



**ELECTRONICS**

## Product Information

*SAMSUNG TFT-LCD*

**MODEL NO. : LTN121X1-L01**

**SAMSUNG ELECTRONICS CO. LTD.**

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## GENERAL DESCRIPTION

### DESCRIPTION

LTN121X1-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 12.1" contains 1,024 x 768 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
- XGA ((1024x768) pixels) resolution
- Low power consumption
- DE (Data enable) only mode.
- 3.3V LVDS (FPD Link) Interface with 1 pixel / clock

### 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	245.76(H)X184.32(V) (12.1"diagonal)	mm	
Driver element	a-Si TFT active matrix		
Display colors	262,144		
Number of pixel	1024 x 768	pixel	
Pixel arrangement	RGB vertical stripe	mm	
Pixel pitch	0.240(H) x 0.240(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)	260.5	261.0	261.5	mm
	Vertical (V)	198.5	199.0	199.5	mm
	Depth (D)	4.9	5.2	5.5	mm
Weight		-	380	396	g

## INPUT Interface Connection

### LVDS

Connector : DF-19L-20P-1H(Hirose)

PIN NO	SYMBOL	FUNCTION	POLARITY	REMARK
1	VDD1	POWER SUPPLY +3.3V		
2	VDD2	POWER SUPPLY +3.3V		
3	GND1	GROUND		
4	GND2	GROUND		
5	RxIN0-	LVDS Differential Data INPUT	Negative	R0~R5 G0
6	RxIN0+	LVDS Differential Data INPUT	Positive	
7	GND3	GROUND		
8	RxIN1-	LVDS Differential Data INPUT	Negative	G1~G5 B0~B1
9	RxIN1+	LVDS Differential Data INPUT	Positive	
10	GND4	GROUND		
11	RxIN2-	LVDS Differential Data INPUT	Negative	B2~B5,DE Hsync,Vsync
12	RxIN2+	LVDS Differential Data INPUT	Positive	
13	GND5	GROUND		
14	RxCLKIN-	LVDS Differential Data INPUT	Negative	
15	RxCLKIN+	LVDS Differential Data INPUT	Positive	
16	GND6	GROUND		
17	NC	No Connection		
18	NC	No Connection		
19	GND7	GROUND		
20	GND8	GROUND		

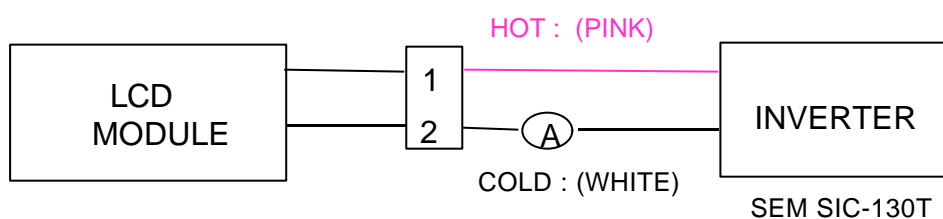
## BACK-LIGHT UNIT

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	6.5	mArms	(1)
Lamp frequency	FL	50	60	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

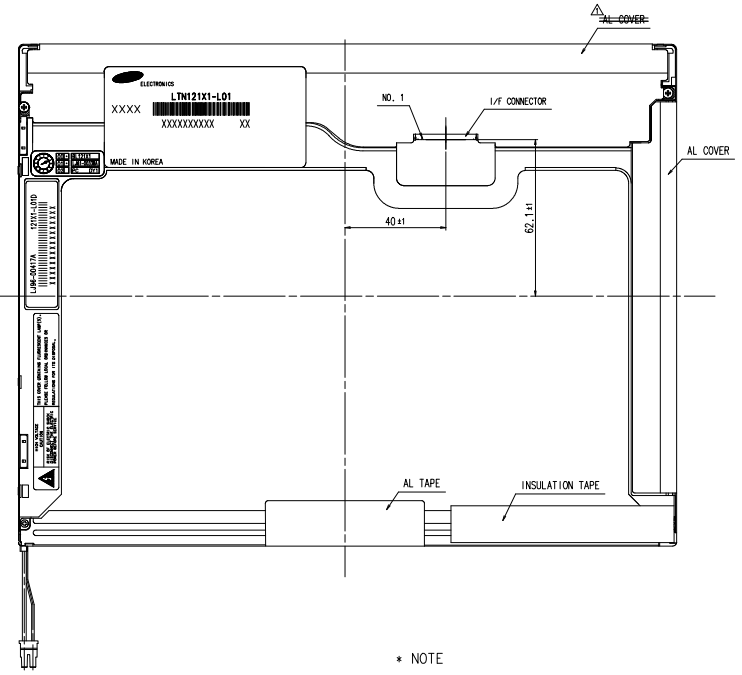
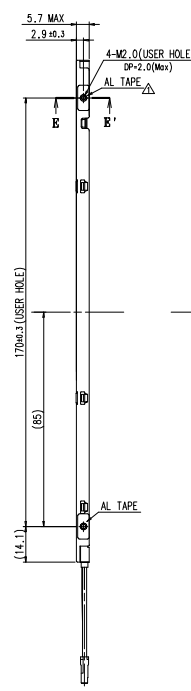
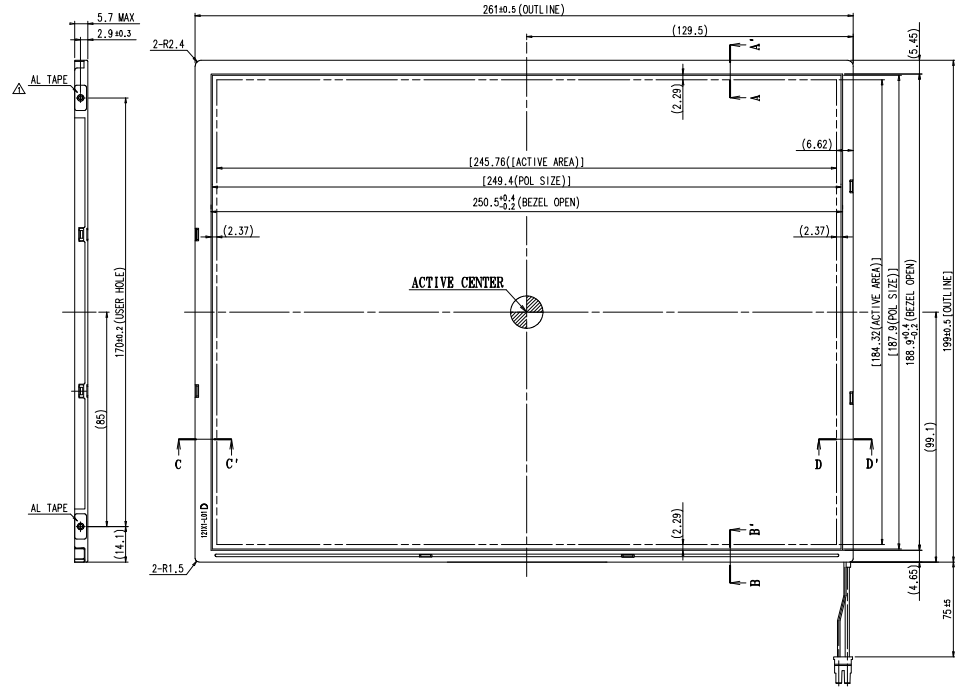
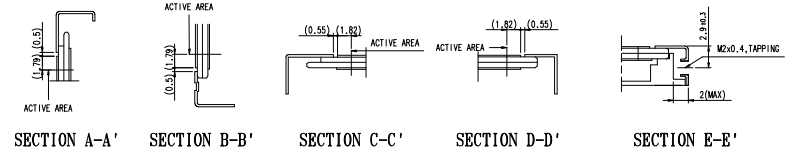


Connector : JST BHSR - 02VS -1

Mating Connector : SM02B-BHSS-1(JST)

### BACKLIGHT CONNECTOR PIN CONFIGURATION

Pin NO.	Symbol	Color	Function
1	HOT	Pink	High Voltage
2	COLD	White	Ground



- \* NOTE
- SIGNAL INTERFACE CONNECTOR TO BE SPECIFIED AS BELOW.
    - MAKER : HIROSE
    - PART NO : DF19L-20P-1H
    - INPUT MATCHING CONNECTOR : DF19G-20S-1SD
  - CCFT CONNECTOR FOR BACKLIGHT TO BE SPECIFIED AS BELOW.
    - MAKER : JST
    - PART NO : SHSR-02VS-1
  - OUTDIMENSION MEASURING METHOD
    - FORCE : 750 ±250g (by : caliper)
  - ALLOWED DEPTH OF USERHOLE SCREW INSERTION IS 2mm MAX.

GENERAL TOLERANCE				REV	DATE	DESCRIPTION OF REVISION	DESIGNED BY	CHECKED BY	APP'D BY	MODEL NAME	REASON	CHG'D BY
0 < X ≤ 4	±0.05	±0.1	±0.2	000	01.08.08	CHANGE OF COVER-PCB & AL-TAPE(2ea->4ea)	SOLUTION OF EMI & POOLING	S.H.LEE		LTN121X1-L01		
4 < X ≤ 16	±0.06	±0.15	±0.3									
16 < X ≤ 64	±0.12	±0.25	±0.5									
64 < X ≤ 256	±0.25	±0.4	±0.8									

STEP	LEVEL 1	LEVEL 2	LEVEL 3	UNIT	SCALE	TOLERANCE	LEVELZ	REV	DATE	DESCRIPTION OF REVISION	DESIGNED BY	CHECKED BY	APP'D BY	MODEL NAME	REASON	CHG'D BY
0	X	4		mm	1/1									LTN121X1-L01		
4	X	16		mm	1/1									LTN121X1-L01		
16	X	64		mm	1/1									LTN121X1-L01		
64	X	256		mm	1/1									LTN121X1-L01		