# Product Specification
## AU OPTRONICS CORPORATION

**(V ) Preliminary Specifications**
**(   ) Final Specifications**

| Module | 15.4" WXGA+ Color TFT-LCD |
|---|---|
| Model Name | B154PW04 V0 |

| Customer | Date | | Approved by | Date |
|---|---|---|---|---|
| | | | | |

| Checked & Approved by | | | Prepared by | |
|---|---|---|---|---|
| | | | | |

Note: This Specification is subject to change without notice.

NBBU Marketing Division /
AU Optronics corporation

# Contents

# Record of Revision

| Version and Date | Page | Old description | New Description | Remark |
|---|---|---|---|---|
| 0.1 2007/06/18 | All | First Edition for Customer | | |
| 0.2 2007/07/10 | 27 | | LCM drawing update | |
| | | | | |
| | | | | |
| | | | | |

## 1. Handling Precautions

1) Since front polarizer is easily damaged, pay attention not to scratch it.

2) Be sure to turn off power supply when inserting or disconnecting from input connector.

3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.

4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.

5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.

6) Since CMOS LSI is used in this module, take care of static electricity and insure human earth when handling.

7) Do not open nor modify the Module Assembly.

8) Do not press the reflector sheet at the back of the module to any directions.

9) In case if a Module has to be put back into the packing container slot after once it was taken out from the container, do not press the center of the CCFL Reflector edge. Instead, press at the far ends of the CFL Reflector edge softly. Otherwise the TFT Module may be damaged.

10) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT Module.

11) After installation of the TFT Module into an enclosure (Notebook PC Bezel, for example), do not twist nor bend the TFT Module even momentary. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside.   Otherwise the TFT Module may be damaged.

12) Cold cathode fluorescent lamp in LCD contains a small amount of mercury. Please follow local ordinances or regulations for disposal.

13) Small amount of materials having no flammability grade is used in the LCD module. The LCD module should be supplied by power complied with requirements of Limited Power Source(, IEC60950 or UL1950), or be applied exemption.

14) The LCD module is designed so that the CCFL in it is supplied by Limited Current Circuit(IEC60950 or UL1950). Do not connect the CCFL in Hazardous Voltage Circuit.

## 2. General Description

B154PW04 V0 is a Color Active Matrix Liquid Crystal Display composed of a TFT LCD panel, a driver circuit, and backlight system. The screen format is intended to support the WXGA+ (1440(H) x 900(V)) screen and 262k colors (RGB 6-bits data driver). All input signals are LVDS interface compatible. Inverter of backlight is not included.

B154PW04 V0 is designed for a display unit of notebook style personal computer and industrial machine.

## 2.1 General Specification

The following items are characteristics summary on the table at 25 ℃ condition:

# Product Specification

| Items | Unit | Specifications |
|---|---|---|
| Screen Diagonal | [mm] | 391 (15.4W") |
| Active Area | [mm] | 331.560 (H) x 207.225 (V) |
| Pixels H x V | | 1440x3(RGB) x 900 |
| Pixel Pitch | [mm] | 0.23025X0.23025 |
| Pixel Arrangement | | R.G.B. Vertical Stripe |
| Display Mode | | Normally White |
| White Luminance ($I_{CCFL}$=19mA)<br>Note: $I_{LED}$ is LED current | [cd/m$^2$] | 330 typ. (5 points average)<br>300 min. (5 points average)<br>(Note1) |
| Luminance Uniformity | | 1.25 max. (5 points) |
| Contrast Ratio | | 400 typ |
| Optical Rise Time/Fall Time | [msec] | 4/12 typ. |
| Nominal Input Voltage VDD | [Volt] | +3.3 typ. |
| Power Consumption | [Watt] | 4.8 max |
| Weight | [Grams] | 430 typ. 450 max. |
| Physical Size | [mm] | 344.0 typ. x 222.0 typ. x 6.1 max. |
| Electrical Interface | | 2 channel LVDS |
| Surface Treatment | | Anti-Glare, Hardness 2H |
| Support Color | | 262K colors ( RGB 6-bit ) |
| Temperature Range<br>  Operating<br>  Storage (Non-Operating) | [$^o$C]<br>[$^o$C] | 0 to +50<br>-20 to +60 |
| RoHS Compliance | | RoHS Compliance |

## 2.2 Optical Characteristics

The optical characteristics are measured under stable conditions at 25℃ (Room Temperature):

| Item | Unit | Conditions | Min. | Typ. | Max. | Note |
|------|------|-----------|------|------|------|------|
| White Luminance $I_{LED}$=19mA | [cd/m²] | 160 points average | 300 | 330 | - | 1, 3, 4. |
| Viewing Angle | [degree] [degree] | Horizontal (Right) CR = 10 (Left) | 65 65 | 70 70 | - - | 8 |
| | [degree] [degree] | Vertical (Upper) CR = 10 (Lower) | 65 60 | 60 60 | - - | |
| Luminance Uniformity | | 5 Points | | | 1.25 | 1 |
| Luminance Uniformity | | 13 Points | | | 1.50 | 2 |
| Response Time | [msec] | Rising | - | 4 | 8 | 7 |
| | [msec] | Falling | - | 12 | 17 | |
| | [msec] | Rising + Falling | | 16 | 25 | |
| Color / Chromaticity Coordinates (CIE 1931) | | Red x | 0.570 | 0.600 | 0.630 | 2,7 |
| | | Red y | 0.315 | 0.345 | 0.375 | |
| | | Green x | 0.290 | 0.320 | 0.350 | |
| | | Green y | 0.525 | 0.555 | 0.585 | |
| | | Blue x | 0.120 | 0.150 | 0.180 | |
| | | Blue y | 0.090 | 0.120 | 0.150 | |
| | | White x | 0.290 | 0.313 | 0.343 | |
| | | White y | 0.299 | 0.329 | 0.359 | |

Note 1: 5 points position (Display area : 331.2mm x 207.0mm)
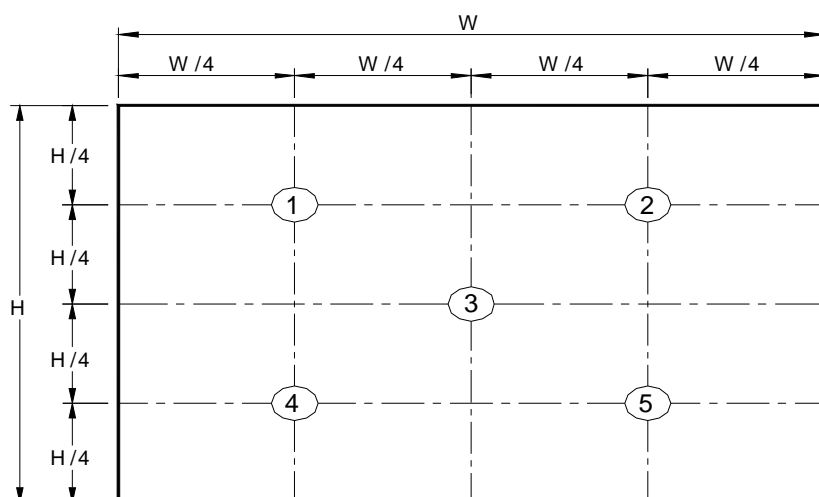


Note 2: 13 points position
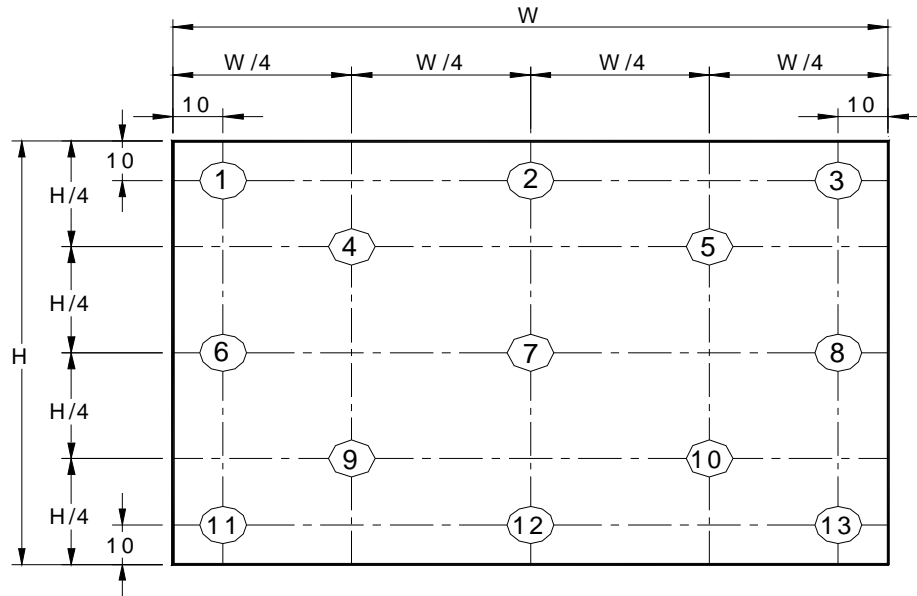
Note 3: The luminance uniformity of 5 and 13 points is defined by dividing the maximum luminance values by the minimum test point luminance

$$\delta_{W5} = \frac{\text{Maximum Brightness of five points}}{\text{Minimum Brightness of five points}}$$

$$\delta_{W13} = \frac{\text{Maximum Brightness of thirteen points}}{\text{Minimum Brightness of thirteen points}}$$

Note 4: Measurement method

The LCD module should be stabilized at given temperature for 30 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 30 minutes in a stable, windless and dark room.
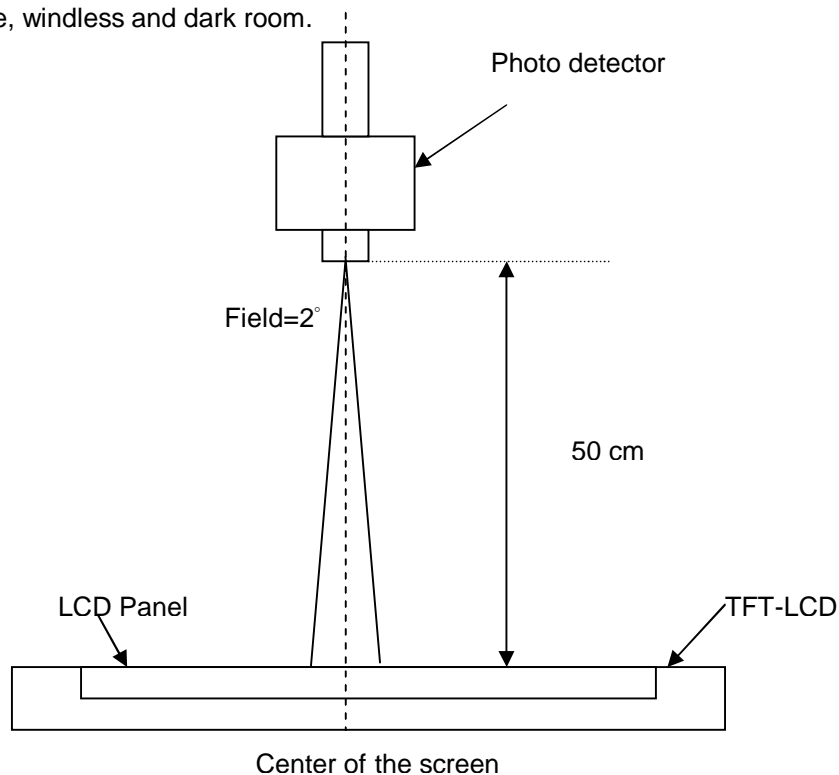
Note 5： Definition of Average Luminance of White ($Y_L$):

Measure the luminance of gray level 63 at 5 points，$Y_L$ = [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 (1).

Note 6： Definition of contrast ratio:

Contrast ratio is calculated with the following formula.

$$\text{Contrast ratio (CR)} = \frac{\text{Brightness on the "White" state}}{\text{Brightness on the "Black" state}}$$

Note 7： Definition of Cross Talk (CT)

CT = | $Y_B$ – $Y_A$ | / $Y_A$ ✕ 100 (%)

Where

$Y_A$ = Luminance of measured location without gray level 0 pattern (cd/㎡)

$Y_B$ = Luminance of measured location with gray level 0 pattern (cd/㎡)
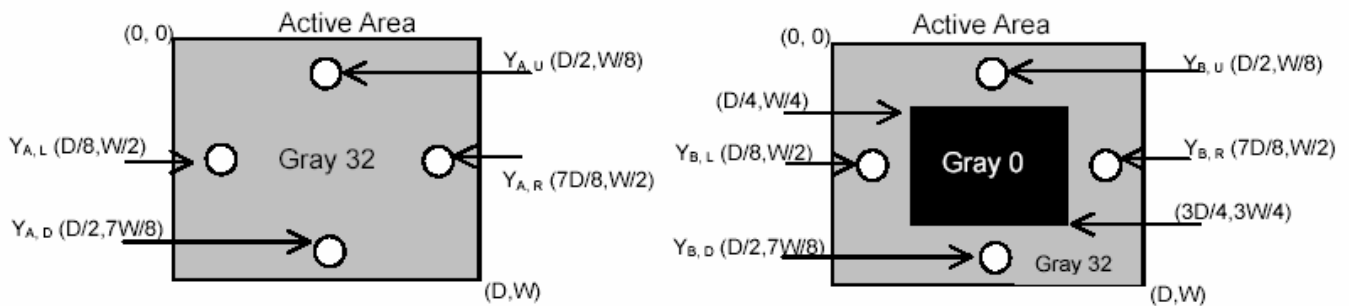


Note 8: Definition of response time:

The output signals of BM-7 or equivalent are measured when the input signals are changed from"Black" to "White" (falling time) and from "White" to "Black" (rising time), respectively. The response time interval between the 10% and 90% of amplitudes. Refer to figure as below.
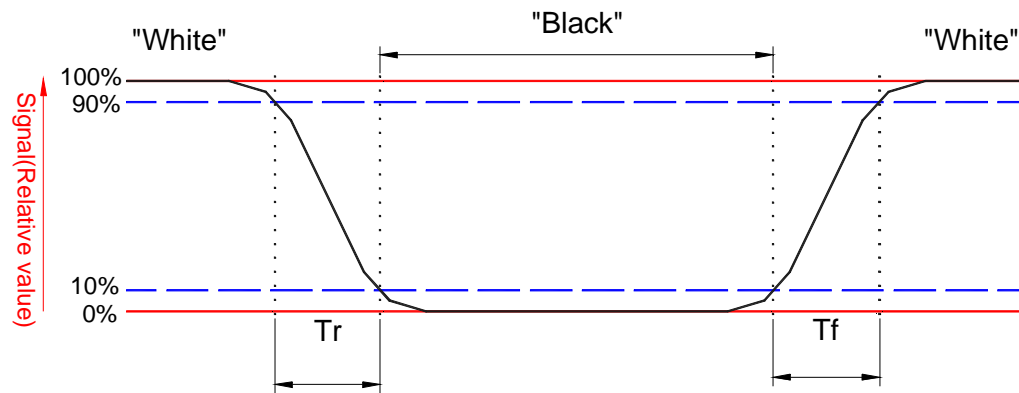
Note 9. Definition of viewing angle

Viewing angle is the measurement of contrast ratio $\geq 10$, at the screen center, over a 180° horizontal and 180° vertical range (off-normal viewing angles). The 180° viewing angle range is broken down as follows; 90° ($\theta$) horizontal left and right and 90° ($\Phi$) vertical, high (up) and low (down). The measurement direction is typically perpendicular to the display surface with the screen rotated about its center to develop the desired measurement viewing angle.
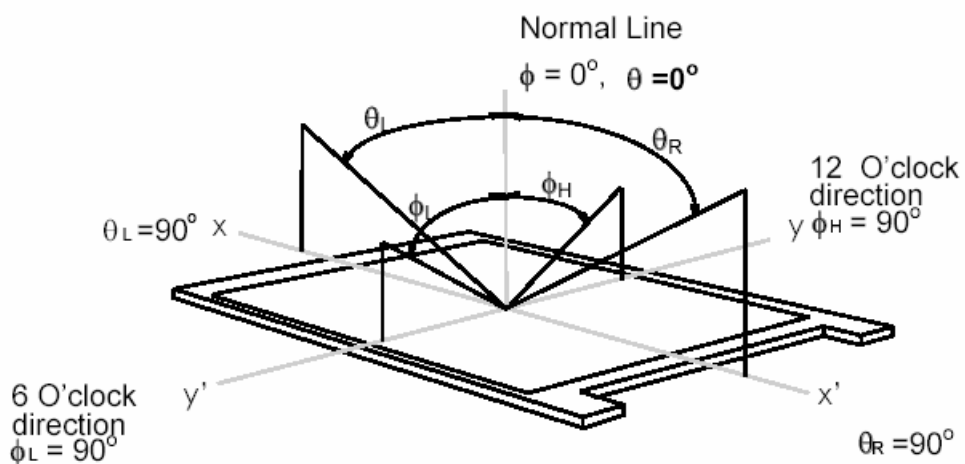
# 3. Functional Block Diagram

The following diagram shows the functional block of the 15.4WXGA+ TFT/LCD Module:
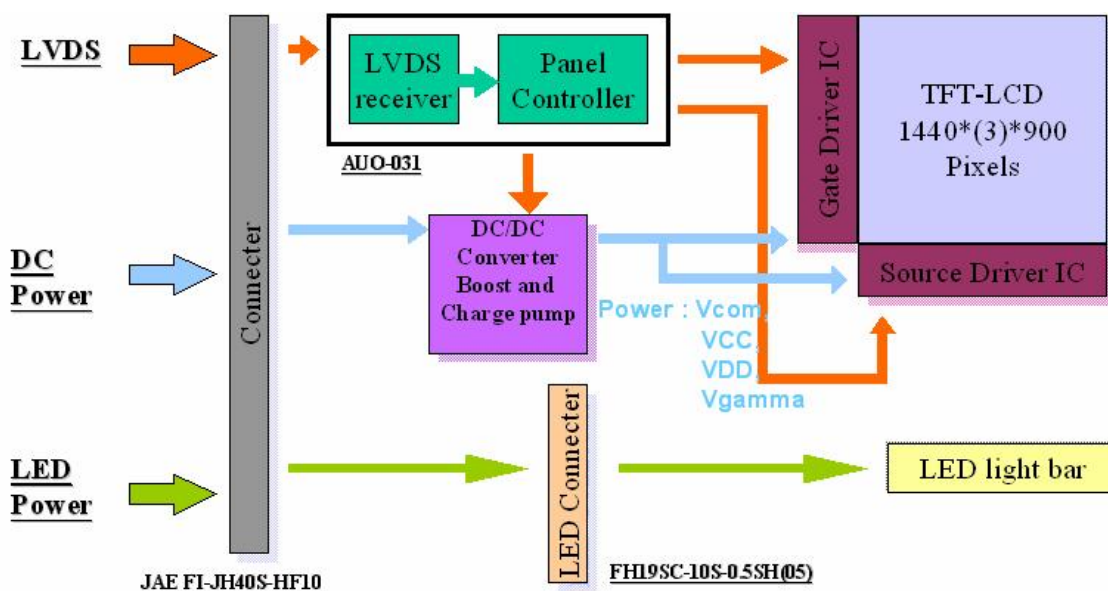
## 4. Absolute Maximum Ratings

Absolute maximum ratings of the module is as following:

### 4.1 Absolute Ratings of TFT LCD Module

| Item | Symbol | Min | Max | Unit | Conditions |
|------|--------|-----|-----|------|-----------|
| Logic/LCD Drive | Vin | -0.3 | +4.0 | [Volt] | Note 1,2 |

### 4.2 Absolute Ratings of Backlight Unit

| Item | Symbol | Min | Max | Unit | Conditions |
|------|--------|-----|-----|------|-----------|
| LED Current | ILED | - | 20 | [mA] rms | Note 1,2 |

### 4.3 Absolute Ratings of Environment

| Item | Symbol | Min | Max | Unit | Conditions |
|------|--------|-----|-----|------|-----------|
| Operating Temperature | TOP | 0 | +50 | [$^{o}$C] | Note 3 |
| Operation Humidity | HOP | -- | 95 | [%RH] | Note 3 |
| Storage Temperature | TST | -20 | +60 | [$^{o}$C] | Note 3 |
| Storage Humidity | HST | 5 | 95 | [%RH] | Note 3 |

Note 1: At Ta (25℃ )

Note 2: Permanent damage to the device may occur if exceed maximum values

Note 3: For quality performance, please refer to AUO IIS(Incoming Inspection Standard).
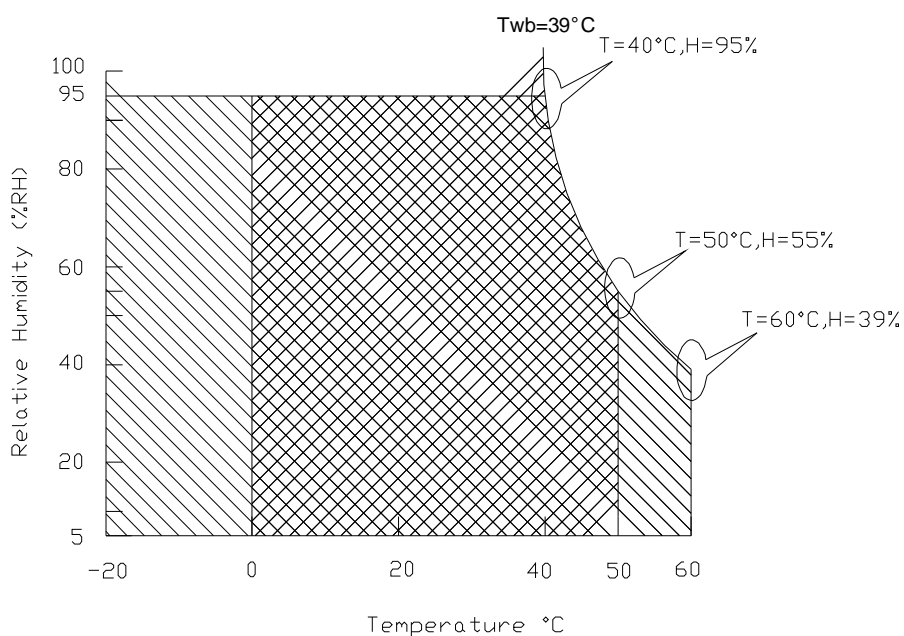


Operating Range ☒☒☒ Storage Range ☒☒☒ + ⬚⬚⬚

# 5. Electrical characteristics

## 5.1 TFT LCD Module

### 5.1.1 Power Specification

Input power specifications are as follows;

| Symble | Parameter | Min | Typ | Max | Units | Note |
|--------|-----------|-----|-----|-----|-------|------|
| VDD | Logic/LCD Drive Voltage | 3.0 | 3.3 | 3.6 | [Volt] | |
| PDD | VDD Power | | | 1.3 | [Watt] | Note 1 |
| IDD | IDD Current | | 280 | 394 | [mA] | Note 1 |
| IRush | Inrush Current | | | 1500 | [mA] | Note 2 |
| VDDrp | Allowable Logic/LCD Drive Ripple Voltage | | | 100 | [mV] p-p | |

Note 1 : Maximum Measurement Condition：Black Patterm

Note 2：Measure Condition
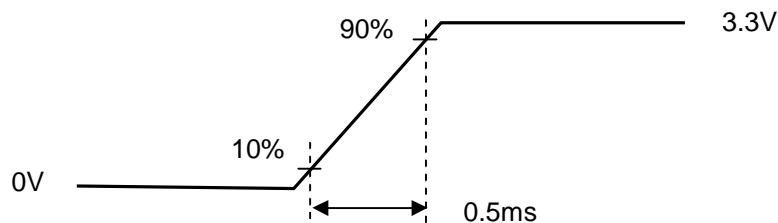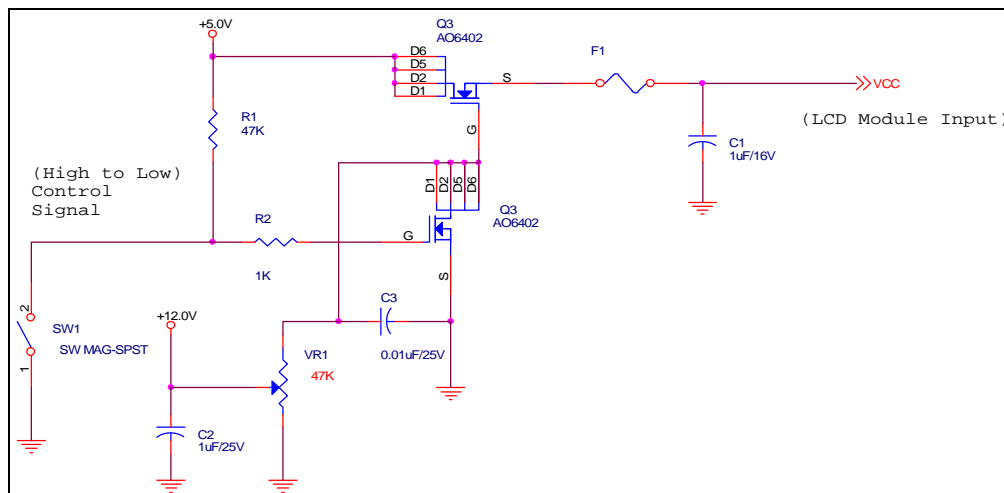




**Vin rising time**

## 5.1.2 Signal Electrical Characteristics

Input signals shall be low or High-impedance state when VDD is off.

It is recommended to refer the specifications of THC63LVDF84A(Thine Electronics Inc.) in detail.

Signal electrical characteristics are as follows:

| Parameter | Condition | Min | Max | Unit |
|-----------|-----------|-----|-----|------|
| Vth | Differential Input High Threshold (Vcm=+1.2V) | | 100 | [mV] |
| Vtl | Differential Input Low Threshold (Vcm=+1.2V) | -100 | | [mV] |
| Vcm | Differential Input Common Mode Voltage | 1.1 | 1.45 | [V] |

Note: LVDS Signal Waveform
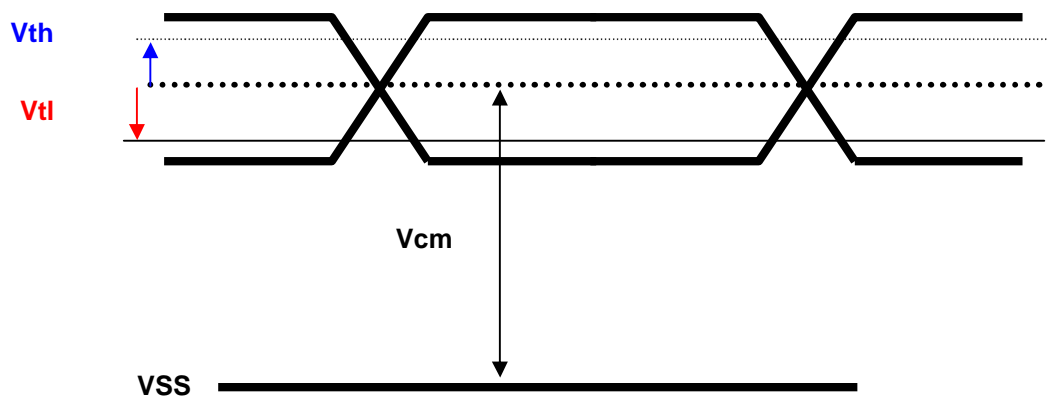
## 5.2 Backlight Unit

The BLU system is an edge type light soure with LED (Light Emitting Diode) light bar

| Item | Symbol | Min. | Typ. | Max. | Unit | Note |
|---|---|---|---|---|---|---|
| Fixed input current | $IL_t$ | | | | $mA_{rms}$ | Absolute maximum guarantee current |
| Input current | IL | | 20 | | $mA_{rms}$ | Current for each LED |
| Light bar Voltage | VL | | 3.3 | | $V_{rms}$ | |
| Light bar Power | PL | | 3.96 | | Watt | PL= $IL_x VL_x$ LED NUMBER |

Light bar PIN assignment:



HRS FH19SC-10S-0.5SH(05)
(on board, front cover)
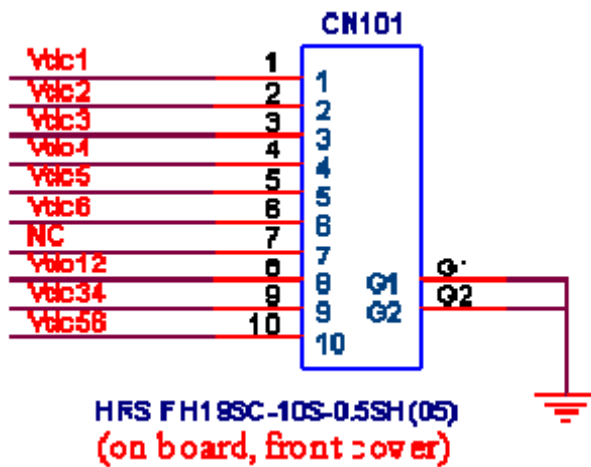
| PIN NO. | SYMBOL | FUNCTION |
|---|---|---|
| 1 | Vdc1 | LED Cathode (Negative) |
| 2 | Vdc2 | LED Cathode (Negative) |
| 3 | Vdc3 | LED Cathode (Negative) |
| 4 | Vdc4 | LED Cathode (Negative) |
| 5 | Vdc5 | LED Cathode (Negative) |
| 6 | Vdc6 | LED Cathode (Negative) |
| 7 | NC | NC |
| 8 | Vdc(1&2) | LED Anode (Positive) |
| 9 | Vdc(3&4) | LED Anode (Positive) |
| 10 | Vdc(5&6) | LED Anode (Positive) |

# 6. Signal Characteristic

## 6.1 Pixel Format Image

Following figure shows the relationship of the input signals and LCD pixel format.

Pixel Format on the Display

Line 0

0

1439

R G B R G B

R G B R G B

Scan Direction

899

R G B R G B

R G B R G B

Flex Bonding Edge
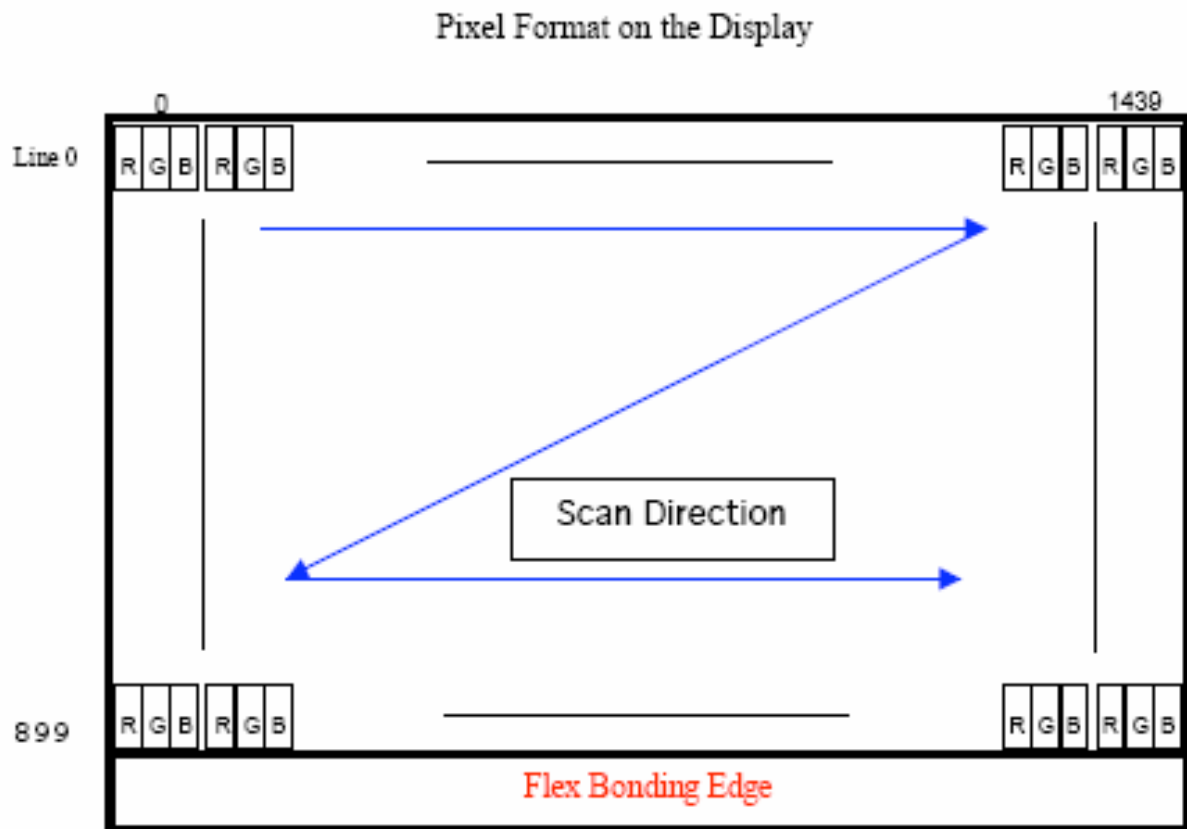
## 6.2 The input data format
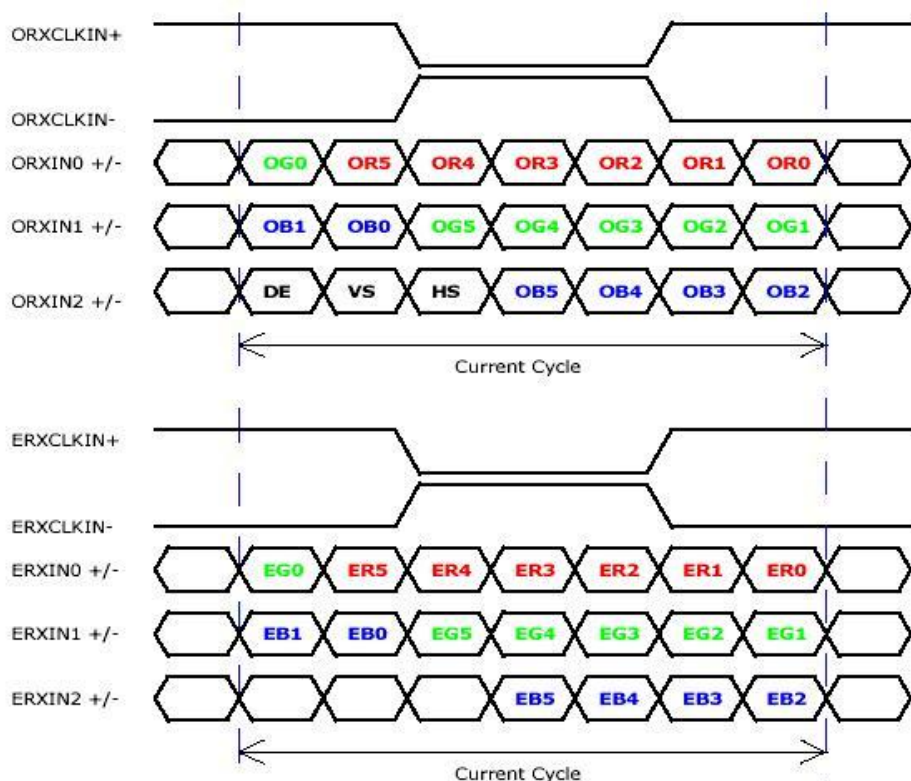


| Signal Name | Description |
|---|---|
| V<sub>EDID</sub> | +3.3V EDID Power |
| CLK<sub>EDID</sub> | EDID Clock Input |
| DATA<sub>EDID</sub> | EDID Data Input |
| ORXIN0-, ORXIN0+ | Odd LVDS differential data input(ORed0-ORed5, OGreen0) |
| ORXIN1-, ORXIN1+ | Odd LVDS differential data input(OGreen1-OGreen5, OBlue0-OBlue1) |
| ORXIN2-, ORXIN2+ | Odd LVDS differential data input(OBlue2-OBlue5, Hsync, Vsync, DE) |
| ORXCLKIN-, ORXCLKIN+ | Odd LVDS differential clock input |
| ERXIN0-, ERXIN0+ | Even LVDS differential data input(ERed0-ERed5, EGreen0) |
| ERXIN1-, ERXIN1+ | Even LVDS differential data input(EGreen1-EGreen5, EBlue0-EBlue1) |
| ERXIN2-, ERXIN2+ | Even LVDS differential data input(EBlue2-EBlue5) |
| ERXCLKIN-, ERXCLKIN+ | Even LVDS differential clock input |
| VDD | +3.3V Power Supply |
| GND | Ground |

Note: Output signals from any system shall be low or High-impedance state when VDD is off.

## 6.3 Signal Description/Pin Assignment

LVDS is a differential signal technology for LCD interface and high speed data transfer device.

| Pin | Symbol | Description | Micro-coax cable gauge (AWG) |
|-----|--------|-------------|------------------------------|
| 1 | GND | Ground | 40 |
| 2 | Vcc | Power Supply (+3.3V) | 36 |
| 3 | Vcc | Power Supply (+3.3V) | 36 |
| 4 | VEDID | DDC 3.3V Power | 40 |
| 5 | Vcc | Power Supply (+3.3V) | 36 |
| 6 | ClkEDID | DDC Clock | 40 |
| 7 | DATAEDID | DDC Data | 40 |
| 8 | Odd_Rin0- | Odd Channel Differential Data Input | 40 |
| 9 | Odd_Rin0+ | Odd Channel Differential Data Input | 40 |
| 10 | GND | Ground | 40 |
| 11 | Odd_Rin1- | Odd Channel Differential Data Input | 40 |
| 12 | Odd_Rin1+ | Odd Channel Differential Data Input | 40 |
| 13 | GND | Ground | 40 |
| 14 | Odd_Rin2- | Odd Channel Differential Data Input | 40 |
| 15 | Odd_Rin2+ | Odd Channel Differential Data Input | 40 |
| 16 | GND | Ground | 40 |
| 17 | Odd_Clkin- | Odd Channel Differential Clock Input | 40 |
| 18 | Odd_Clkin+ | Odd Channel Differential Clock Input | 40 |
| 19 | GND | Ground | 40 |
| 20 | Even_Rin0- | Even Channel Differential Data Input | 40 |
| 21 | Even_Rin0+ | Even Channel Differential Data Input | 40 |
| 22 | GND | Ground | 40 |
| 23 | Even_Rin1- | Even Channel Differential Data Input | 40 |
| 24 | Even_Rin1+ | Even Channel Differential Data Input | 40 |
| 25 | GND | Ground | 40 |
| 26 | Even_Rin2- | Even Channel Differential Data Input | 40 |
| 27 | Even_Rin2+ | Even Channel Differential Data Input | 40 |
| 28 | GND | Ground | 40 |
| 29 | Even_Clkin- | Even Channel Differential Clock Input | 40 |
| 30 | Even_Clkin+ | Even Channel Differential Clock Input | 40 |
| 31 | Vdc1 | LED Cathode (Negative) | 40 |
| 32 | Vdc2 | LED Cathode (Negative) | 40 |
| 33 | Vdc3 | LED Cathode (Negative) | 40 |
| 34 | Vdc4 | LED Cathode (Negative) | 40 |
| 35 | Vdc5 | LED Cathode (Negative) | 40 |

| 36 | Vdc6 | LED Cathode (Negative) | 40 |
|----|------|------------------------|----|
| 37 | AGINE | AGINE PIN | 40 |
| 38 | Vdc(1,2) | LED Annold (Positive) | 40 |
| 39 | Vdc(3,4,) | LED Annold (Positive) | 40 |
| 40 | Vdc(5,6) | LED Annold (Positive) | 40 |

Note1: Start from right side
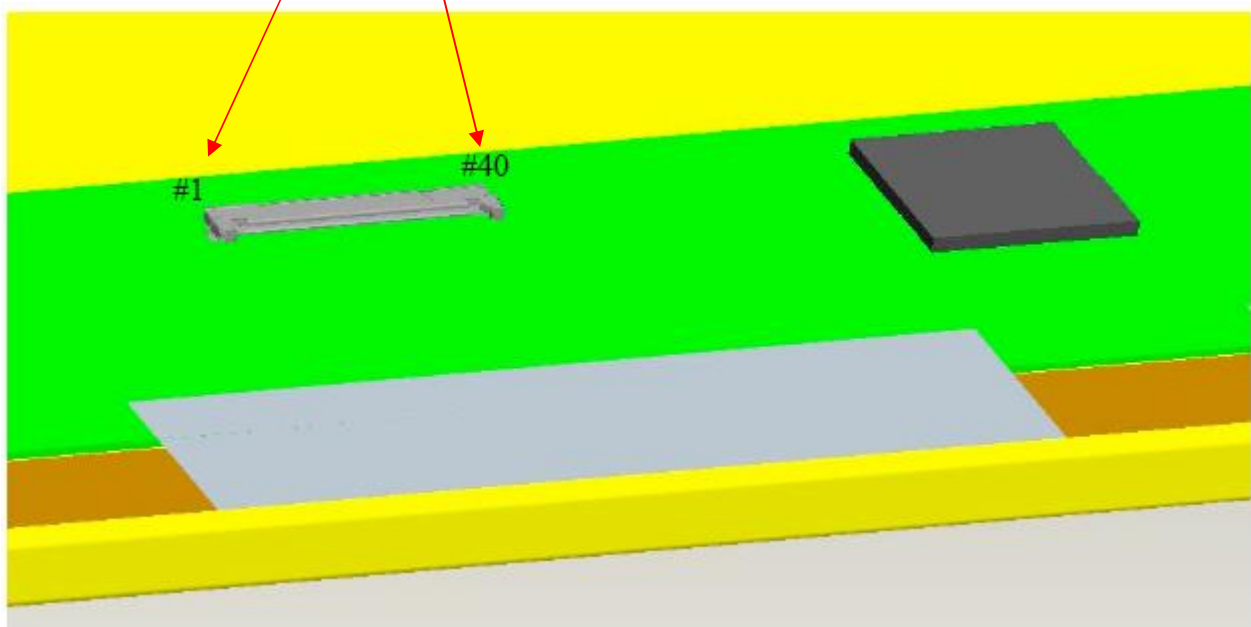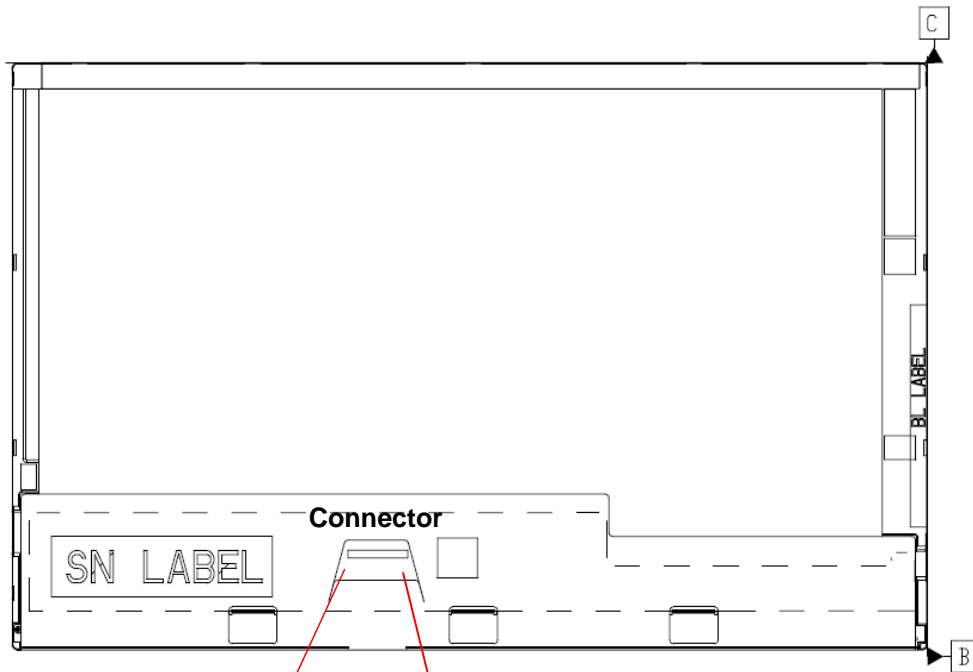
## 6.4 Interface Timing

### 6.4.1 Timing Characteristics

Basically, interface timings should match the 1440X900 /60Hz   manufacturing guide line timing.

| Parameter | | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Frame Rate | | - | 50 | 60 | - | Hz |
| Clock frequency | | $1/T_{Clock}$ | - | 48.2 | 60.2 | MHz |
| Vertical Section | Period | $T_V$ | 904 | 912 | 2048 | $T_{Line}$ |
| | Active | $T_{VD}$ | 900 | 900 | 900 | |
| | Blanking | $T_{VB}$ | 4 | 12 | - | |
| Horizontal Section | Period | $T_H$ | 760 | 880 | 1024 | $T_{Clock}$ |
| | Active | $T_{HD}$ | 720 | 720 | 720 | |
| | Blanking | $T_{HB}$ | 40 | 160 | - | |

Note : DE mode only

## 6.4.2 Timing diagram
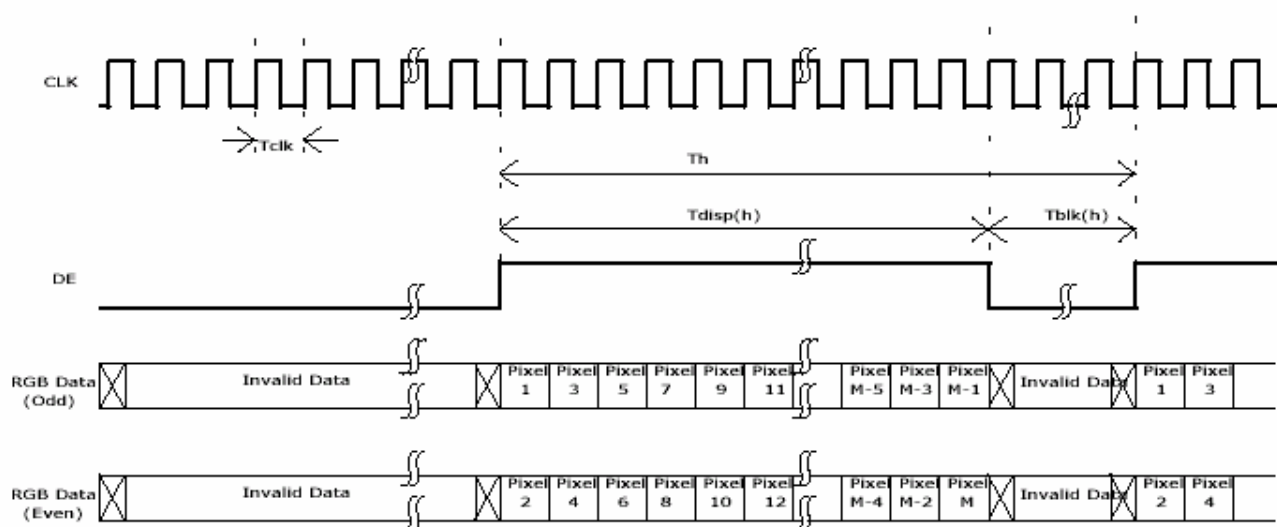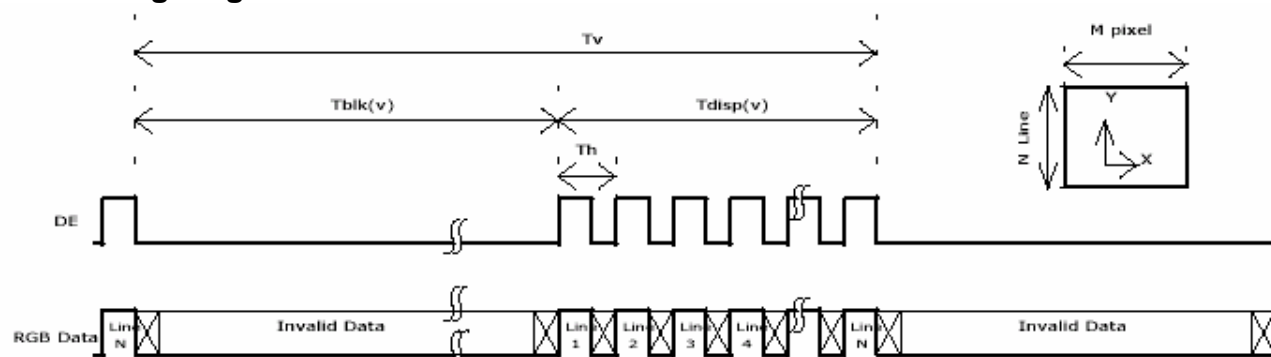
## 6.5 Power ON/OFF Sequence

VDD power and lamp on/off sequence is as follows. Interface signals are also shown in the chart. Signals from any system shall be Hi-Z state or low level when VDD is off.
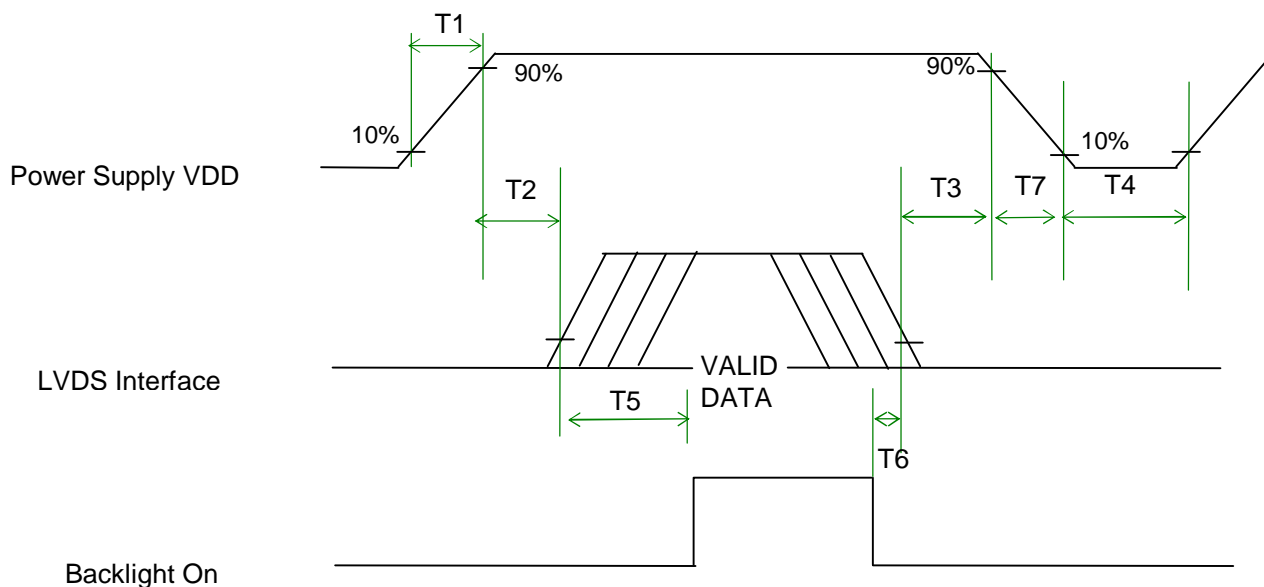


**Power Sequence Timing**

| Parameter | Value | | | Units |
|-----------|------|------|------|-------|
| | Min. | Typ. | Max. | |
| T1 | 0.5 | - | 10 | (ms) |
| T2 | 5 | - | 50 | (ms) |
| T3 | 0.5 | - | 50 | (ms) |
| T4 | 400 | - | - | (ms) |
| T5 | 200 | - | - | (ms) |
| T6 | 200 | - | - | (ms) |
| T7 | 0 | - | 10 | (ms) |

# 7. Connector Description

Physical interface is described as for the connector on module.

These connectors are capable of accommodating the following signals and will be following components.

## 7.1 TFT LCD Module

| Connector Name / Designation | For Signal Connector |
|---|---|
| Manufacturer | JAE or equivalent |
| Type / Part Number | JAE FI-JH-40S-HF10 or equivalent |
| Mating Housing/Part Number | JAE FI-JH-40C series or equivalent (micro-coax type) |

# 8. Vibration and Shock Test (Stand alone)

## 8.1 Vibration Test

**Test Spec:**

- l    Test method:      Non-Operation
- l    Acceleration:      1.5G
- l    Frequency:        26 - 500Hz Random
- l    Sweep:            30 Minutes each Axis (X, Y, Z)

## 8.2 Shock Test Spec:

**Test Spec:**

- l    Test method:      Non-Operation
- l    Acceleration:      260 G , Half sine wave
- l    Active time:       2 ms
- l    Pulse:            X,Y,Z .one time for each side

# 9. Reliability

| Items | Required Condition | Note |
|---|---|---|
| Temperature Humidity Bias | 40℃/95%,300Hrs | |
| High Temperature Operation | 50℃/Dry,300Hrs | |
| Low Temperature Operation | 0℃,300Hrs | |
| On/Off Test | 25℃,150hrs(ON/30 sec. OFF/30sec., 10,000 cycles) | |
| Hot Storage | 65℃/20% RH ,300 hours | |
| Cold Storage | -25℃/50% RH ,300 hours | |
| Thermal Shock Test | -25℃/30 min ,65℃/30 min 100cycles non-OP | |
| Shock Test (Non-Operating) | 260G, 2ms, Half-sine wave, +/- X, Y,Z direction,1 cycle | |
| Vibration Test (Non-Operating) | Sinusoidal vibration, 3.0 G zero-to-peak, 10 to 150 Hz, 30 mins in each of three mutually perpendicular axes. | |
| ESD | Contact : ±8KV/ operation<br>Air : ±15KV / operation | Note 1 |
| Image sticking | 10X10 checker pattern, 10 hrs, 25℃. The persisting pattern should be disappeared in 5 minutes | |

Note1: According to EN61000-4-2 , ESD class B: Some performance degradation allowed. No data lost

. Self-recoverable. No hardware failures.

# 10. Mechanical Characteristics

## 10.1 LCM Outline Dimension



SCALE 0.500

C

332.90

207.00

201.80

187.00

185.55

150.00

15.00

15.00

8.90

115.70

17.00

SN LABEL

37.00

23.00

83.00

176.57 ±1.00

206.55 ±1.00

4.72

B

329.22
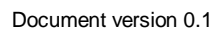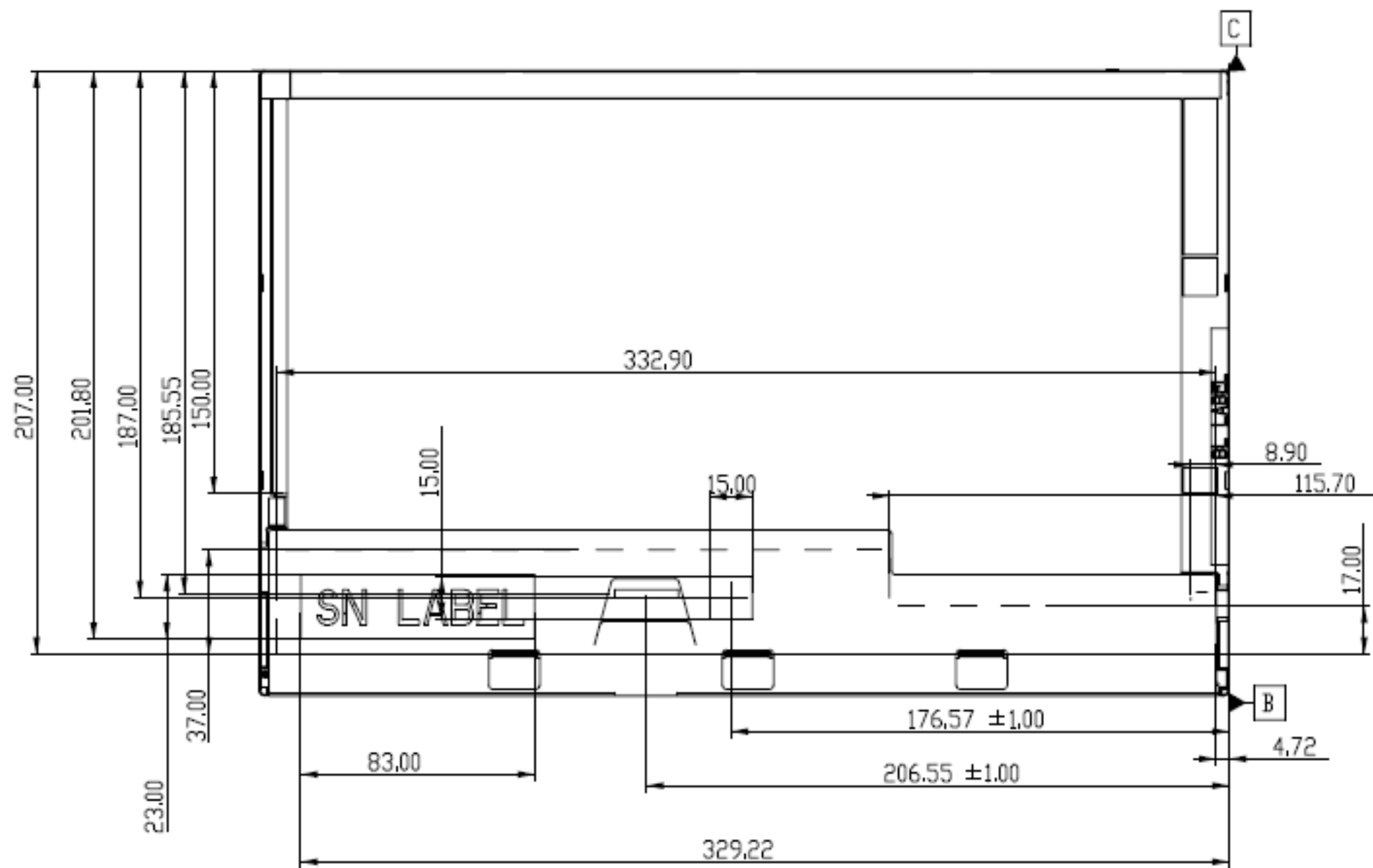
# 11. Shipping and Package

## 11.1 Shipping Label Format

Model name

Week code

Manufactured 05/20
Model No **B154PW04**
AU Optronics                    **0AXXG**
MADE IN TAIWAN (M1)

H/W:OA    F/W:1

cᴿᵁUS
E204356

*NM5501301186—ZM102*

*V16ZZZZZZX2PB*
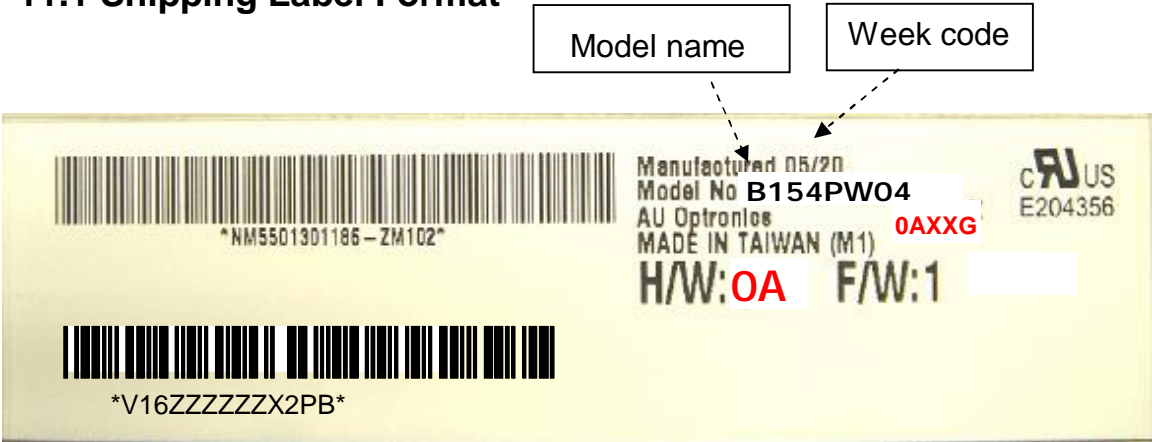
## 11.2. Carton package

The outside dimension of carton is 455 (L)mm x 380 (W)mm x 355 (H)mm
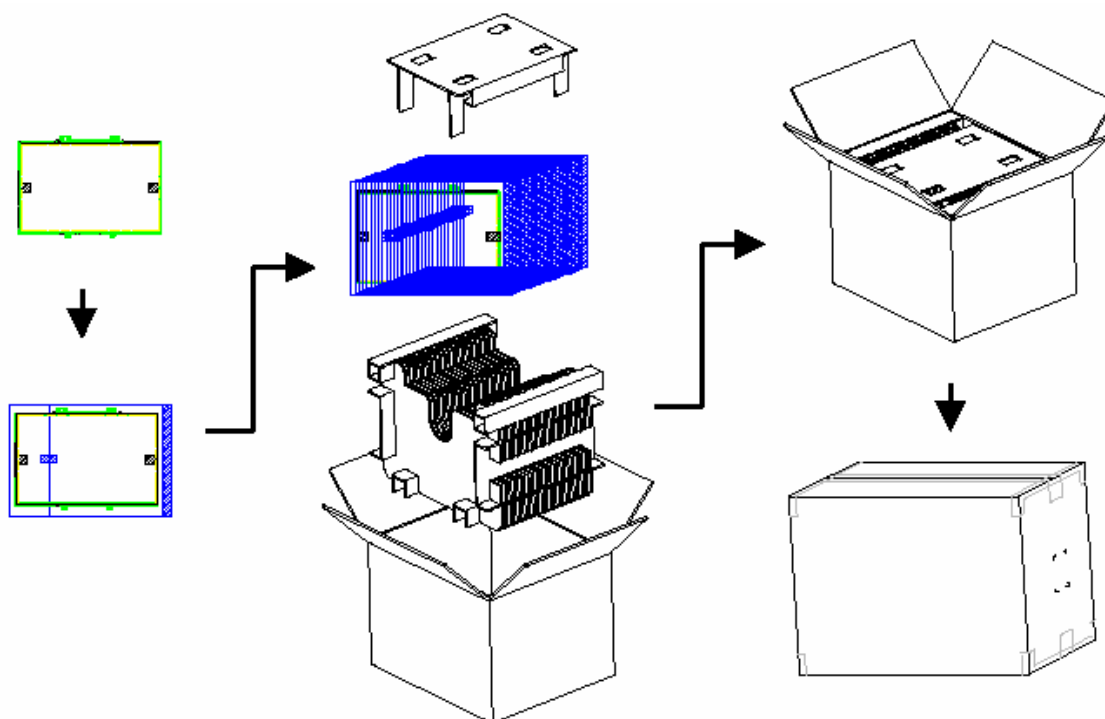


## 11.3 Shipping package of palletizing sequence



Top cardboard

Bottom cardboard

Wooden pallet

Corner angle

PE band

Stretch film

Note : Limit of box palletizing = Max 3 layers(ship and stock conditions)

# 12. Appendix: EDID description

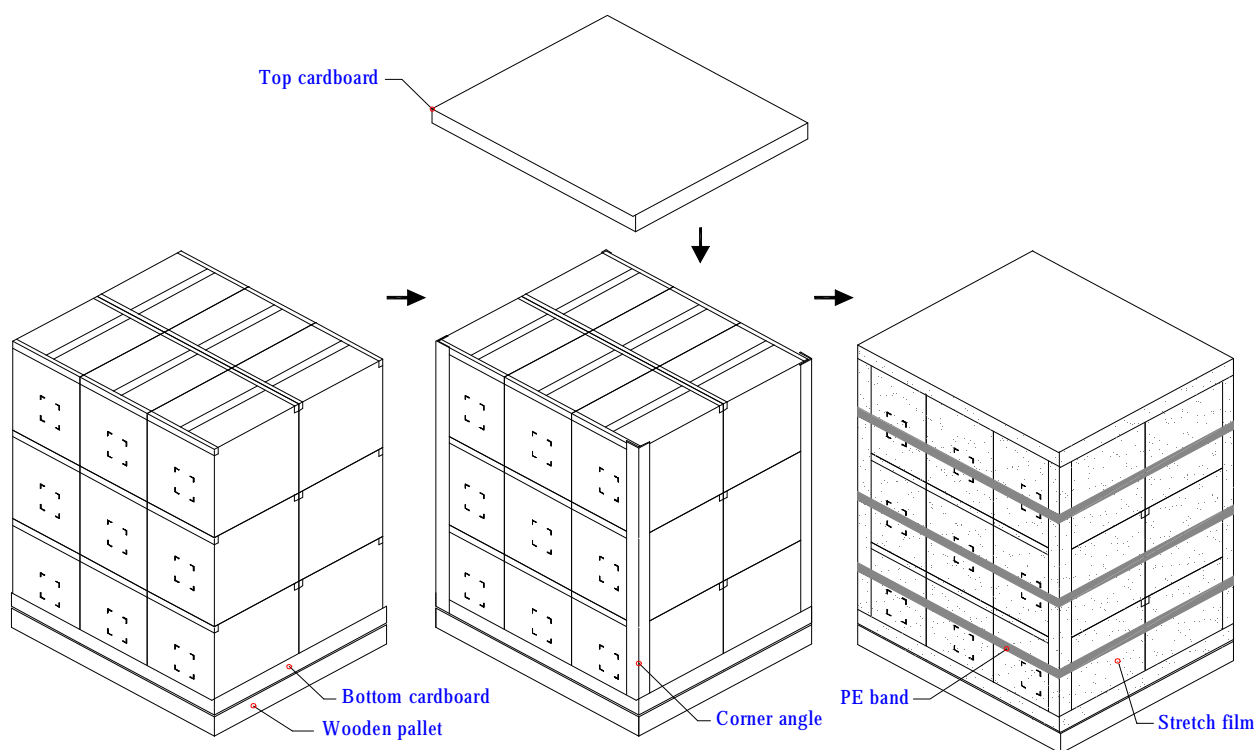| Address | FUNCTION | B154PW04 | Value | Value | Note |
|---|---|---|---|---|---|
| **HEX** | **Header** | **HEX** | **BIN** | **DEC** | |
| 00 | | 00 | 00000000 | 0 | |
| 01 | | FF | 11111111 | 255 | |
| 02 | | FF | 11111111 | 255 | |
| 03 | | FF | 11111111 | 255 | |
| 04 | | FF | 11111111 | 255 | |
| 05 | | FF | 11111111 | 255 | |
| 06 | | FF | 11111111 | 255 | |
| 07 | | 00 | 00000000 | 0 | |
| 08 | **EISA Manuf. Code LSB** | 06 | 00000110 | 6 | **APP** |
| 09 | **Compressed ASCII** | 10 | 00010000 | 16 | **0 00001(A) 10000(P) 10000(P)** |
| 0A | **Product code** | 66 | 01100110 | 102 | **9C66** |
| 0B | **Product code** | 9C | 10011100 | 156 | |
| 0C | **32-bit ser #** | 01 | 00000001 | 1 | **unused** |
| 0D | | 01 | 00000001 | 1 | |
| 0E | | 01 | 00000001 | 1 | |
| 0F | | 01 | 00000001 | 1 | |
| 10 | Week of manufacture | 28 | 00101000 | 40 | **Week=40** |
| 11 | **Year of manufacture** | 10 | 00010000 | 16 | **Year=2006** |
| 12 | EDID Structure Ver. | 01 | 00000001 | 1 | |
| 13 | EDID revision # | 03 | 00000011 | 3 | |
| 14 | Video input definition | 80 | 10000000 | 128 | **Digital Input** |
| 15 | Max H image size | 21 | 00100001 | 33 | **33cm** |
| 16 | Max V image size | 15 | 00010101 | 21 | **21cm** |
| 17 | Display Gamma | 78 | 01111000 | 120 | **Gamma=2.2** |
| 18 | Feature support | 0A | 00001010 | 10 | **no DPMS,Active off,RGB color** |
| 19 | Red/green low bits | 50 | 01010000 | 80 | |
| 1A | Blue/white low bits | C5 | 11000101 | 197 | |
| 1B | Red x/ high bits | 98 | 10011000 | 152 | **Rx=0.595** |
| 1C | Red y | 58 | 01011000 | 88 | **Ry=0.345** |
| 1D | Green x | 52 | 01010010 | 82 | **Gx=0.32** |
| 1E | Green y | 8E | 10001110 | 142 | **Gy=0.555** |
| 1F | Blue x | 27 | 00100111 | 39 | **Bx=0.155** |
| 20 | Blue y | 25 | 00100101 | 37 | **By=0.145** |
| 21 | White x | 50 | 01010000 | 80 | **Wx=0.313** |
| 22 | White y | 54 | 01010100 | 84 | **Wy=0.329** |
| 23 | Established timing 1 | 00 | 00000000 | 0 | **unused** |
| 24 | Established timing 2 | 00 | 00000000 | 0 | — |
| 25 | Manufacturer's Timing | 00 | 00000000 | 0 | |
| 26 | Standard timing #1 | 01 | 00000001 | 1 | **unused** |
| 27 | | 01 | 00000001 | 1 | |
| 28 | Standard timing #2 | 01 | 00000001 | 1 | |
| 29 | | 01 | 00000001 | 1 | |
| 2A | Standard timing #3 | 01 | 00000001 | 1 | |
| 2B | | 01 | 00000001 | 1 | |

| Address | Field | Hex | Binary | Dec | Notes |
|---|---|---|---|---|---|
| 2C | Standard timing #4 | 01 | 00000001 | 1 | |
| 2D | | 01 | 00000001 | 1 | |
| 2E | Standard timing #5 | 01 | 00000001 | 1 | |
| 2F | | 01 | 00000001 | 1 | |
| 30 | Standard timing #6 | 01 | 00000001 | 1 | |
| 31 | | 01 | 00000001 | 1 | |
| 32 | Standard timing #7 | 01 | 00000001 | 1 | |
| 33 | | 01 | 00000001 | 1 | |
| 34 | Standard timing #8 | 01 | 00000001 | 1 | |
| 35 | | 01 | 00000001 | 1 | |
| 36 | Pixel Clock/10,000 (LSB) | 9E | 10011110 | 158 | Timing Descriptor #1 |
| 37 | Pixel Clock/10,000 (MSB) | 25 | 00100101 | 37 | Pixel clock=96.3Mhz |
| 38 | Horiz. Active pixels(Lower 8 bits) | A0 | 10100000 | 160 | Horiz active=1440 pixels |
| 39 | Horiz.Blanking (Lower 8 bits) | 40 | 01000000 | 64 | Horiz blanking=320 pixels |
| 3A | Horiz. Active pixels:Horiz. Blanking (Upper4:4 bits) | 51 | 01010001 | 81 | |
| 3B | | 84 | 10000100 | 132 | Vertcal active=900 lines |
| 3C | | 0C | 00001100 | 12 | Vertical blanking=12 lines |
| 3D | Vert. Active pixels:Vert. Blanking (Upper4:4 bits) | 30 | 00110000 | 48 | |
| 3E | | 40 | 01000000 | 64 | Horiz sync. Offset= 64 pixels |
| 3F | | 20 | 00100000 | 32 | Horiz sync. Pulse Width= 32 pixels |
| 40 | Vert. Sync. Offset=xx lines, Sync Width=xx lines | 33 | 00110011 | 51 | Verti sync. Offset= 3 lines, Sync Width=3 lines |
| 41 | Horz. Ver. Sync/Width (upper 2 bits) | 00 | 00000000 | 0 | |
| 42 | Hori. Image size (Lower 8 bits) | 4C | 01001100 | 76 | Hori image size= 332 mm |
| 43 | Vert. Image size (Lower 8 bits) | CF | 11001111 | 207 | Verti image size= 207 mm |
| 44 | Hori. Image size : Vert. Image size (Upper 4 bits) | 10 | 00010000 | 16 | |
| 45 | | 00 | 00000000 | 0 | Horizontal Border = 0 |
| 46 | | 00 | 00000000 | 0 | Vertical Border = 0 |
| 47 | | 18 | 00011000 | 24 | |
| 48 | Detailed timing/monitor | 00 | 00000000 | 0 | |
| 49 | descriptor #2 | 00 | 00000000 | 0 | |
| 4A | | 00 | 00000000 | 0 | |
| 4B | | 01 | 00000001 | 1 | Customer reserved |
| 4C | Version | 00 | 00000000 | 0 | Customer reserved |
| 4D | edid signature | 06 | 00000110 | 6 | Customer reserved |
| 4E | edid signature | 10 | 00010000 | 16 | Customer reserved |
| 4F | Link Type (LVDS Link,MSB justified) | 30 | 00110000 | 48 | Customer reserved |
| 50 | Pixel and link component format (6-bit panel interface) | 00 | 00000000 | 0 | Customer reserved |
| 51 | Panel features (No inverter) | 00 | 00000000 | 0 | Customer reserved |
| 52 | | 00 | 00000000 | 0 | |
| 53 | | 00 | 00000000 | 0 | |
| 54 | | 00 | 00000000 | 0 | |
| 55 | | 00 | 00000000 | 0 | |
| 56 | | 00 | 00000000 | 0 | |
| 57 | | 00 | 00000000 | 0 | |
| 58 | | 0A | 00001010 | 10 | |

| Address | Description | Hex | Binary | Decimal | Notes |
|---|---|---|---|---|---|
| 59 | | 20 | 00100000 | 32 | ASCII Data String: B154PW04 V0 |
| 5A | Detailed timing/monitor | 00 | 00000000 | 0 | |
| 5B | descriptor #3 | 00 | 00000000 | 0 | |
| 5C | | 00 | 00000000 | 0 | |
| 5D | | FE | 11111110 | 254 | |
| 5E | | 00 | 00000000 | 0 | |
| 5F | | 42 | 01000010 | 66 | **B** |
| 60 | | 31 | 00110001 | 49 | **1** |
| 61 | | 35 | 00110101 | 53 | **5** |
| 62 | | 34 | 00110100 | 52 | **4** |
| 63 | | 50 | 01010000 | 80 | **P** |
| 64 | | 57 | 01010111 | 87 | **W** |
| 65 | | 30 | 00110000 | 48 | **0** |
| 66 | | 34 | 00110100 | 52 | **4** |
| 67 | | 20 | 00100000 | 32 | |
| 68 | | 56 | 01010110 | 86 | **V** |
| 69 | | 30 | 00110000 | 48 | **0** |
| 6A | | 0A | 00001010 | 10 | |
| 6B | | 20 | 00100000 | 32 | |
| 6C | Detailed timing/monitor | 00 | 00000000 | 0 | Monitor Name: Color LCD |
| 6D | descriptor #4 | 00 | 00000000 | 0 | |
| 6E | | 00 | 00000000 | 0 | |
| 6F | | FE | 11111110 | 254 | |
| 70 | | 00 | 00000000 | 0 | |
| 71 | | 43 | 01000011 | 67 | **C** |
| 72 | | 6F | 01101111 | 111 | **o** |
| 73 | | 6C | 01101100 | 108 | **l** |
| 74 | | 6F | 01101111 | 111 | **o** |
| 75 | | 72 | 01110010 | 114 | **r** |
| 76 | | 20 | 00100000 | 32 | |
| 77 | | 4C | 01001100 | 76 | **L** |
| 78 | | 43 | 01000011 | 67 | **C** |
| 79 | | 44 | 01000100 | 68 | **D** |
| 7A | | 0A | 00001010 | 10 | |
| 7B | | 20 | 00100000 | 32 | |
| 7C | | 20 | 00100000 | 32 | |
| 7D | | 20 | 00100000 | 32 | |
| 7E | Extension Flag | 00 | 00000000 | 0 | |
| 7F | **Checksum** | 87 | 10000111 | 135 | |
| | Checksum | | SUM | 6656 | |
| | | | SUM to HEX | 1A00 | |
| | | | Check | 00 | |