



Product Specification

AU OPTRONICS CORPORATION

() Preliminary Specifications

(V) Final Specifications

| | |
|-------------------|---------------------------|
| Module | 15.4" WXGA+ Color TFT-LCD |
| Model Name | B154PW04 V2 |
| Dell P/N | WP576 |

| | |
|----------------------------------|-------------|
| Customer | Date |
| _____ | _____ |
| Checked & Approved by | Date |
| _____ | _____ |

| | |
|--------------------|-------------|
| Approved by | Date |
| _____ | _____ |
| Prepared by | Date |
| _____ | _____ |

Note: This Specification is subject to change without notice.

**NBBU Marketing Division /
AU Optronics corporation**



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Record of Revision

| Version and Date | Page | Old description | New Description | Remark |
|------------------|-----------|---|---|--------|
| 0.1 2007/10/26 | All | First Edition for Customer | | |
| 0.2 2007/10/27 | 27 | No back side drawing | Add back side drawing | |
| 0.3 2007/11/29 | 16, 30 | No LED power sequence No 15 years environmentally safety period mark | Add LED power sequence Change Shipping Label Format and adds 15 years environmentally safety period mark | |
| 0.4 2007/12/10 | 17 | No LED Driver Pull-up resistor | Add LED Driver Pull-up resistor | |
| 0.5 2007/12/28 | 31 | 1D Label | Change to 2D Label | |
| 06 2008/1/11 | 29 | original position of connector | Changed position of connector | |
| 07 2008/4/30 | 6 | Chromaticity of color is ± 0.02 | Chromaticity of color modify to ± 0.03 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



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 LED lamp Reflector edge. Instead, press at the far ends of the LED lamp 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) 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.
- 13) The LCD module is designed so that the LED in it is supplied by Limited Current Circuit (IEC60950 or UL1950). Do not connect the LED in Hazardous Voltage Circuit.



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2. General Description

B154PW04 V2 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) without backlight inverter. All input signals are LVDS interface compatible.

B154PW04 V2 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 °C condition:

| 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 Format | | R.G.B. Vertical Stripe | | | |
| Display Mode | | Normally White | | | |
| White Luminance (ILED=19mA) Note: ILED is lamp current | [cd/m ²] | 300 typ.(5 points average) 270 min.(5 points average) (Note1) | | | |
| Luminance Uniformity | | 1.25 max. (5 points) 1.53 max. (13 points) | | | |
| Contrast Ratio | | 600 typ | | | |
| Response Time | [ms] | 16 typ | | | |
| Nominal Input Voltage VDD | [Volt] | +3.3 typ. | | | |
| Power Consumption | [Watt] | 5.8 max. | | | |
| Weight | [Grams] | 460 max. | | | |
| Physical Size | [mm] | | L | W | T |
| | | Max | 344.5 | 222.5 | 6.1 |
| | | Typical | 344.0 | 222.0 | - |
| | | Min | 343.5 | 221.5 | - |
| Electrical Interface | | Dual channel LVDS | | | |
| Surface Treatment | | Anti-Glare, Hardness 3H, | | | |



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| | | |
|---|--------------|---------------------------|
| Support Color | | 262K colors (RGB 6-bit) |
| Temperature Range Operating Storage (Non-Operating) | [°C] [°C] | 0 to +50 -25 to +65 |
| RoHS Compliance | | RoHS Compliance |

2.2 Optical Characteristics

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

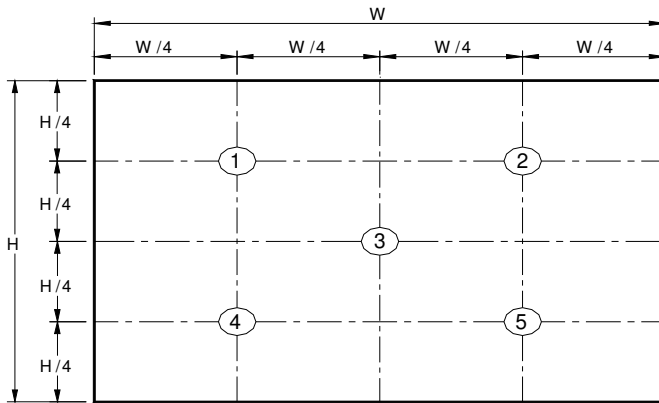
| Item | Unit | Conditions | Min. | Typ. | Max. | Note |
|--|----------------------|---|----------|----------|--------|----------|
| White Luminance I _{LED} =19mA | [cd/m ²] | 5 points average | 270 | 300 | - | 1, 4, 5. |
| Viewing Angle | [degree] [degree] | Horizontal (Right) CR = 10 (Left) | 55 55 | 60 60 | - - | 8 |
| | [degree] [degree] | Vertical (Upper) CR = 10 (Lower) | 45 45 | 50 55 | - - | |
| | | | | | | |
| Luminance Uniformity | | 5 Points | - | - | 1.25 | 1 |
| Luminance Uniformity | | 13 Points | - | - | 1.53 | 2 |
| CR: Contrast Ratio | | | 500 | 600 | - | 6 |
| Cross talk | % | | | | 4 | 7 |
| Response Time | [msec] | Rising | - | 4 | 8 | 8 |
| | [msec] | Falling | - | 12 | 17 | |
| | [msec] | Rising + Falling | - | 16 | 25 | |
| Chromaticity of color Coordinates (CIE 1931) | | Red x | 0.570 | 0.600 | 0.630 | 2,8 |
| | | 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 | 0.283 | 0.313 | 0.343 | |
| | | White y | 0.299 | 0.329 | 0.359 | |
| NTSC | % | CIE 1931 | - | 45 | - | |



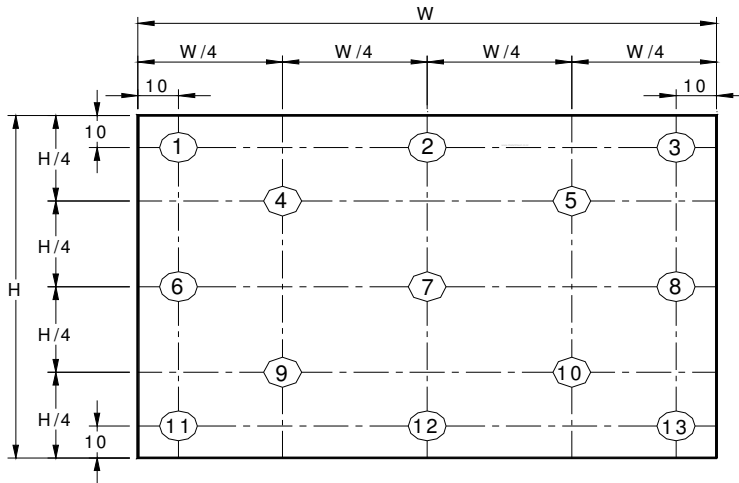
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Note 1: 5 points position (Ref: Active area)



Note 2: 13 points position (Ref: Active area)



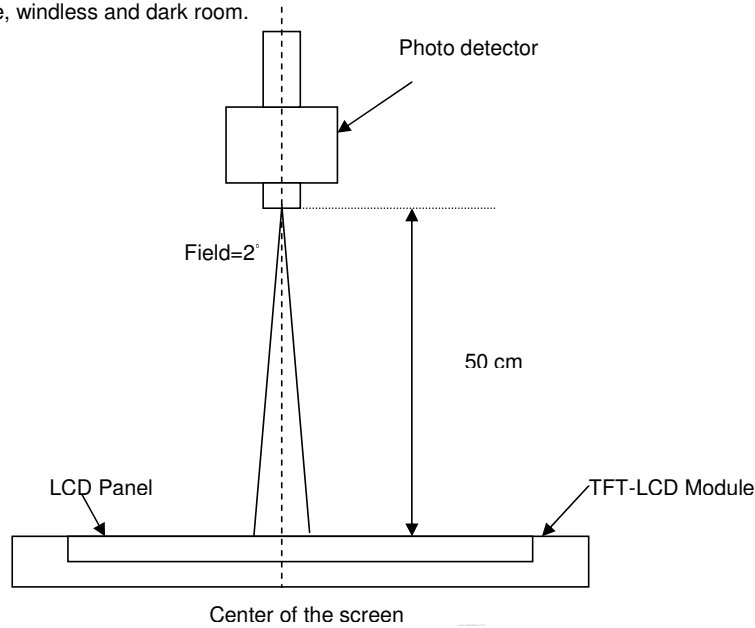
Note 3: The luminance uniformity of 5 or 13 points is defined by dividing the maximum luminance values by the minimum test point luminance

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

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

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)

$$CT = |Y_B - Y_A| / Y_A \times 100 (\%)$$

Where

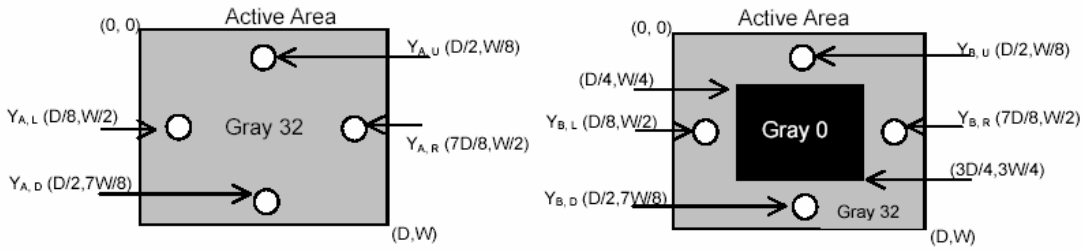
Y_A = Luminance of measured location without gray level 0 pattern (cd/m²)



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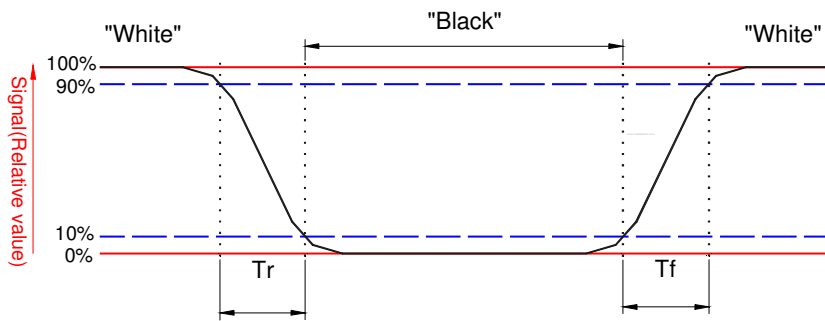
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Y_B = Luminance of measured location with gray level 0 pattern (cd/m²)



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.



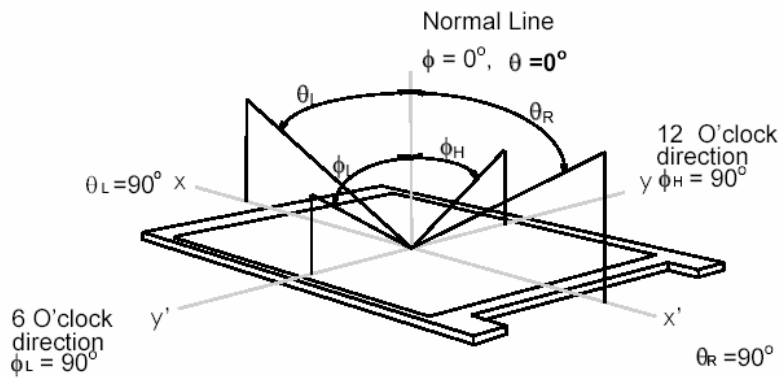


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Note 8. Definition of viewing angle

Viewing angle is the measurement of contrast ratio ≥ 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° (θ) horizontal left and right and 90° (Φ) 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.



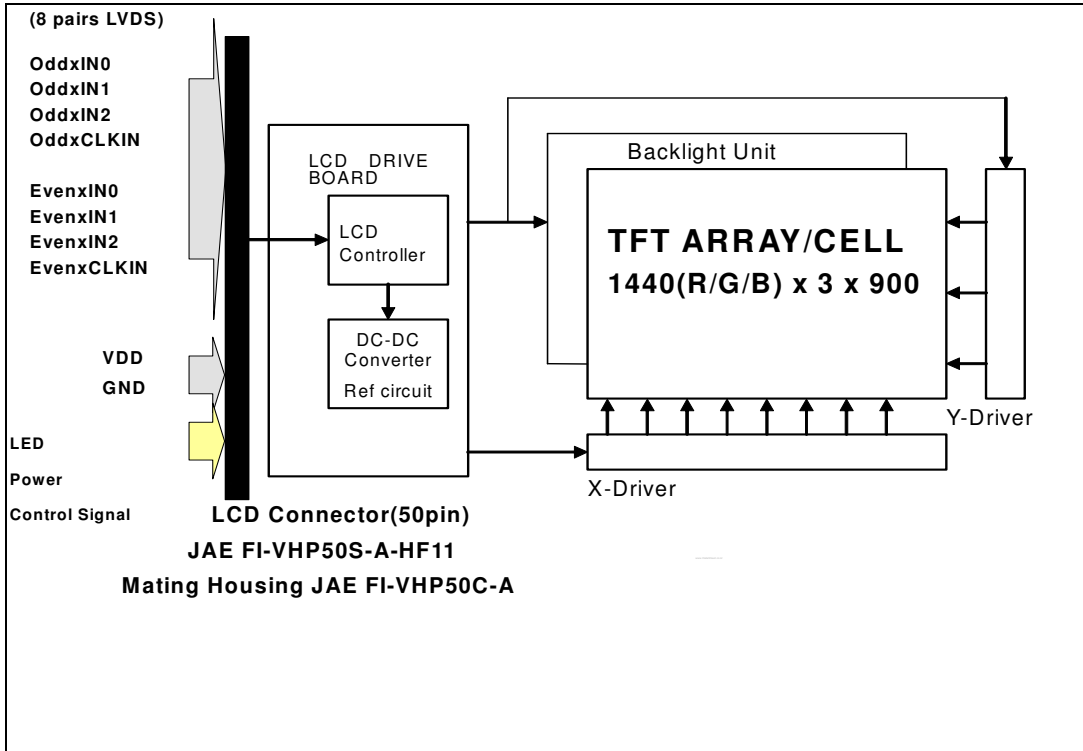


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3. Functional Block Diagram

The following diagram shows the functional block of the 15.4 inches wide Color TFT/LCD Module:





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4. Absolute Maximum Ratings

An absolute maximum rating of the module is as following:

4.1 Absolute Ratings of TFT LCD Module

| Item | Symbol | Min | Max | Unit | Conditions |
|-------------------------|--------|------|------|--------|------------|
| Logic/LCD Drive Voltage | 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 |

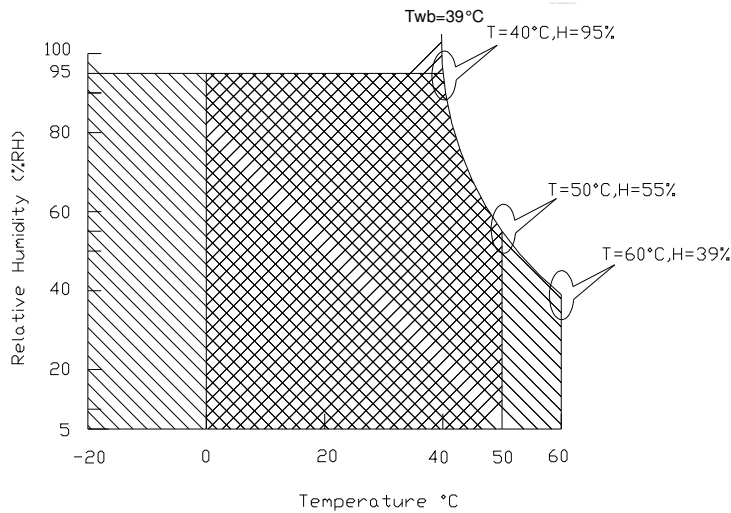
4.3 Absolute Ratings of Environment

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

Note 1: At Ta (25°C)

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

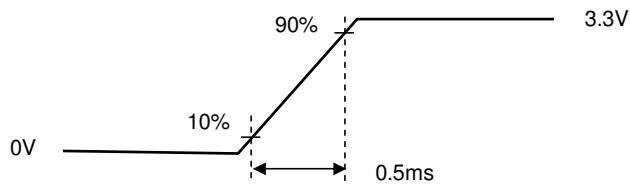
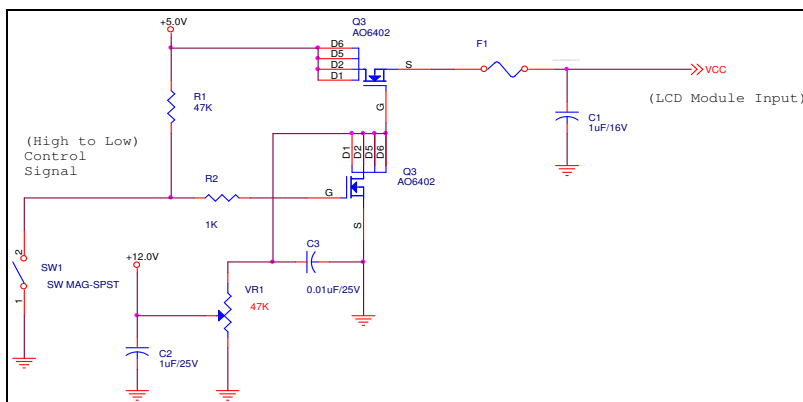
Input power specifications are as follows;

| Symble | Parameter | Min | Typ | Max | Units | Note |
|--------|--|-----|-----|------|----------|----------|
| VDD | Logic/LCD Drive Voltage | 3.0 | 3.3 | 3.6 | [Volt] | |
| PDD | VDD Power | - | - | 2 | [Watt] | Note 1/2 |
| IDD | IDD Current | - | 380 | 562 | [mA] | Note 1/2 |
| IRush | Inrush Current | - | - | 2000 | [mA] | Note 3 |
| VDDrp | Allowable Logic/LCD Drive Ripple Voltage | - | - | 100 | [mV] p-p | |

Note 1 : Maximum Measurement Condition : Black Pattern

Note 2 : Typical Measurement Condition: Mosaic Pattern

Note 3 : Measure Condition



Vin rising time

5.1.2 Signal Electrical Characteristics

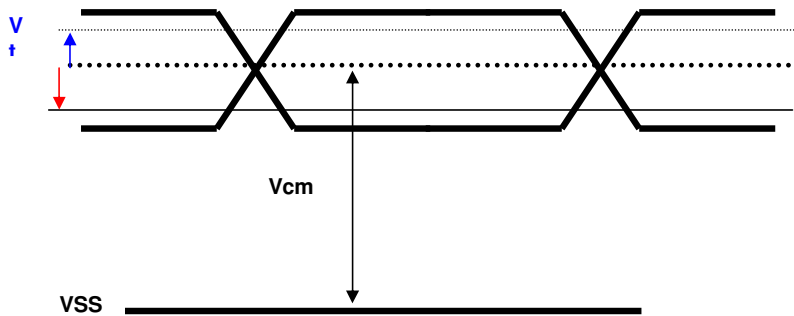
Input signals shall be low or High-impedance state when VDD is off.

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





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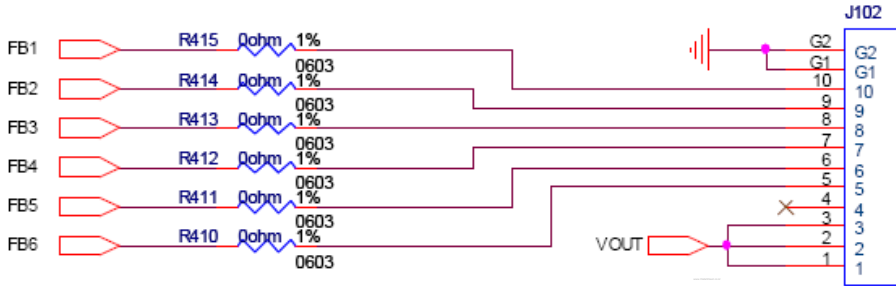
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5.2 Backlight Unit

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

| Item | Symbol | Min | Typ | Max | Units | Condition |
|---------------------|--------|-----|-----|------|------------|-----------|
| Fixed input current | ILt | | | 20 | [mA] rms | |
| Light bar Voltage | VL | | 32. | 34 | [Volt] rms | |
| Light bar Power | PL | | 3.7 | 3.88 | Wt | |

Light bar PIN assignment:



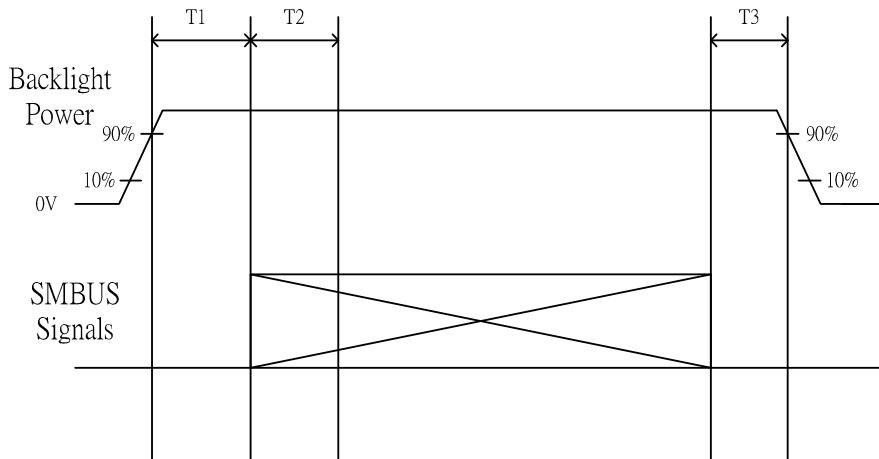
| PIN NO. | Pin assignment | Function |
|---------|----------------|------------------------|
| 1 | VOUT | LED Anode (Positive) |
| 2 | VOUT | LED Anode (Positive) |
| 3 | VOUT | LED Anode (Positive) |
| 4 | NC | NC |
| 5 | FB6 | LED Cathode (Negative) |
| 6 | FB5 | LED Cathode (Negative) |
| 7 | FB4 | LED Cathode (Negative) |
| 8 | FB3 | LED Cathode (Negative) |
| 9 | FB2 | LED Cathode (Negative) |
| 10 | FB1 | LED Cathode (Negative) |



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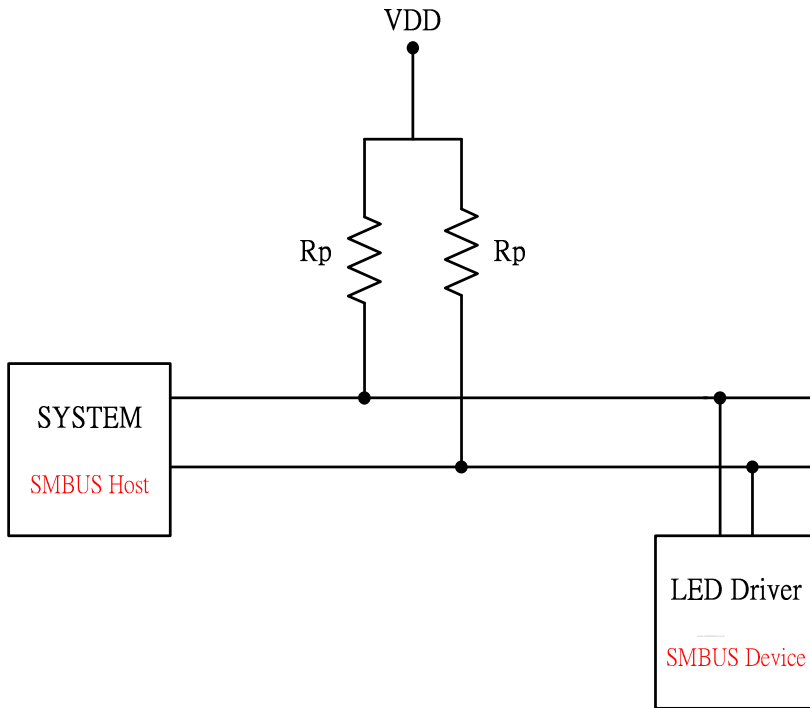
LED Power Sequence



| Symbol | Value | | | Unit |
|--------|-------|-----|-----|------|
| | Min | Typ | Max | |
| T1 | 10 | --- | --- | ms |
| T2 | 100 | --- | --- | ms |
| T3 | 10 | --- | --- | ms |

Note: The duty of LED dimming signal should be more than 20% in T2..

LED Driver SMBUS Pull-up resistor



SMBUS Pull-up Circuitry

Setting value for Pull-up resistor R_p

$$(VDD - 0.4)/(100 * 10^{-6}) \geq R_p \geq (VDD - 0.4)/(350 * 10^{-6})$$

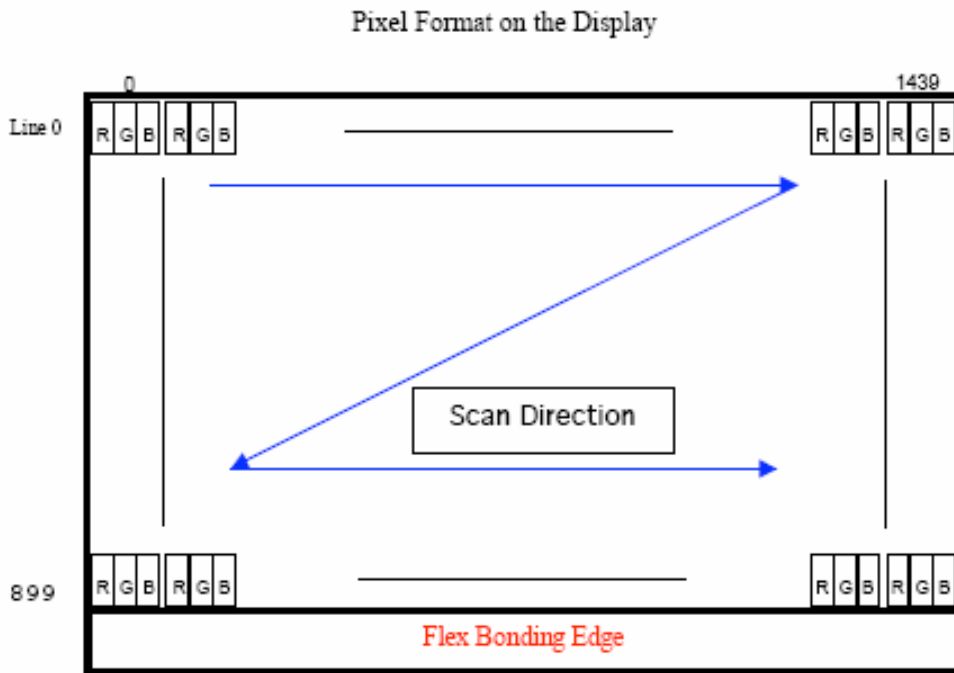
Suggestion: IF VDD=3.3V, $R_p=10K$ ohm; IF VDD=5V, $R_p=15K$ ohm

Note: R_p is the equivalent resistor for SMBUS Pull-up Circuitry

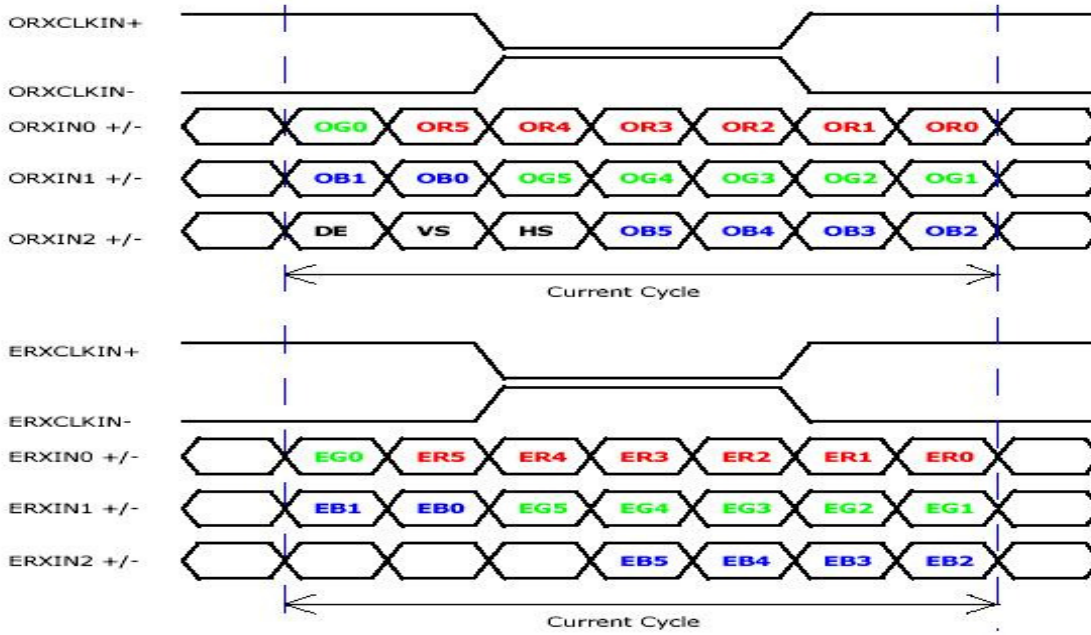
6. Signal Characteristic

6.1 Pixel Format Image

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



6.2 The input data format



| Signal Name | Description |
|----------------------|---|
| VEEDID (3.3V) | +3.3V EDID Power |
| CLK EEDID | EDID Clock Input |
| DATA EEDID | EDID Data Input |
| ORXIN0-, ORXIN0+ | Odd LVDS differential data input(ORed0-ORed5, OGreen0) |
| ORXIN1-, ORXIN1+ | Odd LVDS differential data input(OGreen1-OGreen5, OBlue0-ORed1) |
| 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 |
| VSS | 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# | Signal Name | Description | |
|------|----------------------------|---------------------------------------|--|
| 1 | Test Loop (only to pin 30) | Diag. pin for test | |
| 2 | VEEDID (3.3v) | DDC 3.3Vpower | |
| 3 | VSS | Ground | |
| 4 | CLK EEDID | DDC Clock | |
| 5 | DATA EEDID | DDC Data | |
| 6 | VSS | Ground | |
| 7 | Odd_Rin0- | Odd channel Differential Data Input | |
| 8 | Odd_Rin0+ | Odd channel Differential Data Input | |
| 9 | VSS | Ground | |
| 10 | Odd_Rin1- | Odd channel Differential Data Input | |
| 11 | Odd_Rin1+ | Odd channel Differential Data Input | |
| 12 | VSS | Ground | |
| 13 | Odd_Rin2- | Odd channel Differential Data Input | |
| 14 | Odd_Rin2+ | Odd channel Differential Data Input | |
| 15 | VSS | Ground | |
| 16 | Odd_ClkIN- | Odd channel Differential Clock Input | |
| 17 | Odd_ClkIN+ | Odd channel Differential Clock Input | |
| 18 | VSS | Ground | |
| 19 | Even_Rin0- | Even channel Differential Data Input | |
| 20 | Even_Rin0+ | Even channel Differential Data Input | |
| 21 | VSS | Ground | |
| 22 | Even_Rin1- | Even channel Differential Data Input | |
| 23 | Even_Rin1+ | Even channel Differential Data Input | |
| 24 | VSS | Ground | |
| 25 | Even_Rin2- | Even channel Differential Data Input | |
| 26 | Even_Rin2+ | Even channel Differential Data Input | |
| 27 | VSS | Ground | |
| 28 | Even_ClkIN- | Even channel Differential Clock Input | |
| 29 | Even_ClkIN+ | Even channel Differential Clock Input | |
| 30 | Test Loop (only to pin 1) | Diag. pin for test | |
| 31 | Test Loop (only to pin 50) | Diag. pin for test | |
| 32 | VDD | Power Supply (+3.3V) | |
| 33 | VDD | Power Supply (+3.3V) | |



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| | | | |
|----|----------------------------|---|--|
| 34 | TEST (BIST_EN) | BIST Function | |
| 35 | +5V_ALW | Power Supply (+5V) | |
| 36 | VSS | Ground | |
| 37 | VSS | Ground | |
| 38 | PWM_BL | System side PWM input signal for brightness control | |
| 39 | VBL- | LED Power Ground | |
| 40 | VBL- | LED Power Ground | |
| 41 | VBL- | LED Power Ground | |
| 42 | VBL- | LED Power Ground | |
| 43 | NC | No Connection | |
| 44 | VBL+ | Backlight Input Voltage | |
| 45 | VBL+ | Backlight Input Voltage | |
| 46 | VBL+ | Backlight Input Voltage | |
| 47 | VBL+ | Backlight Input Voltage | |
| 48 | SMB_DATA | SMBus interface for sending brightness information | |
| 49 | SMB_CLK | SMBus interface for sending brightness information | |
| 50 | Test Loop (only to pin 31) | Diag. pin for test | |

Note1: Start from right side

6.4 Interface Timing

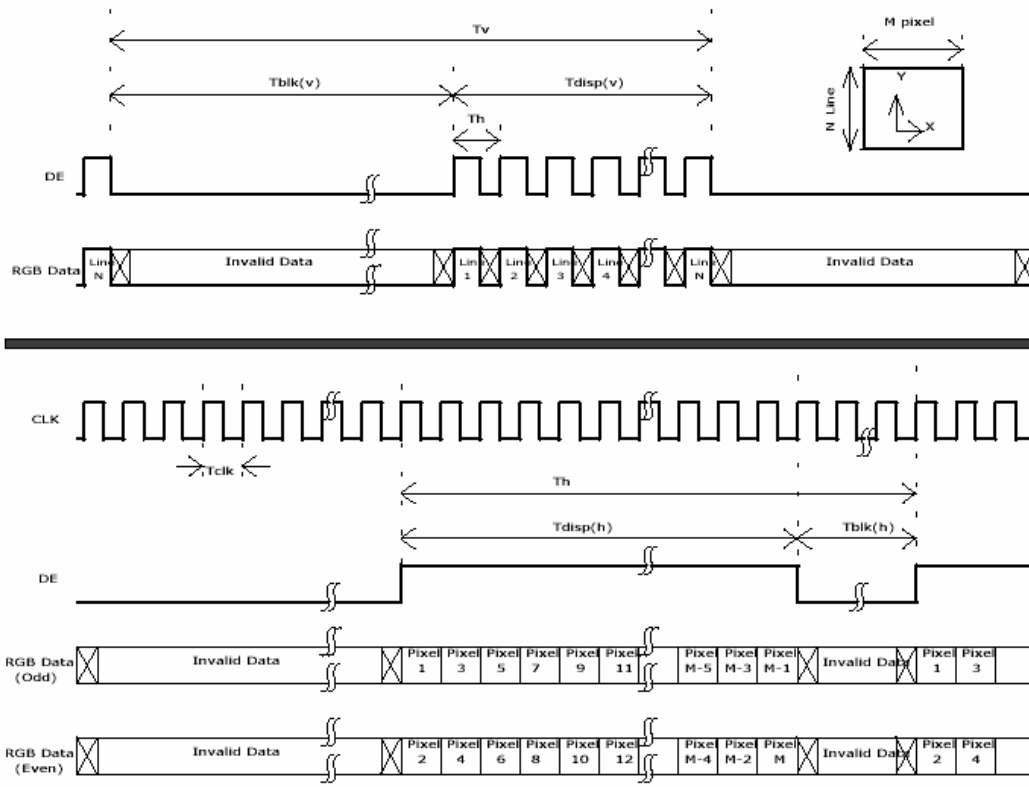
6.4.1 Timing Characteristics

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 | $1/T_{\text{Clock}}$ | - | 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 | - | |

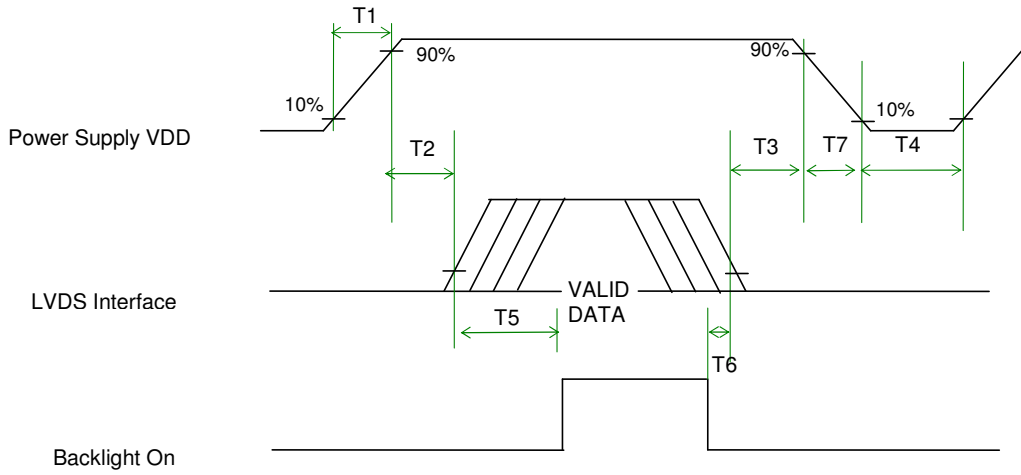
Note : DE mode only

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 compatible |
| Type / Part Number | JAE FI-VHP50S-A-HF11 or compatible |
| Mating Housing/Part Number | JAE FI-VHP50C-A or compatible |

8. Dynamic Test

8.1 Vibration Test

Test condition:

- Acceleration: 1.5 G
- Frequency: 10 - 500Hz Random
- Sweep: 30 Minutes each Axis (X, Y, Z)

8.2 Shock Test Spec:

Test condition:

- Acceleration: 220 G , Half sine wave
- Active time: 2 ms
- Pulse: +/-X,+/-Y,+/-Z , one time for each side

Remark:

1. Ambient condition is $25 \pm 5^{\circ}\text{C}$, Relative humidity : 40% ~ 70%
2. Non-packaged and Non-operation

9. Reliability

| Items | Required Condition | Note |
|----------------------------|--|--------|
| Temperature Humidity Bias | Ta= 40°C, 95%RH, 300h | |
| High Temperature Operation | Ta= 50°C, Dry, 300h | |
| Low Temperature Operation | Ta= 0°C, 300h | |
| High Temperature Storage | Ta= 65°C, 35%RH, 300h | |
| Low Temperature Storage | Ta= -25°C, 50%RH, 300h | |
| Thermal Shock Test | Ta=-40°C to 65°C, Duration at 30 min, 100 cycles | |
| ESD | Contact : ±8 KV Air : ±15 KV | Note 1 |

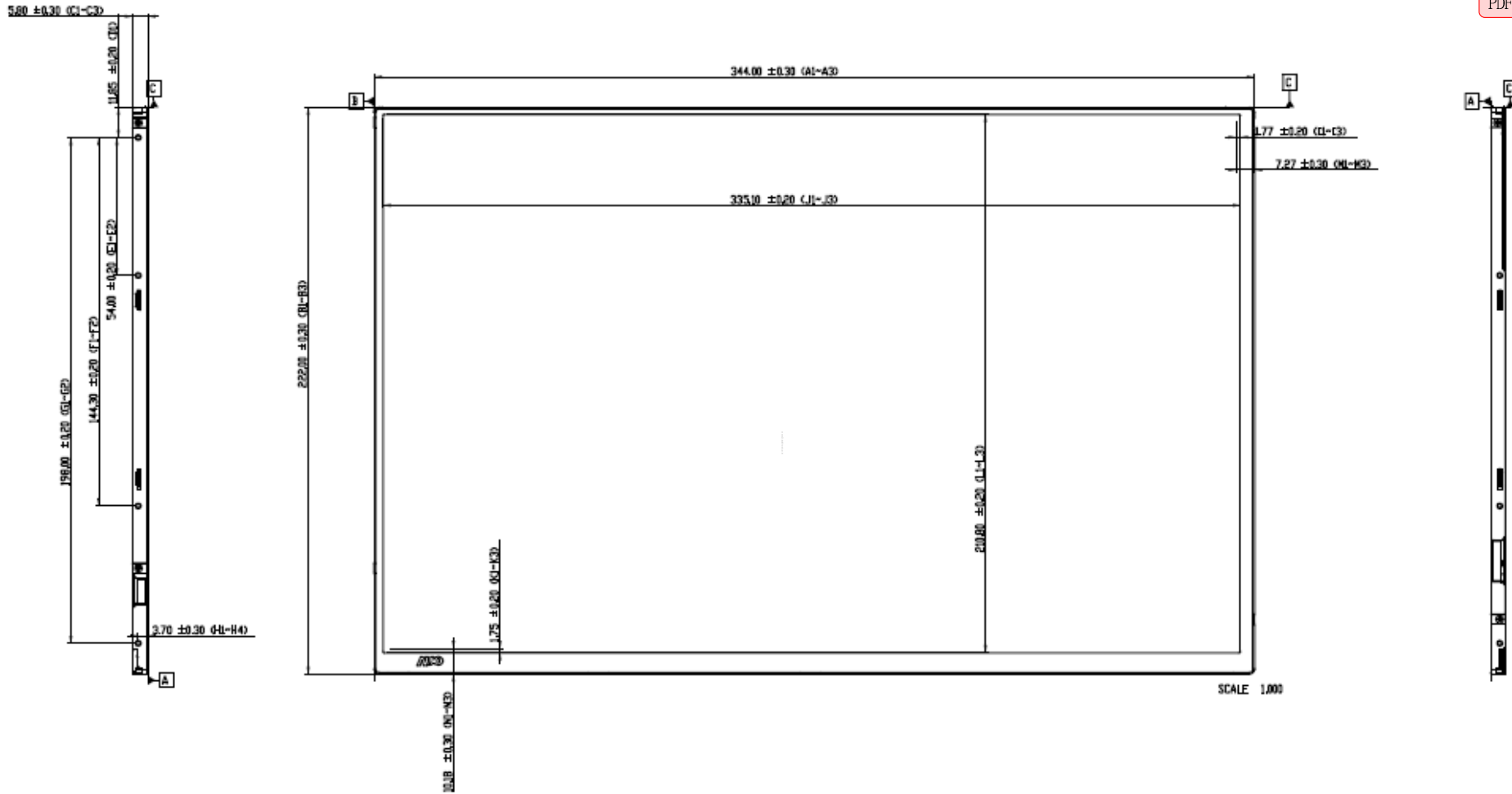
Note1: According to EN 61000-4-2 , ESD class B: Some performance degradation allowed. No data lost
 . Self-recoverable. No hardware failures.

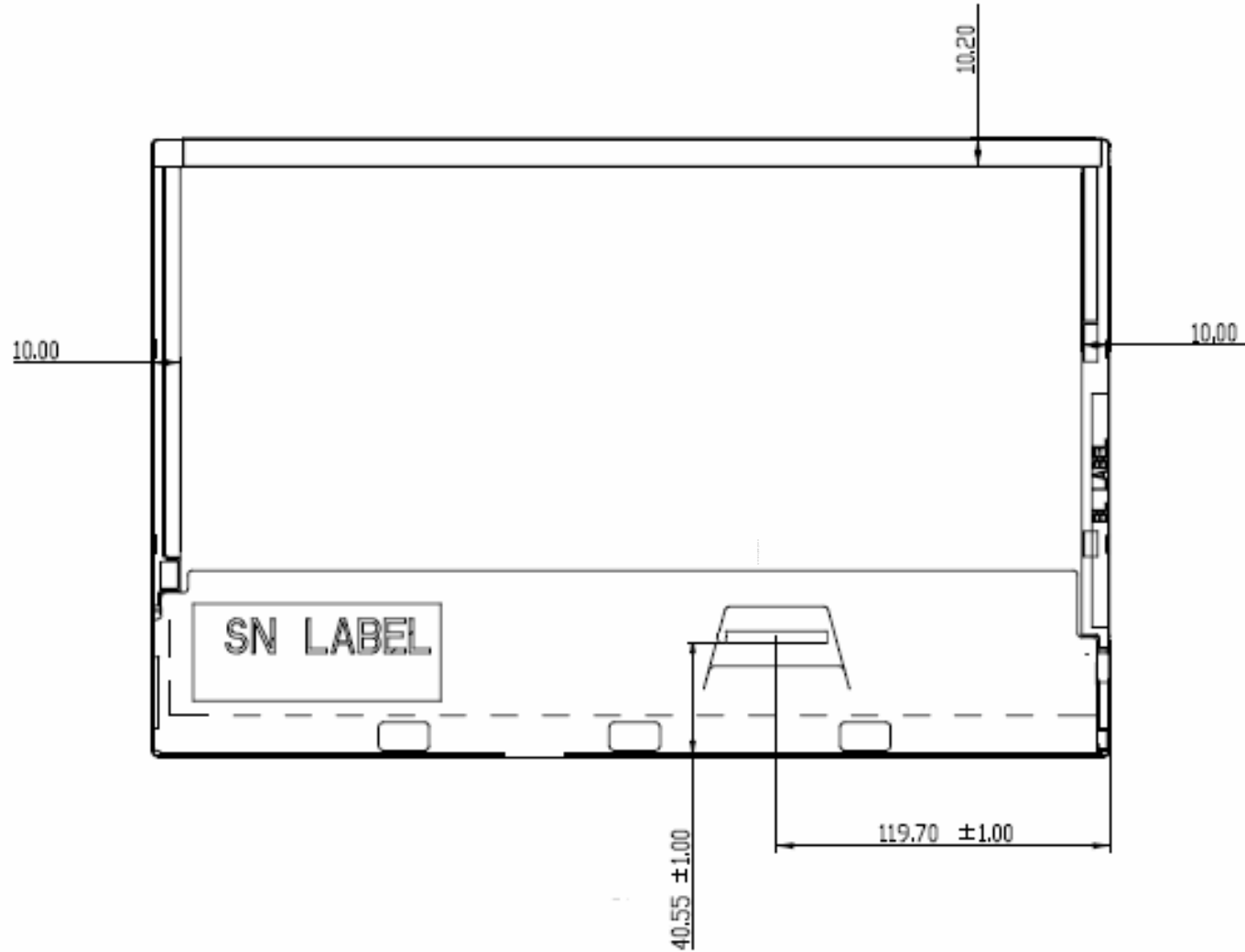
Remark: MTBF (Excluding the LED): 30,000 hours with a confidence level 90%

10. Mechanical Characteristics

10.1 LCM Outline Dimension

註解 [BY1]:
Get from RD-Must paste the PDF format.



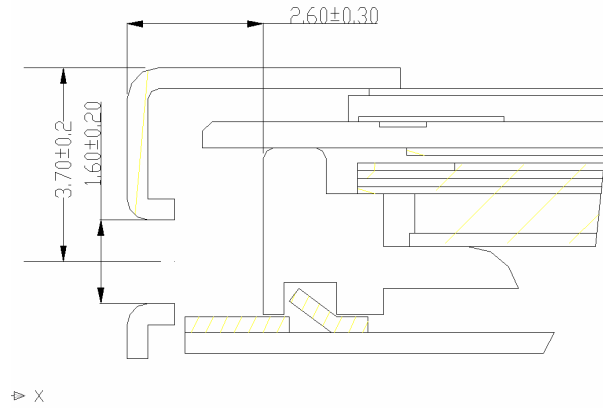


10.2 Screw Hole Depth and Center Position

Screw hole minimum depth, from side surface = 2.3 mm (Ref. drawing)

Screw hole center location, from front surface = 3.7 ± 0.2 mm (Ref. drawing)

Screw Torque: Maximum 2.5 kgf-cm



11. Shipping and Package

11.1 Shipping Label Format

| | | |
|---|------------------------------|---|
|  | Manufactured 08/02 |  |
| *XXXXXXXXXXXXX.XXXXXX | Model No: B154PW04 V2 |  |
|  | AU Optronics 3AXXG |  |
| Made In CN DP/N 0WP576 | MADE IN CHINA (S1) | |
| CN -0WP576-72090- 932-0123-A00 | H/W: 3A F/W:1 | |

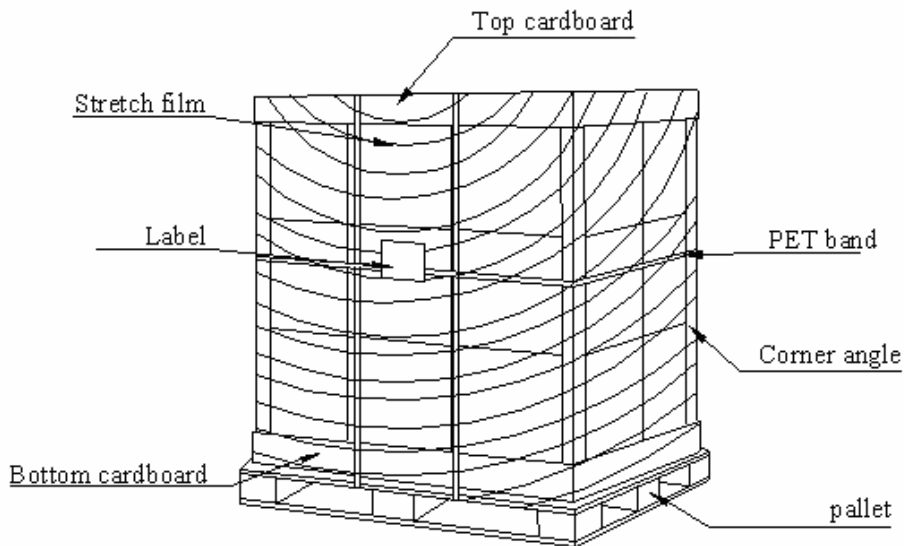
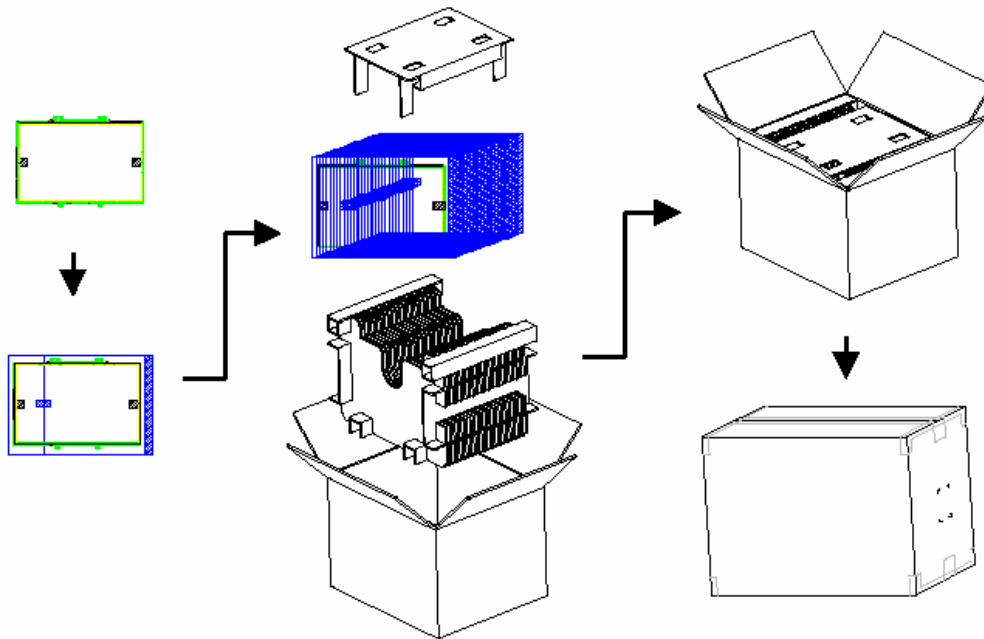
11.2 Definition of customer PPID Label and Revision Code

Please refer to the Dell Part identification Label Specification, Number:13190

| | |
|---|-------------------------|
| Sub System Test (SST) Working Sample (WS) ENG 2 | X00, X01, X02, ..., X0n |
| Product Test (PT) Engineering Sample (ES) ENG 3 | X10, X11, X12, ..., X1n |
| System Test (ST) Customer Sample (CS) ENG 4 | X20, X21, X22, ... X2n |
| X-Build (XB) Mass Production (MP) ENG 5 | A00, A01, A02, ... A0n |

11.3 Carton package

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



12. Appendix: EDID description

| Byte (hex) | Field Name and Comments | Value (hex) | Value (binary) | V (I) |
|---------------|---|----------------|-------------------|----------|
| 0 | Header | 00 | 00000000 | |
| 1 | Header | FF | 11111111 | |
| 2 | Header | FF | 11111111 | |
| 3 | Header | FF | 11111111 | |
| 4 | Header | FF | 11111111 | |
| 5 | Header | FF | 11111111 | |
| 6 | Header | FF | 11111111 | |
| 7 | Header | 00 | 00000000 | |
| 8 | EISA manufacture code = 3 Character ID | 06 | 00000110 | |
| 9 | EISA manufacture code (Compressed ASCII) | AF | 10101111 | |
| 0A | Panel Supplier Reserved – Product Code | 77 | 01110111 | |
| 0B | Panel Supplier Reserved – Product Code | 42 | 01000010 | |
| 0C | LCD module Serial No - Preferred but Optional (“0” if not used) | 00 | 00000000 | |
| 0D | LCD module Serial No - Preferred but Optional (“0” if not used) | 00 | 00000000 | |
| 0E | LCD module Serial No - Preferred but Optional (“0” if not used) | 00 | 00000000 | |
| 0F | LCD module Serial No - Preferred but Optional (“0” if not used) | 00 | 00000000 | |
| 10 | Week of manufacture | 01 | 00000001 | |
| 11 | Year of manufacture | 11 | 00010001 | |
| 12 | EDID structure version # = 1 | 01 | 00000001 | |
| 13 | EDID revision # = 3 | 03 | 00000011 | |
| 14 | Video I/P definition = Digital I/P (80h) | 90 | 10010000 | |
| 15 | Max H image size = (Rounded to cm) | 21 | 00100001 | |
| 16 | Max V image size = (Rounded to cm) | 15 | 00010101 | |
| 17 | Display gamma = (gamma ×100)-100 = Example: (2.2×100) – 100 = 120 | 78 | 01111000 | |
| 18 | Feature support (no DPMS, Active off, RGB, timing BLK 1) | 0A | 00001010 | |
| 19 | Red/Green Low bit (RxRy/GxGy) | 90 | 10010000 | |
| 1A | Blue/White Low bit (BxBY/WxWy) | B5 | 10110101 | |
| 1B | Red X Rx = 0.6 | 99 | 10011001 | |
| 1C | Red Y Ry = 0.345 | 58 | 01011000 | |
| 1D | Green X Gx = 0.32 | 52 | 01010010 | |
| 1E | Green Y Gy = 0.555 | 8E | 10001110 | |
| 1F | Blue X Bx = 0.15 | 26 | 00100110 | |
| 20 | Blue Y By = 0.12 | 1E | 00011110 | |
| 21 | White X Wx = 0.313 | 50 | 01010000 | |
| 22 | White Y Wy = 0.329 | 54 | 01010100 | |



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| | | | | |
|----|--|-----------|----------|--|
| 23 | Established timings 1 (00h if not used) | 00 | 00000000 | |
| 24 | Established timings 2 (00h if not used) | 00 | 00000000 | |
| 25 | Manufacturer's timings (00h if not used) | 00 | 00000000 | |
| 26 | Standard timing ID1 (01h if not used) | 01 | 00000001 | |
| 27 | Standard timing ID1 (01h if not used) | 01 | 00000001 | |
| 28 | Standard timing ID2 (01h if not used) | 01 | 00000001 | |
| 29 | Standard timing ID2 (01h if not used) | 01 | 00000001 | |
| 2A | Standard timing ID3 (01h if not used) | 01 | 00000001 | |
| 2B | Standard timing ID3 (01h if not used) | 01 | 00000001 | |
| 2C | Standard timing ID4 (01h if not used) | 01 | 00000001 | |
| 2D | Standard timing ID4 (01h if not used) | 01 | 00000001 | |
| 2E | Standard timing ID5 (01h if not used) | 01 | 00000001 | |
| 2F | Standard timing ID5 (01h if not used) | 01 | 00000001 | |
| 30 | Standard timing ID6 (01h if not used) | 01 | 00000001 | |
| 31 | Standard timing ID6 (01h if not used) | 01 | 00000001 | |
| 32 | Standard timing ID7 (01h if not used) | 01 | 00000001 | |
| 33 | Standard timing ID7 (01h if not used) | 01 | 00000001 | |
| 34 | Standard timing ID8 (01h if not used) | 01 | 00000001 | |
| 35 | Standard timing ID8 (01h if not used) | 01 | 00000001 | |
| 36 | Pixel Clock/10,000 = 96310000 /10000 (LSB) | 32 | 00110010 | |
| 37 | Pixel Clock/10,000 = 96310000 /10000 (MSB) | 2A | 00101010 | |
| 38 | Horizontal Active = 1440 pixels (lower 8 bits) | A0 | 10100000 | |
| 39 | Horizontal Blanking (Thbp) = 320 pixels (lower 8 bits) | 16 | 00010110 | |
| 3A | Horizontal Active/Horizontal blanking (Thbp) (upper4:4 bits) | 52 | 01010010 | |
| 3B | Vertical Active = 900 lines | 84 | 10000100 | |
| 3C | Vertical Blanking (Tvbp) = 12 lines (DE Blanking typ. for DE only panels) | 0C | 00001100 | |
| 3D | Vertical Active : Vertical Blanking (Tvbp) (upper4:4 bits) | 30 | 00110000 | |
| 3E | Horizontal Sync, Offset (Thfp) = 64 pixels | 40 | 01000000 | |
| 3F | Horizontal Sync, Pulse Width = 32 pixels | 20 | 00100000 | |
| 40 | Vertical Sync, Offset (Tvfp) = 3 lines Sync Width = 3 lines | 33 | 00110011 | |
| 41 | Horizontal Vertical Sync Offset/Width upper 2 bits | 00 | 00000000 | |
| 42 | Horizontal Image Size = 331.2 mm | 4B | 01001011 | |
| 43 | Vertical image Size = 207 mm | CF | 11001111 | |
| 44 | Horizontal Image Size / Vertical image size | 10 | 00010000 | |
| 45 | Horizontal Border = 0 (Zero for Notebook LCD) | 00 | 00000000 | |
| 46 | Vertical Border = 0 (Zero for Notebook LCD) | 00 | 00000000 | |
| 47 | if display uses standard blanking (HSyncPolarity = POS, VSyncPolarity = NEG) , for DVD compliance. | 1A | 00011010 | |



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| | | | | |
|----|--|----|----------|--|
| 48 | Pixel Clock/10,000 = 96310000 /10000 (LSB) | 22 | 00100010 | |
| 49 | Pixel Clock/10,000 = 96310000 /10000 (MSB) | 1C | 00011100 | |
| 4A | Horizontal Active = 1440 pixels (lower 8 bits) | A0 | 10100000 | |
| 4B | Horizontal Blanking (Thbp) = 320 pixels (lower 8 bits) | 16 | 00010110 | |
| 4C | Horizontal Active/Horizontal blanking (Thbp) (upper4:4 bits) | 52 | 01010010 | |
| 4D | Vertical Active = 900 lines | 84 | 10000100 | |
| 4E | Vertical Blanking (Tvbp) = 12 lines (DE Blanking typ. for DE only panels) | 0C | 00001100 | |
| 4F | Vertical Active : Vertical Blanking (Tvbp) (upper4:4 bits) | 30 | 00110000 | |
| 50 | Horizontal Sync, Offset (Thfp) = 64 pixels | 40 | 01000000 | |
| 51 | Horizontal Sync, Pulse Width = 32 pixels | 20 | 00100000 | |
| 52 | Vertical Sync, Offset (Tvfp) = 3 lines Sync Width = 3 lines | 33 | 00110011 | |
| 53 | Horizontal Vertical Sync Offset/Width upper 2 bits | 00 | 00000000 | |
| 54 | Horizontal Image Size = 331.2 mm | 4B | 01001011 | |
| 55 | Vertical image Size = 207 mm | CF | 11001111 | |
| 56 | Horizontal Image Size / Vertical image size | 10 | 00010000 | |
| 57 | Horizontal Border = 0 (Zero for Notebook LCD) | 00 | 00000000 | |
| 58 | Vertical Border = 0 (Zero for Notebook LCD) | 00 | 00000000 | |
| 59 | if display uses standard blanking (HSyncPolarity = POS, VSyncPolarity = NEG) , for DVD compliance. | 1A | 00011010 | |
| 5A | Flag | 00 | 00000000 | |
| 5B | Flag | 00 | 00000000 | |
| 5C | Flag | 00 | 00000000 | |
| 5D | Dummy Descriptor | FE | 11111110 | |
| 5E | Flag | 00 | 00000000 | |
| 5F | Dell P/N 1 st Character | 57 | 01010111 | |
| 60 | Dell P/N 2 nd Character | 50 | 01010000 | |
| 61 | Dell P/N 3 rd Character | 35 | 00110101 | |
| 62 | Dell P/N 4 th Character | 37 | 00110111 | |
| 63 | Dell P/N 5 th Character | 36 | 00110110 | |
| 64 | EEDID Revision = A00 | 80 | 10000000 | |
| 65 | Manufacturer P/N | 42 | 01000010 | |
| 66 | Manufacturer P/N | 31 | 00110001 | |
| 67 | Manufacturer P/N | 35 | 00110101 | |
| 68 | Manufacturer P/N | 34 | 00110100 | |
| 69 | Manufacturer P/N | 50 | 01010000 | |
| 6A | Manufacturer P/N | 57 | 01010111 | |
| 6B | Manufacturer P/N (If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h) | 34 | 00110100 | |
| 6C | Flag | 00 | 00000000 | |



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| | | | | |
|----|--|----|----------|--|
| 6D | Flag | 00 | 00000000 | |
| 6E | Flag | 00 | 00000000 | |
| 6F | Data Type Tag: | 00 | 00000000 | |
| 70 | Flag | 00 | 00000000 | |
| 71 | SMBUS Value = XX nits | 00 | 00000000 | |
| 72 | SMBUS Value = XX nits | 00 | 00000000 | |
| 73 | SMBUS Value = XX nits | 00 | 00000000 | |
| 74 | SMBUS Value = XX nits | 00 | 00000000 | |
| 75 | SMBUS Value = XX nits | 00 | 00000000 | |
| 76 | SMBUS Value = XXX nits | 00 | 00000000 | |
| 77 | SMBUS Value = XXX nits | 00 | 00000000 | |
| 78 | SMBUS Value = max nits (Typically = 00h, XXX nits) | 00 | 00000000 | |
| 79 | Bit[1:0] 00: reserved, 01: single LVDS, 10: dual LVDS, 11: reserved Bit[2] 0: No RTC support, 1: RTC support Bit[7:3] Reserved | 02 | 00000010 | |
| 7A | Bit[0] 0: No BIST support, 1: BIST support Bit[7:1] Reserved | 01 | 00000001 | |
| 7B | (If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h) | 0A | 00001010 | |
| 7C | (If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h) | 20 | 00100000 | |
| 7D | (If <13 char, then terminate with ASCII code 0Ah, set remaining char = 20h) | 20 | 00100000 | |
| 7E | Extension flag (# of optional 128 EDID extension blocks to follow, Typ = 0) | 00 | 00000000 | |
| 7F | Checksum (The 1-byte sum of all 128 bytes in this EDID block shall = 0) | 89 | 10001001 | |