 Good Display	LCD MODULE SPECIFICATIONS	SPEC NO	
	GD40M05-GTM040HS	REV NO	1.0

Good Display Specifications

Type: 4inch TFT LCD module
Model No. GD40M05-GTM040HS
Description:


- 4", 320 x RGB x 240 dots
- Supports CVBS/Video input
- RoHS Compliant

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Issue Date: 2011.12.31



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1. Notice: Important Safety Instructions

- 1.1 The nominal voltage of DC input to the A/D board is 12V, The size of DC current depends on the TFT LCD panel. Please note that your AC/DC adapter's output plug need to match the DC input jack, the diameter of the jack is 5.5 mm.
- 1.2 Before connecting these input/output ports, Video port, it is strongly recommended that your turn off the A/D board and remove the DC 12V plug from the DC input jack.
- 1.3 Don't put the A/D board into an airtight package. When it works, it will produce a certain heat.
- 1.4 When assembling it, please use a suitable force; don't distort the PCB and other components.

CAUTION: Information in this document is subject to change without notice. Please contact us if you have any questions or suggestions

2. Technical Specifications

2.1 Features:


- GD40M05-GTM040HS TFT LCD module includes:
JD40M05 AD board, GTM040HS54DYH0-A0 4" Digital TFT LCD panel, Keypad board/ Rotation Potentiometer, Power cable and Video cable
- DC/ DC & LED Backlight Driver & Video Decoder All In One
- NTSC / PAL System automatic identifying and converting
- Single Operation Voltage +12.0V
- Supports Video Signal Input
- All Functions can be controlled by OSD menu
- This product is RoHS compliant

2.2 Applications:


- Video Game Display
- Security
- Portable TV
- Office Electronics
- Industrial
- Instrument Display

3. General Specifications:

Item	Specifications	Unit
Model name	GD40M05-GTM040HS-X	
Screen size	4.0 (diagonal)	inch
Display ratio	4:3	
Resolution	320(RGB)x240	
Backlight	LED	
Brightness	320	cd/m ²
LED life time	30000(Typ.)	hr
View angle	60/70/75/75 (U/D/L/R)	°
Input/output interface	Video	
Display dimension	96.0(W)x76.0(H)x3.2(D)	mm
Active area	82.08(H)x61.56(V)	mm
A/D board dimension	62.0 (W)x55.2 (H)x9.1 (D)	mm
Operation voltage	DC12.0(Typ.)	V
Input current	DC 120±10	mA
Power consumption	1.44	W
Start time	1.3	s
Operation temperature	-10 to 60	°C
Storage temperature	-30 to 80	°C
Humidity	5~95	%RH

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4. Ordering Information

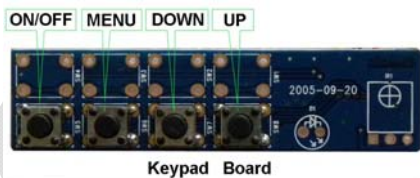
Parameter	GD40M05-GTM040HS	GD40M05-GTM040HS-P	Unit	
Support Video input	Yes	Yes		
Support VGA input	No	No		
Touch panel	Without	Without		
Parts	4" LCD Panel+A/D board+Power Cable+Video Cable+Keypad Board	4" LCD Panel+A/D board+Power Cable+Video Cable+ Rotation Potentiometer		
Unit module net weight	0.09	0.09	Kg	
Packing Information				
Box Information				
	Box Tare Weight:	0.06Kg	0.1Kg	1.5Kg
LCD Modules Capacity	Package Dimension:	23.0x14.0x4.0cm	24.0x17.0x9.0cm	52.0x27.0x28.0cm
		2sets	4sets	56sets
Remark: The above packing information is just for your reference, and we will choice the suitable outer carton for you on your quality ordered.				

5. The photos of the product.



6. Setting the TFT LCD module

6.1 By Keypad board. (For GD40M05-GTM040HS)



6.1.1 Key operation, the keypad includes < ON/OFF>, < MENU>, < DOWN>, <UP>

The description of each key:


< ON/OFF>: Press the <ON/OFF> key on the keypad to turn the backlight ON or OFF. But this is not shutting off the power supply from AC/DC adapter, this only let the module into standby (power saving) status. If you want to shut off the power supply entirely, please pull the DC plug of the AC/DC adapter out from the DC input connector of the module.

<MENU>: Press the <MENU> key to pop the OSD menu on no menu status, or exit present menu level to its father menu level. The <MENU> key is the key to confirm also, it confirms your operation.

<DOWN>: Press the <DOWN> key to move the cursor (highlight bar) from "down" to "up" on the OSD menu, or reduce the parameters value from "large" to "small". These parameters are such as Brightness, Contrast, Volume, etc.. In addition, it is a shortcut key to decrease the volume value at no menu status.

<UP>: Press the <UP> button to move the cursor(highlight bar) from "up" to "down" on the OSD menu, or increase the

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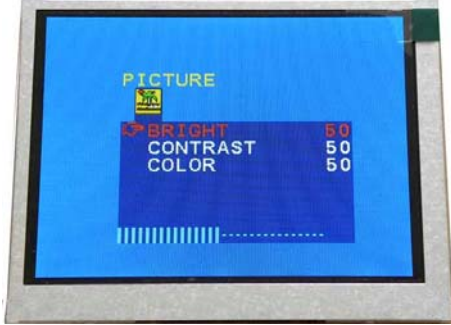
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parameters value from “small” to “large”. These parameters are such as Brightness, Contrast, Volume, etc. In addition, it is a shortcut key to increase the volume value at no menu status.

6.1.2 OSD menu introduction (On Screen Display)

Press the <Menu> button, pop the top main menu.

Main OSD menu contains the following submenu as below: BRIGHT, CONTRAST, COLOR, EXIT.



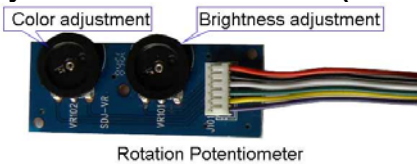
BRIGHT: When you press the <Menu> button move the cursor to the BRIGHT bar on the OSD menu, you can press <Down> button or <Up> button to adjust the image brightness value.

CONTRAST: When you press the <Menu> button move the cursor to the CONTRAST bar on the OSD menu, you can press <Down> button or <Up> button to adjust the image contrast value.

COLOR: When you press the <Menu> button move the cursor to the COLOR bar on the OSD menu, you can press <Down> button or <Up> button to adjust the image color value.

EXIT: When you press the <Menu> button move the cursor to the EXIT bar on the OSD menu, then press <Down> or <Up> button to confirm the EXIT operation, it will exit the present level menu to its father level menu.

6.2 By Rotation Potentiometer. (For GD40M05-GTM040HS-P)



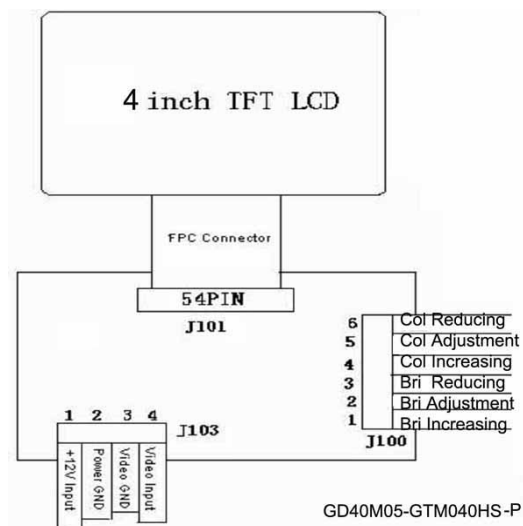
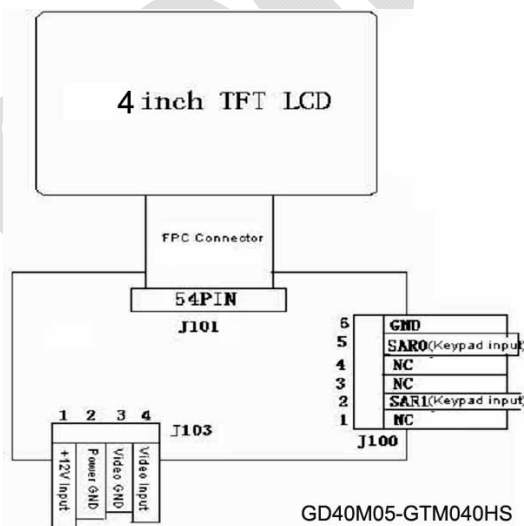
6.2.1 Knob operation, the Rotation Potentiometer includes < Color Adjustment> and < Brightness Adjustment> two knobs.


The description of each Knob:

< Color Adjustment>: Rolling the knob to adjust the image color value, turn left to reduce the image color value and turn right to increase the image color value.

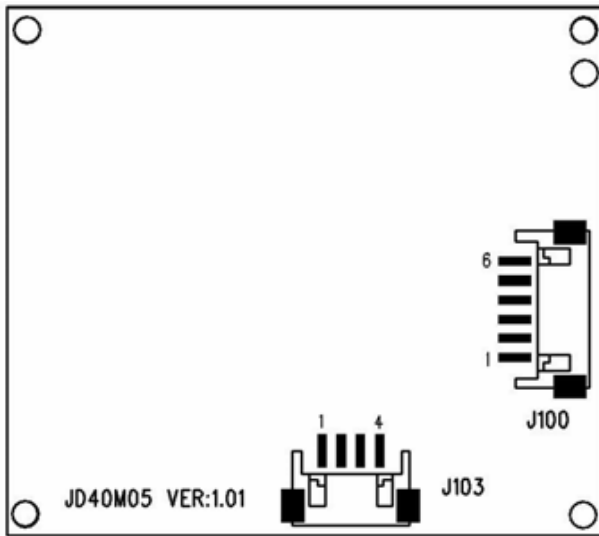
< Brightness Adjustment>: Rolling the knob to adjust the image brightness value, turn left to reduce the image brightness value and turn right to increase the image brightness value.

7. Connection diagram

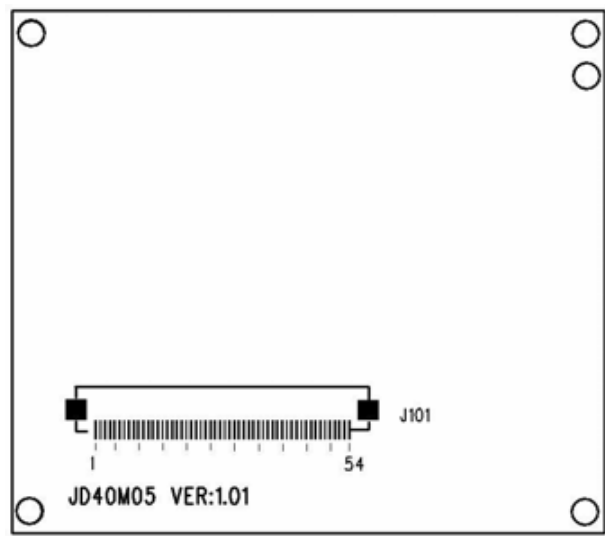


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A/D board Front side:

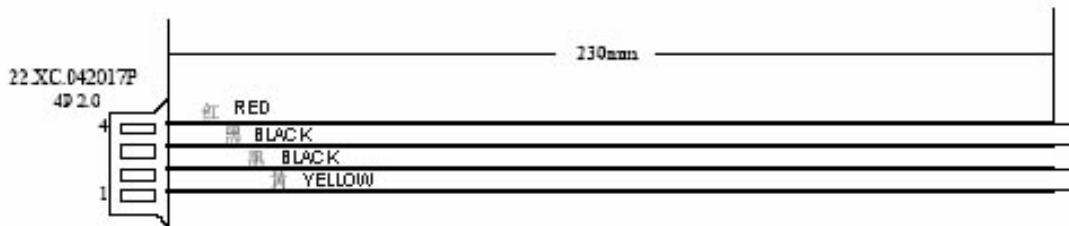


A/D board Back side:



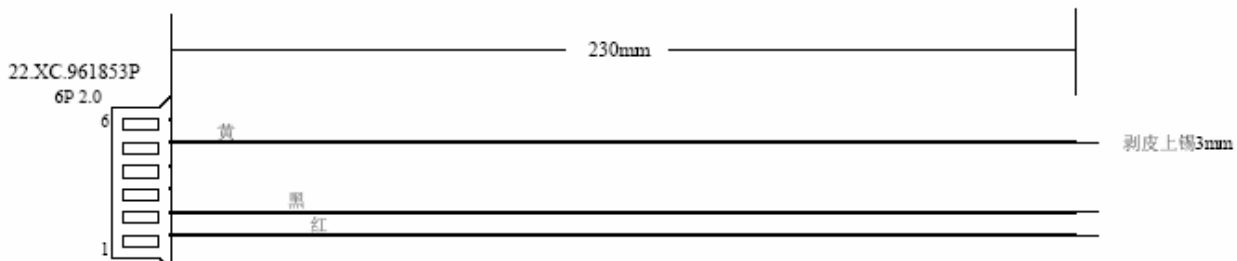
Cable description:

- The length of Power supply and Video cable is 230mm, Part number is 22.XC.042017P, 4 PINs (pitch:2.0 mm)




No.	Cable Color	Function	Remark
1	Yellow	Video signal input	CVBS
2	Black	Video GND	GND
3	Black	Power supply GND	GND
4	Red	DC +12V input	+12V

- The length of Keypad Cable is 230mm, Part number is 22.XC.961853P, 6 PINs (pitch:2.0 mm)



No.	Cable Color	Function	Remark
1	Red	Power Ground	GND
2	Black	Keypad Input	SAR0
3	White	No Connection	NC
4	Green	No Connection	NC
5	Yellow	Keypad Input	SAR1
6	Purple	No Connection	NC

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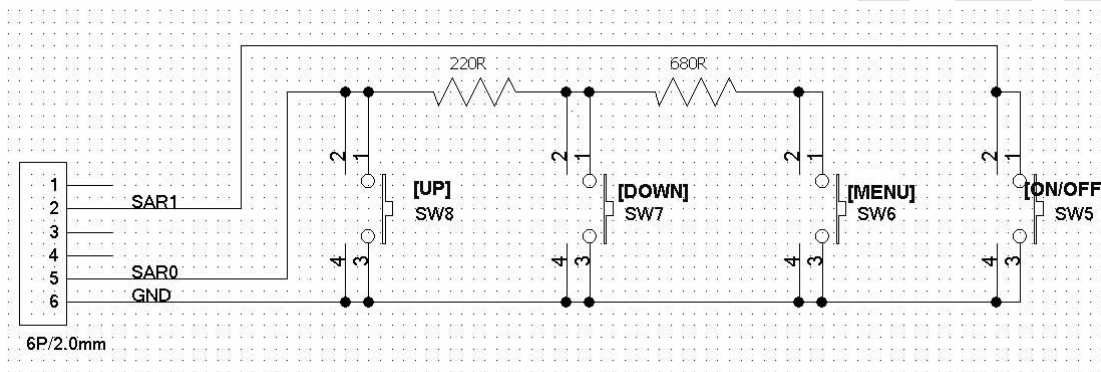
8. The interface definition of the A/D board:

8.1 J103 interface definition:

PIN No.	Symbol	I/O	Description
1	+12V		DC power supply input
2	GND	-	GND
3	GND	-	GND
4	Video		Video signal input

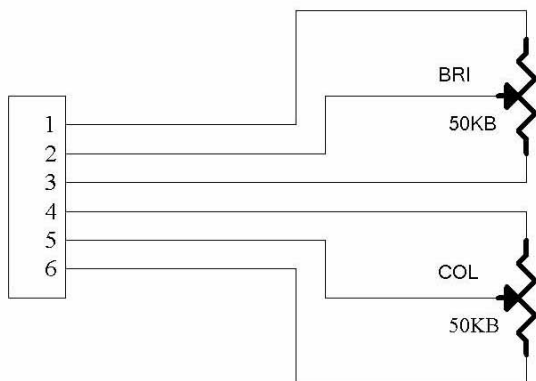
8.2 J100 interface definition for GD40M05-GTM040HS:

PIN No.	Symbol	I/O	Description
1	NC	-	No Connection
2	SAR1		Keypad Input
3	NC	-	No Connection
4	NC	-	No Connection
5	SAR0		Keypad Input
6	GND		GND



8.3 J100 interface definition for GD40M05-GTM040HS-P:

PIN No.	Symbol	I/O	Description
1	BRI+		Brightness Increasing
2	BRI	-	Brightness Adjustment
3	BRI-		Brightness Reducing
4	COL+		Color Increasing
5	COL	-	Color Adjustment
6	COL-		Color Reducing



9. TFT LCD Panel Mechanical Drawing



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LCD MODULE SPECIFICATIONS

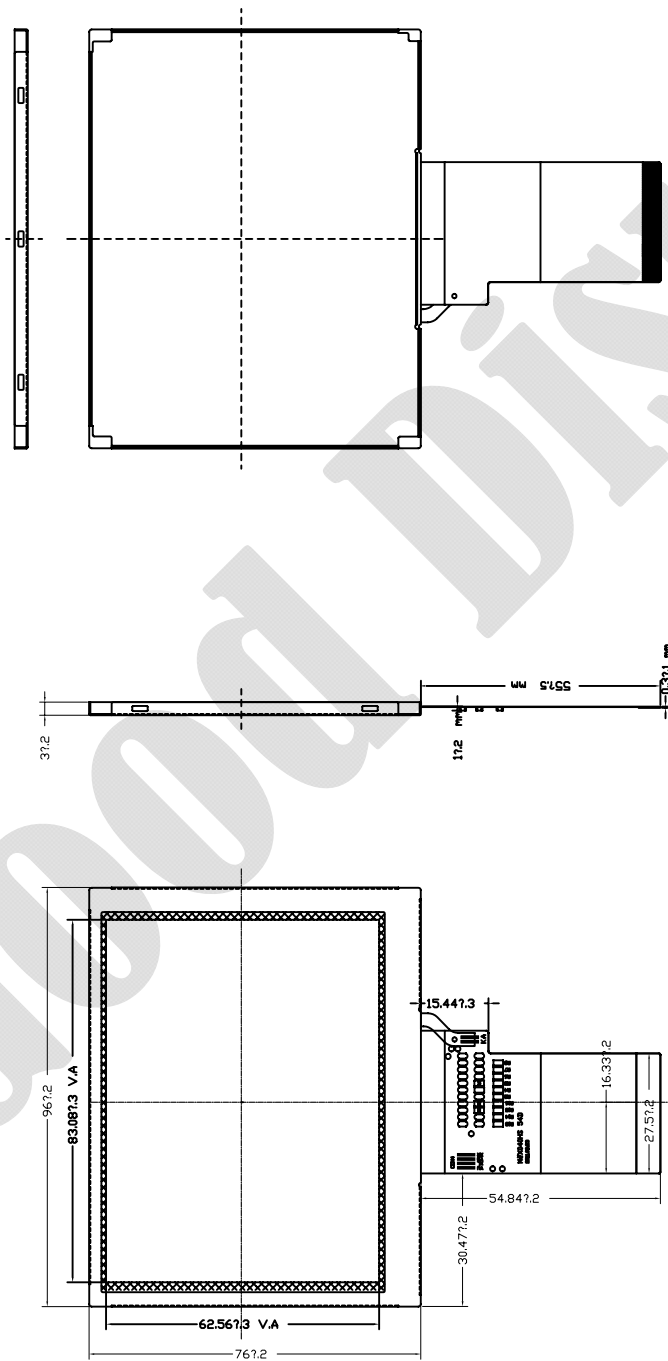
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1	LED_Cathode	31	R3
2	LED_Cathode	32	R4
3	LED_Anode	33	R5
4	LED_Anode	34	R6
5	NC	35	R7
6	NC	36	HSYNC
7	NC	37	VSYNC
8	RESTET	38	DOTCLK
9	/CS	39	NC
10	SCK	40	NC
11	SDI	41	VDD
12	B0	42	VDD
13	B1	43	NC
14	B2	44	NC
15	B3	45	NC
16	B4	46	NC
17	B5	47	NC
18	B6	48	NC(XR)
19	B7	49	NC(YD)
20	G0	50	NC(XL)
21	G1	51	NC(YU)
22	G2	52	ENB
23	G3	53	GND
24	G4	54	
25	G5		
26	G6		
27	G7		
28	R0		
29	R1		
30	R2		



背光电路图 (CIRCUIT DIAGRAM)

Specification:

- 1). Viewing angle: 12 O'clock
- 2). Display mode: a_Si TFT/Transmissive/Normal White
- 3). Operating temp.: -20?~+70?
Storage temp.: -30?~+80?
- 4). IC: ILI9322
- 5). All the raw material are Rohs complicant



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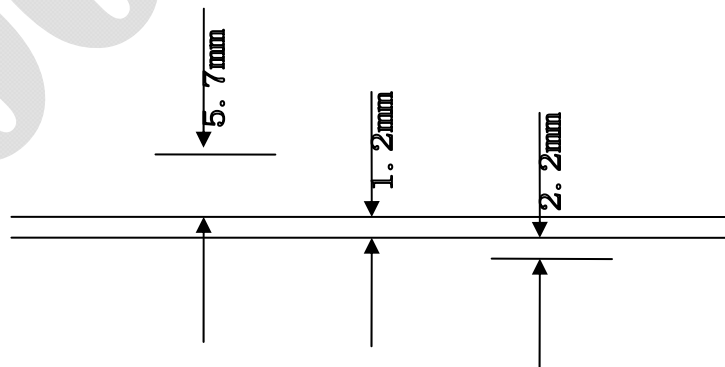
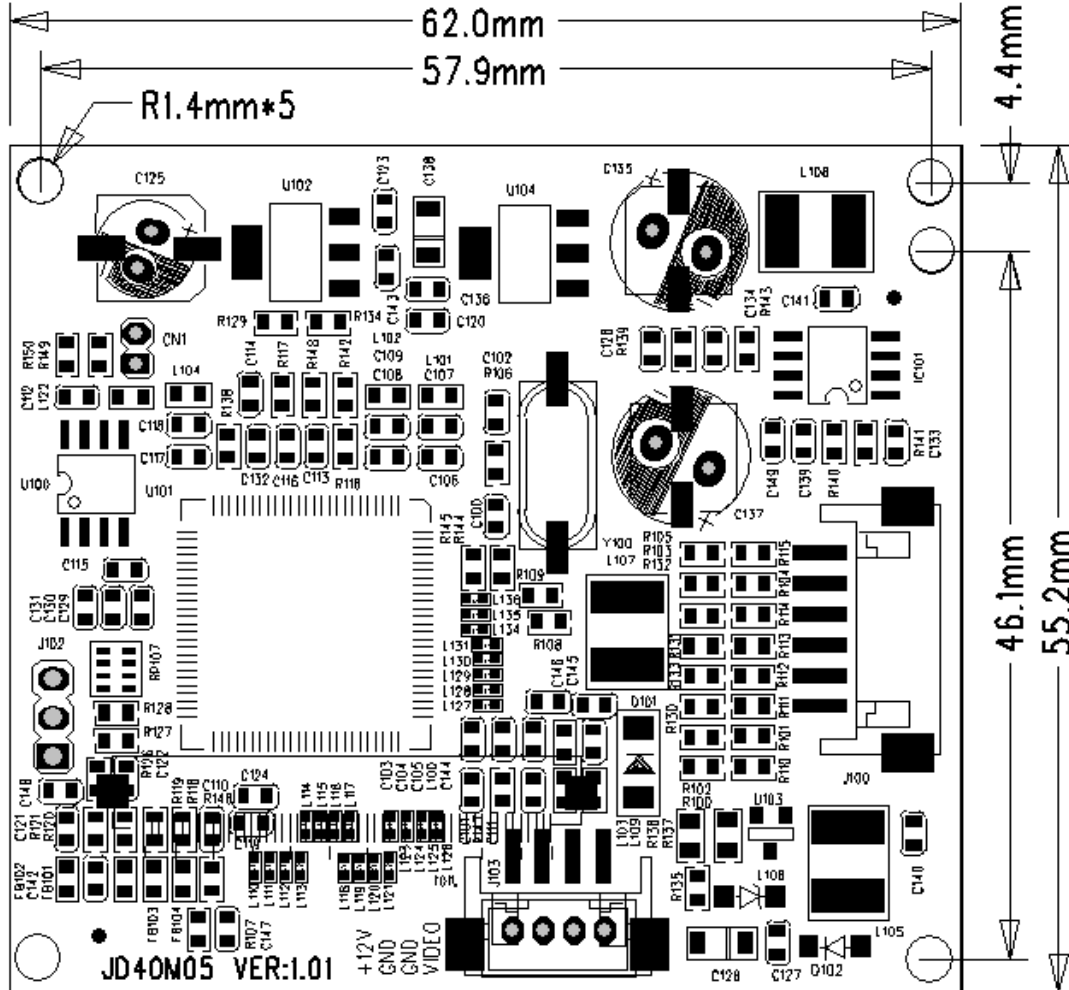
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10. A/D Board Mechanical Drawing

PCB size: 62.0 (W) × 55.2(H) × 9.0(D) mm



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11. Product Label



Label Dimension : 48.0X12.0mm

XXXXXXXX / XXXXXXXX

└── Production Date (Y/M/D)

└── Delivery Date (Y/M/D)

12. Precaution

For the sake of normal usage of this product, preventing incident from the electric shock or fire etc., please follow the precaution below instructions:

1. Before operating this appliance, read these instructions, keep these instructions, heed all warnings, and follow these instructions.
2. The DC (Direct current) supply of appliance is from the indicated AC (Alternating Current)/DC adapter. The AC voltage and AC frequencies C should be in of accord with the description of its on Metal card, the power adapter should be away from the hotness, being put in the well ventilated place.
3. AC power electric outlet and the AC power line of the AC/DC adaptor must be noticed to connect a ground well, and have an enough power supply if needed.
4. Input electric voltage of DC supply of our board is 12V, the error margin is not over and above +/- 1V, The value of the electric current changes for the different LCD and that whether to have audio amplifier or not etc. Pay attention to connect well between 12V DC power electric outlet and the power electric outlets of the board.
5. Do not place the board inside of the Hull or Box that do not transmit heats, with the environment the airiness spreads well, Do not let the sunshine contact the board or other heat sources close to it, The heat sources, such as radiators, stoves, or their apparatus that produce heat.
6. Pay attention to prevent it from contacting with wetness or the dust, in order to protect the electric circuit from decaying.
7. While assembling, pay attention to reserve the certain space to keep the air spreads well, while it can prevent the conductor (for the fixed sheet iron of the of the controller board and the inverter) from contacting with the units of electricity board, from happening the short circuit with the board.(knothole install position bore etc. excepted) .
8. While assembling, pay attention to make sure that the controller board is prevented from not being curved because of the additional pressure.
9. While assembling, notice that the controller board is in right connection with inverter, LCD, OSD keypad, choosing the right LCD work electric voltage(over low the display will not right, LCD may be burnt under over the high work voltage), The power is ON after all checking is well.
10. The circuit signal on the Keypad board, the infrared acceptor and the inverter must pass directly the electric cable to connect to the IC on the board, the attention is that avoiding short circuit and the damages from the static electricity on the hand ESD.
11. All connectors of output or input should be operated under the situation of cutting the power (pull out to put to deal with contact).
12. This product is applicable to common business usage and domestic usage, if it is applied into the environment with high temperature (such as in outdoor), high humidity, the strong vibration (carried in car), strong electromagnetism radiation, please contact our sales personnel.
13. Please pull out the power supply if you do not use it in a long time.