



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

- NES system
- PEI in Delta configuration
- SE 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 × 480	dot	
Active Area	102.6(H) × 61.9(V)	mm ²	
Dot Pitch	0.171(H) × 0.161(V)	mm ²	
Pixel Configuration	Delta		
Outline Dimension	127.2(W) × 61.7(H) × 6.9(D)	mm ³	Note 1
Weight	195	g	

Note 1: Refer to Fig. 1

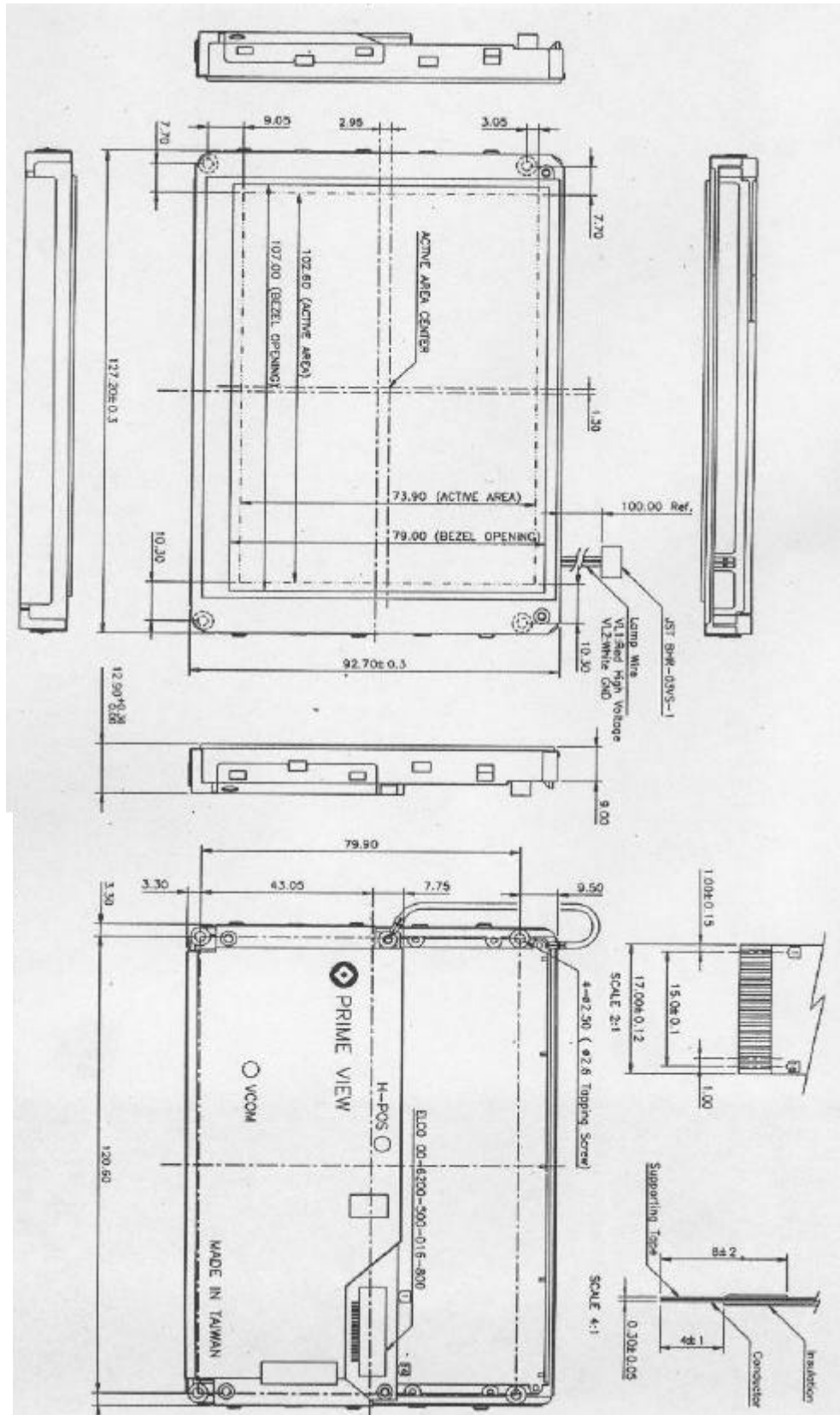


Fig. 1



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



5. OPTICAL CHARACTERISTICS

5-1. SPECIFICATION:

Taj 24 J

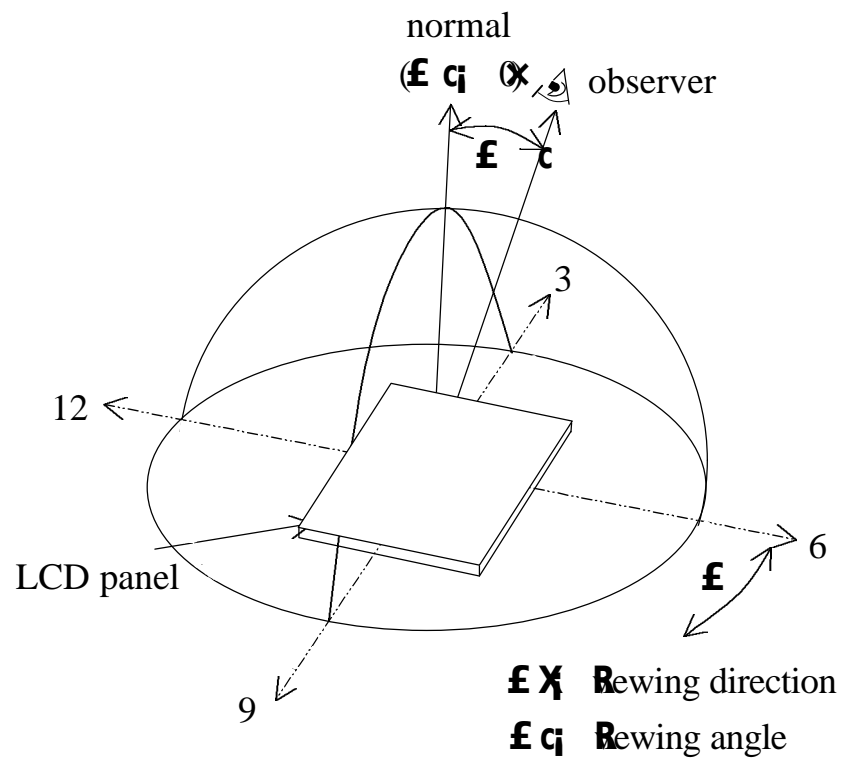
Parameter		Symbol	Condition	MIN.	TYP.	MAX	Unit	Remarks
Viewing Angle	Horizontal	θ_c	CR _i 0	$i \ominus$	$i \ominus$.	deg	
	Vertical	θ_{12} (to 12 o'clock)		10	15		deg	
		θ_6 (to 6 o'clock)		-30	-35		deg	
Contrast Ratio		CR		80	120			Note 1
Response time	Rise	Tr	$\theta_c \otimes X$		30		ms	
	Fall	Tf			50		ms	
Transmittance	Ratio	T			5.0		ϕ H	
Reflectance	Ratio	R			5.5		ϕ 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	$i \otimes J$			10,000			hr	
Time	$i \otimes J$			2,000			hr	

Note 1 $i \otimes J$ $\times \frac{\text{Luminance when LCD is White}}{\text{Luminance when LCD is Black}}$

Note 2 $i \otimes J$ 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 i 8 J, 240 hr
2	Low Temperature Storage Test	Ta i 1 J, 240 hr
3	High Temperature Operation Test	Tp i 6 J, 240 hr
4	Low Temperature Operation Test	Tp i 1 J, 240 hr
5	High Temperature & High Humidity Operation Test	Tp i 30 J, 95% HRH, 240 hr
6	Thermal Cycling (non-operating)	i 1 Ji + 2 1 Ji + 7 1 J, 200 Cycle 30 min 5 min 30 min
7	Vibration Test (non-operating)	Frequency i 10 5 Hz Amplitude i 15 mm Gravity i 1 G Sweep time i 15 min Test period i 1 hr for each direction of X, Y, Z
8	Shock Test (non-operating)	Max Gravity i 10 G Direction i 1 0 i 0 i 0 Cycle i 1 ne cycle; 1 ach direction
9	Electrostatic Test	i 200 V, 200 pF (1 i one cycle i 1 or terminal

Ta: Ambient temperature

Tp: Panel temperature