奇美電子
CHIMEI INNOLUX

PRODUCT SPECIFICATION

Doc. Number:

☐ Tentative Specification
☐ Preliminary Specification
■ Approval Specification

MODEL NO.: N133BGE
SUFFIX: M42
DPN: N34H6

Customer: Dell

APPROVED BY   **SIGNATURE**

Name / Title _____   _____
Note

Please return 1 copy for your confirmation with your signature and comments.

Approved By	Checked By	Prepared By
楊竣傑	曹文彬	歐陽志全
2012-01-30	2011-12-28	2011-12-24
18:59:43 CST	15:29:51 CST	10:57:43 CST

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CONTENTS

One step solution for LCD / PDP / OLED panel application: Datasheet, inventory and accessory! **www.panelook.com**

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REVISION HISTORY

Version	Date	Page	Description
3.0	Dec, 19, 2011	All	Approval spec Ver.3.0 was first issued.

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1. GENERAL DESCRIPTION

1.1 OVERVIEW

N133BGE-M42 is a 13.3" (13.3" diagonal) TFT Liquid Crystal Display module with display head concepts and 30 pins LVDS interface. This module supports 1366 x 768 HD mode and can display 262,144 colors. The optimum viewing angle is at 6 o'clock direction.

1.2 GENERAL SPECIFICATI0NS

| Item	Specification	Unit	Note
Screen Size	13.3 diagonal		
Driver Element	a-si TFT active matrix	-	-
Pixel Number	1366 x R.G.B. x 768	pixel	-
Pixel Pitch	0.2148 (H) x 0.2148 (V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	262,144	color	-
Transmissive Mode	Normally white	-	-
Surface Treatment	Hard coating (3H), AG	-	-
Luminance, White	300	Cd/m2	
Power Consumption	Total 3.68W (Max.) @ cell 0.8W (Max.), BL 2.88W (Max.)		(1)

Note (1) The specified power consumption is under the conditions at VCCS = 3.3 V, Ta = 25 ± 2 ºC, fPWM = 200 Hz, Duty=100% and fv = 60 Hz, whereas black pattern is displayed. Without LED converter transfer efficiency.

2. MECHANICAL SPECIFICATIONS

Item		Min.	Typ.	Max.	Unit	Note
Module Size	Horizontal (H)	-	316	-	mm	(1)
	Vertical (V) (without cable)	-	205	-	mm	
	Thickness (T)	-	NA	-	mm	
Active Area	Horizontal	293.1168	293.4168	293.7168	mm	
	Vertical	164.6664	164.9664	165.2664	mm	
Weight (without A-cover and B-cover)		-	-	600	g	

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

2.1 CONNECTOR TYPE
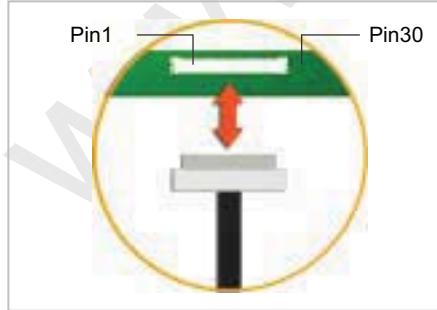
Please refer Appendix Outline Drawing for detail design.
User's connector Part No: GS12401-1011P-9H or equivalent

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3. ABSOLUTE MAXIMUM RATINGS

3.1 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)

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 surface should be 0 ºC min. and 60 ºC max.

Relative Humidity (%RH)

Temperature (ºC)
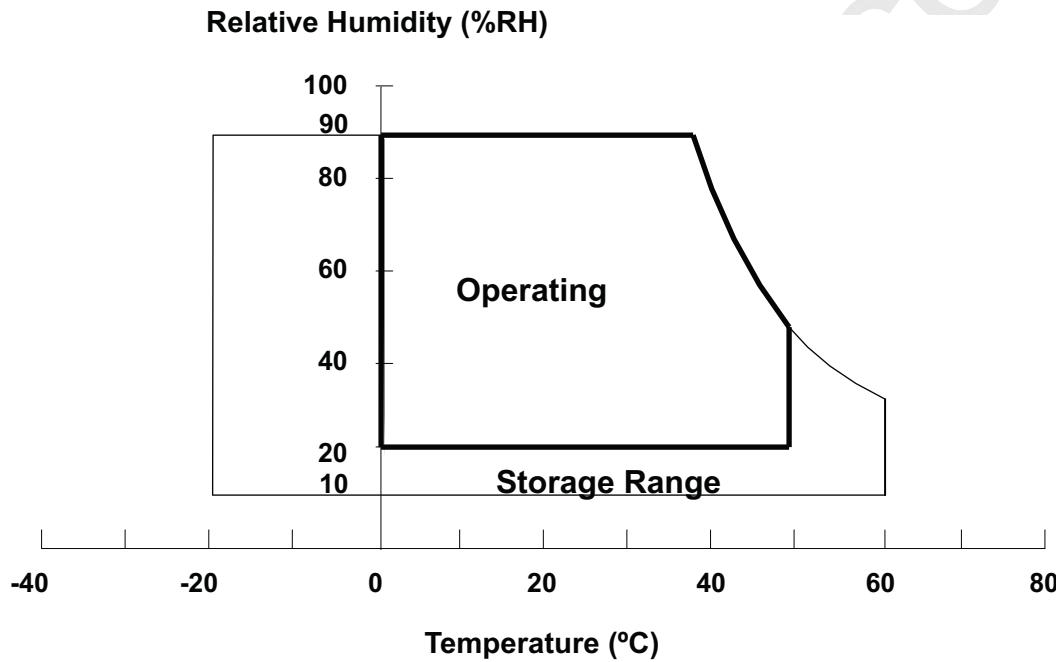
3.2 ELECTRICAL ABSOLUTE RATINGS

3.2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	VCCS	-0.3	+4.0	V	(1)
Logic Input Voltage	V_{IN}	-0.3	VCCS+0.3	V	
System PWM signal input for dimming	PWM_IN	-0.3	5	V	
Dynamic backlight control	CABC_EN	-0.3	5	V	(1)

Note (1) Stresses beyond those listed in above "ELECTRICAL ABSOLUTE RATINGS" may cause permanent damage to the device. Normal operation should be restricted to the conditions described in "ELECTRICAL CHARACTERISTICS".

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4. ELECTRICAL SPECIFICATIONS
4.1 FUNCTION BLOCK DIAGRAM
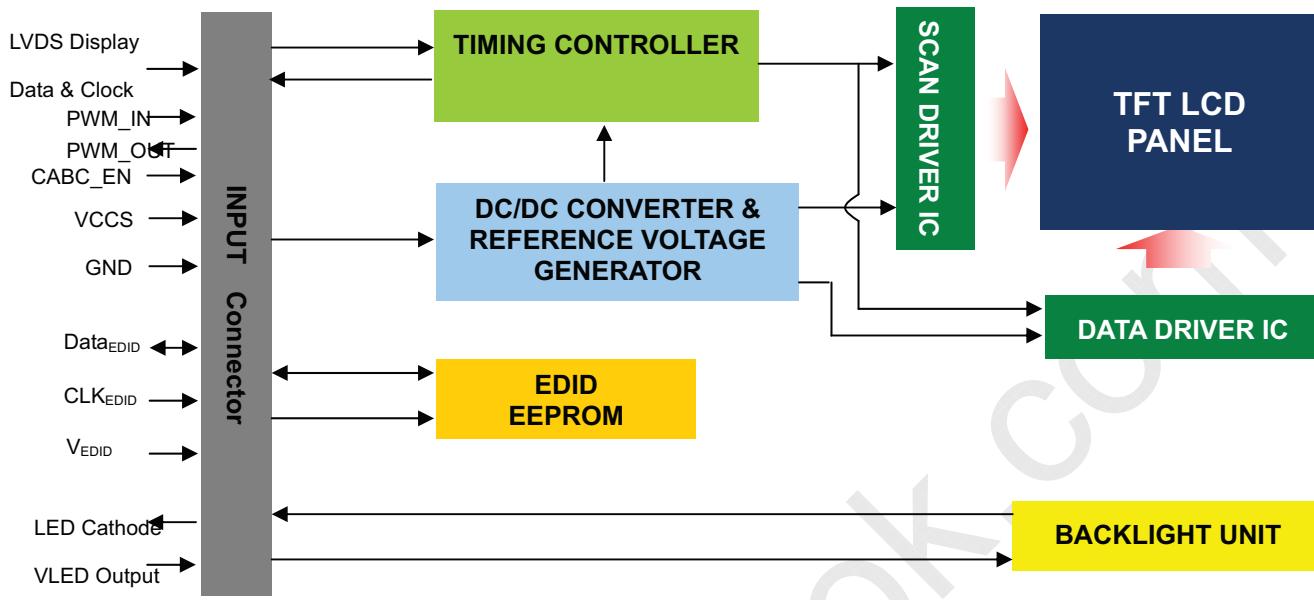
4.2. INTERFACE CONNECTIONS

PIN ASSIGNMENT

Pin	Symbol	Description	Remark
1	NC	No Connection (Reserve)	
2	VCCS	Power Supply (3.3V typ.)	
3	VCCS	Power Supply (3.3V typ.)	
4	VEDID	DDC 3.3V power	
5	BIST	Panel self test	Bist
6	CLKEDID	DDC clock	
7	DATAEDID	DDC data	
8	Rxin0-	LVDS differential data input	R0-R5, G0
9	Rxin0+	LVDS differential data input	
10	VSS	Ground	
11	Rxin1-	LVDS differential data input	G1~G5, B0, B1
12	Rxin1+	LVDS differential data input	
13	VSS	Ground	
14	Rxin2-	LVDS Differential Data Input	B2-B5,HS,VS, DE
15	Rxin2+	LVDS Differential Data Input	
16	VSS	Ground	
17	RxCLK-	LVDS differential clock input	LVDS CLK
18	RxCLK+	LVDS differential clock input	
19	VSS	Ground	
20	PWM_IN	System PWM signal input for dimming	
21	CABC_EN	CABC Enable Input	

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22	PWM_OUT	Panel PWM signal output to system	
23	NC	No Connection (Reserve)	
24	VLED Output	LED driver output	
25	VLED Output	LED driver output	
26	NC	No Connection (Reserve)	
27	LED_CA1	LED Cathode 1	
28	LED_CA2	LED Cathode 2	
29	LED_CA3	LED Cathode 3	
30	LED_CA4	LED Cathode 4	

Note (1)   The first pixel is odd as shown in the following figure.
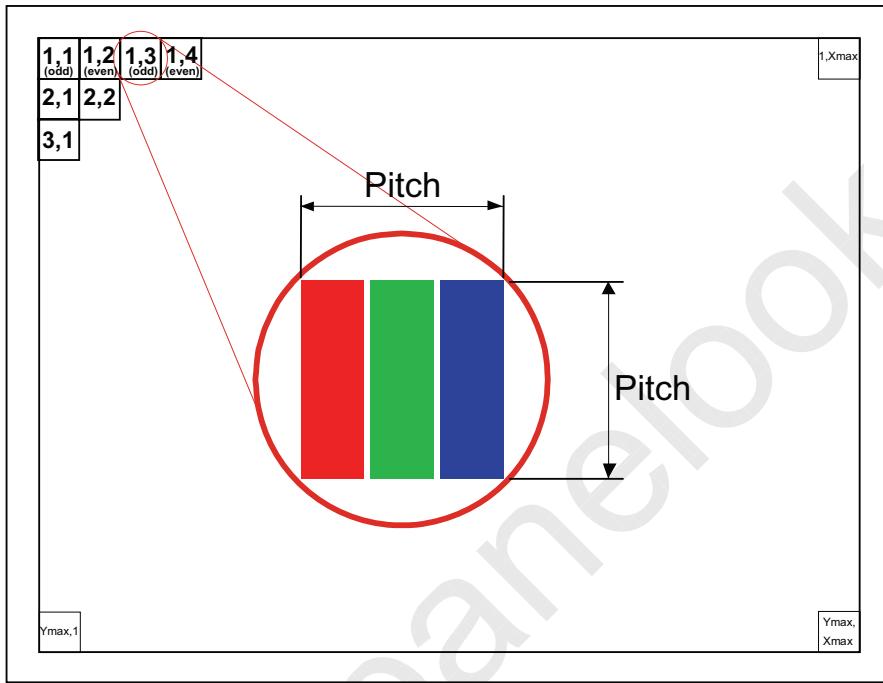
Note (2)   The setting of CABC function are as follows.

Pin	Enable	Disable
CABC_EN	Hi	Lo or Open

Hi = High level, Lo = Low level.

Note (3) The I^2C structure of CLKEDID and DATAEDID uses multiple slave device and the device addresses are defined as follows. The EDID part is M24C02-RMC6TG and D-VCOM part is iML7978CL.

Component	Device Address							
	B7	B6	B5	B4	B3	B2	B1	WR
EEPROM	1	0	1	0	0	0	0	X
D-VCOM	1	0	0	1	1	1	1	X

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4.3 ELECTRICAL CHARACTERISTICS

4.3.1 LCD ELETRONICS SPECIFICATION

| Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Power Supply Voltage		VCCS	3.0	3.3	3.6	V	(1)-
Ripple Voltage		V_{RP}	-	50	-	mV	(1)-
CABC_EN Input Voltage	High Level	V_{IHCABC}	2.3	-	3.6	V	
	Low Level	V_{ILCABC}	0	-	0.5	V	
PWM Input Voltage	High Level	V_{IHCABC}	2.3	-	3.6	V	
	Low Level	V_{ILCABC}	0	-	0.5	V	
PWM Input Frequency		f_{PWM}	190	-	2K	Hz	
PWMO Output Voltage	High Level	V_{IHCABC}	2.0	-	2.8	V	
	Low Level	V_{ILCABC}	0	-	0.4	V	
PWM Output Frequency		f_{PWM}	190	-	2K	Hz	
Inrush Current		I_{RUSH}	-	-	1.5	A	(1),(2)
Power Supply Current	Mosaic	Icc	-	170	190	mA	(3)a
	Black		-	200	230	mA	(3)b

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

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

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

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

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VCCS rising time is 0.5ms
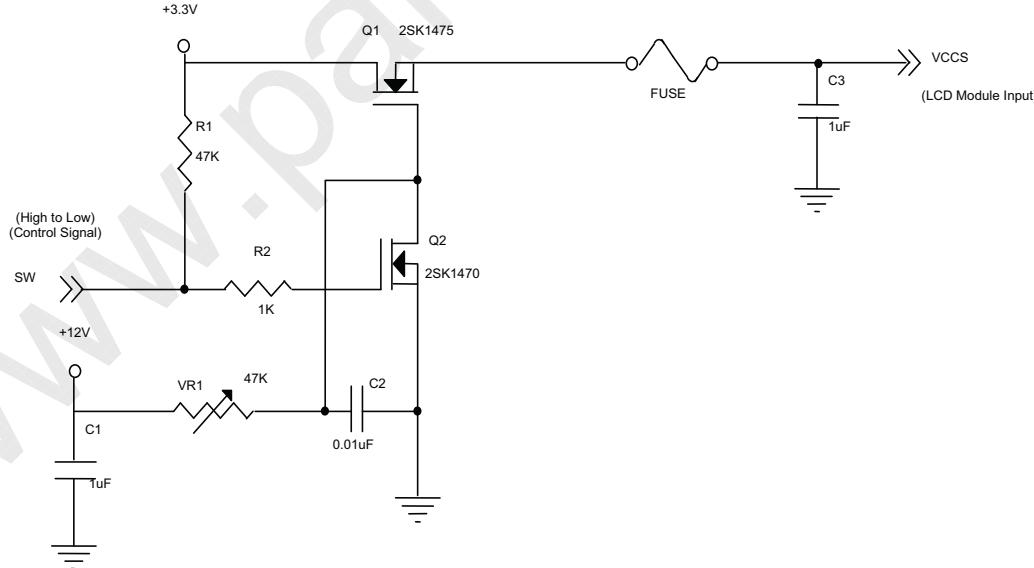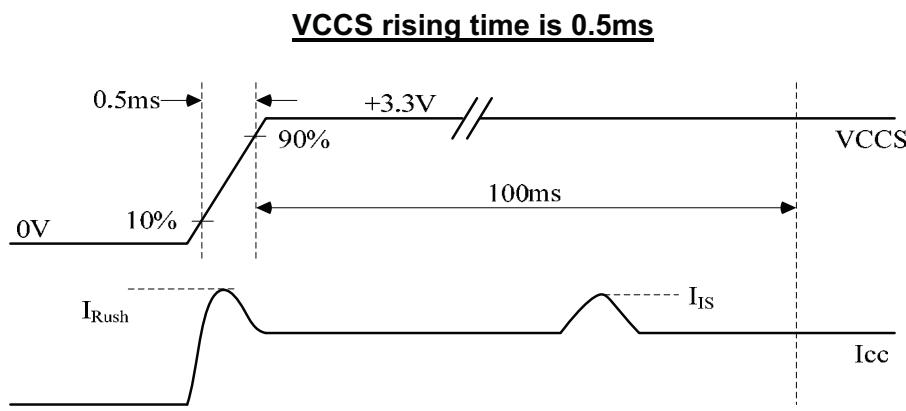
Note (3) The specified power supply current is under the conditions at VCCS = 3.3 V, Ta = 25 ± 2 ºC, DC

Current and f_v = 60 Hz, whereas a power dissipation check pattern below is displayed.
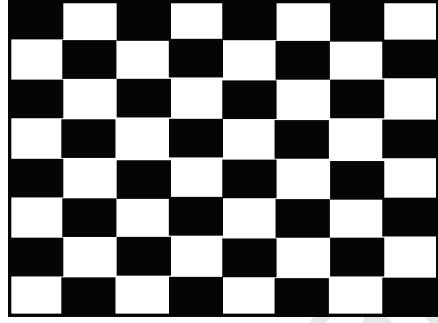
a. Mosaic Pattern   b. Black Pattern

Active Area   Active Area

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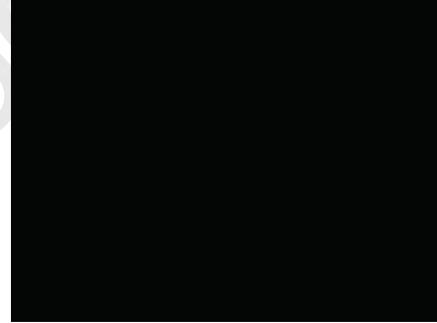
4.3.3 BACKLIGHT UNIT

Ta = 25 ± 2 ℃

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Light Bar Power Supply Voltage	V_L	25	28	30	V	(1)(2)(Duty100%)
LED Light Bar Power Supply Current	I_L	91.2	96	100.8	mA	
Power Consumption	P_L	2.280	2.688	3.024	W	(3)
LED Life Time	L_{BL}	15,000	-	-	Hrs	(4)

Note (1)   LED current is measured by utilizing a high frequency current meter as shown below :
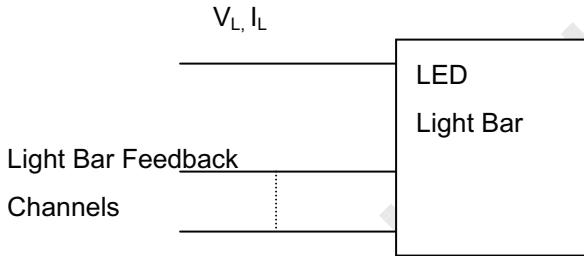
Note (2) For better LED light bar driving quality, it is recommended to utilize the adaptive boost converter with current balancing function to drive LED light-bar.

Note (3) $P_L = I_L \times V_L$ (Without LED converter transfer efficiency)

Note (4) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 25 ±2 ^{o}C and I_L = 20 mA(Per EA) until the brightness becomes $\leqq$ 50% of its original value.

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4.4 LVDS INPUT SIGNAL TIMING SPECIFICATIONS

4.4.1 LVDS DC SPECIFICATIONS

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LVDS Differential Input High Threshold	$V_{TH(LVDS)}$	-	-	+100	mV	(1), V_{CM}=1.2V
LVDS Differential Input Low Threshold	$V_{TL(LVDS)}$	-100	-	-	mV	(1) V_{CM}=1.2V
LVDS Common Mode Voltage	V_{CM}	1.125	-	1.375	V	(1)
LVDS Differential Input Voltage	$|V_{ID}|$	100	-	600	mV	(1)
LVDS Terminating Resistor	R_T	-	100	-	Ohm	-

Note (1) The parameters of LVDS signals are defined as the following figures.

Single Ended

Differential

4.4.2 LVDS DATA FORMAT

Signal for 1 DCLK Cycle (T)

PRODUCT SPECIFICATION
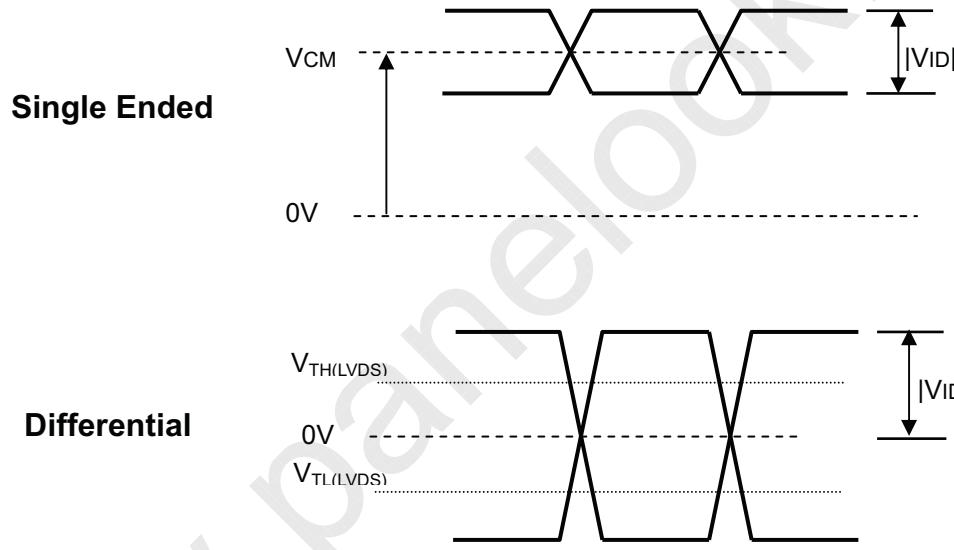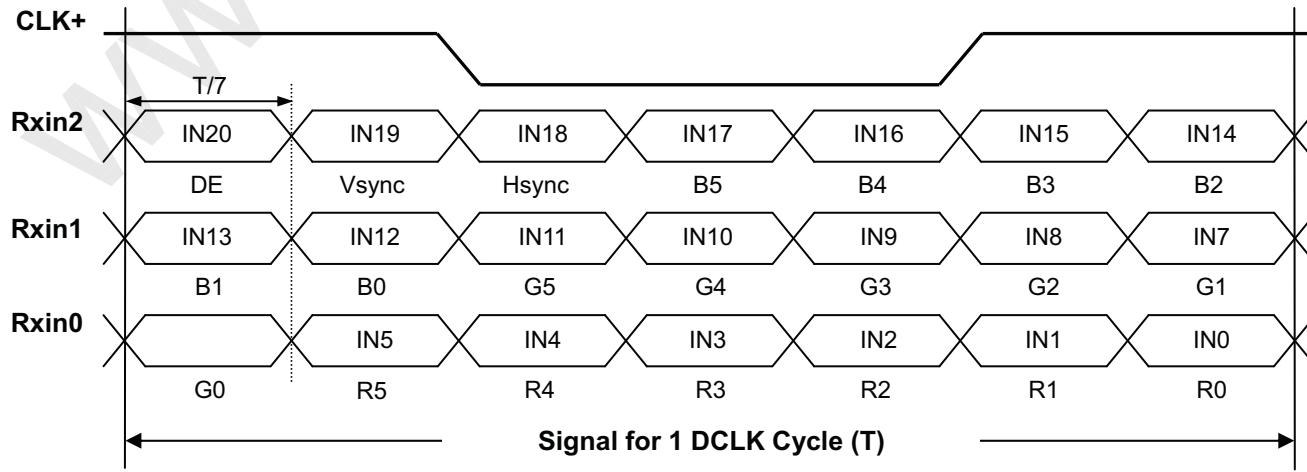
4.4.3 COLOR DATA INPUT ASSIGNMENT

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
Basic Colors	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
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	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
Gray Scale Of Red	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
	Red(2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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
Gray Scale Of Green	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
	Green(2)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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
Gray Scale Of Blue	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
	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	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

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4.5 DISPLAY 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	50	75.44	80	MHz	-
DE	Vertical Total Time	TV	773	806	1008	TH	-
	Vertical Active Display Period	TVD	768	768	768	TH	-
	Vertical Active Blanking Period	TVB	TV-TVD	38	TV-TVD	TH	-
	Horizontal Total Time	TH	1448	1560	1950	Tc	-
	Horizontal Active Display Period	THD	1366	1366	1366	Tc	-
	Horizontal Active Blanking Period	THB	TH-THD	194	TH-THD	Tc	-

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

INPUT SIGNAL TIMING DIAGRAM

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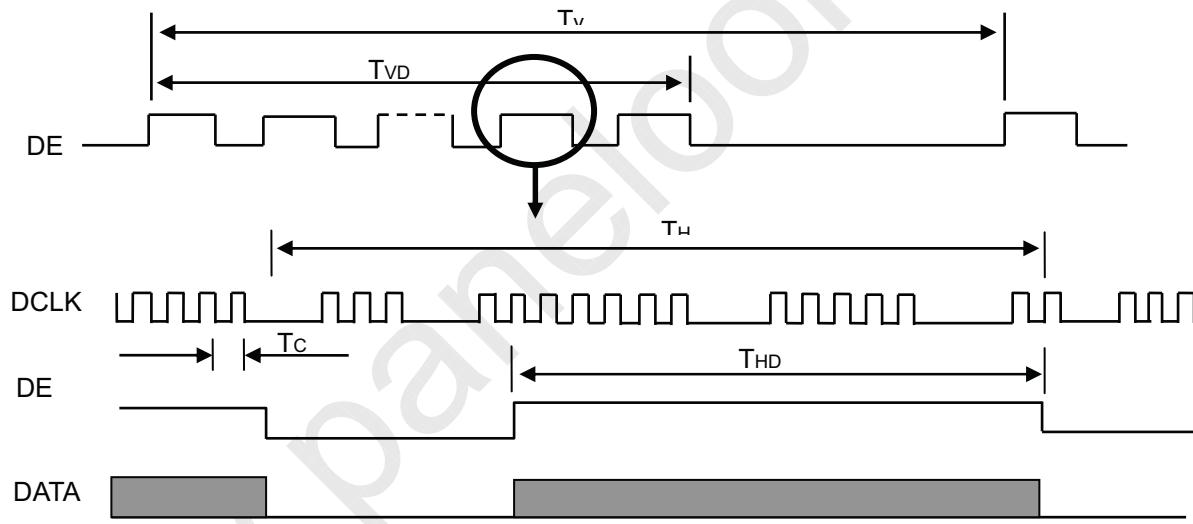
4.6 POWER ON/OFF SEQUENCE

The power sequence specifications are shown as the following table and diagram.

Symbol	Value			Unit	Note
	Min.	Typ.	Max.		
t1	0.5	-	10	ms	
t2	0	-	50	ms	
t3	0	-	50	ms	
t4	500	-	-	ms	
t5	200	-	-	ms	
t6	200	-	-	ms	
t7	0.5	-	10	ms	
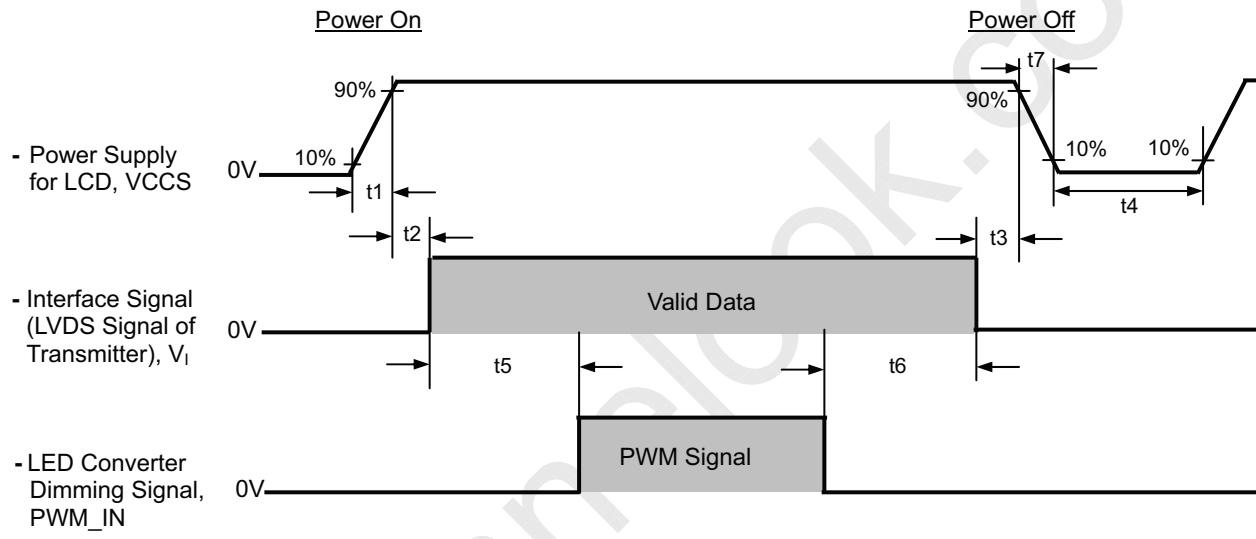
Note (1) Please don't plug or unplug the interface cable when system is turned on.

Note (2) Please avoid floating state of the interface signal during signal invalid period.

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5. OPTICAL CHARACTERISTICS

5.1 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	96	mA

The measurement methods of optical characteristics are shown in Section 5.2. The following items should be measured under the test conditions described in Section 5.1 and stable environment shown in Note (5).

5.2 OPTICAL SPECIFICATIONS

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio		CR		300	500	-	-	(2), (5), (7)
Response Time		T_R		-	8	12	ms	(3), (7)
		T_F		-	8	13	ms	
Average Luminance of White		L_{AVE}		255	300	-	cd/m²	(4), (6), (7)
Color Chromaticity	Red	Rx	$\theta_x=0°$, $\theta_Y=0°$ Viewing Normal Angle	Typ – 0.03	0.595	Typ + 0.03	-	(1), (7)
		Ry			0.345		-	
	Green	Gx			0.320		-	
		Gy			0.565		-	
	Blue	Bx			0.155		-	
		By			0.139		-	
	White	Wx			0.313		-	
		Wy			0.329		-	
Viewing Angle	Horizontal	θ_x+	CR≥10	40	45		Deg.	(1), (5), (7)
		θ_x-		40	45	-		
	Vertical	θ_Y+		15	20	-		
		θ_Y-		40	45	-		
White Variation of 5 Points		δW_{5p}	$\theta_x=0°$, $\theta_Y=0°$	70	80	-	%	(5), (6), (7)
		δW_{13p}		60	70	-	%	

Note (1) Definition of Viewing Angle (θx, θy`·

Normal

θx = θy = 0º

θy- θy+

θx- = 90º   x-

12 o'clock direction

θy+ = 90º

θx−

y+

θx+

6 o'clock

y-

x+ θx+ = 90º

θy- = 90º
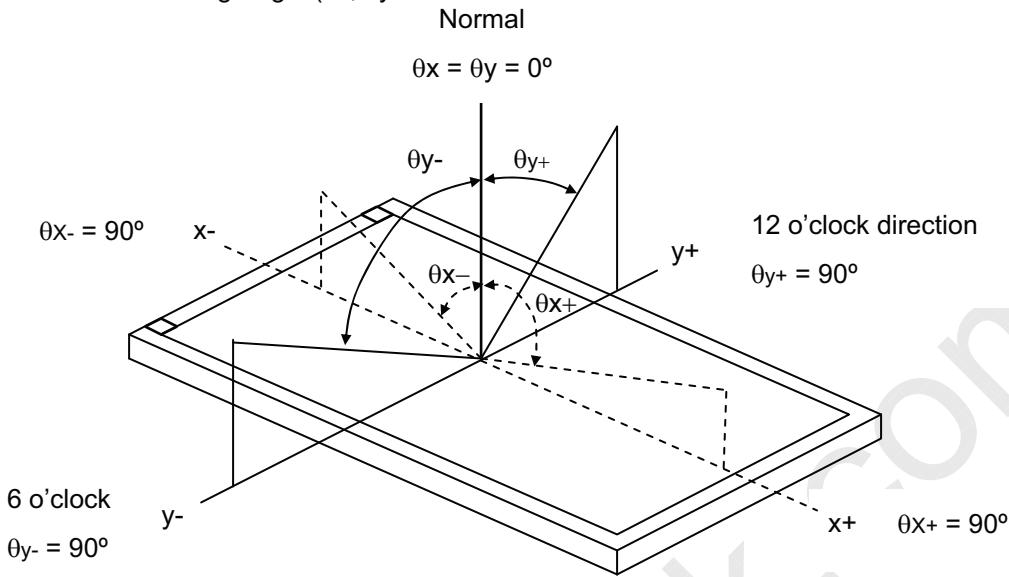
Note (2) Definition of Contrast Ratio (CR):

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 (1)

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):

Grav Level 63   Grav Level 63

100%

90%

Optical

Response

Grav Level 0

10%

0%

Time

T_R T_F

66.67 ms   66.67 ms
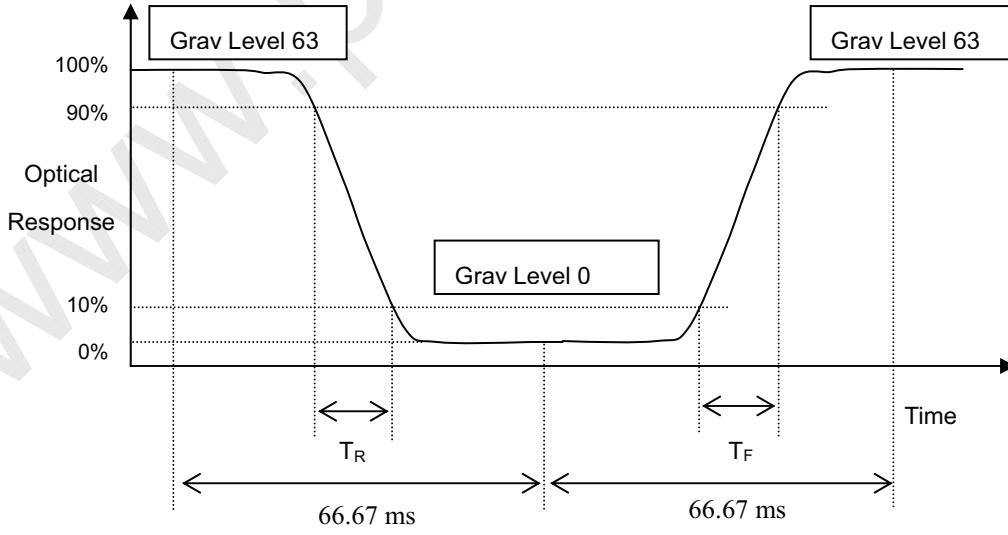
Note (4) Definition of Average Luminance of White (L_{AVE}):

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 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.

LCD Module

LCD Panel

USB2000 or equivalent   CS-2000T or equivalent

Center of the Screen

500 mm

Light Shield Room

(Ambient Luminance < 2 lux)
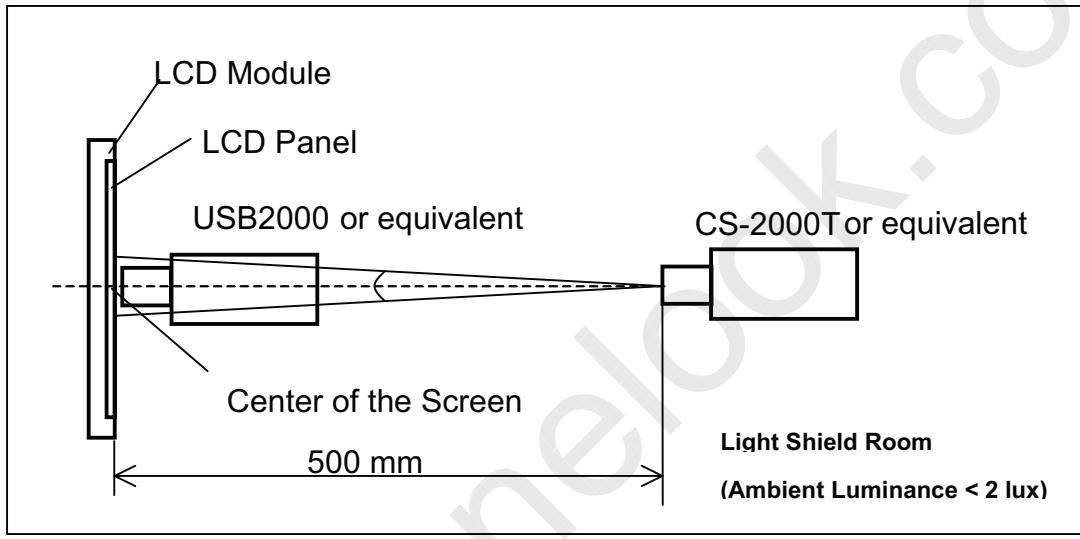
Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 63 at 5 points

δW_{5p} = {Minimum [L (1)~L (5)] / Maximum [L (1)~ L (5)]}*100%

$\delta W13p$ = {Minimum [L (1)~L (13)] / Maximum [L (1)~L (13)]}*100%
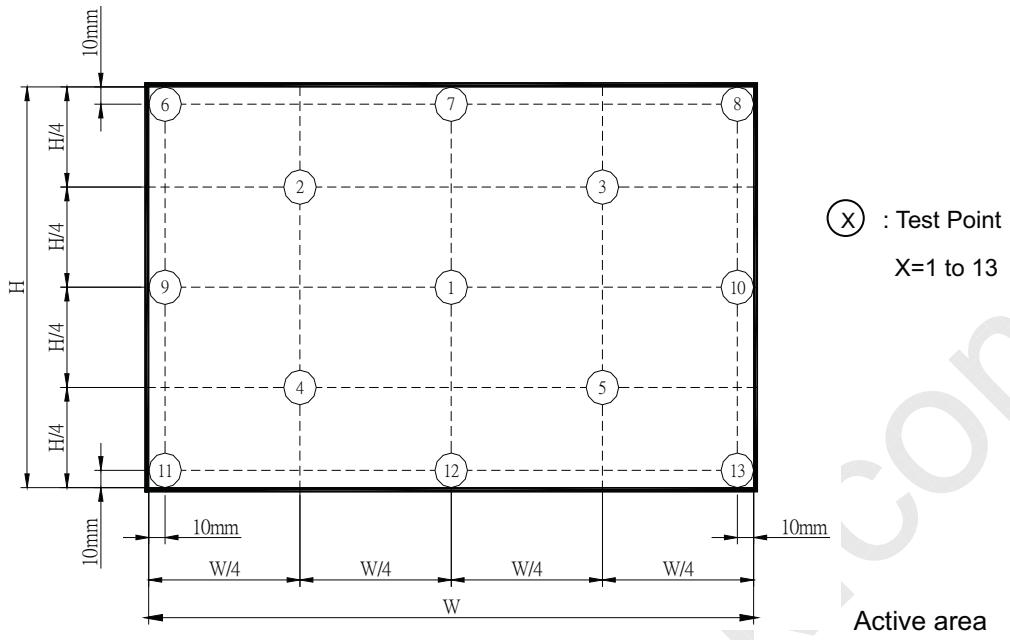
Note (7) The listed optical specifications refer to the initial value of manufacture, but the condition of the specifications after long-term operation will not be warranted.

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6. RELIABILITY TEST ITEM

Test Item	Test Condition	Note
High Temperature Storage Test	60ºC, 240 hours	(1) (2)
Low Temperature Storage Test	-20ºC, 240 hours	
Thermal Shock Storage Test	-20ºC, 0.5hour←→60℃, 0.5hour; 100cycles, 1hour/cycle	
High Temperature Operation Test	50ºC, 240 hours	
Low Temperature Operation Test	0ºC, 240 hours	
High Temperature & High Humidity Operation Test	50ºC, RH 80%, 240hours	
ESD Test (Operation)	150pF, 330Ω, 1sec/cycle Condition 1 : Contact Discharge, ±8KV Condition 2 : Air Discharge, ±15KV	(1)
Shock (Non-Operating)	220G, 2ms, half sine wave,1 time for each direction of ±X,±Y,±Z	(1)(3)
Vibration (Non-Operating)	1.5G / 10-500 Hz, Sine wave, 30 min/cycle, 1cycle for each X, Y, Z	(1)(3)

Note (1) criteria : Normal display image with no obvious non-uniformity and no line defect.

Note (2) Evaluation should be tested after storage at room temperature for more than two hour

Note (3) 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.

7. PACKING

7.1 MODULE LABEL & CARTON LABEL

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

CN- 0N34H6 -70896-
YMD-XXXX-ZZZ

(a) Dell 2D label contains information as below:

(a-1) Serial ID: CN-0N34H6-70896-YMD-XXXX-ZZZ

    Serial Numbers
    Production Year, Month, Date
    Manufacturing ID
    Part Number
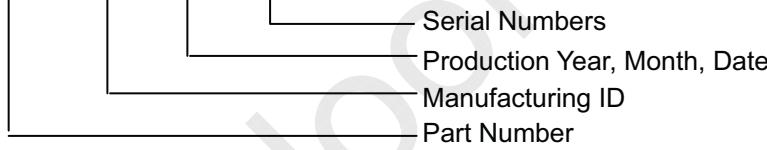
(a-2) ZZZ :Revision code: X00, X10, X20, A00..etc.

BUILD PHASE	REVISION
SST (WS)	X00,X01,X02,…X09
PT (ES)	X10,X11,X12,…X19
ST (CS)	X20,X21,X23,…X29
XB (MP)	A00,A01,A02,…A99

Dell carton label contains information as below:

(a) PKG ID: 04688-70896-YMD-XXXXXX-0N34H6-ZZ

                                                     Dell P/N

                                                     Serial numbers.

                                                     Production Year, Month, Date

                                                     Manufacturing ID
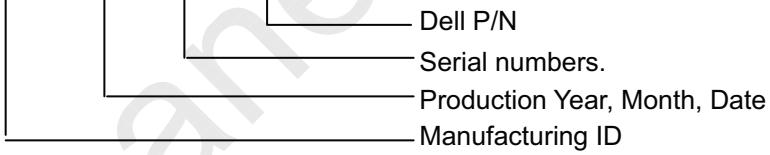
(b) Production location: Made in XXXX.

(c) Revision code: X00, X10, X20, A00..etc.

(d) BOX Quantity :ZZ

PRODUCT SPECIFICATION

7.2 CARTON

(1)Box Dimensions: 540(L)*450(W)*320(H)
(2)16 Modules/Carton
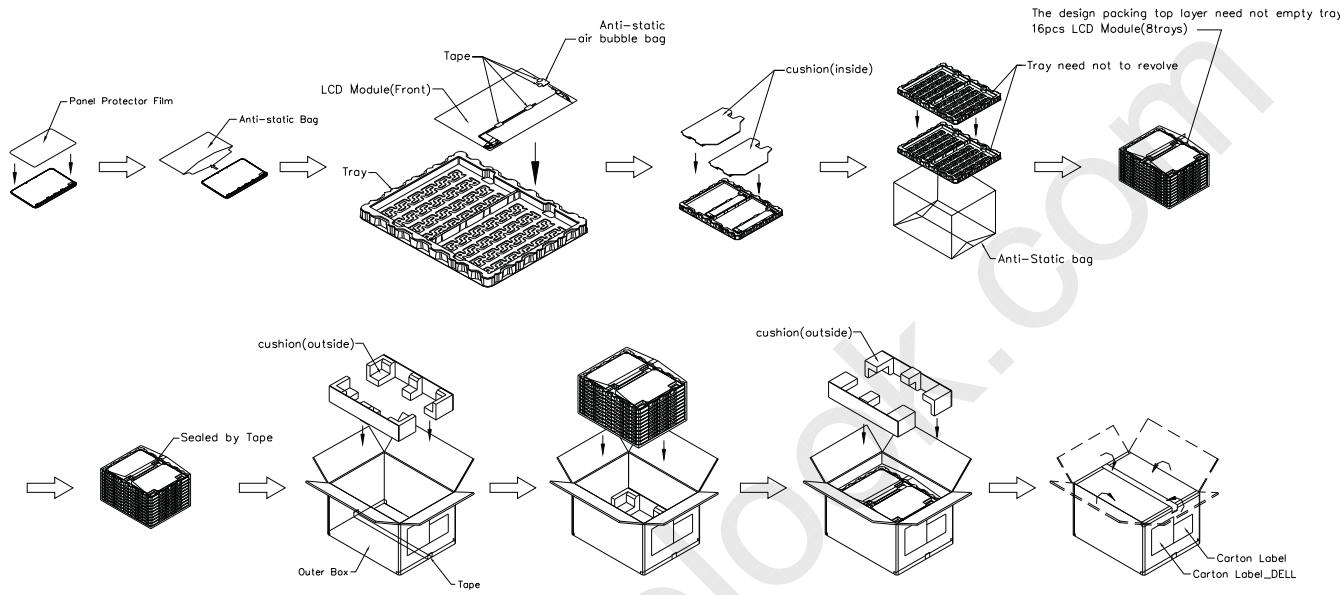
Figure. 7-2 Packing method

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PRODUCT SPECIFICATION

7.3 PALLET

Sea & Land Transportation   Air Transportation
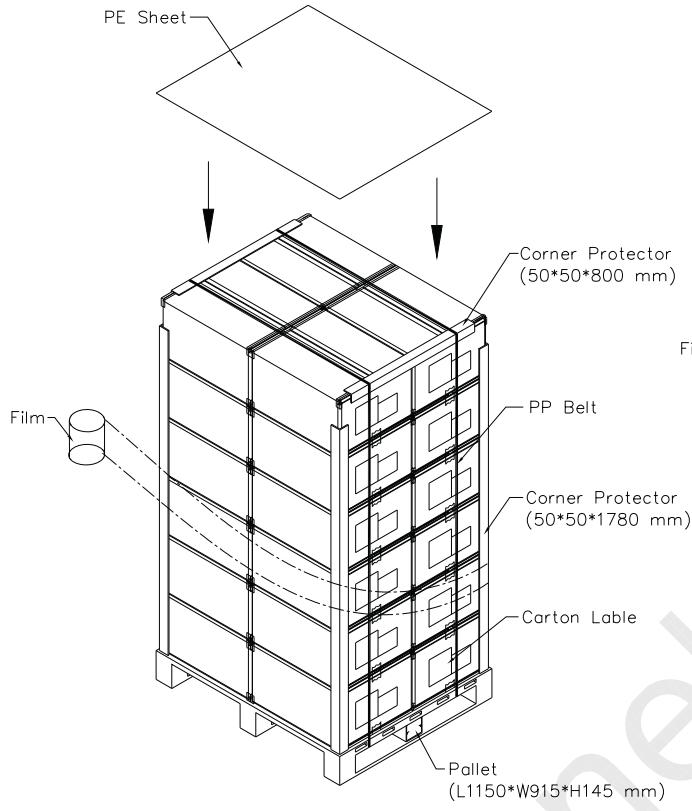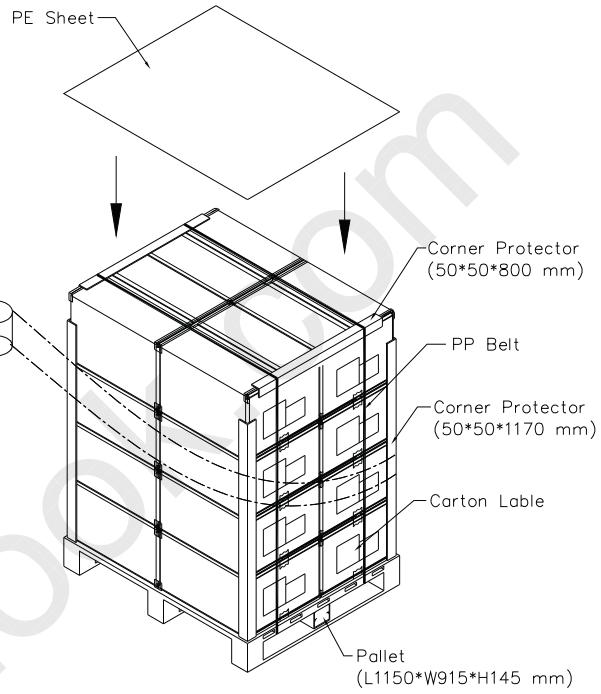
Figure. 7-3 Packing method

PRODUCT SPECIFICATION

8. PRECAUTIONS

8.1 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 LED wire.

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

8.2 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 LED will be higher than the room temperature.

8.3 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.

PRODUCT SPECIFICATION

Appendix. EDID DATA STRUCTURE

The EDID (Extended Display Identification Data) data formats are to support displays as defined in the

VESA Plug & Display and FPDI standards.

Byte # (decimal)	Byte # (hex)	Field Name and Comments	Value (hex)	Value (binary)
0	0	Header , Fixed	00	00000000
1	1	Header , Fixed	FF	11111111
2	2	Header , Fixed	FF	11111111
3	3	Header , Fixed	FF	11111111
4	4	Header , Fixed	FF	11111111
5	5	Header , Fixed	FF	11111111
6	6	Header , Fixed	FF	11111111
7	7	Header , Fixed	00	00000000
8	8	ID system manufacturer name	0D	00001101
9	9	ID system manufacturer name	AE	10101110
10	0A	ID system Product Code (LSB)	38	00111000
11	0B	ID system Product Code (MSB)	13	00010011
12	0C	32-bit serial # Unused(01h for VESA, 00h for SPWG)	00	00000000
13	0D	32-bit serial # Unused(01h for VESA, 00h for SPWG)	00	00000000
14	0E	32-bit serial # Unused(01h for VESA, 00h for SPWG)	00	00000000
15	0F	32-bit serial # Unused(01h for VESA, 00h for SPWG)	00	00000000
16	10	Week of manufacture 1 - 53 (unused: 00h) : 10h fixed by CMN	30	00110000
17	11	Year of manufacture year - 1990(unsed:00h) : 14h (Year 2011) fixed by CMN	15	00010101
18	12	Version=1	01	00000001
19	13	Revision=4	04	00000100
20	14	Vedio Input Definition	90	10010000
21	15	Active area horizontal 29.341cm	1D	00011101
22	16	Active area vertical 16.496cm	10	00010000
23	17	Display Gamma (Gamma = "2.2")	78	01111000
24	18	Feature support	02	00000010
25	19	Rx1, Rx0, Ry1, Ry0, Gx1, Gx0, Gy1, Gy0	98	10011000
26	1A	Bx1, Bx0, By1, By0, Wx1, Wx0, Wy1, Wy0	55	01010101
27	1B	Rx = "0.584"	95	10010101
28	1C	Ry = "0.349"	59	01011001
29	1D	Gx = "0.338"	56	01010110
30	1E	Gy = "0.574"	93	10010011
31	1F	Bx = "0.157"	28	00101000
32	20	By = "0.126"	20	00100000
33	21	Wx = "0.313"	50	01010000
34	22	Wy = "0.329"	54	01010100
35	23	Established timings 1	00	00000000
36	24	Established timings 2 (1600x900@60Hz)	00	00000000
37	25	No manufacturer's specific timing	00	00000000
38	26	Standard timing ID # 1	01	00000001
39	27	Standard timing ID # 1	01	00000001
40	28	Standard timing ID # 2	01	00000001

PRODUCT SPECIFICATION

41	29	Standard timing ID # 2	01	00000001
42	2A	Standard timing ID # 3	01	00000001
43	2B	Standard timing ID # 3	01	00000001
44	2C	Standard timing ID # 4	01	00000001
45	2D	Standard timing ID # 4	01	00000001
46	2E	Standard timing ID # 5	01	00000001
47	2F	Standard timing ID # 5	01	00000001
48	30	Standard timing ID # 6	01	00000001
49	31	Standard timing ID # 6	01	00000001
50	32	Standard timing ID # 7	01	00000001
51	33	Standard timing ID # 7	01	00000001
52	34	Standard timing ID # 8	01	00000001
53	35	Standard timing ID # 8	01	00000001
54	36	Detailed timing description # 1 Pixel clock ("71.01MHz", According to VESA CVT Rev1.4)	BD	10111101
55	37	# 1 71.01MHz/10000 =7101=1BBD(Hex)	1B	00011011
56	38	# 1 H active ("1366")	56	01010110
57	39	# 1 H blank ("132")	84	10000100
58	3A	# 1 H active : H blank ("1366 : 132")	50	01010000
59	3B	# 1 V active ("768")	00	00000000
60	3C	# 1 V blank ("22")	16	00010110
61	3D	# 1 V active : V blank ("768 :22")	30	00110000
62	3E	# 1 H sync offset ("48")	30	00110000
63	3F	# 1 H sync pulse width ("32")	20	00100000
64	40	# 1 V sync offset : V sync pulse width ("1 : 4")	14	00010100
65	41	# 1 H sync offset : H sync pulse width : V sync offset : V sync width ("48: 32 : 1 : 4")	00	00000000
66	42	# 1 H image size ("293 mm")	25	00100101
67	43	# 1 V image size ("164 mm")	A4	10100100
68	44	# 1 H image size : V image size ("293 : 164")	10	00010000
69	45	# 1 H boarder ("0")	00	00000000
70	46	# 1 V boarder ("0")	00	00000000
71	47	Non-interlaced, Normal Display, Digital separate, Positive Hsync, Negative Vsync	1A	00011010
72	48	Detailed timing description # 1 Pixel clock ("47.34MHz", According to VESA CVT Rev1.4)	7E	01111110
73	49	# 2 47.34MHz/10000 =4734=127E(Hex)	12	00010010
74	4A	# 1 H active ("1366")	56	01010110
75	4B	# 1 H blank ("132")	84	10000100
76	4C	# 1 H active : H blank ("1366 : 132")	50	01010000
77	4D	# 1 V active ("768")	00	00000000
78	4E	# 1 V blank ("22")	16	00010110
79	4F	# 1 V active : V blank ("768 :22")	30	00110000
80	50	# 1 H sync offset ("48")	30	00110000
81	51	# 1 H sync pulse width ("32")	20	00100000
82	52	# 1 V sync offset : V sync pulse width ("1 : 4")	14	00010100
83	53	# 1 H sync offset : H sync pulse width : V sync offset : V sync width ("48: 32 : 1 : 4")	00	00000000
84	54	# 2 H image size ("293 mm")	25	00100101

PRODUCT SPECIFICATION

85	55	# 2 V image size ("164 mm")	A4	10100100
86	56	# 2 H image size : V image size ("293 : 164")	10	00010000
87	57	# 2 H boarder ("0")	00	00000000
88	58	# 2 V boarder ("0")	00	00000000
89	59	Non-interlaced, Normal Display, Digital separate, Positive Hsync, Negative Vsync	1A	00011010
90	5A	Flag	00	00000000
91	5B	Flag	00	00000000
92	5C	Flag	00	00000000
93	5D	Data Type Tag: Alphanumeric Data String (ASCII)	FE	11111110
94	5E	Flag	00	00000000
95	5F	Dell P/N 1st Character "N"	4E	01001110
96	60	Dell P/N 2nd Character "3"	33	00110011
97	61	Dell P/N 3rd Character "4"	34	00110100
98	62	Dell P/N 4th Character "H"	48	01001000
99	63	Dell P/N 5th Character "6"	36	00110110
100	64	EDID Revision	81	10000001
101	65	Manufacturer P/N "1"	31	00110001
102	66	Manufacturer P/N "3"	33	00110011
103	67	Manufacturer P/N "3"	33	00110011
104	68	Manufacturer P/N "B"	42	01000010
105	69	Manufacturer P/N "G"	47	01000111
106	6A	Manufacturer P/N "E"	45	01000101
107	6B	Manufacturer P/N (If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h)	0A	00001010
108	6C	Flag	00	00000000
109	6D	Flag	00	00000000
110	6E	Flag	00	00000000
111	6F	Data Type Tag: Manufacturer Specified Data 00	00	00000000
112	70	Flag	00	00000000
113	71	Color Management	00	00000000
114	72	Panel Type and Revision	41	01000001
115	73	Frame Rate	31	00110001
116	74	Light Controller Interface and Maximum Luminance	9E	10011110
117	75	Front Surface / Polarizer and Pixel Structure	00	00000000
118	76	Multi-Media Features	10	00010000
119	77	Multi-Media Features	00	00000000
120	78	Special Features	00	00000000
121	79	Special Feature	01	00000001
122	7A	Special Features	01	00000001
123	7B	(If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h)	0A	00001010
124	7C	(If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h)	20	00100000
125	7D	(If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h)	20	00100000
126	7E	No extension	00	00000000
127	7F	Checksum	3C	00111100

PRODUCT SPECIFICATION

Appendix. OUTLINE DRAWING

N133BGE-M42

One step solution for LCD / PDP / OLED panel application: Datasheet, inventory and accessory! www.panelook.com

奇美電子
CHIMEI INNOLUX

PRODUCT SPECIFICATION

3-(21.4) FPC Width

(71.828) FPC Center

(159.078) FPC Center

(208.439) T-CON Center

(246.328) FPC Center

FPC, T-CON Positions.