

VIDEOLOGY®

IMAGING SOLUTIONS INC.

Instruction Manual

45S10 10.2" LCD Module

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Doc # INS-45S10	Issue Date: 10/30/2007
Revision: A	Page 1 of 11

Table Of Contents

1.	Scope of Work	3
2.	History.....	3
3.	Specifications.....	3
4.	Optical Specifications	3
5.	Pin assignment	4
6.	Inspection Standard.....	6
6.1.	Inspection Environment Conditions.....	6
6.2.	Classification of Defects	6
7.	Reference of The Input Application.....	7
7.1.	Drive Board w/Input Connectors/ Function Key Board	7
7.1.1.	Key Operation Manual.....	7
7.2.	PCB Mechanical Dimensions.....	8
8.	Mechanical Drawing (PANEL only)	9
9.	Contact.....	11

1. Scope of Work

These specifications shall be applied to: 45S10, 10.2"color TFT LCD module.

2. History

Revision	Issue Date	Reason	CN#
Rev A	08-22-2007	Initial release	07-0195

3. Specifications

Display	10.2" color TFT LCD (16:9)
Number of dots	800 x (R.G.B) x 480
Active Area	222(W) x 133.2(H)
Dot Pitch	0.1905(W) x 0.1905 (H)
Color Configurations	R.G.B stripe
Display Color	262144
Back Light	CCFT
Input Signal	1 CH Composite video Input (RCA x 1) NTSC/PAL auto switchable. S-Video Input (4 Pin Min Din x 1) PC-D Sub. Input. SVGA.
Audio Input	1CH RCA Input (Option)
Audio Output	2W(Optional)
Power Input Voltage	DC12±10%
Power Consumption	8.5W
External Control	OSD Function Control: Video: Contrast. Brightness. Color. Hue (NTSC only). Saturation, Sharpness, Color Temp (Warm, Cool), Display (Full, 4:3)
Operating Temperature	-10°C~60°C
Storage Temperature	-30°C~85°C
Overall Dimension	235(W) x 145.8(H) x 5.9(D) (Panel only)
Weight	305±10g (Panel only)

4. Optical Specifications

Lamp Life-time	40,000hr min. (at Temp =25°C)
Viewing Angle (min.)	Right 60 deg Left 60 deg Up 50 deg Down 60 deg
Brightness	450 nit (typ.)
Contrast Ratio	300:1 typical
Response Time	Tr: 12 ms Tf: 18ms (Typ)

5. Pin assignment

TFT-LCD Panel Driving Section

Pin no	Symbol	I/O	Description	Remark
1	(POL)	O	Polarity selection	
2	DIO2	O/P	Vertical start pulse signal input or output	
3	OE	I	Output enable	
4	CPV	I	Vertical clock	
5	DIO1	I	Vertical start pulse signal input or output	
6	GND	I	Power ground	
7	(EDGSL)	I	Select rising edge or rising/falling edge	
8	VCC	I	Digital voltage for source driver	
9	(V12)	I	Gamma voltage level 12	
10	VGL	I	Gate OFF voltage	
11	(V14)	I	Gamma voltage level 14	
12	VGH	I	Gate ON voltage	
13	(V13)	I	Gamma voltage level 13	
14	U/D	I	Up/down selection	
15	VCOM1	I	Common voltage	
16	GND	I	Power ground	
17	AVDD1	I	Power supply for analog circuit	
18	V10	I	Gamma voltage level 10	
19	V8	I	Gamma voltage level 8	
20	V6	I	Gamma voltage level 6	
21	V4	I	Gamma voltage level 4	
22	V2	I	Gamma voltage level 2	
23	GND	I	Power ground	
24	R5	I	Red data (MSB)	
25	R4	I	Red data	
26	R3	I	Red data	
27	R2	I	Red data	
28	R1	I	Red data	
29	R0	I	Red data (LSB)	
30	GND	I	Power ground	

Pin no	Symbol	I/O	Description	Remark
31	GND	I	Power ground	
32	G5	I	Green data (MSB)	
33	G4	I	Green data	
34	G3	I	Green data	
35	G2	I	Green data	
36	G1	I	Green data	
37	G0	I	Green data (LSB)	
38	STHL	I/O	Horizontal start pulse signal input or output	
39	INV	I	Control signal are inverted or not	
40	GND	I	Power ground	
41	DCLK	I	Sample clock	
42	DVDD	I	Voltage for digital circuit	
43	STHR	I/O	Horizontal start pulse signal input or output	
44	LD	I	Latches the polarity of outputs and switches the new data to outputs	
45	B5	I	Blue data (MSB)	
46	B4	I	Blue data	
47	B3	I	Blue data	
48	B2	I	Blue data	
49	B1	I	Blue data	
50	B0	I	Blue data (LSB)	
51	R/L	I	Right/ left selection	
52	V1	I	Gamma voltage level 1	
53	V3	I	Gamma voltage level 3	
54	V5	I	Gamma voltage level 5	
55	V7	I	Gamma voltage level 7	
56	V9	I	Gamma voltage level 9	
57	V11	I	Gamma voltage level 11	
58	AVDD2	I	Voltage for analog circuit	
59	GND	I	Power ground	
60	VCOM2	I	Common voltage	

6. Inspection Standard

6.1. Inspection Environment Conditions

Room Temperature: 20 ~ 25°C

Humidity: 65±5% RH

The viewing line should be perpendicular to the surface screen.

6.2. Classification of Defects

Dot Defect

A. Inspection condition

Inspection distance: 35±5cm

Inspection illumination: 100~150Lux

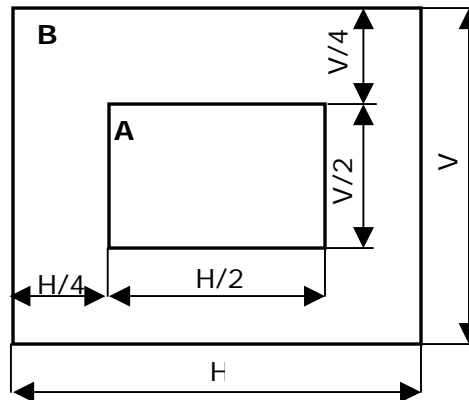
Panel temperature: 30±5°C

Inspection pattern: Full white, full black, red, green and blue screens.

B. Acceptable

Item	Area		Total
	A	B	
Blue Black	2	3	4
Red Green White	1	3	3
Total	2	5	7

C. The definitions of A and B zone



Scratch on the polarizer

Number = 3 max.

Width \leq 0.1 mm, Length \leq 6 mm

Dent on the polarizer

Number = 3 max., Average Diameter \leq 0.3 mm

Foreign material on the polarizer

Number = 2 max, Average Diameter \leq 0.5 mm

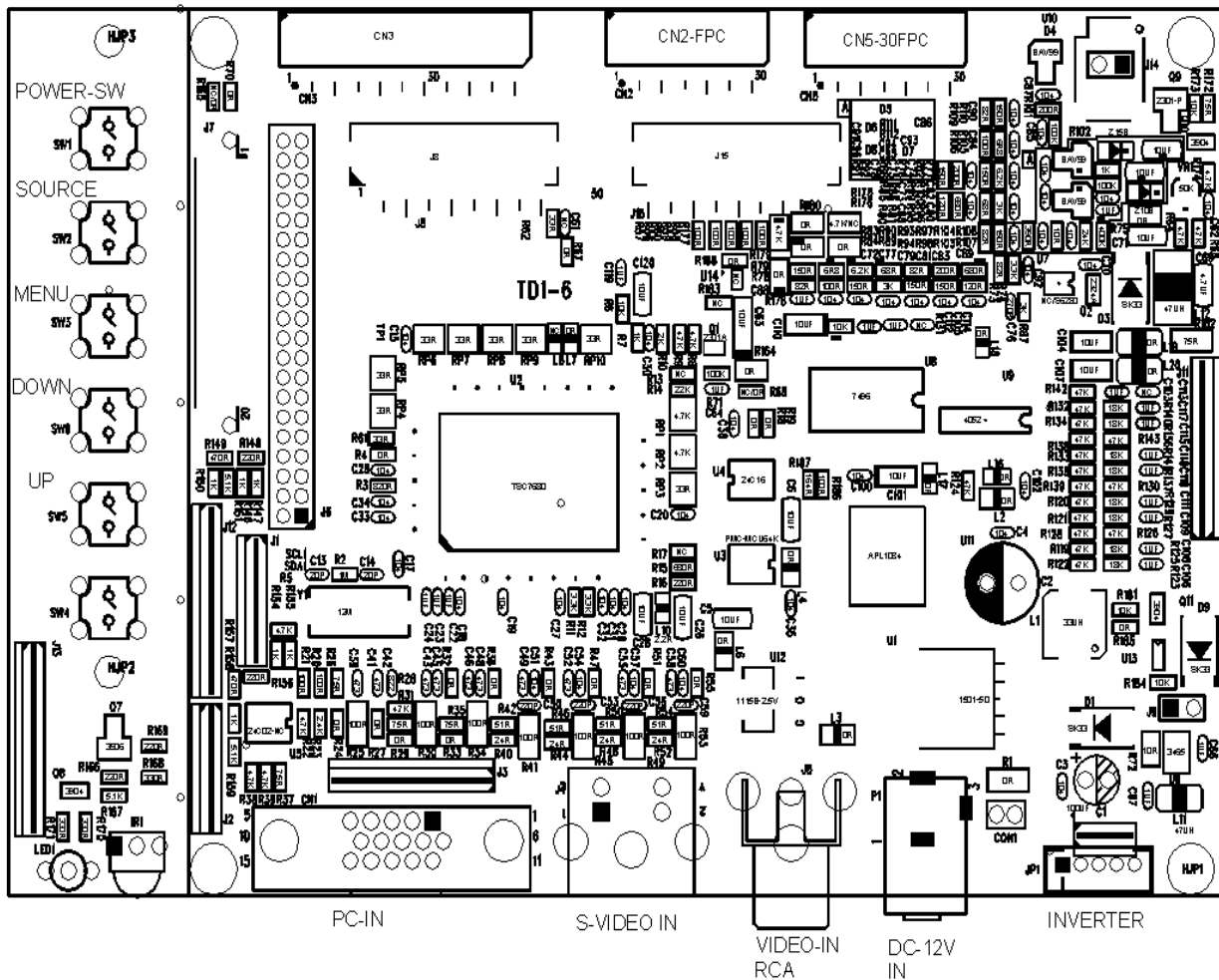
Afterimage

After displaying a pattern for 5 seconds then switch to a different pattern, the previous pattern should disappear within 10 seconds.

Doc # INS-45S10	Issue Date: 10/30/2007
Revision: A	Page 6 of 11

7. Reference of The Input Application

7.1. Drive Board w/Input Connectors/ Function Key Board

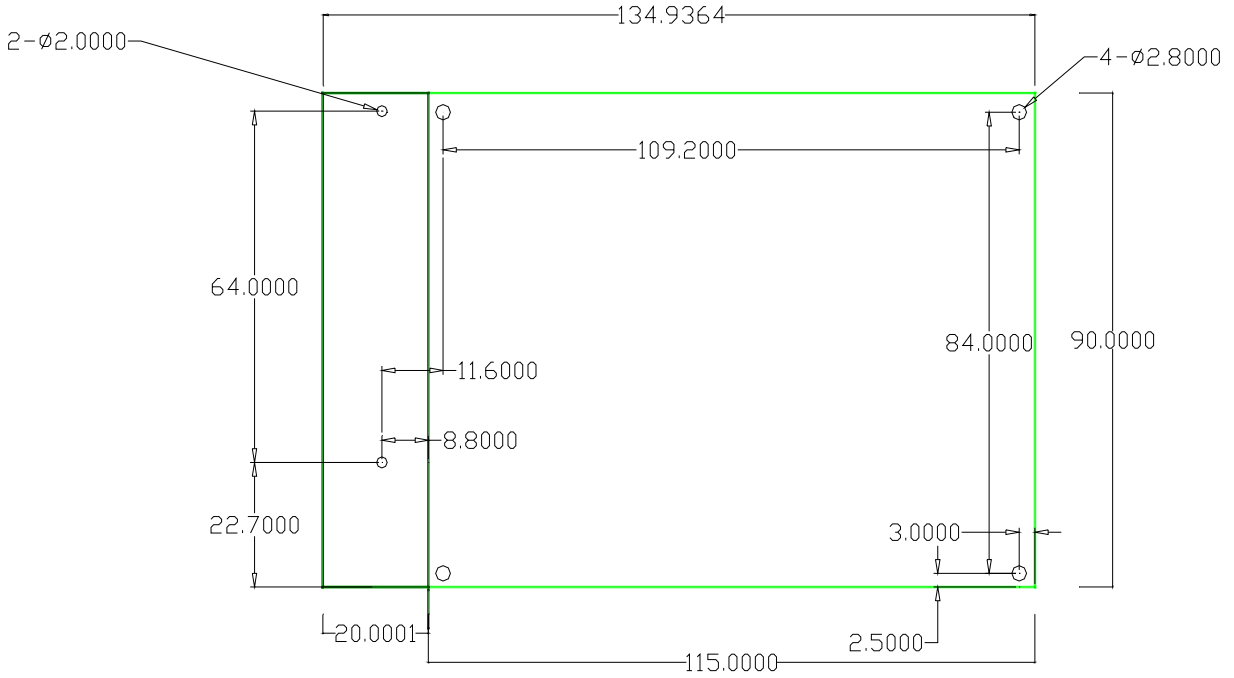


7.1.1. Key Operation Manual

1. Press "POWER" to switch on the LCD monitor.
2. Press "Source" to select: AV1 -> S-Video -> PC.
3. Press "MENU" to get into the OSD operator: Contrast. Brightness. Color, Hue (NTSC only). Saturation, Sharpness, Color Temp (Warm, Cool), Display (Full, 4:3).
4. Press "UP" & "DOWN" to increase or decrease the setting.
5. Press "POWER" to switch off the power.

Doc # INS-45S10	Issue Date: 10/30/2007
Revision: A	Page 7 of 11

7.2. PCB Mechanical Dimensions



Doc # INS-45S10	Issue Date: 10/30/2007
Revision: A	Page 8 of 11

8. Mechanical Drawing (PANEL only)

- Note:** 1: 6'O'CLOCK DIRECTION IS THE OPTIMUM VIEWING ANGLE
 2: GENERAL TOLERANCE : 0.3mm
 3: Connector : BHSR-02VS-1

Figure 1. Outline dimensions of TFT-LCD module (Front Side)

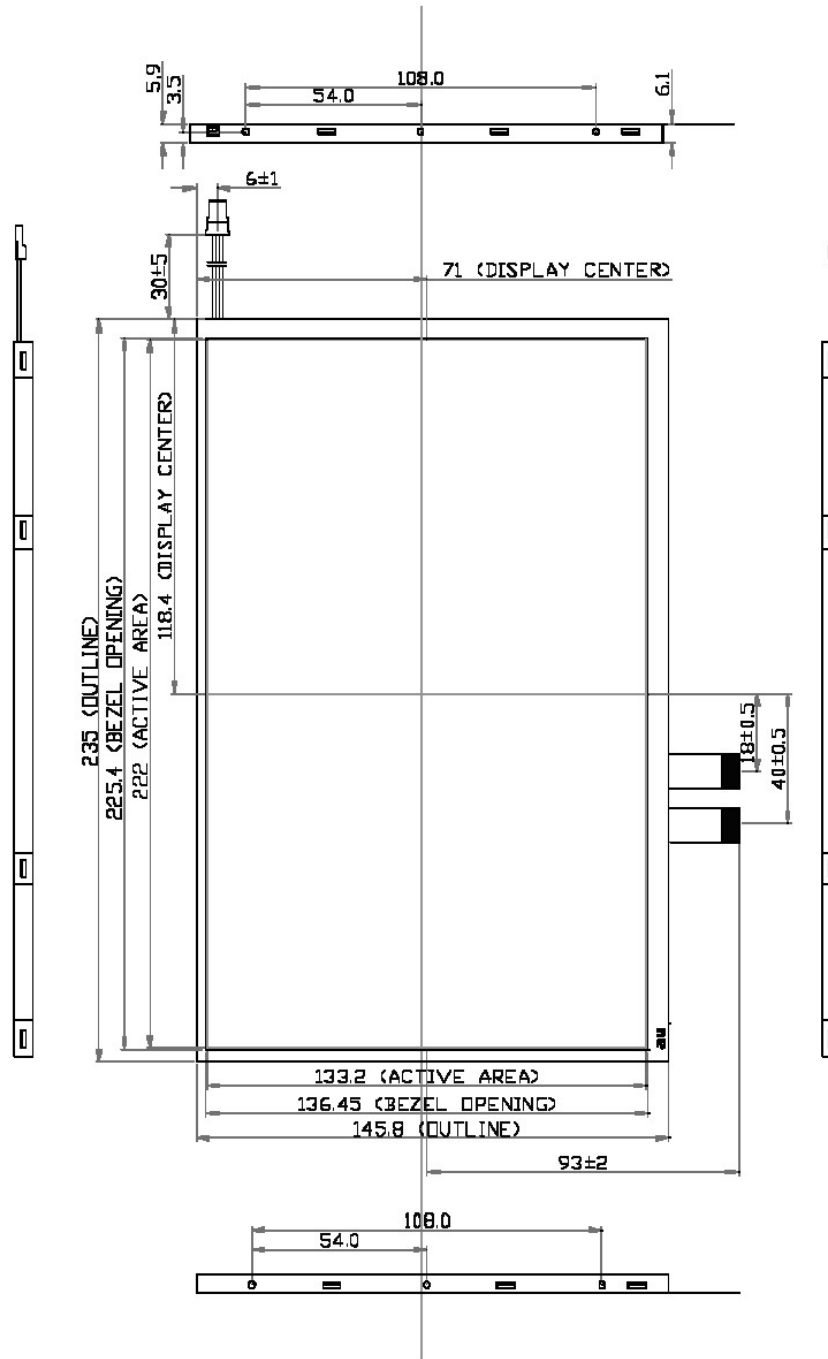
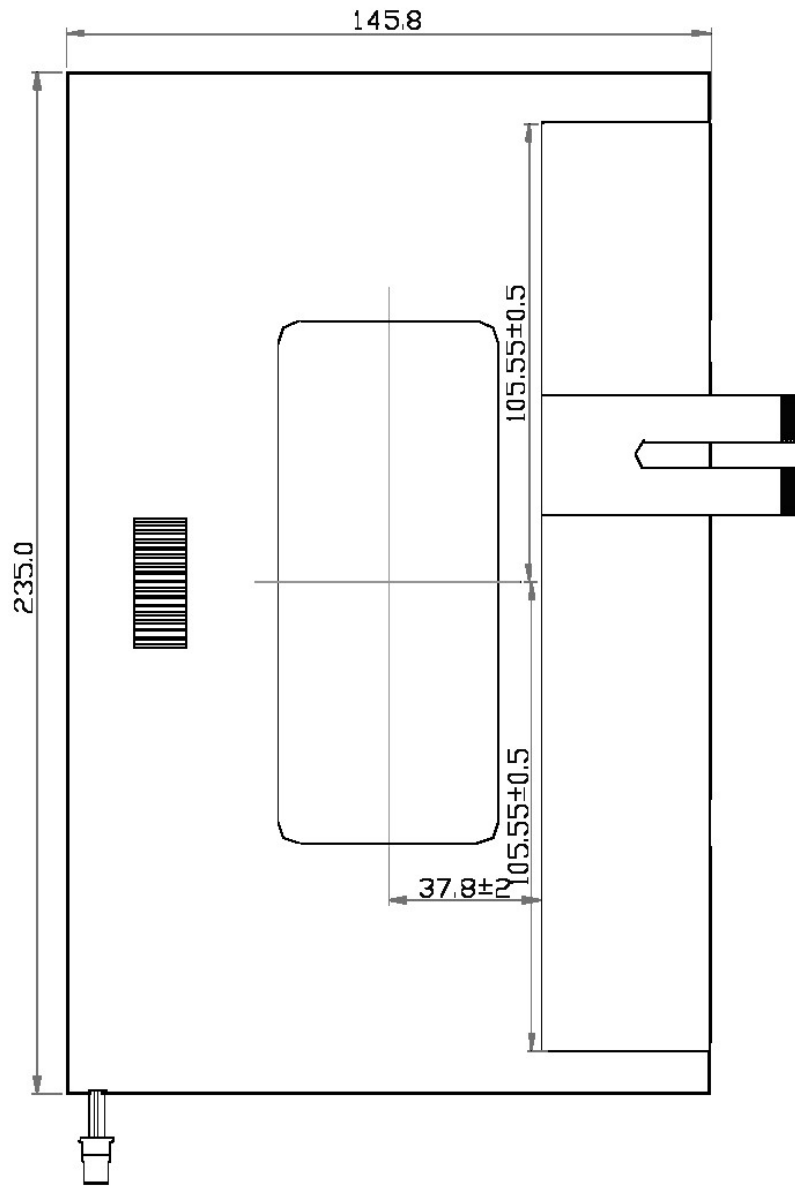


Figure 2. Outline dimensions of TFT-LCD module (Rear Side)



9. Contact

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Doc # INS-45S10	Issue Date: 10/30/2007
Revision: A	Page 11 of 11