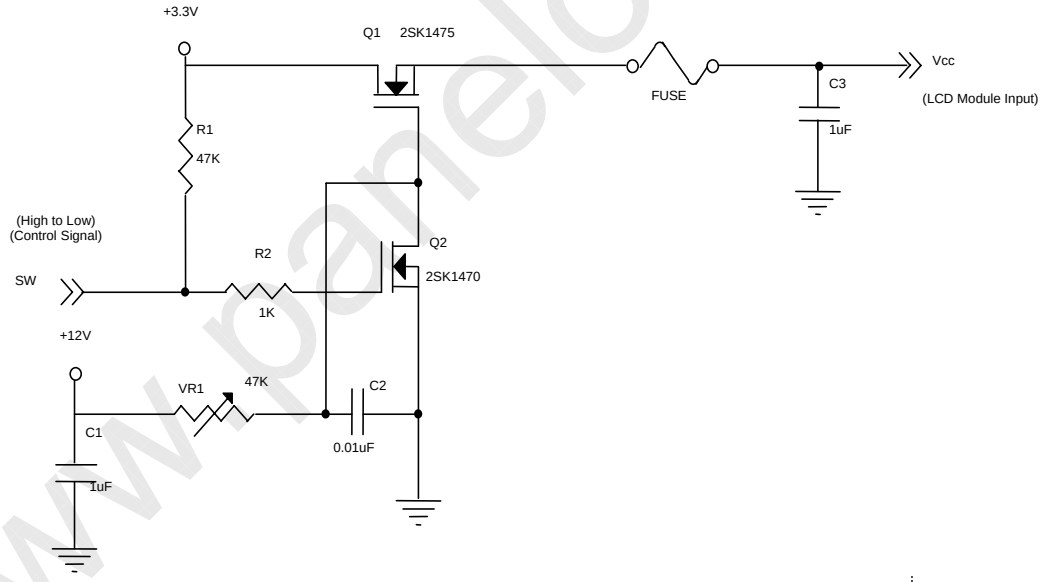
Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Power Supply Voltage		Vcc	3.0	3.3	3.6	V	-
Ripple Voltage		V_{RP}	-	50		mV	-
Rush Current		I_{RUSH}	-		1.5	A	(2)
Initial Stage Current		I_{IS}			1.0	A	(2)
Power Supply Current	White	Icc	-	(170)	TBD	mA	(3)a
	Black		-	(240)	TBD	mA	(3)b
LVDS Differential Input High Threshold		$V_{TH(LVDS)}$			+100	mV	(5), V_{CM}=1.2V
LVDS Differential Input Low Threshold		$V_{TL(LVDS)}$	-100			mV	(5) V_{CM}=1.2V
LVDS Common Mode Voltage		V_{CM}	1.125		1.375	V	(5)
LVDS Differential Input Voltage		$\|V_{ID}\|$	100		600	mV	(5)
Terminating Resistor		R_T	-	100	-	Ohm	-
Power per EBL WG		P_{EBL}	-	TBD		W	(4)

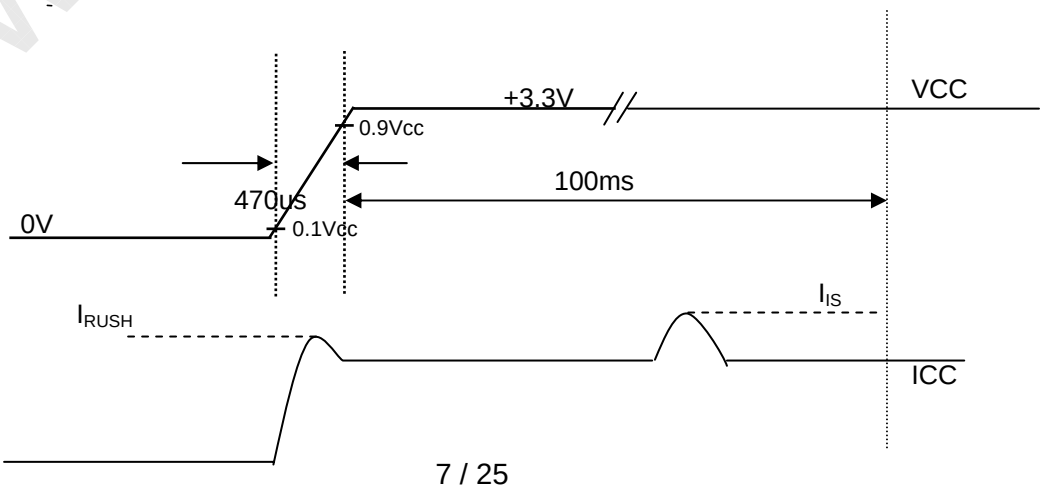
Note (1) The ambient temperature is Ta = 25 ± 2 ºC.

Note (2) I_{RUSH}: the maximum current when VCC is rising

I_{IS}: the maximum current of the first 100ms after power-on

Measurement Conditions: Shown as the following figure. Test pattern: black.





Note (3) The specified power supply current is under the conditions at Vcc = 3.3 V, Ta = 25 ± 2 ºC, f_v = 60 Hz, whereas a power dissipation check pattern below is displayed.

a. White Pattern

Active Area

b. Black Pattern

Active Area

Note (4) The specified power are the sum of LCD panel electronics input power and the converter input power. Test conditions are as follows.

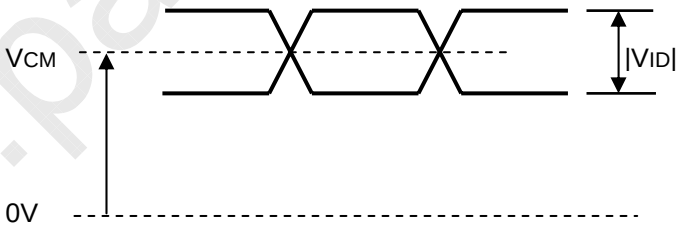
(a) Vcc = 3.3 V, Ta = 25 ± 2 ºC, f_v = 60 Hz,

(b) The pattern used is a black and white 32 x 36 checkerboard, slide #100 from the VESA file "Flat Panel Display Monitor Setup Patterns", FPDMSU.ppt.

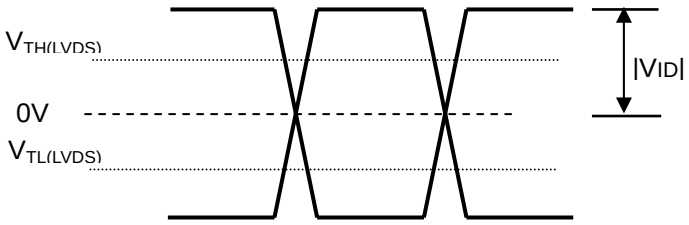
(c) Luminance: 60 nits.

Note (5) The parameters of LVDS signals are defined as the following figures.

Single Ended



Differential

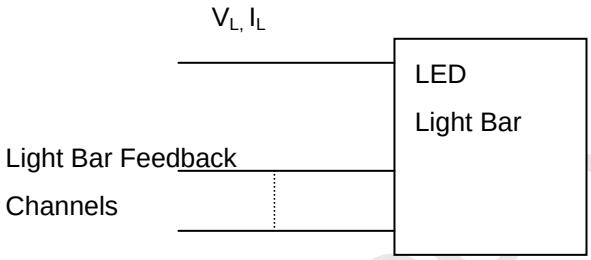


3.2 BACKLIGHT UNIT

Ta = 25 ± 2 ºC

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED light bar Power Supply Voltage	V_L	27	28.8	30.6	V_{dc}	(1) Duty 100%
LED light bar Power Supply Current	I_L	114	120	126	mA	
LED Life Time	L_{BL}	12,000	-	-	Hrs	(4)
Power Consumption	P_L	3.078	3.456	3.856	W	(3) I_L=120mA, Duty=100%

Note (1) LED light bar configuration is shown as below:



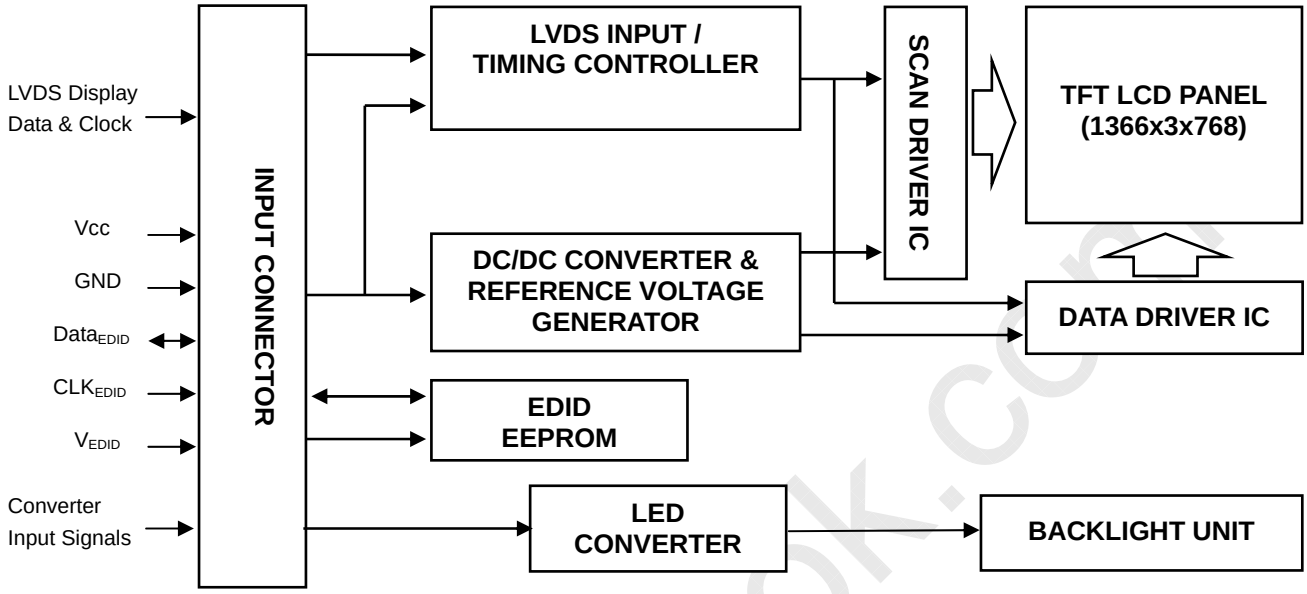
Note (2) For better LED light bar driving quality, it is recommended to utilize the adaptive boost converter with current balancing function to drive LED light-bar.

Note (3) $P_L = I_L \times V_L$

Note (4) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 25 ±2 °C and I_L = 20.0 mA(Per EA) until the brightness becomes ≦ 50% of its original value.

4 BLOCK DIAGRAM

4.1 TFT LCD MODULE



5 INPUT TERMINAL PIN ASSIGNMENT

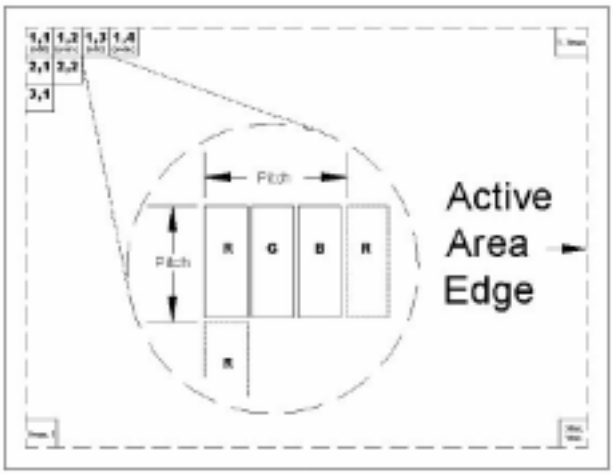
5.1 TFT LCD MODULE

Pin	Symbol	Description	Polarity	For Foxconn
1	Test Loop	Test Loop (only to pin 40)		AWG #40
2	VCCS	Power Supply +3.3 V		AWG #36
3	VCCS	Power Supply +3.3 V		AWG #36
4	EE_VDD	DDC +3.3 V		NC
5	NC	No Connection		For BIST , AWG #40
6	EE_SC	DDC Clock		NC
7	EE_SD	DDC Data		NC
8	Rx0-	LVDS Differential Data Input	Negative	AWG #40
9	Rx0+	LVDS Differential Data Input	Positive	AWG #40
10	VSS	Ground		NC
11	Rx1-	LVDS Differential Data Input	Negative	AWG #40
12	Rx1+	LVDS Differential Data Input	Positive	AWG #40
13	VSS	Ground		NC
14	Rx2-	LVDS Differential Data Input	Negative	AWG #40
15	Rx2+	LVDS Differential Data Input	Positive	AWG #40
16	VSS	Ground		NC
17	RXC-	LVDS Clock Data Input	Negative	AWG #40
18	RXC+	LVDS Clock Data Input	Positive	AWG #40
19	VSS	Ground	-	AWG #36
20	NC	No Connection	-	NC
21	NC	No Connection		NC
22	VSS	Ground		AWG #36
23	NC	No Connection		NC
24	NC	No Connection		NC
25	VSS	Ground		NC
26	NC	No Connection		NC
27	NC	No Connection		NC
28	VSS	Ground		NC
29	NC	No Connection		NC
30	NC	No Connection		NC
31	VSS	Ground		AWG #36
32	VSS	Ground		AWG #36
33	VSS	Ground		NC
34	NC	No Connection		NC
35	LED_PWM	PWM brightness control		AWG #40
36	LED_EN	LED Enable		AWG #40
37	NC	No Connection		NC
38	LED_VCCS	LED Power		AWG #36
39	LED_VCCS	LED Power		AWG #36
40	Test Loop	Test Loop (only to pin 1)		AWG #40

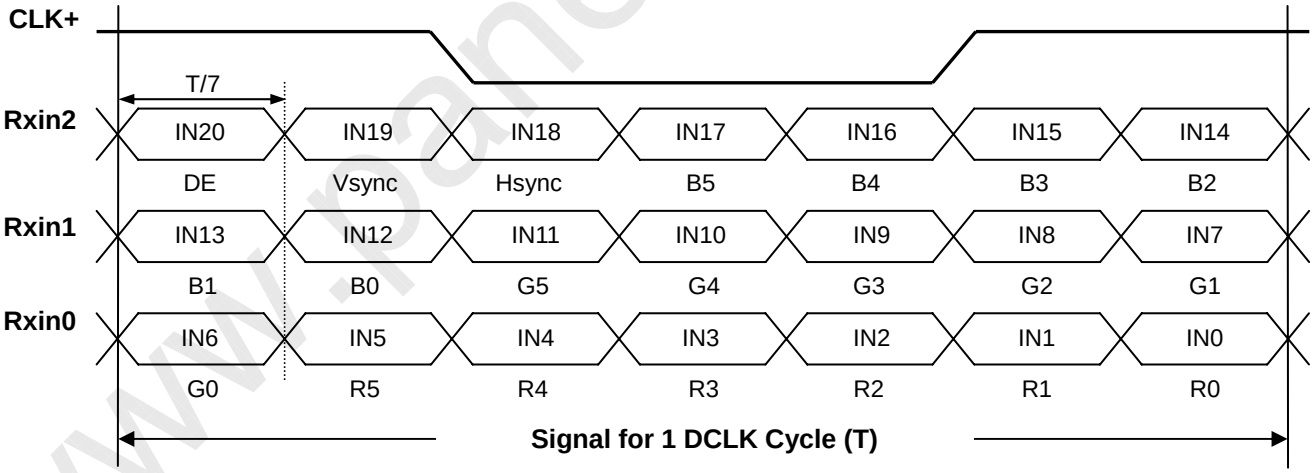
Note (1) Connector Part No.: I-PEX 20455-040E-12 or equivalent

Note (2) User's connector Part No.: I-PEX 20453-040T-01 or equivalent

Note (3) The first pixel is odd as shown in the following figure.



5.2 TIMING DIAGRAM OF LVDS INPUT SIGNAL



5.3 COLOR DATA INPUT ASSIGNMENT

The brightness of each primary color (red, green and blue) is based on the 6-bit gray scale data input for the color. The higher the binary input the brighter the color. The table below provides the assignment of color versus data input.

Color		Data Signal																	
		Red						Green						Blue					
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Basic	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
Colors	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Red(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(1)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Gray	Red(2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Scale	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Of	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Red	Red(61)	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red(62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Gray	Green(2)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Scale	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Of	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Green	Green(61)	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
	Green(62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	Green(63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Gray	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Scale	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Of	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Blue	Blue(61)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
	Blue(62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	Blue(63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

Note (1) 0: Low Level Voltage, 1: High Level Voltage

6 CONVERTER SPECIFICATION

6.1 ABSOLUTE MAXIMUM RATINGS

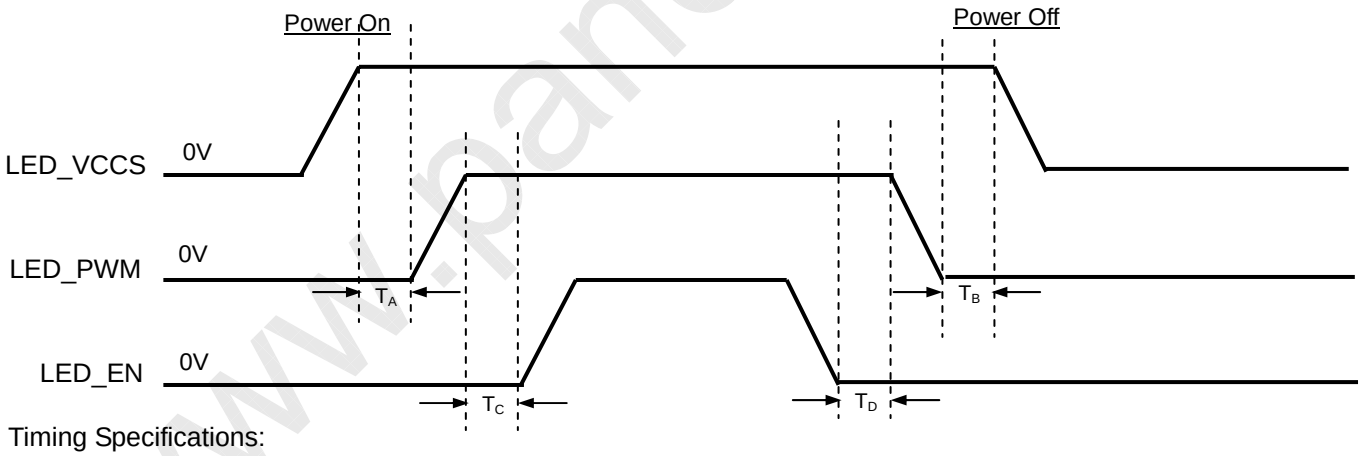
Symbol	Ratings
LED_VCCS	-0.3V ~ 28.0V
LED_PWM, LED_EN	-0.3V ~ 5.5V

6.2 RECOMMENDED OPERATING RATINGS

Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Converter Input power supply voltage		LED_Vccs	7.0	12.0	20.0	V	
EN Control Level	Backlight On		2.0	---	5.0	V	
	Backlight Off		0	---	0.8	V	
PWM Control Level	PWM High Level		2.0	---	5.0	V	
	PWM Low Level		0	---	(0.15)	V	
PWM Control Duty Ratio			(20)		100	%	
PWM Control Permissive Ripple Voltage		V_{PWM_pp}			100	mV	
PWM Control Frequency		f_{PWM}	(190)	(210)	(230)	Hz	
Converter Input Current	LED_VCCS=Min	I_{BL}	(517)	(581)	(689)	mA	(1)
	LED_VCCS=Typ		(302)	(339)	(402)	mA	(1)
	LED_VCCS=Max		(181)	(203)	(241)	mA	(1)

Note (1) The specified LED power supply current is under the conditions at "LED_VCCS = Min, Typ, Max", Ta = 25 ± 2 ºC, f_{PWM} = 200 Hz, Duty=100%.

6.3 LED BACKLIGHT CONTROLL POWER SEQUENCE



Timing Specifications:

$T_A \geqq$ (0ms)

$T_B \geqq$ (0ms)

$T_C \geqq$ (10ms)

$T_D \geqq$ (0ms)

Note (1) Please follow the LED backlight power sequence as above. If the customer could not follow, it might cause backlight flash issue during display ON/OFF or damage the LED backlight controller

7 INTERFACE TIMING

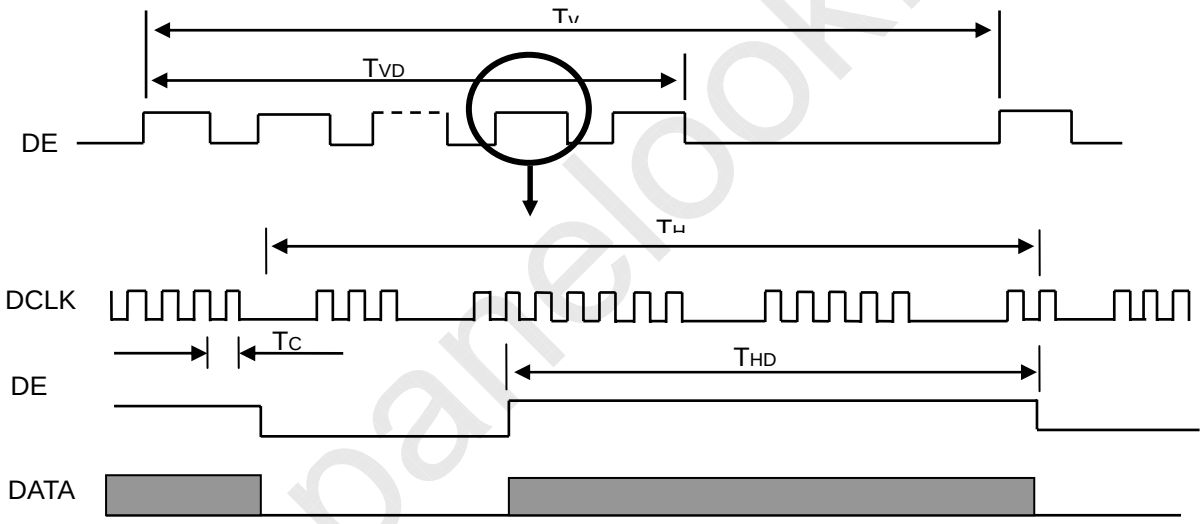
7.1 INPUT SIGNAL TIMING SPECIFICATIONS

The input signal timing specifications are shown as the following table and timing diagram.

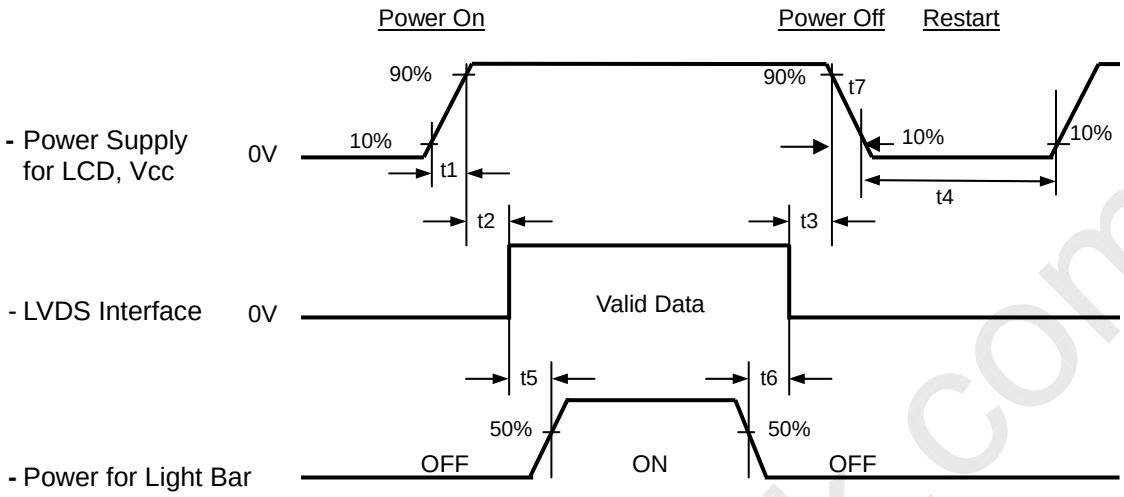
Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Note
DCLK	Frequency	1/Tc	TBD	69.33	TBD	MHz	
DE	Vertical Total Time	TV	TBD	784	TBD	TH	
	Vertical Active Display Period	TVD	TBD	768	TBD	TH	
	Vertical Active Blanking Period	TVB	TV-TVD	16	TV-TVD	TH	
	Horizontal Total Time	TH	TBD	1474	TBD	Tc	
	Horizontal Active Display Period	THD	TBD	1366	TBD	Tc	
	Horizontal Active Blanking Period	THB	TH-THD	108	TH-THD	Tc	

Note (1) Because this module is operated by DE only mode, Hsync and Vsync are ignored

INPUT SIGNAL TIMING DIAGRAM



7.2 POWER ON/OFF SEQUENCE



Timing Specifications:

0.5 ≦ t1 ≦ 10 ms

0 ≦ t2 ≦ 50 ms

0 ≦ t3 ≦ 50 ms

t4 ≧ 500 ms

t5 ≧ 200 ms

t6 ≧ 200 ms

Note (1) Please follow the power on/off sequence described above. Otherwise, the LCD module might be damaged.

Note (2) Please avoid floating state of interface signal at invalid period. When the interface signal is invalid, be sure to pull down the power supply of LCD Vcc to 0 V.

Note (3) The Backlight converter power must be turned on after the power supply for the logic and the interface signal is valid. The Backlight converter power must be turned off before the power supply for the logic and the interface signal is invalid.

Note (4) Sometimes some slight noise shows when LCD is turned off (even backlight is already off). To avoid this phenomenon, we suggest that the Vcc falling time is better to follow (50us) ≦ t7 ≦ (10 ms)

8 OPTICAL CHARACTERISTICS

8.1 TEST CONDITIONS

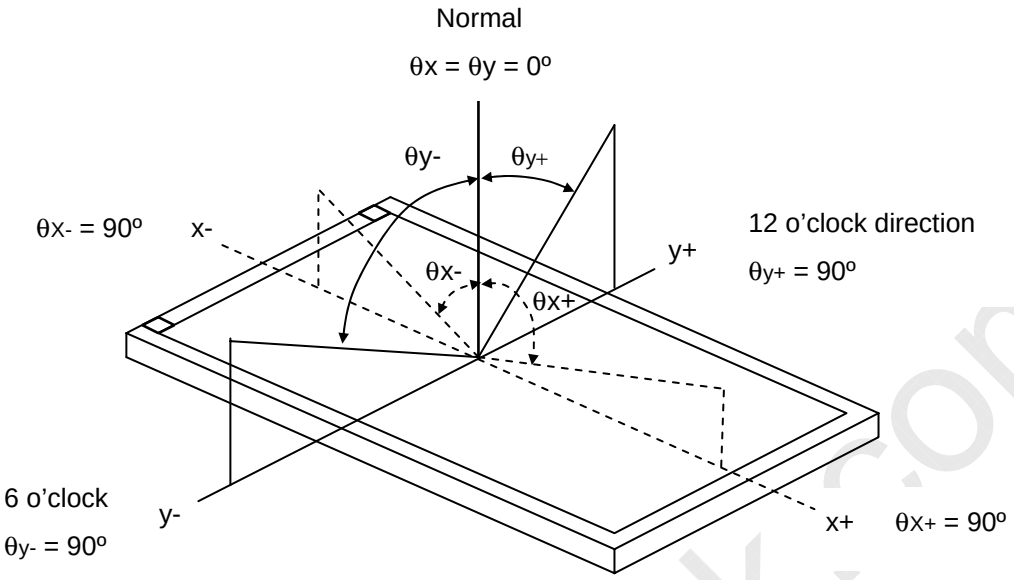
Item	Symbol	Value	Unit
Ambient Temperature	Ta	25±2	°C
Ambient Humidity	Ha	50±10	%RH
Supply Voltage	V_{CC}	3.3	V
Input Signal	According to typical value in "3. ELECTRICAL CHARACTERISTICS"		
LED Light Bar Input Current	I_L	120	mA

The measurement methods of optical characteristics are shown in Section 7.2. The following items should be measured under the test conditions described in Section 7.1 and stable environment shown in Note (6).

8.2 OPTICAL SPECIFICATIONS

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio		CR	θ_x=0°, θ_Y =0° Viewing Normal Angle	400	600	-	-	(2), (5)
Response Time		T_R		-	2	7	ms	(3)
		T_F		-	6	11	ms	
Luminance of White (5P)		L_{AVE}		270	300	-	cd/m^2	(4), (5)
White Variation		δW		-	-	1.25	-	(5), (6)
Color Chromaticity	Red	Rx		Typ.-0.03	TBD	Typ.+0.03	-	(1), (5)
		Ry			TBD		-	
	Green	Gx			TBD		-	
		Gy			TBD		-	
	Blue	Bx			TBD		-	
		By			TBD		-	
	White	Wx			(0.313)		-	
		Wy			(0.329)		-	
Viewing Angle	Horizontal	θ_x+	CR≥10	40	45	-	Deg.	(1), (5)
		θ_x-		40	45	-		
	Vertical	θ_Y+		15	20	-		
		θ_Y-		40	45	-		

Note (1) Definition of Viewing Angle (θx, θy):



Note (2) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.

Contrast Ratio (CR) = L63 / L0

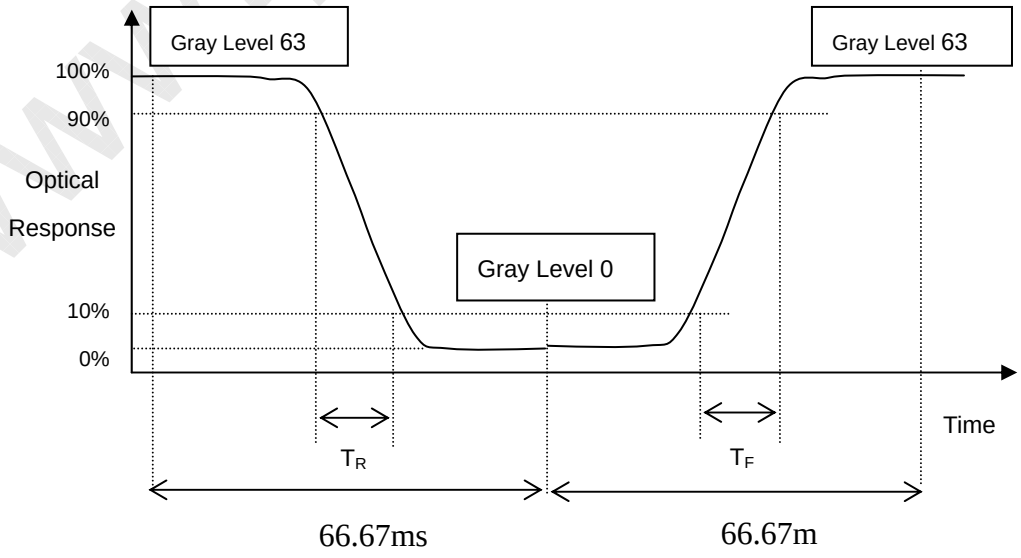
L63: Luminance of gray level 63

L 0: Luminance of gray level 0

CR = CR (5)

CR (X) is corresponding to the Contrast Ratio of the point X at Figure in Note (6).

Note (3) Definition of Response Time (T_R, T_F):



Note (4) Definition of Average Luminance of White (L_{AVE}):

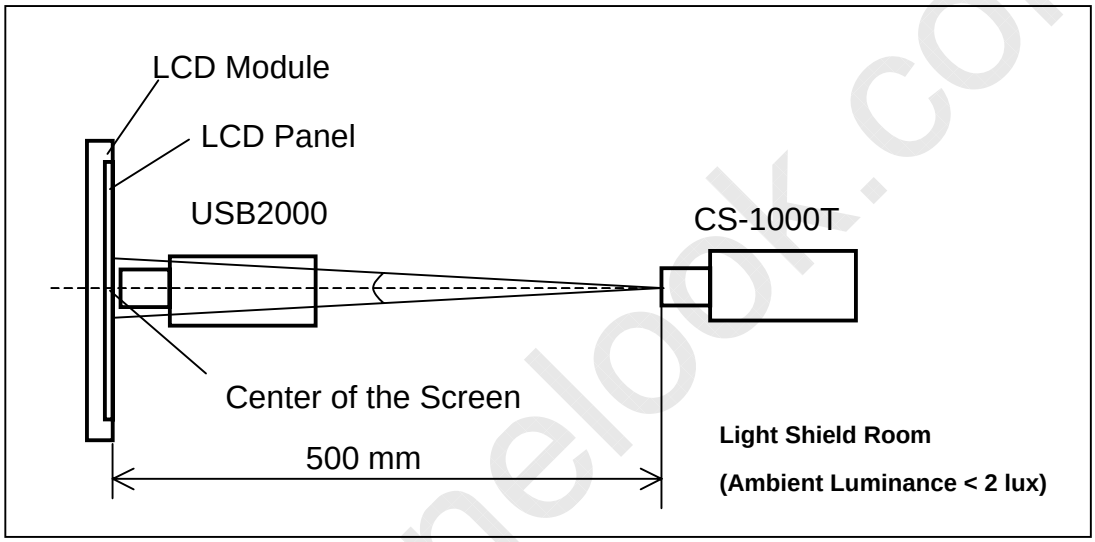
Measure the luminance of gray level 63 at 5 points

L_{AVE} = [L (1)+ L (2)+ L (3)+ L (4)+ L (5)] / 5

L (x) is corresponding to the luminance of the point X at Figure in Note (6).

Note (5) Measurement Setup:

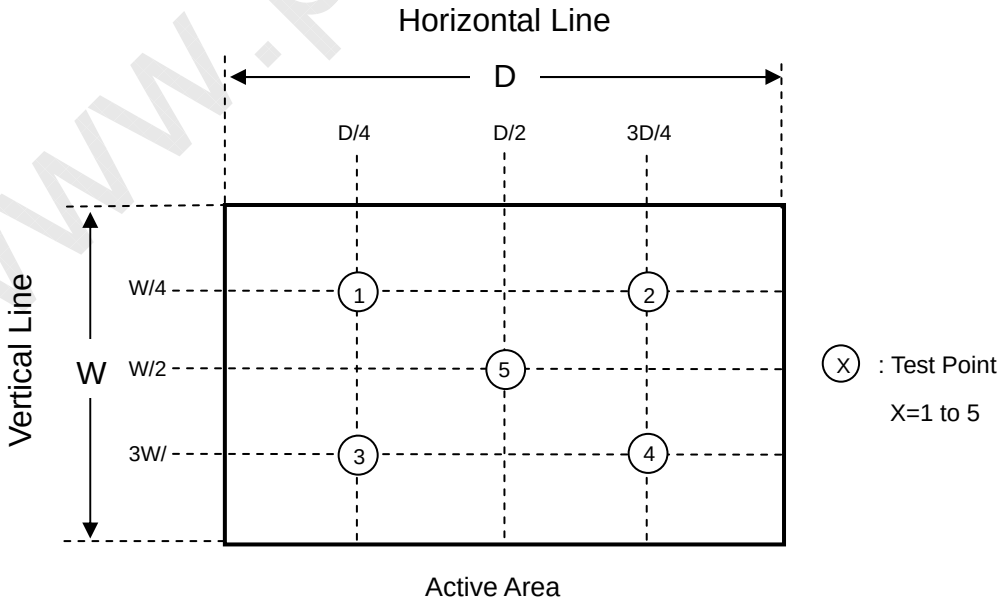
The LCD module should be stabilized at given temperature for 15 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 15 minutes in a windless room.



Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 63 at 5 points

δW = Maximum [L (1), L (2), L (3), L (4), L (5)] / Minimum [L (1), L (2), L (3), L (4), L (5)]



9 PRECAUTIONS

9.1 HANDLING PRECAUTIONS

(1) The module should be assembled into the system firmly by using every mounting hole. Be careful not to twist or bend the module.

(2) While assembling or installing modules, it can only be in the clean area. The dust and oil may cause electrical short or damage the polarizer.

(3) Use fingerstalls or soft gloves in order to keep display clean during the incoming inspection and assembly process.

(4) Do not press or scratch the surface harder than a HB pencil lead on the panel because the polarizer is very soft and easily scratched.

(5) If the surface of the polarizer is dirty, please clean it by some absorbent cotton or soft cloth. Do not use Ketone type materials (ex. Acetone), Ethyl alcohol, Toluene, Ethyl acid or Methyl chloride. It might permanently damage the polarizer due to chemical reaction.

(6) Wipe off water droplets or oil immediately. Staining and discoloration may occur if they left on panel for a long time.

(7) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contacting with hands, legs or clothes, it must be washed away thoroughly with soap.

(8) Protect the module from static electricity, it may cause damage to the C-MOS Gate Array IC.

(9) Do not disassemble the module.

(10) Do not pull or fold the lamp wire.

(11) Pins of I/F connector should not be touched directly with bare hands.

9.2 STORAGE PRECAUTIONS

(1) High temperature or humidity may reduce the performance of module. Please store LCD module within the specified storage conditions.

(2) It is dangerous that moisture come into or contacted the LCD module, because the moisture may damage LCD module when it is operating.

(3) It may reduce the display quality if the ambient temperature is lower than 10 ºC. For example, the response time will become slowly, and the starting voltage of lamp will be higher than the room temperature.

9.3 OPERATION PRECAUTIONS

(1) Do not pull the I/F connector in or out while the module is operating.

(2) Always follow the correct power on/off sequence when LCD module is connecting and operating. This can prevent the CMOS LSI chips from damage during latch-up.

(3) The startup voltage of Backlight is approximately 1000 Volts. It may cause electrical shock while assembling with converter. Do not disassemble the module or insert anything into the Backlight unit.

10 REGULATORY STANDARDS

10.1 SAFETY

The design of module should meet follow requirements:

Regulatory	Item	Standard
Information Technology equipment	UL	UL 60950-1:2006
	cUL	CAN/CSA C22.2 No.60950-1-03: 2006
	CB	IEC 60950 -1:2005

11 PACKING

11.1 CARTON

Box Dimensions : 435(L)*350(W)*360(H)
Weight: Approx. 11.4kg(15 module .per. 1 box)

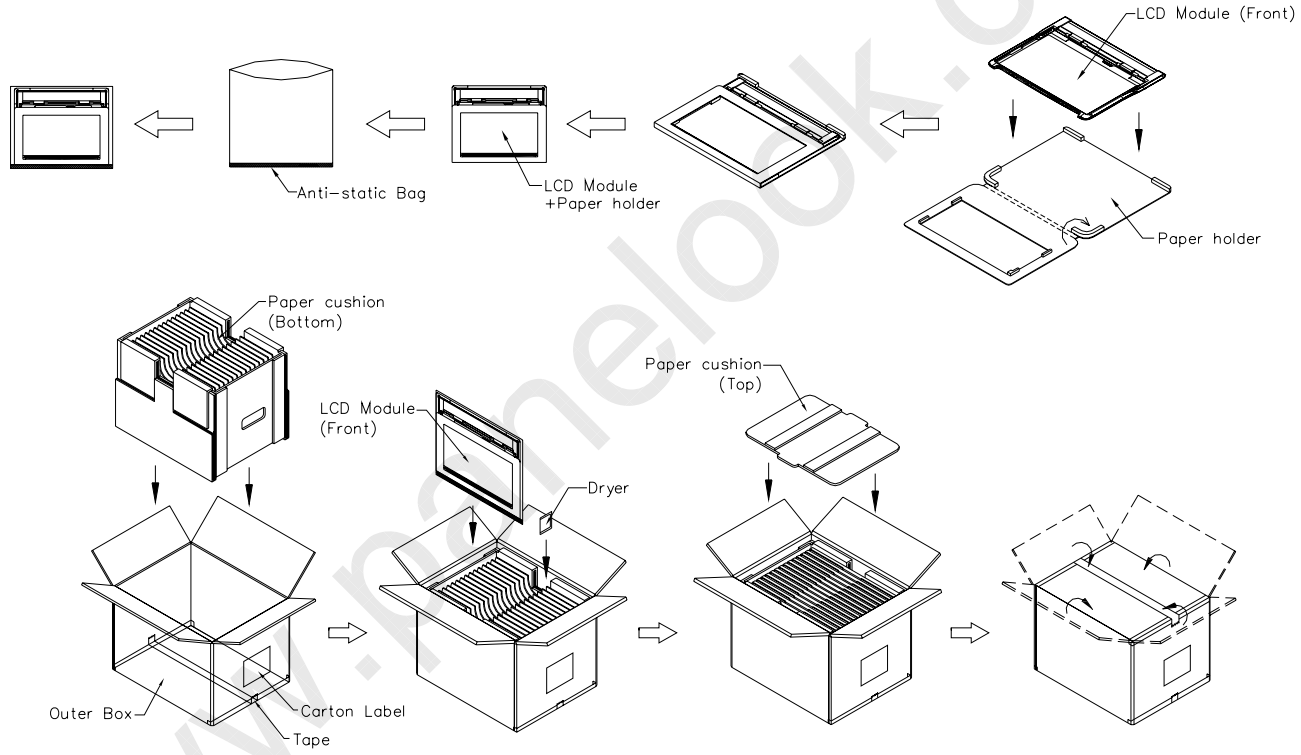


Figure. 11-1 Packing method

11.2 PALLET

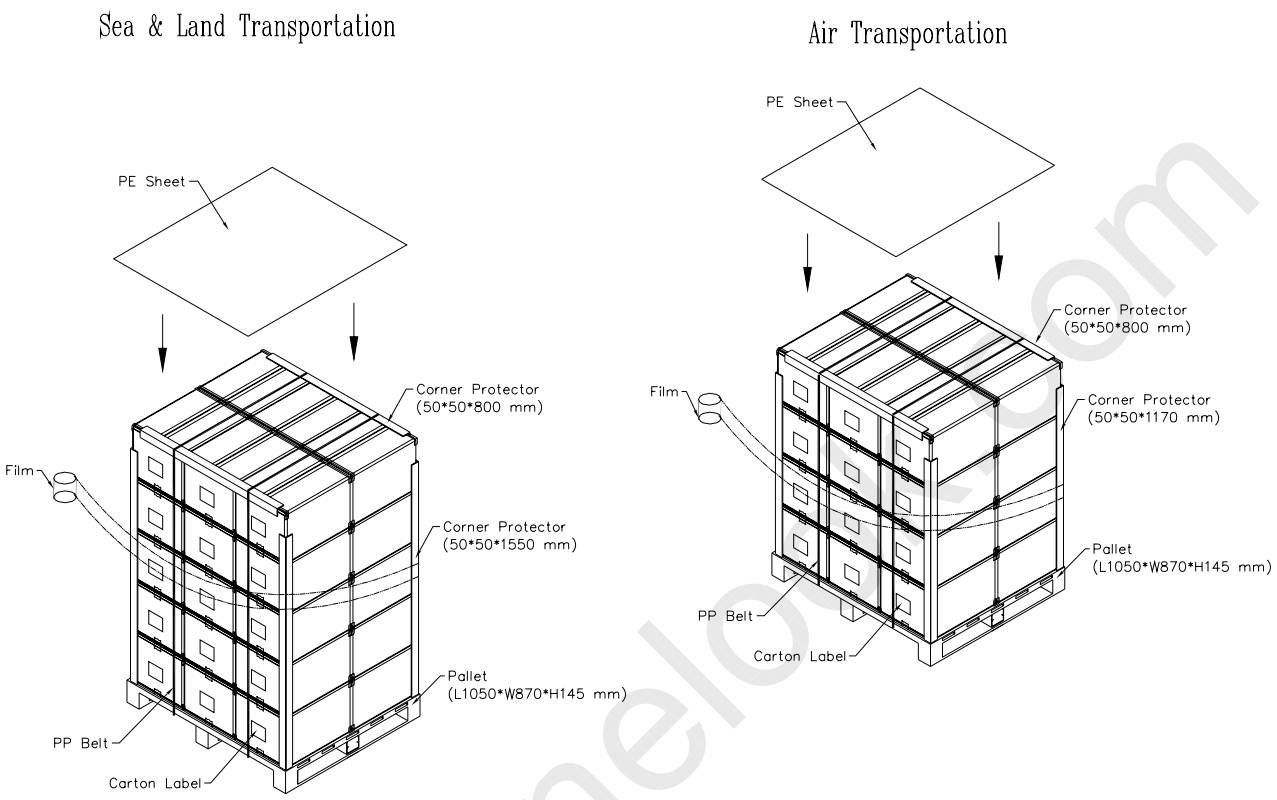
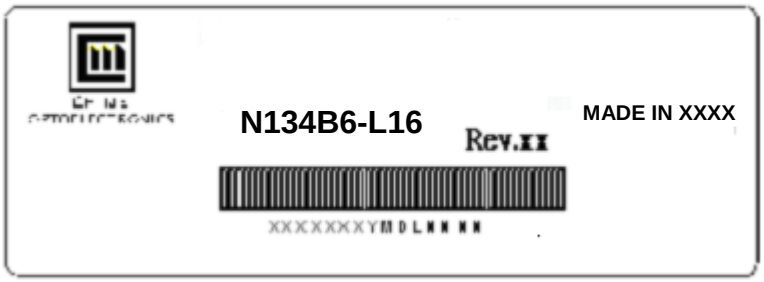


Figure. 11-2 Packing method

12 DEFINITION OF LABELS

12.1 CMO MODULE LABEL

The barcode nameplate is pasted on each module as illustration, and its definitions are as following explanation.



(a) Model Name: N134B6 – L16

(b) Revision: Rev. XX, for example: C1, C2 …etc.

(c) Serial ID: X X X X X X Y M D X N N N N

- Serial No.
- CMO Internal Use
- Year, Month, Date
- CMO Internal Use
- Revision
- CMO Internal Use

(d) Production Location: MADE IN XXXX. XXXX stands for production location.

Serial ID includes the information as below:

(a) Manufactured Date: Year: 1~9, for 2001~2009

Month: 1~9, A~C, for Jan. ~ Dec.

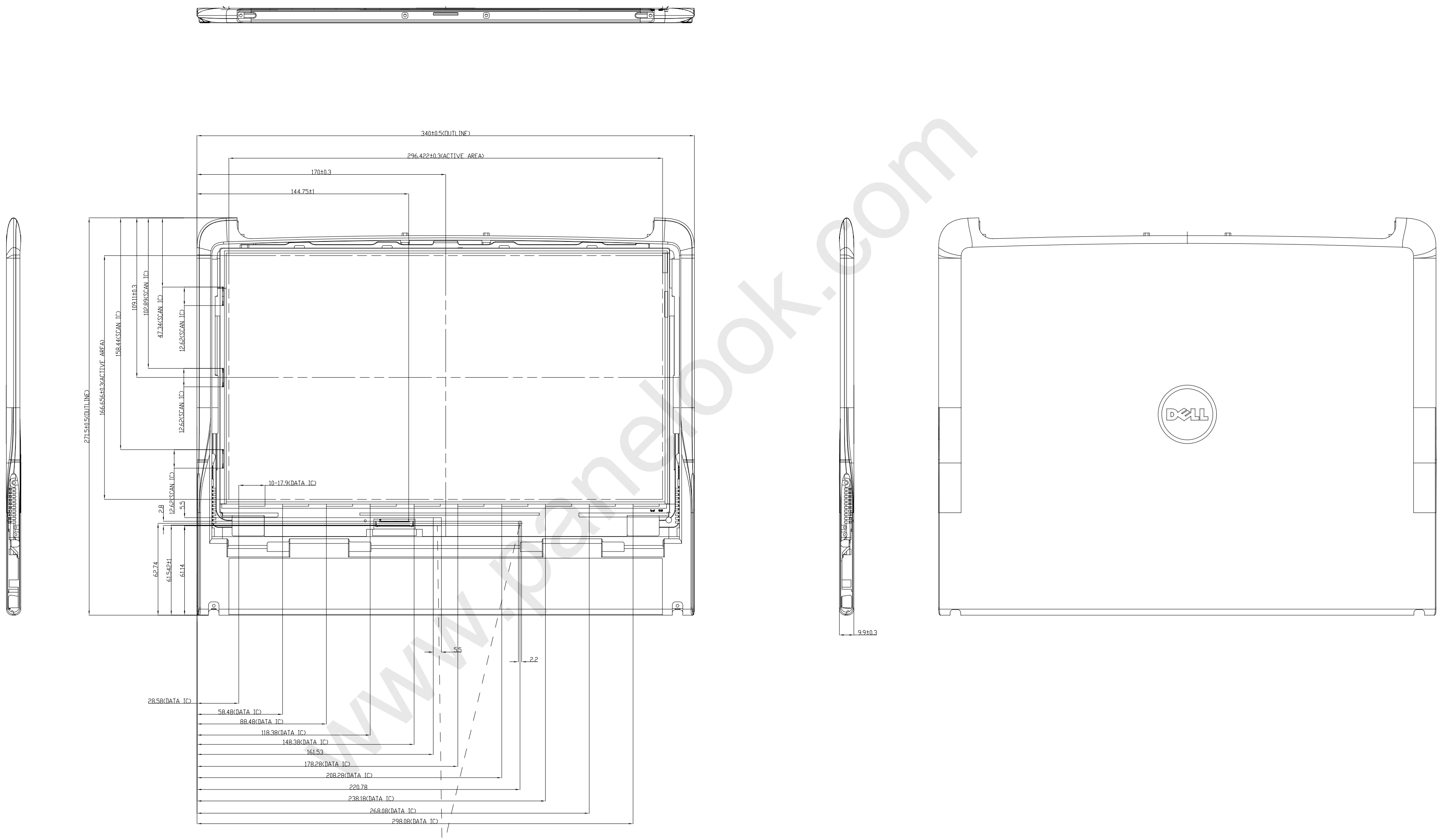
Day: 1~9, A~Y, for 1st to 31st, exclude I , O and U

(b) Revision Code: cover all the change

(c) Serial No.: Manufacturing sequence of production

11.2 CARTON LABEL

(a) Production location: Made in XXXX. XXXX stands for production location.



NOTES:
1.FPC CONNECTOR: 59453-091110EDHLF (FCI).
2.LCD MODULE INPUT CONNECTOR: I-PEX 20455-040E-12 or
FOXCONN GS13401-1110P-7F
3."*"MARKS THE DESIGN CRITICAL DIMENSIONS.
4."®"MARKS THE PROCESS CRITICAL DIMENSIONS.

In order to avoid abnormal display, pooling and white spot, no overlapping is suggested at cables, antennas, camera, WLAN, WAN or other foreign objects over COF driver IC, TCON and VR locations.

Mark	Description	Date	Changed_By	Approved_By	ECN No.	Remark

TITLE	OUTLINE DRAWING N134B6-L16			2D REV. 1 / 3D REV.
Approved	SHUNNAN CHANG	Drawing No.	N134G41011	
Checked	JACKSON CHEN	Part No.	NA	
Drawer	ERIC CHANG	Material	NA	Sheet 1 / 1 A0
Designer	ERIC CHANG	Date	26-Nov-2008	Scale 1:1 Unit:mm

CHI MEI OPTOELECTRONICS CORP.