LCD MODULE SPECIFICATION

MODEL NO.

ST50AN01

FOR MESSRS:

_____

ON DATE OF :

_____

APPROVED BY:

_____ _____ _____

1. APPLICATION

This technical specification applies to 5” color TFT-LCD module, P50AD3.

2. FEATURES

- NTSC system
- Pixel in Delta configuration
- Slim and compact
  Active area / Outline area = 64.3 %
- Aperture Ratio : 64.3%
- Viewing Direction : 6 o’clock

3. MECHANICAL SPECIFICATIONS

Parameter	Specifications	Unit	Remark
Screen Size	5 (diagonal)	inch	
Display Format	600 × 234	dot	
Active Area	102.6(H) × 73.9(V)	mm^2	
Dot Pitch	0.171(H) × 0.316(V)	mm^2	
Pixel Configuration	Delta		
Outline Dimension	127.2(W) × 92.7(H) × 12.9(D)	mm^3	Note 1
Weight	195	g	

Note 1: Refer to Fig. 1

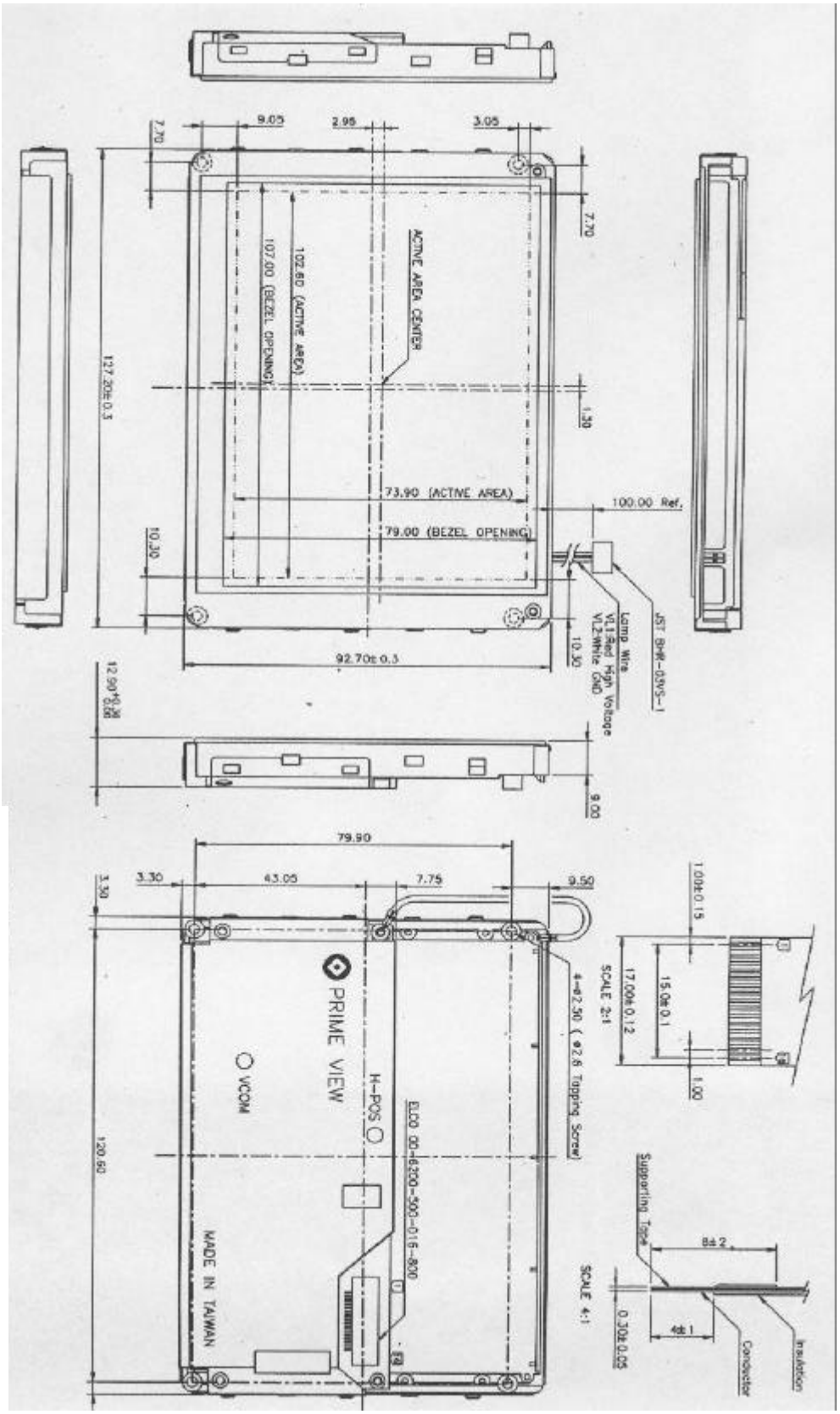

ACTIVE AREA CENTER
107.00 (BEZEL OPENING)
102.60 (ACTIVE AREA)
73.90 (ACTIVE AREA)
79.00 (BEZEL OPENING)
100.00 Ref.
92.70±0.3
127.20±0.3
JST BHR-05VS-1
Lamp Wire
PRIME VIEW
VCOM
H-POS
MADE IN TAIWAN
SCALE 2:1
SCALE 4:1
Supporting Tape
Conductor
Insulation

Fig. 1

4. ELECTRICAL SPECIFICATIONS

4.1 INPUT / OUTPUT TERMINAL

PIN No.	Symbol	I/O	Description	Remark
1	DC IN	I	Power Supply for Board & Panel	Note 2
2	Power Sw		Power Supply On Off	Note 2
3	COLOR VR		For Color Alignment	Note 2
4	CONTRAST VR		For Contrast Alignment	Note 2
5	BRIGHT VR		For Brightness Alignment	Note 2
6	AV IN 1	I	Composite Video / Audio Signal Input	Note 2
7	AV SW		AV IN 1/ AV IN 2 Select	Note 2
8	AV IN 2	I	Composite Video / Audio Signal Input	Notes 2
9	AV OUT	O	Composite Video / Audio Signal Output	Note 2
10	AU OUT	O	Audio Signal Output	Note 2
11	VOLUME VR		For Audio Volume Alignment	Note 2

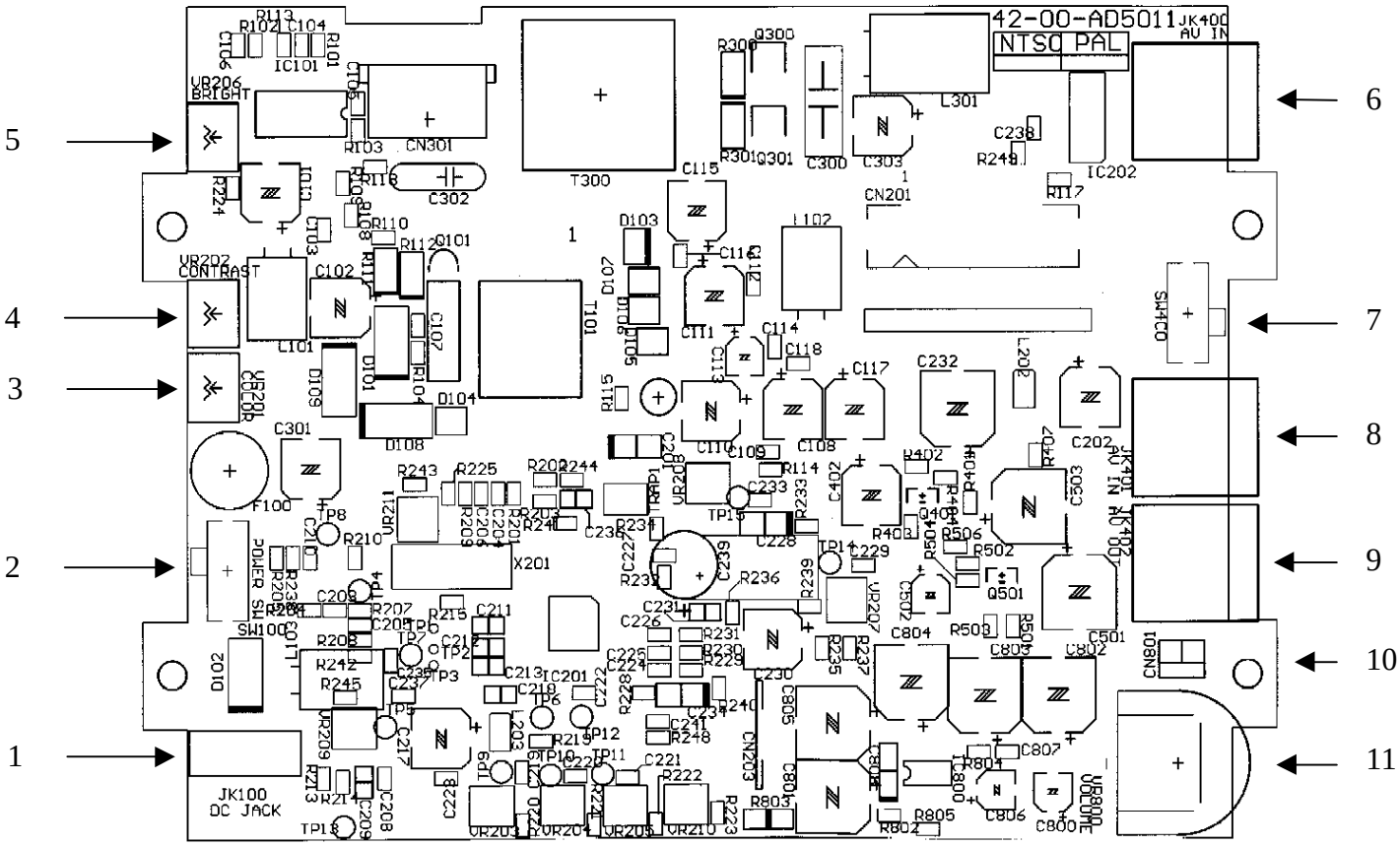
NOTE 2 : Refer to Fig 2

4.2 ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min.	Typical	Max.	Unit	Remark
Composite Signal Video	AV IN 1	0.8Vp-p	1.0Vp-p	1.2Vp-p	V	NOTE 2
	AV IN 2	0.8Vp-p	1.0Vp-p	1.2Vp-p	V	NOTE 2
Composite Signal Audio	AV IN 1	-	-	70	mVRMS	NOTE 2
	AV IN 2	-	-	70	mVRMS	NOTE 2
Supply Voltage	DC IN	10.8	12	13.2	V	NOTE 2
Audio Out	AU OUT			0.1	W	NOTE 2 8OHM

4.3 CURRENT CONSUMPTION

Parameter	Condition	Min	Typ	Max	Unit	Remark
Current for Unit	Vcc=12V	-	-	500	mA	



5. OPTICAL CHARACTERISTICS

5-1.SPECIFICATION:

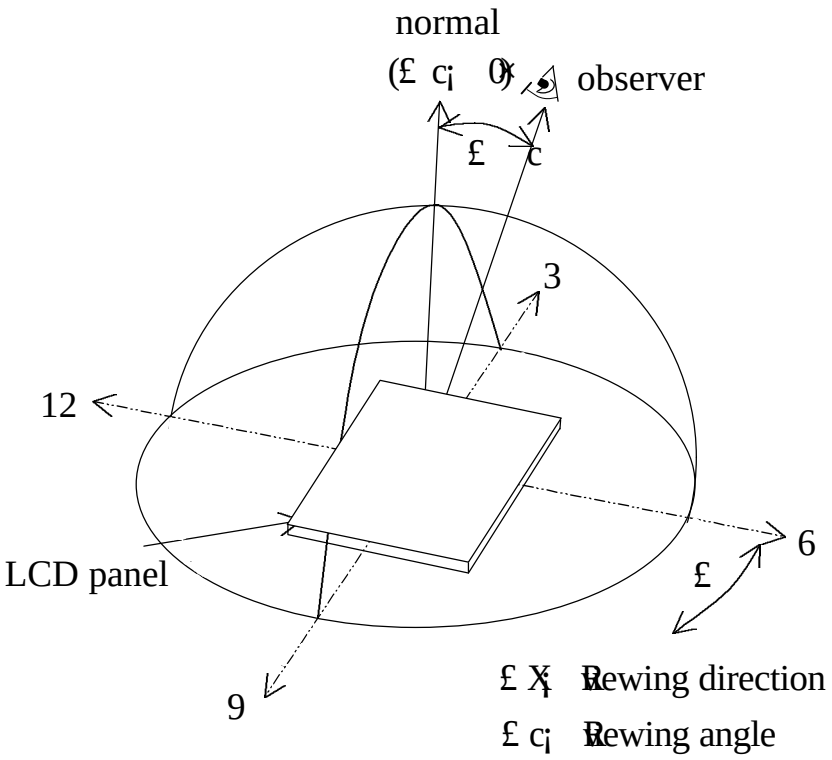
Ta¡ 25¢ J

Parameter		Symbol	Condition	MIN.	TYP.	MAX.	Unit	Remarks
Viewing Angle	Horizontal	£ c	CR¡ 10Ö	¡ 40	¡ 50		deg	
	Vertical	£ (to 12 o'clock)		10	15		deg	
		£ (to 6 o'clock)		-30	-35		deg	
Contrast Ratio		CR		80	120			Note 1
Response time	Rise	Tr	£ c¡ 0¢ X		30		ms	
	Fall	Tf			50		ms	
Transmittance	Ratio	T			5.0		¢ H	
Reflectance	Ratio	R			5.5		¢ H	
Brightness				200	240		cd/m^2	Note 2
White Chromaticity		x			.300			Note 2
		y			.342			Note 2
Red Chromaticity		x			.605			
		y			.355			
Green Chromaticity		x			.275			
		y			.633			
Blue Chromaticity		x			.146			
		y			.082			
Lamp Life Time	¡ 25¢ J			10,000			hr	
	¡ 30¢ J			2,000			hr	

Note 1 ¡ CR ¡ $\times \dfrac{\text{Luminance when LCD is White}}{\text{Luminance when LCD is Black}}$

Note 2 ¡ Topcon BM-7 luminance meter is used in the testing (after 10 minutes operation).

5-2 View Angle Diagram:



6. RELIABILITY TEST

NO	Test Item	Test Condition
1	High Temperature Storage Test	Ta ¡ ×† 80¢ J, 240 hr
2	Low Temperature Storage Test	Ta ¡ ×† 30¢ J, 240 hr
3	High Temperature Operation Test	Tp ¡ ×† 60¢ J, 240 hr
4	Low Temperature Operation Test	Tp ¡ ×† 10¢ J, 240 hr
5	High Temperature & High Humidity Operation Test	Tp ¡ ×60¢ J, 95¢ HRH , 240 hr
6	Thermal Cycling (non-operating)	¡ 25¢ J¡ † 25¢ J¡ † 70¢ J, 200 Cycle 30 min 5 min 30 min
7	Vibration Test (non-operating)	Frequency ¡ R10 ¡ 55 Hz Amplitude ¡ R1.5 mm Gravity ¡ RG Sweep time ¡ R5 min Test period ¡ R2 hr for each direction of X, Y, Z
8	Shock Test (non-operating)	Max Gravity ¡ 50 G Direction ¡ R¡ XÓ, ¡ YÓ, ¡ ZÓ Cycle ¡ 3 one cycle¡ each direction
9	Electrostatic Test	¡ 200 V , 200 pF (0)) one cycle ¡ per terminal

Ta¡ Ambient temperature

Tp¡ Panel temperature