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Produktspezifikation für AUO G150XG03 V0

Im Programm von

FORTEC
ELEKTRONIK AG

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AU OPTRONICS CORPORATION

Product Specification

15.0" XGA Color TFT-LCD Module

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Model Name: G150XG03 V.0

| | |
|-------------------|--------------|
| Approved by | Prepared by |
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GDBD Marketing Division / AU Optronics corporation

| | |
|----------|-----------------------|
| Customer | Checked & Approved by |
| | |

Document version: 0.1

Date 1/20/2006

Product Specification

15.0" XGA Color TFT-LCD Module Model Name: G150XG03 V.0

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Preliminary Specifications
 Final Specifications

Note: This Specification is subject to change without notice.

Record of Revision

| Version and Date | Page | Old description | New Description | Remark |
|------------------|------|---|---|--------|
| 0.0 2005/012/22 | All | First Edition for Customer | | |
| 0.1 2006/1/20 | 5 | Only define white luminance and power consumption @ 8mA IRCFL | Add white luminance and power consumption @ 6.5mA IRCFL | |
| | 6 | Only define white luminance @ 8mA IRCFL | Add white luminance @ 6.5mA IRCFL | |
| | 15 | Only define power consumption @ 8mA IRCFL | Add power consumption @ 6.5mA IRCFL | |
| | 15 | Only define lamp life time@ 8mA IRCFL | Add the lamp life time @ 6.5mA IRCFL | |

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1.0 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 or pat the panel surface by fingers, hand or tooling.
- 9) Do not press the reflector sheet at the back of the module to any directions.
- 10) 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 CCFL reflector edge softly. Otherwise the TFT module may be damaged.
- 11) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT module.
- 12) After installation of the TFT module into an enclosure (Desktop monitor 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.

2.0 General Description

This specification applies to the 15.0 inch Color TFT/LCD Module G150XG03 V0.

This module is designed for a display unit of personal computer.

The display supports the XGA (1024 (H) x 768(V)) screen format and 16.2M colors (RGB 6-bits + FRC data)/262K (RGB 6-bit) selectable

All input signals are 1 Channel LVDS interface compatible.

This module does not contain an inverter card for backlight.

2.1 Display Characteristics

The following items are characteristics summary on the table under 25 °C condition:

| ITEMS | Unit | SPECIFICATIONS | | | |
|---|----------------------|--|------------|-------|-------|
| Screen Diagonal | [mm] | 381 (15") | | | |
| Active Area | [mm] | 304.128 (H) x 228.096 | | | |
| Pixels H x V | | 1024(x3) x 768 | | | |
| Pixel Pitch | [mm] | 0.297 (per one triad) x 0.297 | | | |
| Pixel Arrangement | | R.G.B. Vertical Stripe | | | |
| Display Mode | | TN mode, Normally White | | | |
| White Luminance | [cd/m ²] | 250 (Typ) @ 8mA; 200nit(Typ) @ 6.5mA | | | |
| Contrast Ratio | | 500 : 1 (Typ) | | | |
| Optical Rise Time/Fall Time | [msec] | 12 (Typ) (Note 1) | | | |
| Color Saturation | | 65% NTSC (Typ) | | | |
| Nominal Input Voltage VDD | [Volt] | +3.3 V | | | |
| Power Consumption (VDD line + CCFL line) | [Watt] | 13.3 W (Typ.) @8mA (Gray Bar Pattern); 11.3 W (Typ.) @6.5mA (Gray Bar Pattern) | | | |
| Weight | [Grams] | 1100 (Typ) | | | |
| Physical Size | [mm] | | Min. | Typ. | Max. |
| | | Horizatal(H) | 326.0 | 326.5 | 327.0 |
| | | Vertical(V) | 253.0 | 253.5 | 254.0 |
| | | Depth(D) | - | - | 12.0 |
| Electrical Interface | | 1 Channel LVDS | | | |
| Support Color | | 16.2M colors (RGB 6-bit + FRC data)/262k(RGB 6-bit) selectable | | | |
| Temperature Range | Operating | [°C] | 0 to +50 | | |
| | Storage (Shipping) | [°C] | -20 to +60 | | |
| Surface Treatment | | Hard-coating (3H), anti-glare treatment | | | |
| ROHS | | RoHS Compliance | | | |

Note 1 :System should warm up for at least one hour

2.2 Optical Characteristics

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

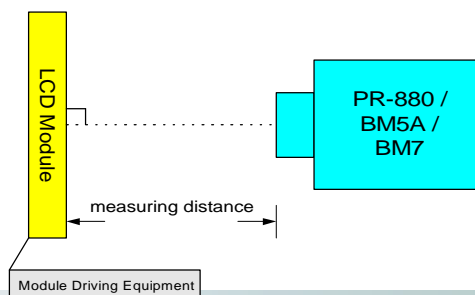
| Item | Unit | Conditions | Min. | Typ. | Max. | Note |
|--|----------------------|--------------------------------------|----------|----------|-------|------------------------------------|
| Viewing Angle | [degree] | Horizontal (Right) CR = 10 (Left) | 60 60 | 70 70 | - | - |
| | | Vertical (Up) CR = 10 (Down) | 55 45 | 65 55 | - | keep total 120(Mayb e 60,60) |
| | | Horizontal (Right) CR = 5 (Left) | 65 65 | 75 75 | - | |
| | | Vertical (Up) CR = 5 (Down) | 65 65 | 75 75 | - | |
| Contrast ratio | | Normal Direction | 400 | 500 | - | - |
| Response Time | [msec] | Rising Time | - | 8.5 | 11 | Note 1 |
| | | Falling Time | - | 3.5 | 5 | |
| | | Rising + Falling | - | 12 | - | |
| Color / Chromaticity Coordinates (CIE) | | Red x | 0.612 | 0.642 | 0.672 | |
| | | Red y | 0.307 | 0.337 | 0.367 | |
| | | Green x | 0.276 | 0.306 | 0.336 | |
| | | Green y | 0.551 | 0.581 | 0.611 | |
| | | Blue x | 0.114 | 0.144 | 0.174 | |
| | | Blue y | 0.071 | 0.101 | 0.131 | |
| Color Coordinates (CIE) White | | White x | 0.283 | 0.313 | 0.343 | |
| | | White y | 0.299 | 0.329 | 0.359 | |
| White Luminance @ CCFL 8mA (center) | [cd/m ²] | | 200 | 250 | | - |
| White Luminance @ CCFL 6.5mA (center) | [cd/m ²] | | 180 | 200 | | |
| Luminance Uniformity | [%] | | 75 | 80 | | Note 2 |
| Crosstalk (in 75Hz) | [%] | | | 1.2 | 1.5 | Note 3 |
| Flicker | dB | | | | -20 | Note 4 |

Equipment Pattern Generator, Power Supply, Digital Voltmeter, Luminance meter (PR 880, BM-5A , BM 7 ,CS-1000, CA210, SR_3 & EZ Contrast(ELDIM)*)

Aperture 1° with 50cm viewing distance

Test Point Center (VESA point 9)

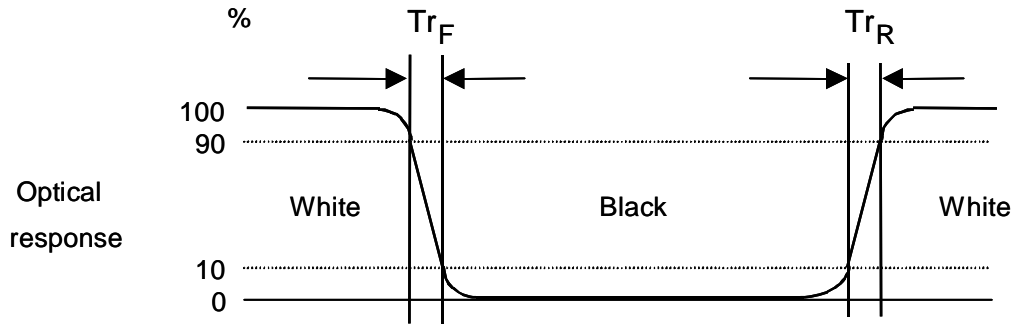
Environment < 1 lux



*' EZ Contrast is different measurement tool with very close viewing distance.

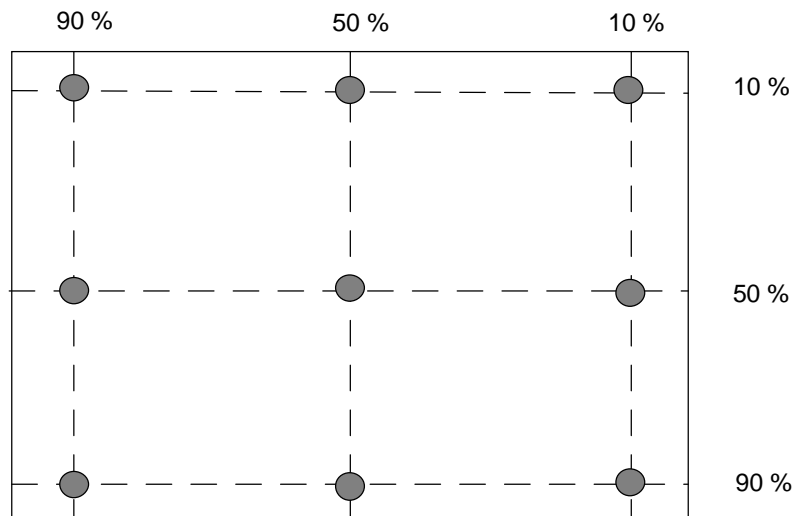
Note 1: Definition of Response time

The output signals of photo detector are measured when the input signals are changed from “Full Black” to “Full White” (rising time), and from “Full White” to “Full Black ”(falling time), respectively. The response time is interval between the 10% and 90% of amplitudes.



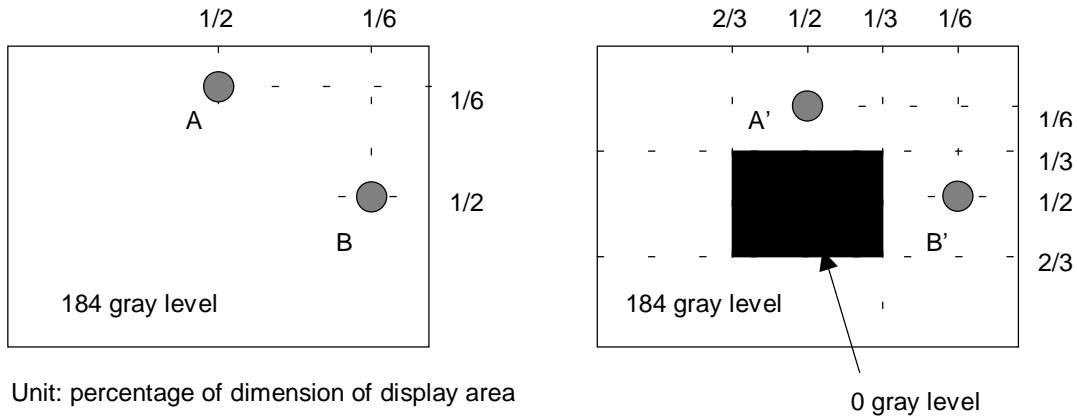
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Note 2: Brightness uniformity of these 9 points is defined as below



$$\text{Uniformity} = \frac{\text{Minimum Luminance in 9 points (1 - 9)}}{\text{Maximum Luminance in 9 Points (1 - 9)}} \times 100\%$$

Note 3: Crosstalk is defined as below :



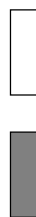
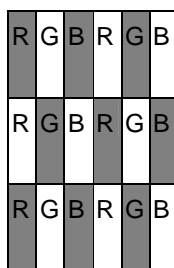
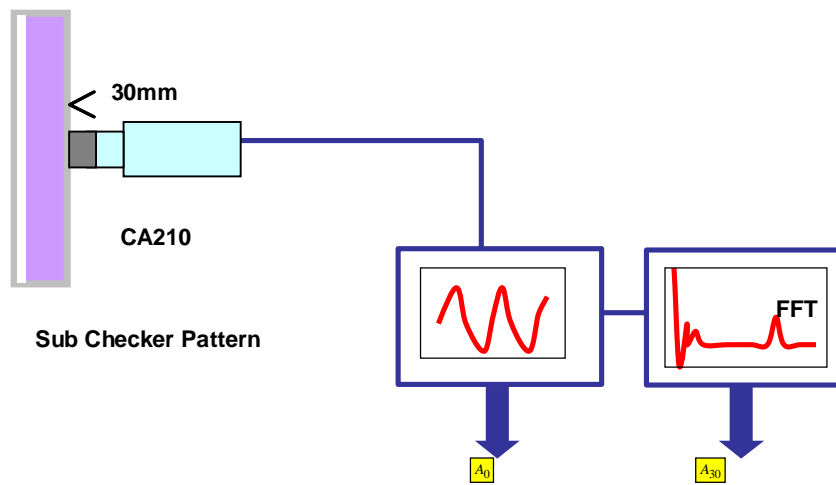
Unit: percentage of dimension of display area

$|L_A - L_{A'}| / L_A \times 100\% = 1.5\% \text{ max.}$, L_A and L_B are brightness at location A and B

$|L_B - L_{B'}| / L_B \times 100\% = 1.5\% \text{ max.}$, $L_{A'}$ and $L_{B'}$ are brightness at location A' and B'

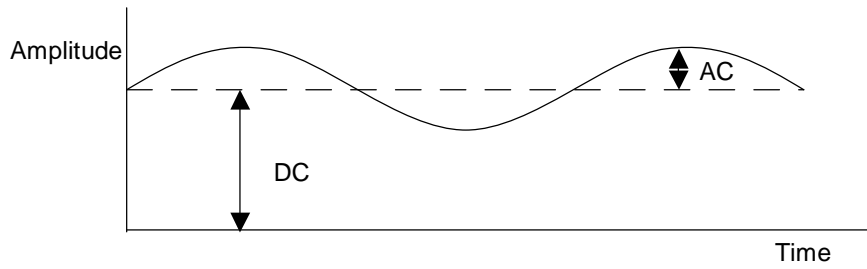
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Note 4: Test Patern: Subchecker Pattern at 127 gray level



Gray Level = L127

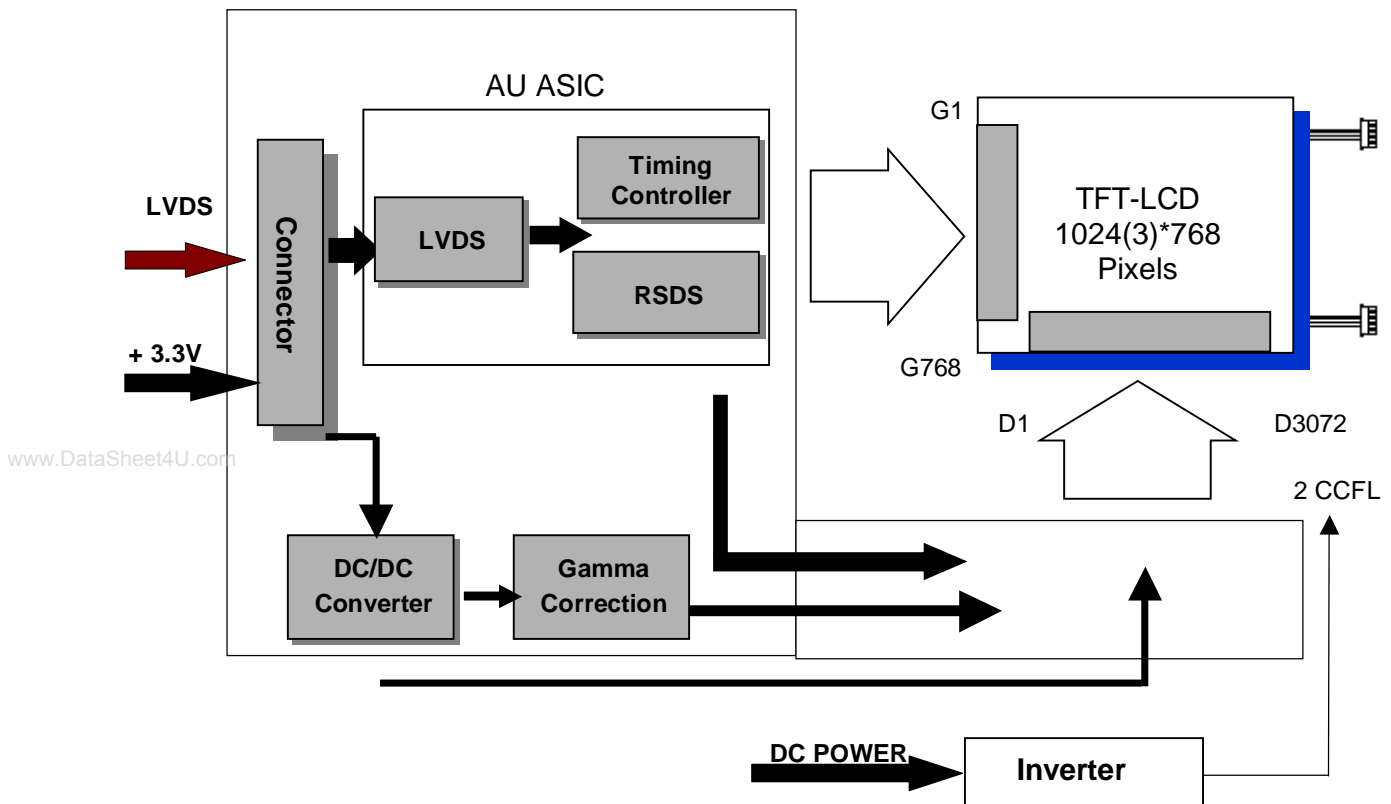
Gray Level = L0



$$\text{Flicker (dB)} = 20 \log \frac{\text{AC Level(at 30 Hz)}}{\text{DC Level}}$$

3.0 Functional Block Diagram

The following diagram shows the functional block of the 15.0 inches wide Color TFT/LCD Module:



CWY20G – A0G16 / MSB240420

JST-BHR-03VS-1

Mating Type: HRS DF14-20S-1.25C

SM02(8.0)B-BHS-1-TB

4.0 Absolute Maximum Ratings

Absolute maximum ratings of the module is as following:

4.1 TFT LCD Module

| Item | Symbol | Min | Max | Unit | Conditions |
|-----------------|--------|-----|------|--------|-----------------|
| Logic/LCD Drive | VDD | 0.3 | +3.6 | [Volt] | Note 1,2 |

4.2 Backlight Unit

| Item | Symbol | Min | Max | Unit | Conditions |
|--------------|--------|-----|-----|----------|-----------------|
| CCFL Current | IRCFL | - | 8.5 | [mA] rms | Note 1,2 |

4.3 Absolute Ratings of Environment

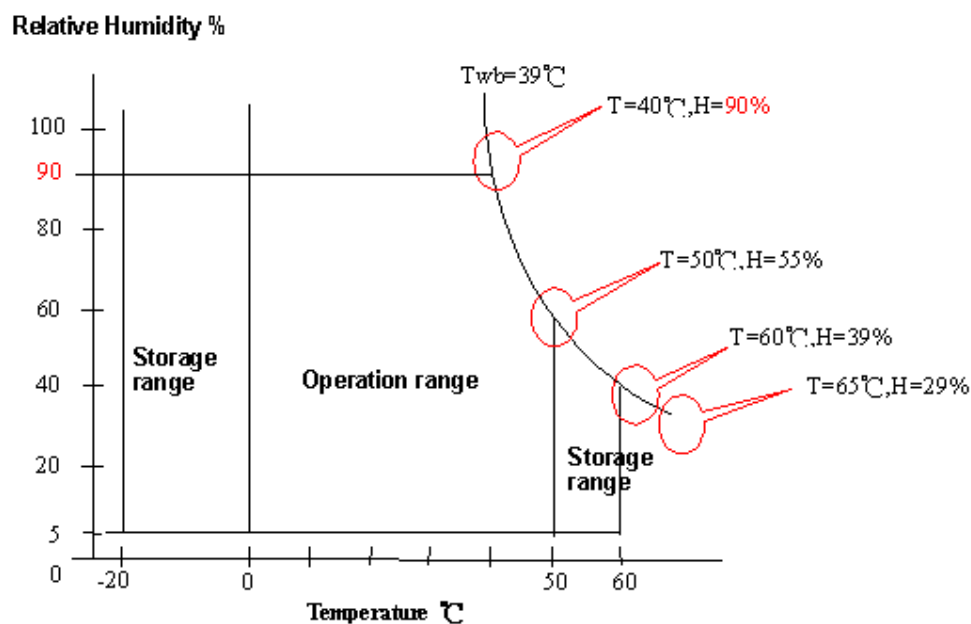
www.DataSheet4U.com

| Item | Symbol | Min | Max | Unit | Conditions |
|-----------------------|--------|-----|-----|-------|---------------|
| Operating Temperature | TOP | 0 | +50 | [°C] | Note 3 |
| Operating Humidity | HOP | 8 | 90 | [%RH] | Note 3 |
| Storage Temperature | TST | -20 | +60 | [°C] | Note 3 |
| Storage Humidity | HST | 8 | 90 | [%RH] | Note 3 |

Note 1: With in 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) . Please refer the graph below for the corresponding of temperature and humidity."



5.0 Electrical characteristics

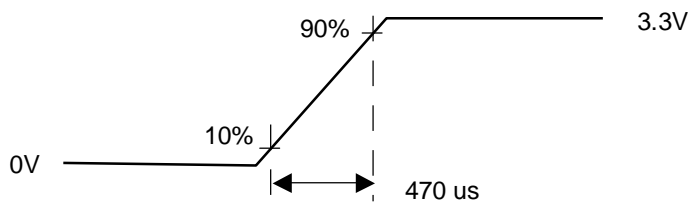
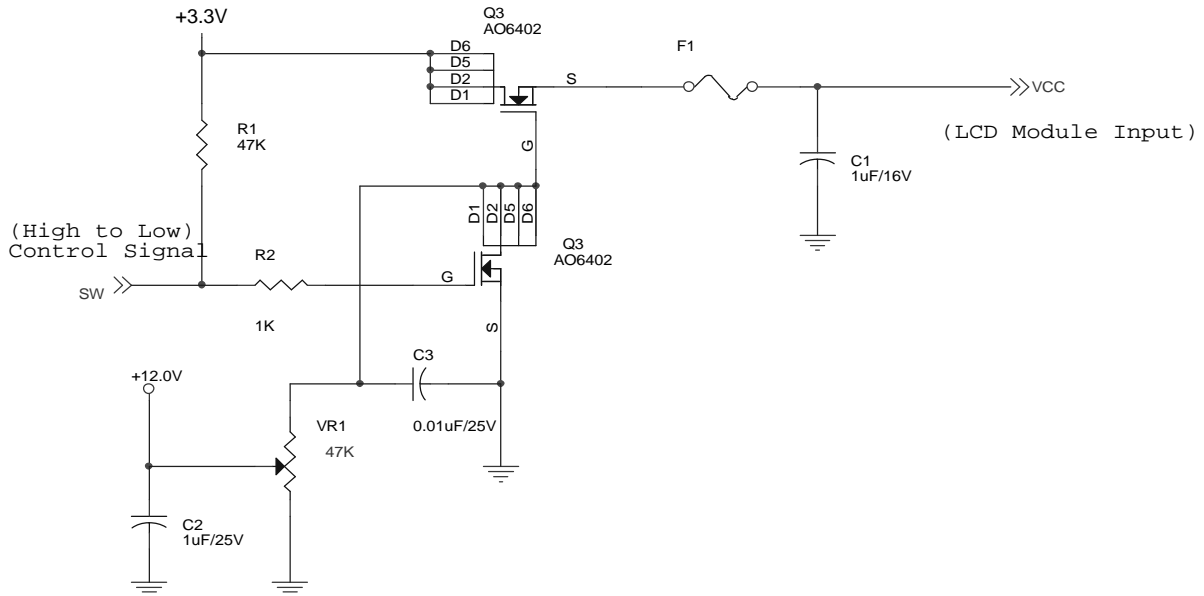
5.1 TFT LCD Module

5.1.1 Power Specification

Input power specifications are as follows;

| Symbol | Parameter | Min | Typ | Max | Units | Condition |
|--------|--|-----|-----|-----|-------------|---------------------------------------|
| VDD | Logic/LCD Drive Voltage | 3.0 | 3.3 | 3.6 | [Volt] | ±10% |
| IDD | VDD current | - | 600 | 700 | [mA] | Vin=3.3V , Gray Bar Pattern, at 60Hz |
| Irush | LCD Inrush Current | - | - | 3 | [A] | Note |
| PDD | VDD Power | | 2.0 | 2.3 | [Watt] | Vin=3.3V , Gray Bar Pattern, at 60Hz |
| VDDrp | Allowable Logic/LCD Drive Ripple Voltage | | | 100 | [mV] p-p | Vin=3.3V , All Black Pattern, at 75Hz |

Note: Measurement conditions:



Vin rising time

5.1.2 Signal Electrical Characteristics

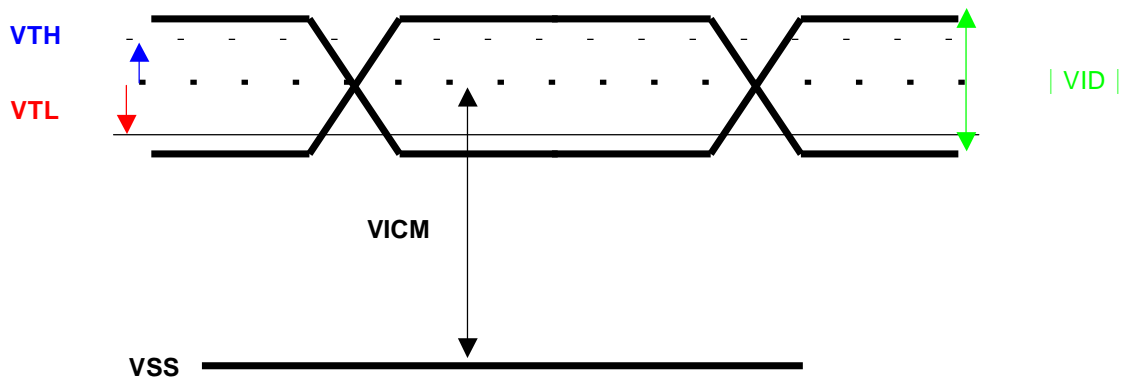
Input signals shall be low or Hi-Z state when V_{in} is off

It is recommended to refer the specifications of SN75LVDS82DGG (Texas Instruments) in detail.

Each signal characteristics are as follows;

| Symbol | Parameter | Min | Typ | Max | Units | Condition |
|--------|--|------|-----|------|-------|---|
| VTH | Differential Input High Threshold | - | - | 100 | [mV] | $V_{ICM} = 1.2V$ Note |
| VTL | Differential Input Low Threshold | -100 | - | - | [mV] | $V_{ICM} = 1.2V$ Note |
| VID | Input Differential Voltage | 100 | 400 | 600 | [mV] | Note |
| VICM | Differential Input Common Mode Voltage | 1.1 | - | 1.45 | [V] | $V_{TH}/V_{TL} = \pm 100mV$ Note |

www.DataSheet4U.com **Note:** LVDS Signal Waveform



5.2 Backlight Unit

Parameter guideline for CCFL Inverter

| Symbol | Parameter | Min. | Typ. | Max. | Unit | Condition |
|--------------------------------|--|------|---------------|-----------------|---------------|----------------------------|
| IRCFL | CCFL operation range | 2.5 | 8 | 8.5 | [mA] rms | (Ta=25°C) Note 4 |
| ICFL | CCFL Inrush current | - | - | 20 | [mA] | |
| FCFL | CCFL Frequency | 40 | 55 | 80 | [KHz] | (Ta=25°C) Note 1 |
| ViCFL (0°C) (reference) | CCFL Ignition Voltage | 1450 | - | - | [Volt] rms | (Ta=0°C) Note 3 |
| ViCFL (25°C) (reference) | CCFL Ignition Voltage | 1100 | - | - | [Volt] rms | (Ta=25°C) Note 3 |
| VCFL | CCFL Discharge Voltage (Only for reference) | - | 620 (@8mA) | 710 (@2.5mA) | [Volt] rms | (Ta=25°C) Note 2 |
| PCFL | CCFL Power consumption @8mA(excluding inverter) | - | 10 | 11 | [Watt] | (Ta=25°C) Note 2 |
| | CCFL Power consumption @6.5mA(excluding inverter) | | 8 | 9 | | |

Note 1: CCFL frequency should be carefully determined to avoid interference between inverter and TFT LCD.

Note 2: Calculator value for reference ($IRCFL \times VCFL \times 2 = PCFL$).

Note 3: CCFL inverter should be able to give output a voltage more than 1450 volt. Lamp units need 1450 volt minimum for ignition.

Note 4: CCFL life time is 30,000hr at 8.0mA and 50000hr at 6.5mA. It's defined as when the brightness is reduced by half. It's recommended

not to exceed 8.0mA for CCFL life time concern and it's prohibited to exceed 8.5mA for safety concern.

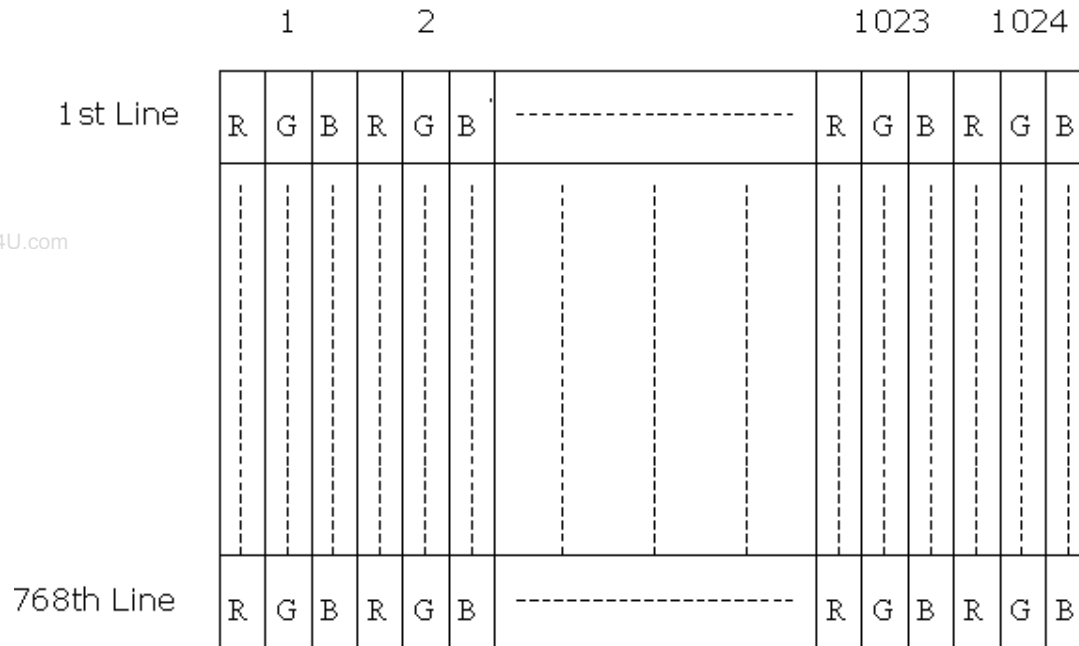


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6.0 Signal Characteristic

6.1 Pixel Format Image

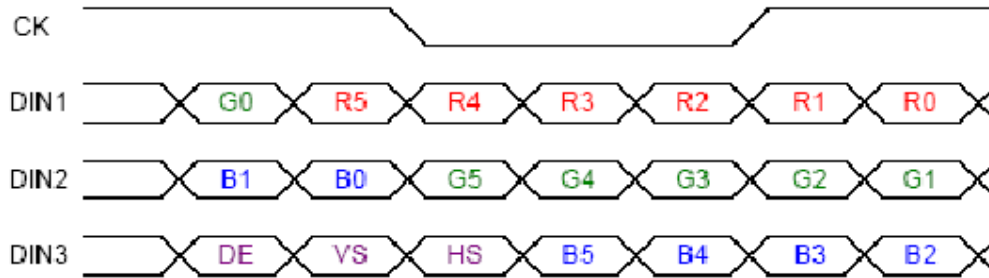
Following figure shows the relationship of the input signals and LCD pixel format.



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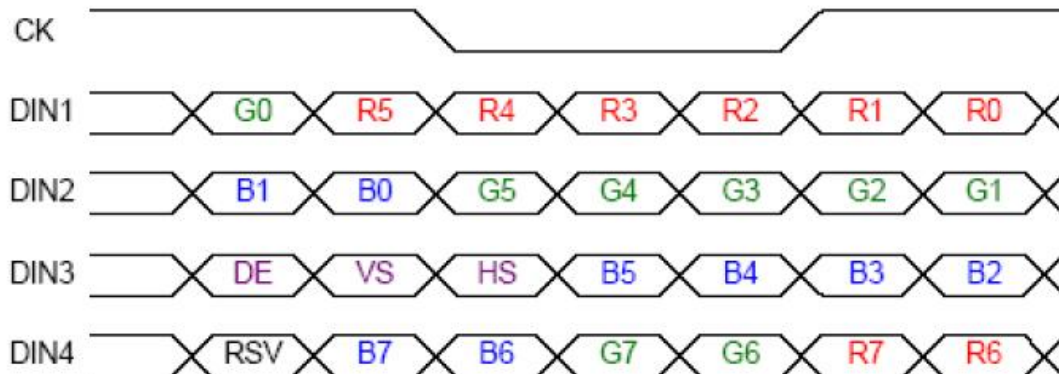
6.2 The input data format

SEL68="H" or "Floating" for 6 bits LVDS input



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SEL68="L" for 8 bits LVDS input



- Note1:** Please follow PSWG.
- Note2:** 8-bit in
- Note3:** R/G/B data 7:MSB, R/G/B data 0:LSB

6.3 Signal Description

The module using a pair of LVDS receiver SN75LVDS82(Texas Instruments) or compatible. LVDS is a differential signal technology for LCD interface and high speed data transfer device. Transmitter shall be SN75LVDS83(negative edge sampling) or compatible. The first LVDS port(RxOxxx) transmits odd pixels while the second LVDS port(RxExxx) transmits even pixels.

| CWY20G-A0D1T (PTWO) or MSB240420 (STM) | | |
|--|--------|--|
| Pin No. | Symbol | Description |
| 1 | VDD | Power Supply, 3.3V (typical) |
| 2 | VDD | Power Supply, 3.3V (typical) |
| 3 | VSS | Ground |
| 4 | VSS | Ground |
| 5 | Rin0- | - LVDS differential data input (R0-R5, G0) |
| 6 | Rin0+ | + LVDS differential data input (R0-R5, G0) |
| 7 | VSS | Ground |
| 8 | Rin1- | - LVDS differential data input (G1-G5, B0-B1) |
| 9 | Rin1+ | + LVDS differential data input (G1-G5, B0-B1) |
| 10 | VSS | Ground |
| 11 | Rin2- | - LVDS differential data input (B2-B5, HS, VS, DE) |
| 12 | Rin2+ | + LVDS differential data input (B2-B5, HS, VS, DE) |
| 13 | VSS | Ground |
| 14 | CIKIN- | - LVDS differential clock input |
| 15 | CIKIN+ | + LVDS differential clock input |
| 16 | VSS | Ground |
| 17 | Rin3- | - LVDS differential data input (R6-R7, G6-G7,B6-B7) |
| 18 | Rin3+ | + LVDS differential data input (R6-R7, G6-G7,B6-B7) |
| 19 | VSS | Ground |
| 20 | SEL68 | Selection for 6 bits/8bits LVDS data input *Note1 |

Note 1: SEL68=" High" or "NC" , accept 6 bits LVDS data input;
SEL68=" Low" , accept 8 bits LVDS data input.

6.4 Interface Timing

6.4.1 Timing Characteristics

Basically, interface timings described here is not actual input timing of LCD module but output timing of SN75LVDS82DGG (Texas Instruments) or equivalent.

| Signal | Parameter | Symbol | MIN | TYP | MAX | Unit |
|--------------|---------------------|--------|------|------|------|------|
| Clock Timing | Clock frequency | clk | 50 | 65 | 81 | MHz |
| Hsync Timing | Horizontal active | Thd | 1024 | 1024 | 1024 | Tclk |
| | Horizontal blanking | Thbl | 30 | 320 | 1024 | Tclk |
| | Horizontal period | Th | 1054 | 1344 | 2048 | Tck |
| Vsync Timing | Vertical active | Tvd | 768 | 768 | 768 | Th |
| | Vertical blanking | Tvbl | 8 | 38 | 256 | Th |
| | Vertical period | Tv | 776 | 806 | 1024 | Th |

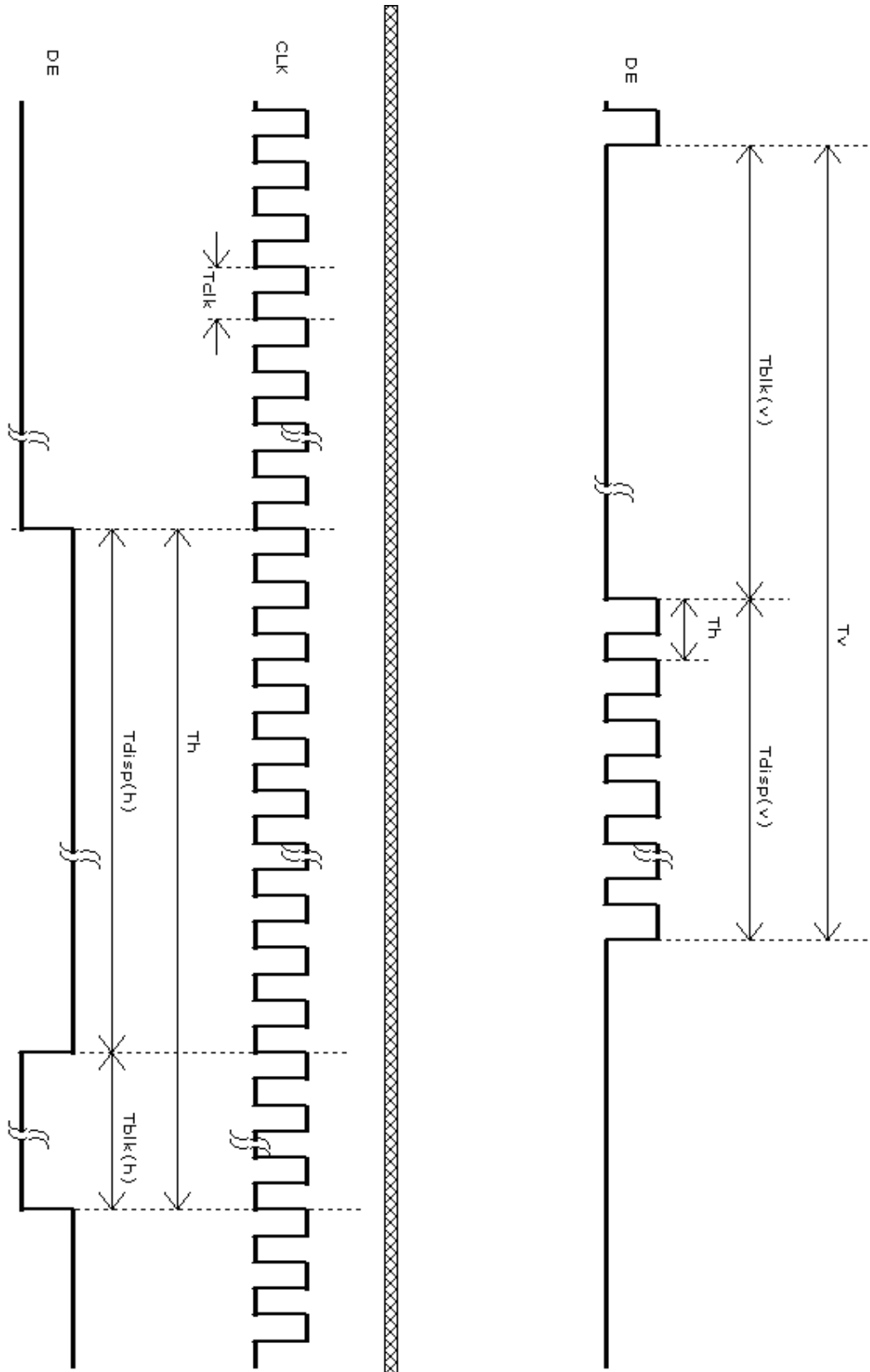
Note:DE mode only

Note: Typical value refer to VESA STANDARD

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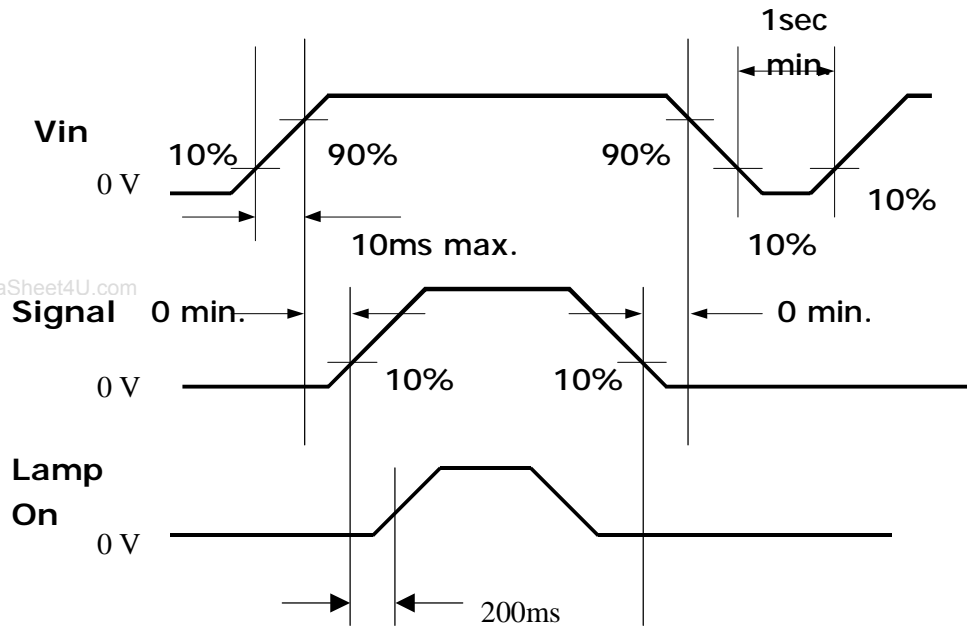
6.4.2 Timing diagram

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6.5 Power ON/OFF Sequence

Vin 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 Vin is off.



7.0 Connector & Pin Assignment

Physical interface is described as for the connector on module.

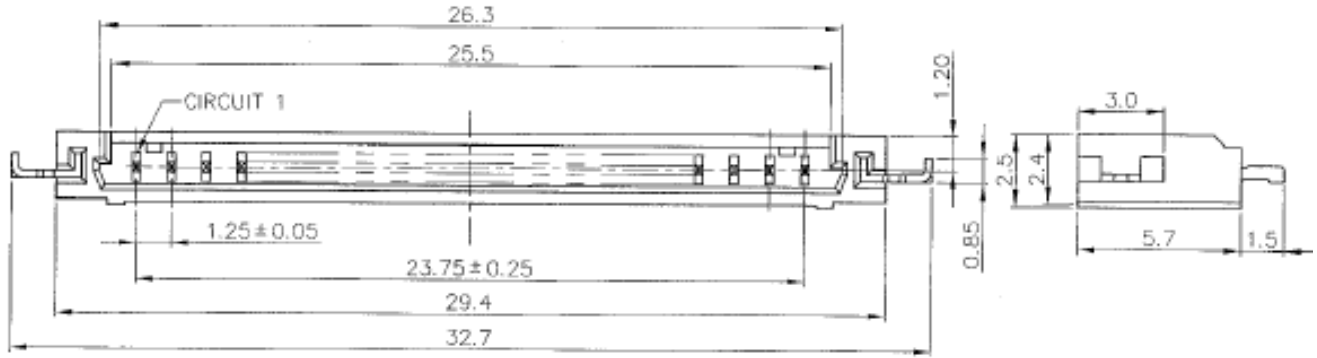
These connectors are capable of accommodating the following signals and will be following components.

7.1 TFT LCD Module

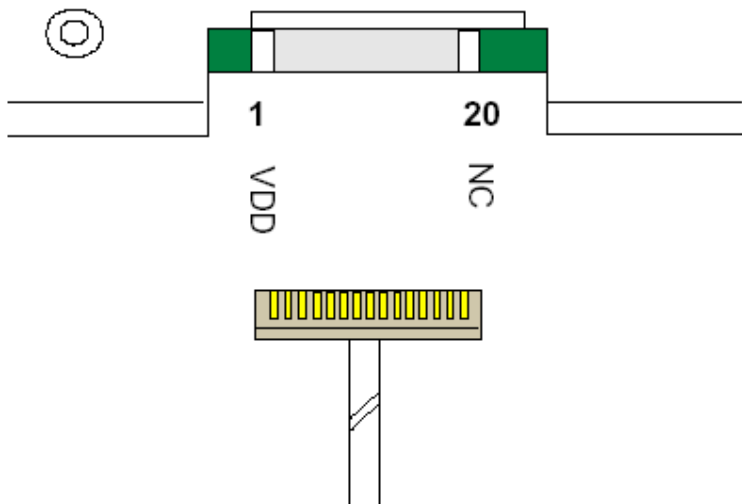
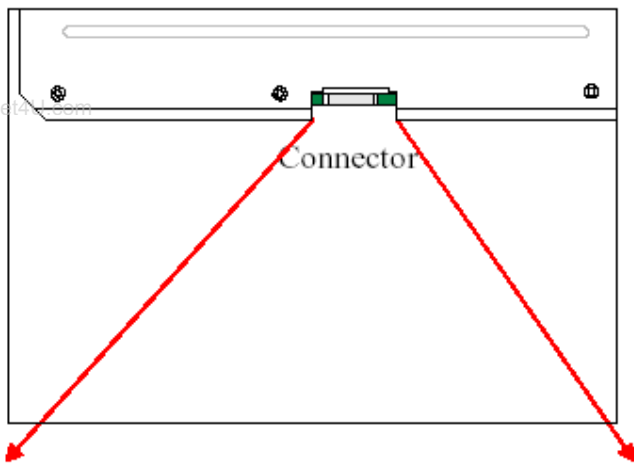
| | |
|-------------------------------------|--------------------------------------|
| Connector Name / Designation | Interface Connector / Interface card |
| Manufacturer | P-TWO or compatible |
| Type Part Number | CWY20G – A0G16 / MSB240420 |
| Mating Housing Part Number | HRS DF14-20S-1.25C |

| Pin# | Signal Name | Pin# | Signal Name |
|------|-------------|------|-------------|
| 1 | VDD | 2 | VDD |
| 3 | VSS | 4 | VSS |
| 5 | Rin0- | 6 | Rin0+ |
| 7 | VSS | 8 | Rin1- |
| 9 | Rin1+ | 10 | VSS |
| 11 | Rin2- | 12 | Rin2+ |
| 13 | VSS | 14 | ClkIN- |
| 15 | ClkIN+ | 16 | VSS |
| 17 | Rin3- | 18 | Rin3+ |
| 19 | VSS | 20 | SEL68 |

7.1.1 Connector Illustration



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7.2 Backlight Unit

| | |
|-------------------------------------|---------------------|
| Connector Name / Designation | For Lamp Connector |
| Manufacturer | JST or compatible |
| Type / Part Number | BHR-03VS-1 |
| Mating Type / Part Number | SM02(8.0)B-BHS-1-TB |

7.3 Signal for Lamp connector

| Pin | Symbol | Description |
|-----|--------|-------------------|
| 1 | HV | Lamp High Voltage |
| 2 | NC | No connection |
| 3 | LV | Ground |

- u Cable length: 140 +- 5 mm
- u Connector-output position: right side (front view)
- u Lamp assembly design shall be easy for replacement and repair.

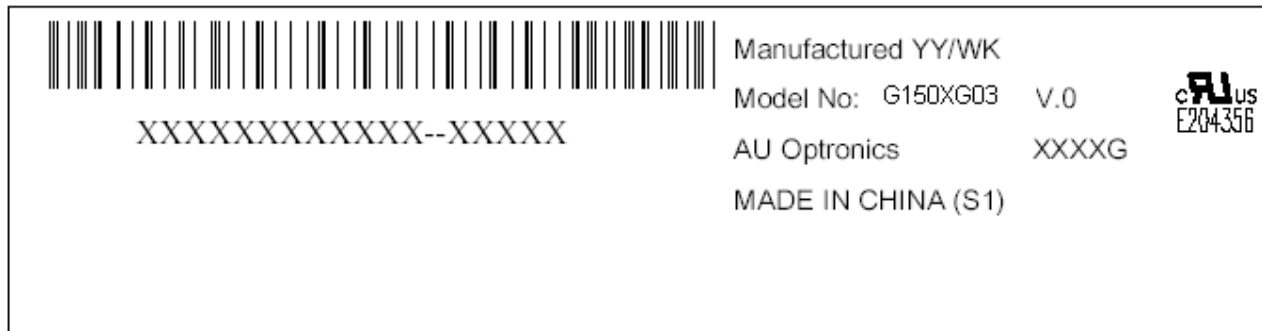
8.0 Reliability

Reliability test condition

| No | Test Item | Test Condition |
|----|----------------------------------|---|
| 1 | Temperature Humidity Bias (THB) | 50°C , 80%, 300hours |
| 2 | High Temperature Operation (HTO) | 50°C , 300hours |
| 3 | Low Temperature Operation (LTO) | 0°C , 300hours |
| 4 | High Temperature Storage (HTS) | 60°C , 300hours |
| 5 | Low Temperature Storage (LTS) | -20°C , 300hours |
| 6 | Thermal Shock Test (TST) | -20°C/30min, 60°C/30min, 100 cycles |
| 7 | On/Off Test | On/10sec, Off/10sec, 30,000 cycles |
| 8 | Shock Test (Non-Operating) | 50G, 20ms, Half-sine wave (\pm X, \pm Y, \pm Z) |
| 9 | Vibration Test (Non-Operating) | 1.5G(10~200Hz P- P), 30 Minutes each Axis (X, Y, Z) |
| 10 | ESD (ElectroStatic Discharge) | Contact Discharge: \pm 8KV, 150pF(330 Ω) 1sec, 8 points, 25 times/ point Air Discharge: \pm 15KV, 150pF(330 Ω) 1sec, 8 points, 25 times/ point |
| 11 | Altitude Test | Operation:10,000 ft Non-Operation:30,000 ft |
| 12 | Drop Test | The drop height is 60cm |

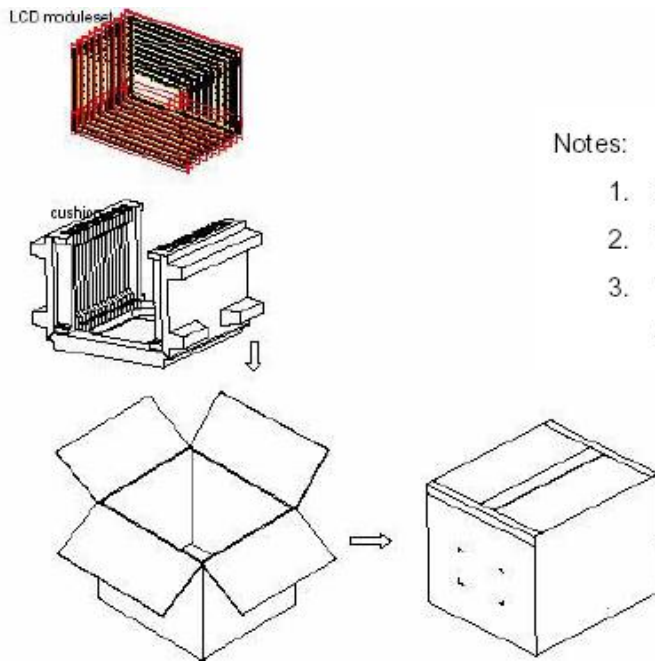
9.0 Shipping and packing

9-1 Shipping label format



9-2 Carton package

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Notes:

1. Max Capacity: 10 LCD module/Carton
2. Max Weight: 14kg/Carton
3. The outside dimension of carton is 490(L)mmx390(W)mmx360(H)mm

10.0 Safety

10.1 Sharp Edge Requirements

There will be no sharp edges or comers on the display assembly that could cause injury.

10.2 Materials

10.2.1 Toxicity

There will be no carcinogenic materials used anywhere in the display module. If toxic materials are used, they will be reviewed and approved by the responsible AUO Toxicologist.

10.2.2 Flammability

All components including electrical components that do not meet the flammability grade UL94-V1 in the module will complete the flammability rating exception approval process.

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The printed circuit board will be made from material rated 94-V1 or better. The actual UL flammability rating will be printed on the printed circuit board.

10.3 Capacitors

If any polarized capacitors are used in the display assembly, provisions will be made to keep them from being inserted backwards.

11.0 Other requirement

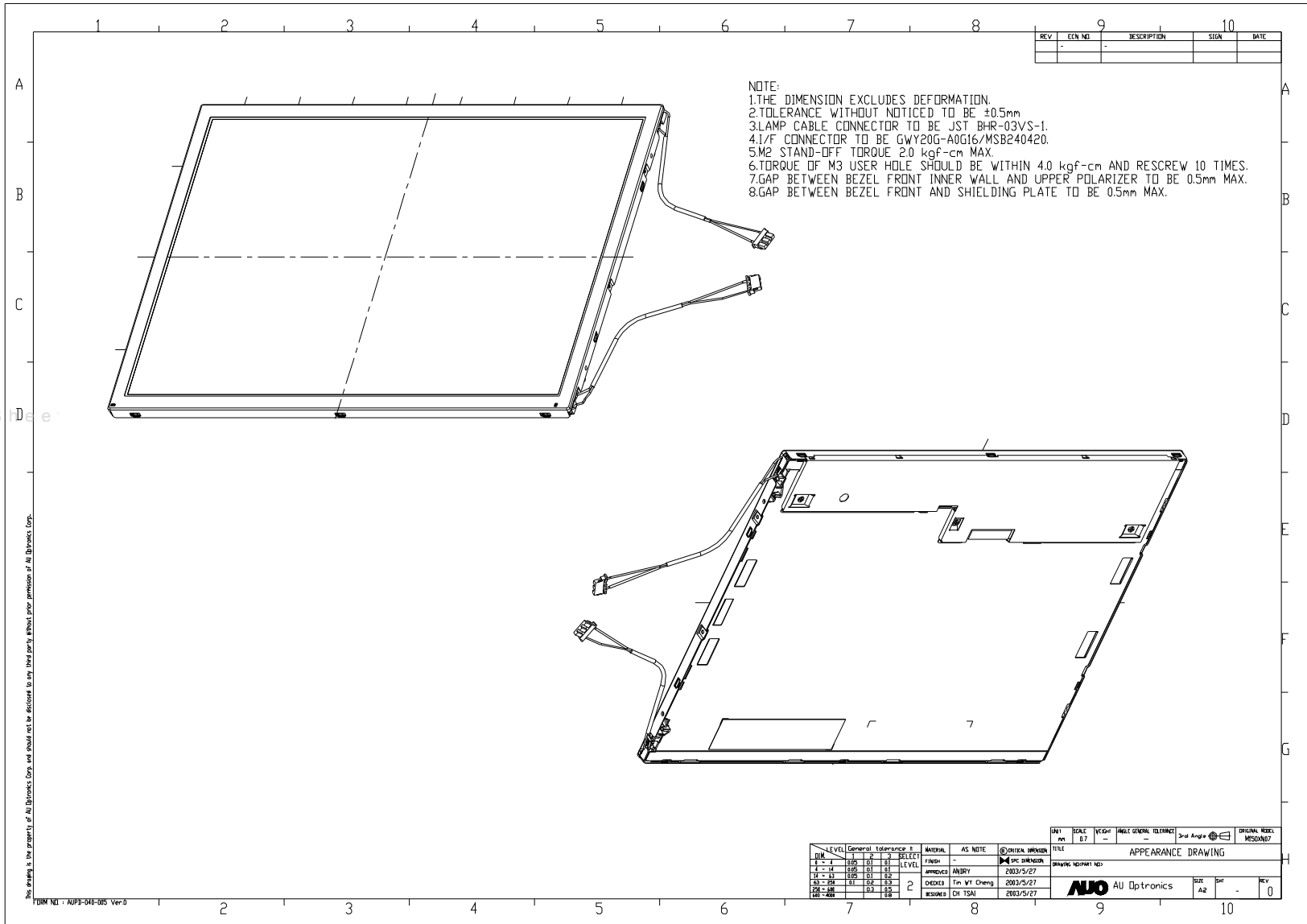
11.1 National Test Lab Requirement

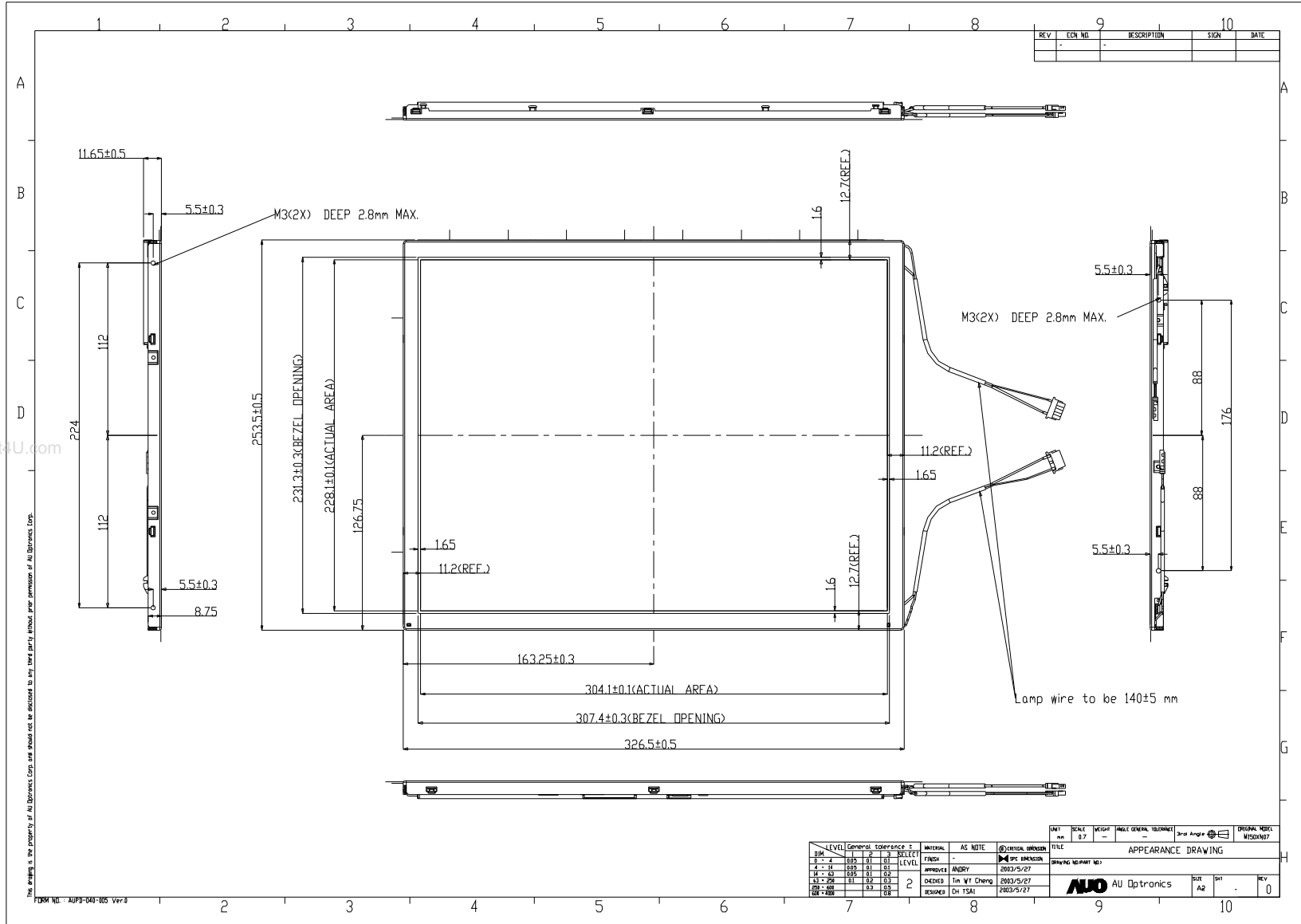
The display module will satisfy all requirements for compliance to

UL 1950, First Edition
CSA C22.2 No.950-M89
EEC 950
EN 60 950

U.S.A. Information Technology Equipment
Canada, Information Technology Equipment
International, Information Technology Equipment
International, Information Processing Equipment
(European Norm for IEC950)

12.0 Mechanical Characteristics





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FORM NO. AAPP-D40-005 Ver.3

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| LEVEL | General tolerance | MATERIAL | AS NOTE | GENERAL DIMENSION | TITLE |
|--------|-------------------|----------|---------|-------------------|-------|
| 1-2 | F3 | | | | |
| 3-4 | F5 | | | | |
| 5-6 | F7 | | | | |
| 7-8 | F9 | | | | |
| 9-10 | F11 | | | | |
| 11-12 | F13 | | | | |
| 13-14 | F15 | | | | |
| 15-16 | F17 | | | | |
| 17-18 | F19 | | | | |
| 19-20 | F21 | | | | |
| 21-22 | F23 | | | | |
| 23-24 | F25 | | | | |
| 25-26 | F27 | | | | |
| 27-28 | F29 | | | | |
| 29-30 | F31 | | | | |
| 31-32 | F33 | | | | |
| 33-34 | F35 | | | | |
| 35-36 | F37 | | | | |
| 37-38 | F39 | | | | |
| 39-40 | F41 | | | | |
| 41-42 | F43 | | | | |
| 43-44 | F45 | | | | |
| 45-46 | F47 | | | | |
| 47-48 | F49 | | | | |
| 49-50 | F51 | | | | |
| 51-52 | F53 | | | | |
| 53-54 | F55 | | | | |
| 55-56 | F57 | | | | |
| 57-58 | F59 | | | | |
| 59-60 | F61 | | | | |
| 61-62 | F63 | | | | |
| 63-64 | F65 | | | | |
| 65-66 | F67 | | | | |
| 67-68 | F69 | | | | |
| 69-70 | F71 | | | | |
| 71-72 | F73 | | | | |
| 73-74 | F75 | | | | |
| 75-76 | F77 | | | | |
| 77-78 | F79 | | | | |
| 79-80 | F81 | | | | |
| 81-82 | F83 | | | | |
| 83-84 | F85 | | | | |
| 85-86 | F87 | | | | |
| 87-88 | F89 | | | | |
| 89-90 | F91 | | | | |
| 91-92 | F93 | | | | |
| 93-94 | F95 | | | | |
| 95-96 | F97 | | | | |
| 97-98 | F99 | | | | |
| 99-100 | F101 | | | | |

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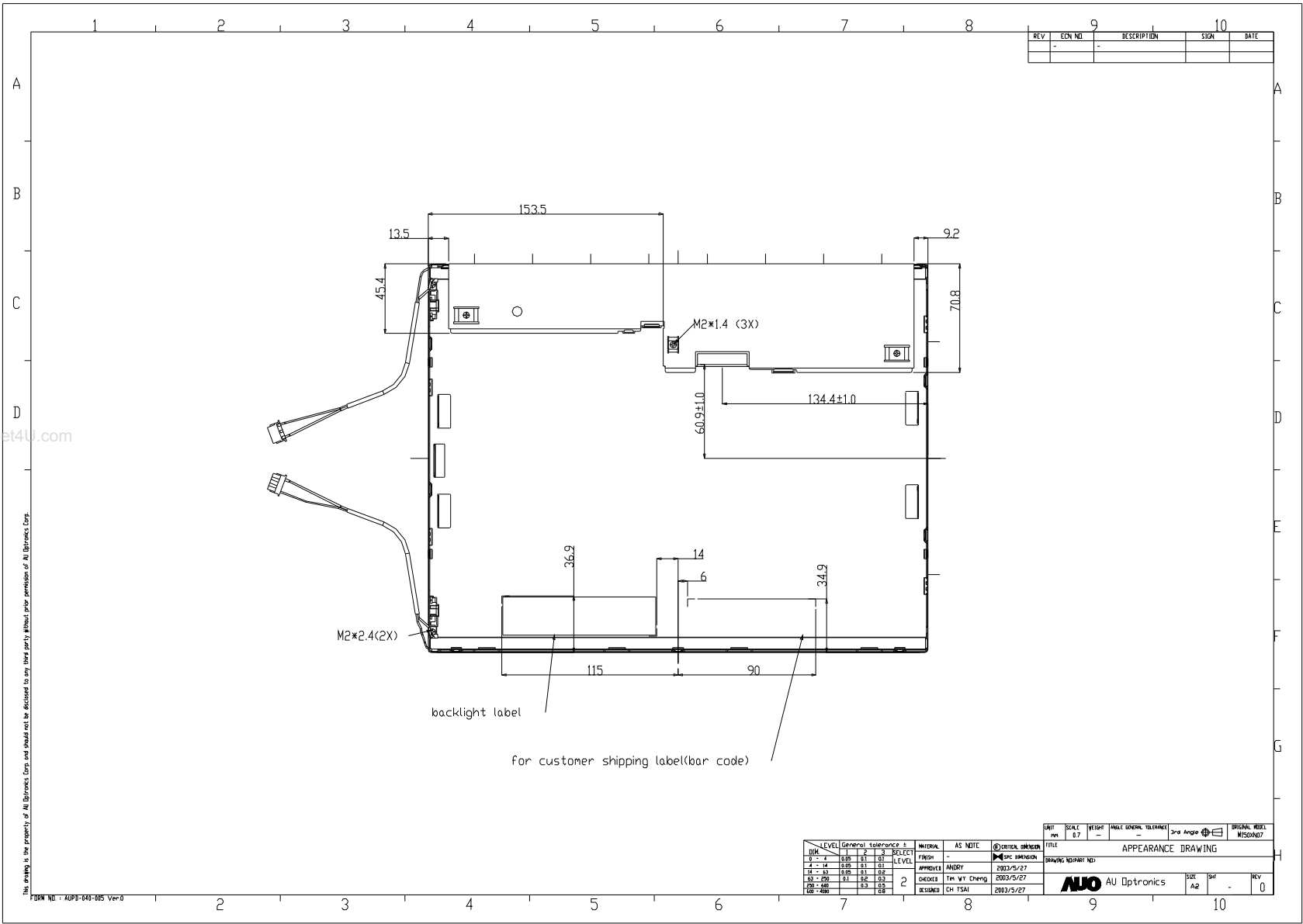
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FORM NO. : APPF-041-005 Ver.0

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| LEVEL | | General tolerance | 1 | 2 | 3 | SELECT | MATERIAL | AS NOTE | CRITICAL DIMENSION | FILE | SCALE | WEIGHT | ANGLE | GENERAL TOLERANCE | 3rd Angle | ORIGINAL MODEL |
| 0 | 1 | 0.05 | 0.1 | 0.15 | 0.2 | LEVEL | FINISH | - | APPEARANCE DRAWING | APPEARANCE DRAWING | 1:1 | 0.7 | - | - | YES | MIS004027 |
| 4 | 14 | 0.05 | 0.1 | 0.15 | 0.2 | LEVEL | APPROVED | ANDRY | 2003/5/27 | DRAWING REPORT NO. | | | | | | |
| 14 | 13 | 0.05 | 0.1 | 0.15 | 0.2 | LEVEL | CHECKED | TH YI Cheng | 2003/5/27 | | | | | | | |
| 03 | 020 | 0.1 | 0.2 | 0.3 | 0.5 | LEVEL | DESIGNED | CH TSAI | 2003/5/27 | | | | | | | |
| 02 | 005 | 0.1 | 0.2 | 0.3 | 0.5 | LEVEL | | | | | | | | | | |

AUO AU Optonics SIZE: A2 SH: REV: 0