

# Product Specification

## Specification for Approval

(    ) Preliminary Specification

( o ) Final Specification

|              |                                                      |
|--------------|------------------------------------------------------|
| Product Name | Mega 14 ( 14.1 inch XGA Color TFT LCD Module of LG ) |
| Model Name   | LP141X2-B                                            |

Please return 1 copy for our confirmation  
with your signature.

This document is preliminary. All of the informations in this document are  
subject to change  
without notice to improve the specification.

### Contents

| No. | Item | Page |
|-----|------|------|
|-----|------|------|

**PC-1444-1000-100000**

|     |                              |  |
|-----|------------------------------|--|
| -   | Contents                     |  |
| -   | Record of Revision           |  |
| 1.  | General description          |  |
| 2.  | Maximum ratings              |  |
| 3.  | Electrical specifications    |  |
| 4.  | Optical specifications       |  |
| 5.  | Interface connections        |  |
| 6.  | Signal timing specifications |  |
| 7.  | Signal timing wave forms     |  |
| 8.  | Color input data reference   |  |
| 9.  | Power sequence               |  |
| 10. | Mechanical characteristics   |  |
| 11. | Handling precautions         |  |
| -   | Appendix                     |  |
| -   |                              |  |

**Record of Revision**

| VERSION & Date        | DESCRIPTION                     |
|-----------------------|---------------------------------|
| 1. Ver 1.0 : 97/08/25 | Original                        |
| 2. Ver 1.1 : 97/10/29 | Update Drawing and Error        |
| 3. Ver 1.2 : 97/11/13 | Add B/L Inverter power sequence |
|                       |                                 |

## Product Specification

### 1. General Description

This product, Mega 14, is a color active matrix LCD module. The LCD module employs an amorphous silicon TFTs as an active element for displaying. The module is composed of TFT LCD panel, Back light unit, driving circuitry including drive IC and the power supply circuit.

Information is being displayed on the screen of XGA resolution with the diagonal measurement of 14.1 inch.

The LCD module also can realize the number of 262,144 colors by supplying 18 bits of data signals.

In addition to the data signal, some timing control signals and power supply voltage for the circuit are required for the LC (liquid crystal) and the back light unit, respectively.

Mega 14 is intended to support applications where the low power consumption, light weight and thickness are required. In combination with the Panel-Link interface, Mega 14 characteristics provide an excellent quality of display for the office automation products such as the portable computers.

DC-AC inverter for the back light driving unit is not built in to this module.

CLK(±)

Y3(±)

Y2(±)

Y1(±)

POWER

VBL

### General Display Characteristics

The general feature of the model LP141X2-B are as following

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Active display area    | 14.1 inches Diagonal                            |
| Outsize dimensions     | 298.5(W)×227.0(H)×8.7(D)mm Typ. (0.5 Tolerable) |
| Pixel pitch            | 0.28 mm × 0.28 mm                               |
| Pixel format           | 768 Vert. by 1024 Hori. pixels                  |
|                        | RGB vertical stripe arrangement                 |
| Color depth            | 6-bit, 262K colors                              |
| Display operating mode | Transmissive mode, normally white               |
| Weight                 | 650 g Typ.                                      |
| Surface treatments     | Hard coating(3H) and anti-glare treatment       |

## 2. Maximum Rating

The following are the maximum values which, if exceeded, may cause faulty operation or damage to the unit.

Table 1

ABSOLUTE MAXIMUM RATINGS

Vss=0

| Parameter             | Symbol          | Values |      | Units | Notes |
|-----------------------|-----------------|--------|------|-------|-------|
|                       |                 | Min.   | Max. |       |       |
| Power Supply Voltage  | V <sub>CC</sub> | -0.3   | +4.0 | Vdc   | at 25 |
|                       | V <sub>AA</sub> | -0.3   | +6.0 | Vdc   |       |
| Operating Temperature | T <sub>OP</sub> | 0      | 50   |       | 1     |
| Storage Temperature   | T <sub>ST</sub> | -20    | 60   |       | 1     |

Note: 1. The Relative Humidity must not exceed 95% non-condensing at temperatures of 40 .  
At temperatures greater than 40, the wet bulb temperature must not exceed 39.

## 3. Electrical Specifications

The LP141X2-B requires two kinds of external power inputs. one is to power the drive circuit.

The other is to power the backlight CCFT, which is typically generated by an inverter .

Table 2 ELECTRICAL CHARACTERISTICS:

| Parameter                  | Sym.            | Values |       |       | Units            | Notes |
|----------------------------|-----------------|--------|-------|-------|------------------|-------|
|                            |                 | Min.   | Typ.  | Max.  |                  |       |
| MODULE :                   |                 |        |       |       |                  | 1     |
| Logic Power Supply Voltage | V <sub>CC</sub> | 3.0    | 3.3   | 3.6   | V                |       |
| Logic Power Supply Current | I <sub>CC</sub> |        | (430) | (500) | mA               |       |
| Differential Impedence     | Z <sub>m</sub>  | 90     | 100   | 110   | ohm              |       |
| BACKLIGHT Unit:            |                 |        |       |       |                  | 2     |
| Lamp Input voltage         | V <sub>BL</sub> | (650)  | 690   | 750   | V <sub>RMS</sub> |       |
| Lamp Current               | I <sub>BL</sub> | (2.0)  | 3.2   | 5.0   | mA               |       |
| Lamp Kick-Off Voltage      | V <sub>BK</sub> |        | 1100  |       | V <sub>RMS</sub> | 252   |
| Operating Frequency        | F <sub>BL</sub> | (40)   | 55    | (60)  | V <sub>RMS</sub> | 02    |
| Lamp Life time             | L <sub>BL</sub> | 10000  |       |       | KHz              |       |
|                            |                 |        |       |       | Hrs              |       |

Notes:

1. Operating Temp. range : 0 ~ 50
2. The used connector : BHSR-02VS-1 (JST)  
Mating connector : SM02(4.0)B-BHSS-1-TB (JST) or equivalent.

## Product Specification

**4. Optical Specifications**

Optical characteristics are determined after the unit has been turned 'ON' and stable for approximately 30 minutes in a dark environment at 25°. The values specified are at an approximate distance of 50cm from the LCD surface at a viewing angle of  $\Phi$  and  $\theta$  equal to 0°.

Appendix A presents additional information concerning the specified characteristics.

| Parameter            |            | Symbol | Condition | Min. | Typ.  | Max. | Unit   | Remarks |
|----------------------|------------|--------|-----------|------|-------|------|--------|---------|
| Contrast ratio       |            | K      | Center    | 150  | 300   | -    |        | * 1     |
| Surface Brightness   |            | Bsf    | IBL=3.0mA | 50   | 70    | -    | cd/m   | * 2     |
|                      |            |        | IBL=4.5mA | 70   | 90    | -    |        |         |
| Response Time        | Rising     | Tr     |           | -    | 15    | 30   | ms     | * 4     |
|                      | Falling    | Tf     |           | -    | 25    | 50   | ms     |         |
| Viewing Angle        | Horizontal | x      | K > 10    | 40   |       |      | degree | * 5     |
|                      | Vertical   | yu     |           | 10   |       |      |        |         |
|                      |            | yd     |           | 30   |       |      |        |         |
| Chromaticity         |            | Xw     | = 0       |      | 0.330 |      |        | 0.03    |
|                      |            | Yw     |           |      | 0.330 |      |        |         |
|                      |            | Xr     |           |      | 0.590 |      |        |         |
|                      |            | Yr     |           |      | 0.340 |      |        |         |
|                      |            | Xg     |           |      | 0.330 |      |        |         |
|                      |            | Yg     |           |      | 0.530 |      |        |         |
|                      |            | Xb     |           |      | 0.150 |      |        |         |
|                      |            | Yb     |           |      | 0.110 |      |        |         |
| Brightness Variation |            | Bv     |           |      |       | 1.45 |        | * 3     |

- Notes
- Contrast Ratio is defined mathematically as following  

$$\frac{\text{(Surface Brightness with all white pixels)}}{\text{(Surface Brightness with all black pixels)}}$$
  - Surface brightness is the average of 9 points measured at a distance of 50cm away from the surface under the full white condition of all pixels in supplying current as conditions.
  - The brightness variation B<sub>v</sub> is defined as following ( Refer to Appendix A-1 )  

$$\frac{\text{The Maximum value of 9 points luminance}}{\text{The Minimum value of 9 points luminance}}$$
  - Response time is required for the display to transition from white to black  
 (Rise Time, Tr<sub>R</sub>) and from black to white (Decay Time, Tr<sub>D</sub>).  
 Please refer to Appendix A-2
  - Viewing angle is the angle at which the contrast ratio is greater than 10.  
 Please refer to Appendix A-3

## 5. Interface Pin configuration

The electronics interface connector is a model FI-SEB20P-HF , manufactured by JAE  
The mating connector part number is FI-S20S (JAE) or equivalent.  
The pin configuration for the interface are shown in the table below.

INTERFACE PIN CONFIGURATION

| Pin | Symbol | Description                    | Notes       |
|-----|--------|--------------------------------|-------------|
| 1   | Vcc    | Logic Power supply voltage     | 3.3V        |
| 2   | Vcc    | Logic Power supply voltage     |             |
| 3   | Vcc    | Logic Power supply voltage     |             |
| 4   | Vcc    | Logic Power supply voltage     |             |
| 5   | DGND   | Ground                         |             |
| 6   | DGND   | Ground                         |             |
| 7   | DGND   | Ground                         |             |
| 8   | DGND   | Ground                         |             |
| 9   | Y1M    | Differential input data pairs  | R0~R5,G0    |
| 10  | Y1P    | Differential input data pairs  |             |
| 11  | DGND   | Ground                         |             |
| 12  | Y2M    | Differential input data pairs  |             |
| 13  | Y2P    | Differential input data pairs  | G1~G5,B0,B1 |
| 14  | DGND   | Ground                         |             |
| 15  | Y3M    | Differential input data pairs  | B2~B5,H,V,E |
| 16  | Y3P    | Differential input data pairs  |             |
| 17  | DGND   | Ground                         |             |
| 18  | CLKM   | Differential input clock pairs |             |
| 19  | CLKP   | Differential input clock pairs |             |
| 20  | DGND   | Ground                         |             |

## 6. Signal Timing Specification

This is the signal timing required at the input of the control Asic concerned with LVDS as

a Flat link or equaivalant.

All of the interface signal timing should be satisfied with the following specifications

based on the VESA timing guideline (1024 x 768 @ 60 Hz) for it's proper operation.

LP141X2-B with LVDS transmitter recommend to connect the Display Enable,Horizontal sync,Vertical

## Product Specification

sync, Clock signal from Vedio signal controller to input of Transmitter simultaneously.

| Signal   | Parameter                | Symbol | Min  | Typ  | Max  | Unit | Remarks |
|----------|--------------------------|--------|------|------|------|------|---------|
| Dclk     | Period                   | Tclk   | 15   | 15   | 15   | ns   | 1       |
|          | Duty ratio (% high)      | Kdr    | 40   | 50   | 60   | %    |         |
|          | Rise Time                | Trck   | 1.6  | 2.0  | 2.3  | ns   |         |
|          | Fall Time                | Tfck   | 0.9  | 1.1  | 1.4  | ns   |         |
| DE(DTMG) | Setup time               | Tsde   | 4    | -    | -    | ns   |         |
|          | Hold time                | Thde   | 5    | -    | -    | ns   |         |
|          | Horizontal Period        | Thp    | 1280 | 1344 | 1364 | Tclk |         |
|          | Horizontal blank Period  | Twhp   | 315  | 320  | 325  | Tclk |         |
|          | Vertical Period          | Tvp    | 33   | 38   | 44   | Tclk |         |
|          | Vertical Blank Period    | Twvp   | 801  | 806  | 812  | Thp  |         |
|          |                          |        |      |      |      | Thp  |         |
| Hsync    | Hsync Back porch         | Hbp    | 160  | 160  | 160  | Tclk |         |
|          | Hsync front porch        | Hfp    | 20   | 24   | 45   | Tclk |         |
|          | Horizontal Active Period | Twha   | 1024 | 1024 | 1024 | Tclk |         |
| Vsync    | Vsync Back porch         | Vbp    | 29   | 29   | 29   | Thp  |         |
|          | Vsync front porch        | Vfp    | 1    | 3    | 6    | Thp  |         |
|          | Vertical Active Period   | Twva   | 768  | 768  | 768  | Thp  |         |
| Data     | Setup Time               | Tsd    | 3.5  | 4    | -    | ns   |         |
|          | Hold Time                | Thd    | 3.5  | 4    | -    | ns   |         |
|          | Rise                     | Trd    | 3.2  | 3.9  | 4.5  | ns   |         |
|          | Fall Time                | Tfd    | 1.4  | 1.7  | 2.1  | ns   |         |

Notes: 1. Dclk values are required for LVDS applications  
Dclk jitter requirement for transmitter : max. 2.0 ns  
LVDS used for Rx : SN75LVDS86 or equivalent ( Tx : SN75LVDS84 or equivalent )

## 7. Signal Timing Wave forms



Vsync

Vbp

Vfp

Tvp

Twvb

Twva

DE

Thp

Twlb

Twla

DE

Hbp

Hfp

Hsync

Dclk

Data Invalid 1 2 3 103 104 105 1023 1024 Invalid 1

2

Tclk

Dclk

Tfck

Trck

Trd

Tsd

Thd

Tfd

Data

Tsde

Thde

DE



### . Color Input Data Reference

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

Table 5 COLOR DATA REFERENCE

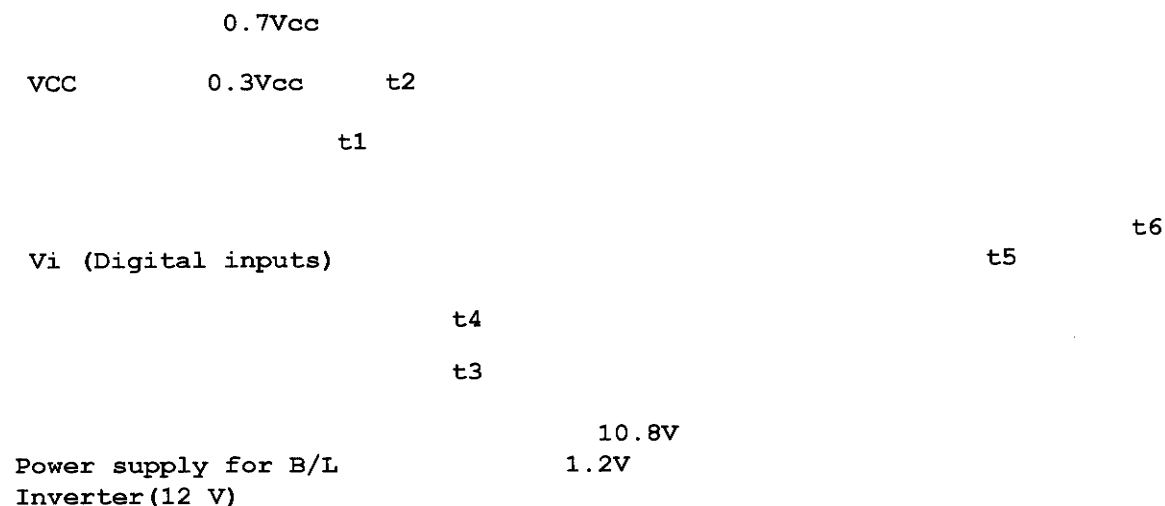
| Color        |                 | Input Color Data |    |    |    |    |    |       |    |    |    |    |    |      |    |    |    |    |    |
|--------------|-----------------|------------------|----|----|----|----|----|-------|----|----|----|----|----|------|----|----|----|----|----|
|              |                 | Red              |    |    |    |    |    | Green |    |    |    |    |    | Blue |    |    |    |    |    |
|              |                 | R5               | R4 | R3 | R2 | R1 | R0 | G5    | G4 | G3 | G2 | G1 | G0 | B5   | B4 | B3 | B2 | B1 | B0 |
| Basic Colors | Black           | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(00)         | 1                | 1  | 1  | 1  | 1  | 1  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Green(00)       | 0                | 0  | 0  | 0  | 0  | 0  | 1     | 1  | 1  | 1  | 1  | 1  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Blue(00)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 1    | 1  | 1  | 1  | 1  | 1  |
|              | Cyan            | 0                | 0  | 0  | 0  | 0  | 0  | 1     | 1  | 1  | 1  | 1  | 1  | 1    | 1  | 1  | 1  | 1  | 1  |
|              | Magenta         | 1                | 1  | 1  | 1  | 1  | 1  | 0     | 0  | 0  | 0  | 0  | 0  | 1    | 1  | 1  | 1  | 1  | 1  |
|              | Yellow          | 1                | 1  | 1  | 1  | 1  | 1  | 1     | 1  | 1  | 1  | 1  | 1  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | White           | 1                | 1  | 1  | 1  | 1  | 1  | 1     | 1  | 1  | 1  | 1  | 1  | 1    | 1  | 1  | 1  | 1  | 1  |
| Red          | Red(b3) Black   | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(b2)         | 0                | 0  | 0  | 0  | 0  | 1  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(b1)         | 0                | 0  | 0  | 0  | 1  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | :               | :                | :  | :  | :  | :  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(02)         | 1                | 1  | 1  | 1  | 0  | 1  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(01)         | 1                | 1  | 1  | 1  | 1  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Red(00)         | 1                | 1  | 1  | 1  | 1  | 1  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
| Green        | Green(b3) Black | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Black           | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 1  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Green(b2)       | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 1  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Green(b1)       | 0                | 0  | 0  | 0  | 0  | 0  | :     | :  | :  | :  | :  | :  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | :               | 0                | 0  | 0  | 0  | 0  | 0  | 1     | 1  | 1  | 1  | 0  | 1  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Green(02)       | 0                | 0  | 0  | 0  | 0  | 0  | 1     | 1  | 1  | 1  | 1  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Green(01)       | 0                | 0  | 0  | 0  | 0  | 0  | 1     | 1  | 1  | 1  | 1  | 1  | 0    | 0  | 0  | 0  | 0  | 0  |
| Blue         | Blue(b3) Black  | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 0  |
|              | Blue(b2)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 0  | 1  |
|              | Blue(b1)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 0    | 0  | 0  | 0  | 1  | 0  |
|              | :               | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | :    | :  | :  | :  | :  | :  |
|              | Blue(02)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 1    | 1  | 1  | 1  | 0  | 1  |
|              | Blue(01)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 1    | 1  | 1  | 1  | 1  | 0  |
|              | Blue(00)        | 0                | 0  | 0  | 0  | 0  | 0  | 0     | 0  | 0  | 0  | 0  | 0  | 1    | 1  | 1  | 1  | 1  | 1  |

Note : Gray scale L(0) is the darkest and L(b3) is the brightest.

## Product Specification

### 9. Power Up/Down Sequence

The supplies must be powered up and down as indicated or the device may be damaged permanently.



\* Turn on sequence : GND - Vcc - Digital inputs

Turn off sequence : Digital inputs - Vcc - GND

t1 : 10 ns ~ 1 ms

t2 : 5 us ~ 30 ms

t3-t4 : 10 ms ~ 50 ms

t5-t6 : 5 ms ~ 35 ms

\* Set 0 Volt < Vi(t) < Vcc(t)

Here Vi(t), Vcc(t) indicate the transitive state of Vi, Vcc when power is turned ON or OFF

Notes: 1. Please avoid floating state of interface signal at invalid period.

2. When the interface signal is invalid, be sure to pull down the Vcc to 0 V.

3. Back light inverter power must be turn on after power supply for logic and interface signal are valid.

Back light inverter power must be turn off before power supply for logic and interface signal are valid.

### 10. Mechanical Characteristics

The chart below provides general mechanical characteristics for the model LP141X2-B LCD.

The surface of the LCD has an anti-glare coating to minimize reflection and a 2H hard

#

## 11. precautions

### 11-1 Handling

- 1) Be sure to turn off the power when connecting or disconnecting the circuit.
- 2) Note that the polarizer are easily damaged. Pay attention not to scratch or press this surface with any hard object.
- 3) Clean the LCD surface with a soft material (ie.cotton ball) should the surface become dirty.
- 4) Protect the module from the ESD as it may damage the electronic circuit (C-MOS). Make certain that the treatment person's body is grounded through the wrist bend.
- 5) Do not disassemble the module and be careful not to incur a mechanical shock that might occur during installation. It may cause permanent damage.
- 6) Do not leave the module in high temperatures, Particularly in areas of high humidity for a long time.
- 7) The module is not to be exposed direct sunlight.
- 8) Avoid contact with water as it may cause short circuit within the module.

### 11-2 Safety

- 1) If module is broken , be careful to handle not to injure.( LCD and Lamp are made of glass )  
Please wash hands sufficiently when you touch the liquid crystal coming out from broken LCDs.
- 2) As back light unit has high voltage circuit internally, do not disassemble the module and do not insert the foreign materials into the module.

# Product Identification

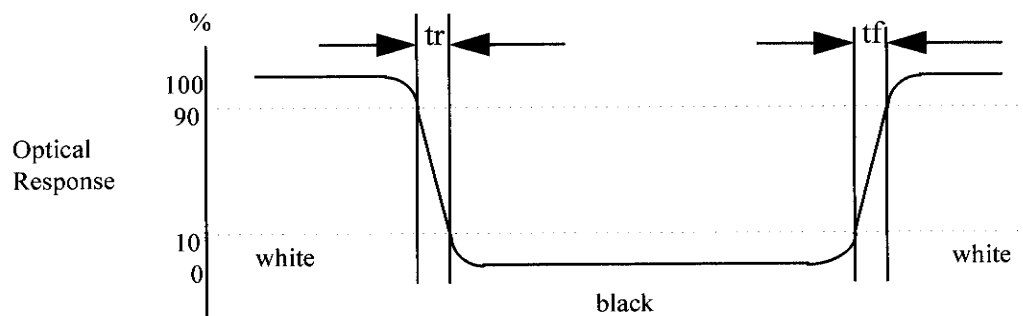
## A-1 Brightness

<measuring point> Effective Display Area

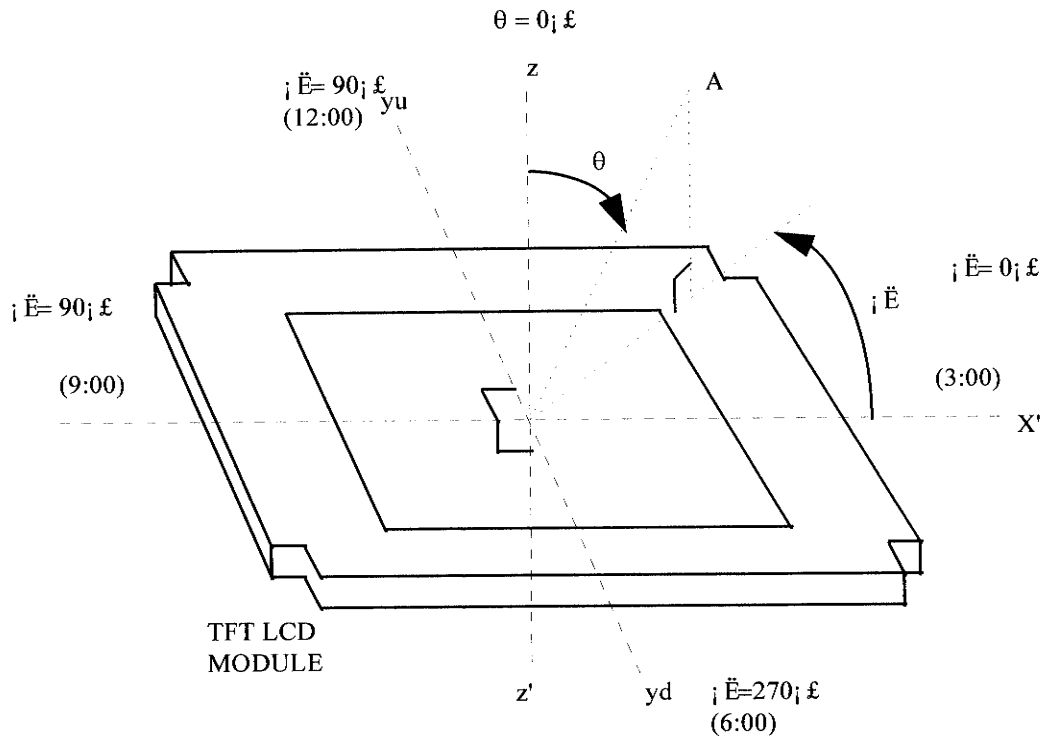
| 1/4 | 2/4 | 3/4 |     |
|-----|-----|-----|-----|
| 1   | 2   | 3   | 1/4 |
| 4   | 5   | 6   | 2/4 |
| 7   | 8   | 9   | 3/4 |

## A-2 RESPONSE TIME

The response time is defined as the following figure and shall be measured by switching the input signal for "black" and "white".



## A-3 Definition of viewing angle range



## A-4. Outline Drawing

# Pin Connection

## A-5 Data Map of Flat link with 65554

| Pin connection between 65554 - Tx |         |            |      |    | Interface between Tx - Rx |        |
|-----------------------------------|---------|------------|------|----|---------------------------|--------|
| 65554                             |         | SN74LVDS84 |      |    |                           |        |
| Pin                               | Data    | Data       | Pin  | No | LVDS84                    | LVDS86 |
| P0                                | B0      | B0         |      |    | CLKP                      | CLKP   |
| P1                                | B1      | B1         |      |    | CLKM                      | CLKM   |
| P2                                | B2 (B0) | B2 (B0)    | D12  |    | Y3P                       | A3P    |
| P3                                | B3 (B1) | B3 (B1)    | D13  |    | Y3M                       | A3M    |
| P4                                | B4 (B2) | B4 (B2)    | D14  |    | Y2P                       | A2P    |
| P5                                | B5 (B3) | B5 (B3)    | D15  |    | Y2M                       | A2M    |
| P6                                | B6 (B4) | B6 (B4)    | D16  |    | Y1P                       | A1P    |
| P7                                | B7 (B5) | B7 (B5)    | D17  |    | Y1M                       | A1M    |
| P8                                | G0      | G0         |      |    | BLANK                     |        |
| P9                                | G1      | G1         |      |    |                           |        |
| P10                               | G2 (G0) | G2 (G0)    | D6   |    |                           |        |
| P11                               | G3 (G1) | G3 (G1)    | D7   |    |                           |        |
| P12                               | G4 (G2) | G4 (G2)    | D8   |    |                           |        |
| P13                               | G5 (G3) | G5 (G3)    | D9   |    |                           |        |
| P14                               | G6 (G4) | G6 (G4)    | D10  |    |                           |        |
| P15                               | G7 (G5) | G7 (G5)    | D11  |    |                           |        |
| P16                               | R0      | R0         |      |    |                           |        |
| P17                               | R1      | R1         |      |    |                           |        |
| P18                               | R2 (R0) | R2 (R0)    | D0   |    |                           |        |
| P19                               | R3 (R1) | R3 (R1)    | D1   |    |                           |        |
| P20                               | R4 (R2) | R4 (R2)    | D2   |    |                           |        |
| P21                               | R5 (R3) | R5 (R3)    | D3   |    |                           |        |
| P22                               | R6 (R4) | R6 (R4)    | D4   |    |                           |        |
| P23                               | R7 (R5) | R7 (R5)    | D5   |    |                           |        |
| SHFCLK                            | SHTCLK  | SHTCLK     | IDCK |    |                           |        |
| FLM                               | VSYNC   | VSYNC      | D19  |    |                           |        |
| LP                                | HSYNC   | HSYNC      | D18  |    |                           |        |
| DE                                | DE      | DE         | D20  |    |                           |        |

### Transmitter Pin Config

| No | Sig | No | Sig | No | Sig | No | Sig  | No | Sig  | No | Sig  | No | Sig  | No | Sig |
|----|-----|----|-----|----|-----|----|------|----|------|----|------|----|------|----|-----|
| 1  | R4  | 7  | G2  | 1  | B0  | 1  | B4   | 2  | ENAB | 3  | LGND | 3  | LVCC | 4  | NC  |
| 2  | Vcc | 8  | Vcc | 1  | Vcc | 2  | B5   | 2  | MCLK | 3  | CLKP | 3  | A1P  | 4  | R0  |
| 3  | R5  | 9  | G3  | 1  | B1  | 2  | Vcc  | 2  | Vcc  | 3  | CLKM | 3  | A1M  | 4  | R1  |
| 4  | G0  | 1  | G4  | 1  | B2  | 2  | HSYN | 2  | PGND | 3  | A2P  | 4  | A0P  | 4  | GND |
| 5  | GND | 1  | GND | 1  | GND | 2  | VSYN | 2  | PVCC | 3  | A2M  | 4  | A0M  | 4  | R2  |
| 6  | G1  | 1  | G5  | 1  | B3  | 2  | GND  | 3  | PGND | 3  | GND  | 4  | GND  | 4  | R3  |

Product : Mega 14

Model

