



ELECTRONICS

## Product Information

*SAMSUNG TFT-LCD*

**MODEL NO. : LTN141P1-L01**

**SAMSUNG ELECTRONICS CO. LTD.**

|         |              |        |                 |      |       |
|---------|--------------|--------|-----------------|------|-------|
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# GENERAL DESCRIPTION

## DESCRIPTION

LTN141P1-L01 is a color active matrix TFT (Thin Film Transistor) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching devices. This model is composed of a TFT LCD panel, a driver circuit and a backlight system. The resolution of a 14.1" contains 1400 x 1050 pixels and can display up to 262,144 colors. 6 O'clock direction is the Optimum viewing angle.

## FEATURES

- Thin and light weight
- High contrast ratio
- SXGA-Plus((1400x1050) pixels) resolution
- Low power consumption
- DE (Data enable) only mode.

## APPLICATIONS

- Notebook PC and desktop monitors
- Display terminals for AV application products
- Monitors for Industrial machine
- If the usage of this product is not for PC application, but for others, please contact SEC

## GENERAL INFORMATION

| ITEM              | SPECIFICATION                     | UNIT  | NOTE |
|-------------------|-----------------------------------|-------|------|
| Display area      | 285.6(H)X214.2(V) (14.1"diagonal) | mm    |      |
| Driver element    | a-Si TFT active matrix            |       |      |
| Display colors    | 262,144                           |       |      |
| Number of pixel   | 1400 x 1050                       | pixel |      |
| Pixel arrangement | RGB vertical stripe               | mm    |      |
| Pixel pitch       | 0.204(H) x 0.204(V) (TYP.)        |       |      |
| Display Mode      | Normally white                    |       |      |
| Surface treatment | HAZE (25), HARD-COATING (3H)      |       |      |

## Mechanical Information

| ITEM             |                | MIN.  | TYP.  | MAX.  | NOTE |
|------------------|----------------|-------|-------|-------|------|
| Module size (mm) | Horizontal (H) | 298.0 | 298.5 | 299.0 |      |
|                  | Vertical (V)   | 226.0 | 226.5 | 227.0 |      |
|                  | Depth (D)      | -     | 5.9   | TBD   |      |
| Weight           |                | -     | 540   | TBD   |      |

# INPUT Interface Connection

## LVDS

Connector : UJ-FI-SEB-20P-HF13

Mating Connector : JAE FI-SE20M-HF

| PIN NO | SYMBOL   | FUNCTION                     | POLARITY | REMARK         |
|--------|----------|------------------------------|----------|----------------|
| 1      | VDD      | POWER SUPPLY +3.3V           |          |                |
| 2      | VDD      | POWER SUPPLY +3.3V           |          |                |
| 3      | GND      | GROUND                       |          |                |
| 4      | GND      | GROUND                       |          |                |
| 5      | O_RxIN0- | LVDS Differential Data INPUT | Negative | Odd channel 0  |
| 6      | O_RxIN0+ | LVDS Differential Data INPUT | Positive | Odd channel 0  |
| 7      | O_RxIN1- | LVDS Differential Data INPUT | Negative | Odd channel 1  |
| 8      | O_RxIN1+ | LVDS Differential Data INPUT | Positive | Odd channel 1  |
| 9      | O_RxIN2- | LVDS Differential Data INPUT | Negative | Odd channel 2  |
| 10     | O_RxIN2+ | LVDS Differential Data INPUT | Positive | Odd channel 2  |
| 11     | O_RxCLK- | LVDS Differential Data INPUT | Negative | Odd Clock      |
| 12     | O_RxCLK+ | LVDS Differential Data INPUT | Positive | Odd Clock      |
| 13     | E_RxIN0- | LVDS Differential Data INPUT | Negative | Even channel 0 |
| 14     | E_RxIN0+ | LVDS Differential Data INPUT | Positive | Even channel 0 |
| 15     | E_RxIN1- | LVDS Differential Data INPUT | Negative | Even channel 1 |
| 16     | E_RxIN1+ | LVDS Differential Data INPUT | Positive | Even channel 1 |
| 17     | E_RxIN2- | LVDS Differential Data INPUT | Negative | Even channel 2 |
| 18     | E_RxIN2+ | LVDS Differential Data INPUT | Positive | Even channel 2 |
| 19     | E_RxCLK- | LVDS Differential Data INPUT | Negative | Even Clock     |
| 20     | E_RxCLK+ | LVDS Differential Data INPUT | Positive | Even Clock     |

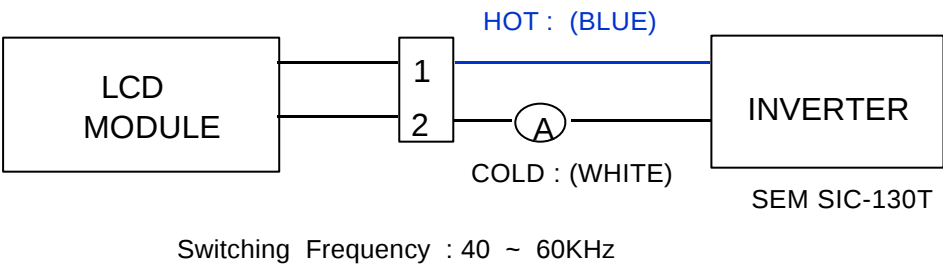
# BACK-LIGHT UNIT

The backlight system is an edge - lighting type with a single CCFT.

Ta = 25 ± 2 °C

| ITEM           | SYMBOL | MIN. | MAX. | UNIT  | NOTE |
|----------------|--------|------|------|-------|------|
| Lamp Current   | IL     | 3.0  | 6.0  | mArms | (1)  |
| Lamp frequency | FL     | 40   | 680  | kHz   | (1)  |

Note 1) Permanent damage to the device may occur if maximum values are exceeded  
Functional operation should be restricted to the conditions described under normal operating condition

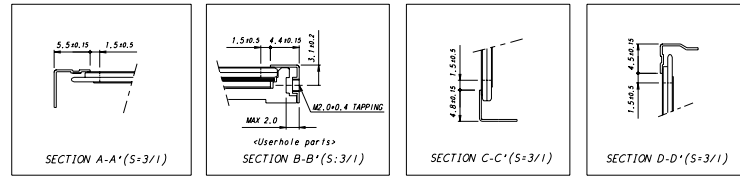
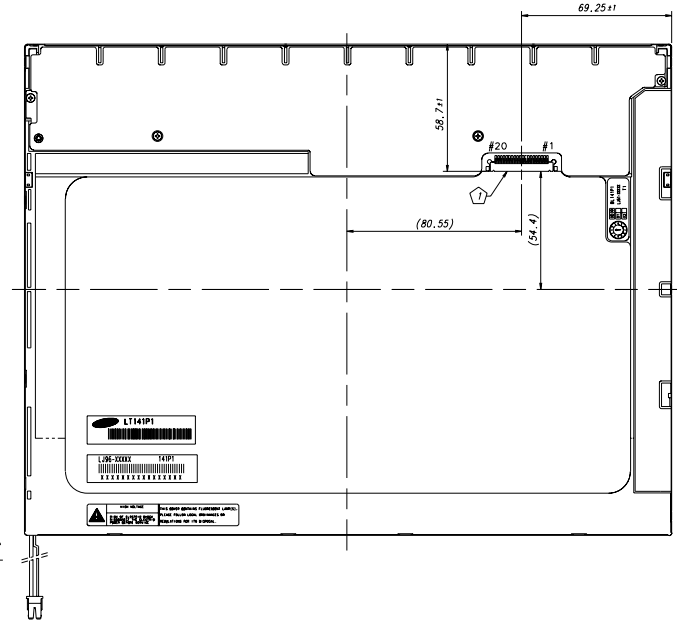
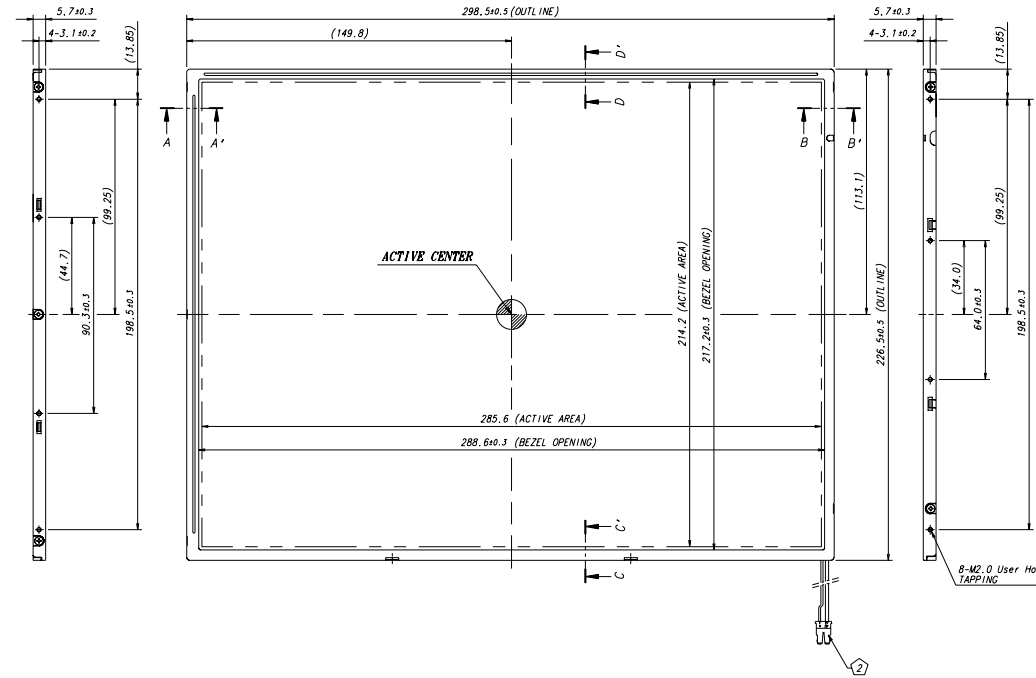


Connector : JST BHSR - 02VS -1  
Mating Connector : SM02B-BHSS-1(JST)

## BACKLIGHT CONNECTOR PIN CONFIGURATION

| Pin NO. | Symbol | Color | Function     |
|---------|--------|-------|--------------|
| 1       | HOT    | Blue  | High Voltage |
| 2       | COLD   | White | Low Voltage  |

| NO | PART NAME | CODE NO | SPECIFICATION | Q'TY | WEIGHT |        | REMARKS |
|----|-----------|---------|---------------|------|--------|--------|---------|
|    |           |         |               |      | THEORY | ACTUAL |         |



\* NOTE

- ① SIGNAL INTERFACE CONNECTOR TO BE SPECIFIED AS BELOW.  
- MAKER : JAE  
- PART NO : F1-SEB20P-HF10
- ② COFT CONNECTOR FOR BACKLIGHT TO BE SPECIFIED AS BELOW.  
- MAKER : JST  
- PART NO : BHSR-02VS-1  
- LAMP DIAMETER :  $\phi 2.0$
- ③ THE LENGTH OF WIRE CAN BE CHANGED BY CUSTOMER REQUIREMENT.

| GENERAL TOLERANCE |         |         |         | REVISION |      |             |             | REASON |        | CHK'D BY | EON |
|-------------------|---------|---------|---------|----------|------|-------------|-------------|--------|--------|----------|-----|
| STEP              | LEVEL 1 | LEVEL 2 | LEVEL 3 | REV      | DATE | DESCRIPTION | BY          | DATE   | REASON |          |     |
| 0 x X x 4         | ±0.05   | ±0.1    | ±0.2    | 1        |      | DESIGN BY   | DESIGNED BY |        |        |          |     |
| 4 x X x 16        | ±0.05   | ±0.1    | ±0.3    | 2        |      | SCALE 1/1   | W.S.#10     |        |        |          |     |
| 16 x X x 64       | ±0.12   | ±0.25   | ±0.5    | 3        |      | TOLERANCE   |             |        |        |          |     |
| 64 x X x 256      | ±0.25   | ±0.4    | ±0.8    |          |      |             |             |        |        |          |     |