Good Display Specifications

Type: 5.6inch TFT LCD module
Model No. GDN-D567AT-GTI056TN52-U

Description:
- 5.6inch VGA 640 x RGB x 480 dots
- High Brightness
- Support Video & VGA input
- RoHS Compliant

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Dalian Good Display Co., Ltd.

Contents

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, audio amplifier, etc. 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:
- TFT LCD module: GDN-D567AT-GTI056TN52-U/XX-XX serial includes:
  DN-D567AT A/D board, GTI056TN52-U 5.6" Digital TFT LCD, Keypad board, Power cable, Video cable and VGA cable, 5.6" Touch Screen (Option), Touch screen driver with USB port or RS232 port (Option)
- DC/ DC Converter, LED Backlight Driver, Video and VGA Decoder All In One
- NTSC / PAL System automatic identifying and converting
- Single Operation Voltage +12.0V (Min9.0V, Max15.0V)
- Support Video & VGA Signal Input
- OSD controls: Allow on-screen adjustments of Brightness, Contrast, RGB Auto Color Balance, Reverse, H-Position, V-position
- Support Touch Screen Function (Option)
- This product is RoHS compliant

2.2 Applications:
- Industrial Controller
- Medical Equipment
- Security Equipment
- Simple Function Equipment

3. General Specifications:

Item	Specifications	Unit
Model name	GDN-D567AT-GTI056TN52-U /XX-XX	
Screen size	5.6 (diagonal)	inch
Display ratio	4:3	
Resolution	640(RGB)×480	
Backlight	LED	
Brightness	1350 (Min800, Max1800)	cd/m^2
LED life time	30000(Typ.)	hr
View angle	50/70/70/70 (U/D/L/R)	°
Input/output interface	Video	
	D-Sub 15 pin female for VGA	
	USB (A Type) or RS-232 (DB9 Female) for Touch Screen Driver (Option)	
Display dimension	126.5(W)×100.0(H)×8.0(D)	mm
Active area	112.896(W)×84.672(H)	mm
A/D board dimension	102.0(W)×50.0(H)×7.9(D)	mm
Operation voltage	DC12.0(Typ.) (Min.9.0, Max.15.0)	**V**
Input current	DC 280±20	mA
Power consumption	3.36	W
Start time	1.8	s
Touch Screen Controller	4-wire Resistive Driver USB/ RS232 (Option)	
Operation temperature	-20 to 70	°C
Storage temperature	-30 to 80	°C
Humidity	5~95	%RH

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4. Ordering Information

Parameter	GDN-D567AT-GTI056TN52-U	GDN-D567AT-GTI056TN52-U/4-02	GDN-D567AT-GTI056TN52-U /4T1-02	GDN-D567AT-GTI056TN52-U /4T2-02	Unit
Support Video input	Yes	Yes	Yes	Yes	
Support VGA input	Yes	Yes	Yes	Yes	
Touch panel type	-	4W Resistive	4W Resistive	4W Resistive	
Touch screen interface	-	-	USB	RS232	
Display dimension	126.5x100.0x8.0	126.5x100.0x9.5	126.5x100.0x9.5	126.5x100.0x9.5	mm
Accessories	None	5.6" Touch screen GDT4W05601	5.6" Touch screen GDT4W05601 and T/P Driver with USB port	5.6" Touch screen GDT4W05601 and T/P Driver with RS232 port	
Unit module net weight (including accessory)	0.26	0.30	0.43	0.47	Kg
Packing Information					
Box Information	Box Tare Weight: 0.06Kg Package Dimension: 23.0x14.0x4.0cm		0.1Kg 24.0x17.0x9.0cm	1.5Kg 52.0x27.0x28.0cm	
LCD Modules Capacity (Without T/P Driver and Cable)		1sets	2sets	28ets	
Touch Screen Drivers Capacity		50pcs	100pcs	1400pcs	
Touch Screen Cables Capacity		500pcs	1000pcs	14000pcs	
Driver Cables Capacity		15pcs	30pcs	420pcs	
Remark: The above packing information is just for your reference, and we will choice the suitable outer carton for you on your quality ordered.					
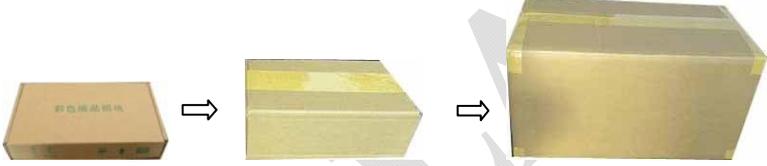
5. The pictures of the Product.

GDN-567AT-GTI056TN52-U TFT LCD module:
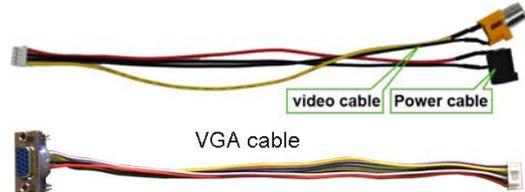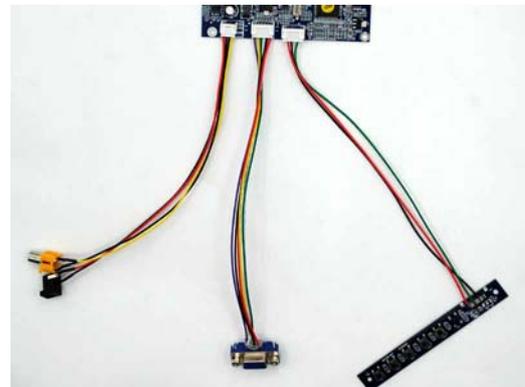
The related accessories (Option):
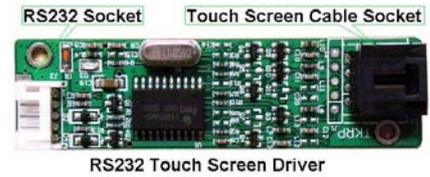
5.6inch Touch Panel and Driver board with USB port

Touch screen Cable

USB Touch Screen Driver

RS232 Touch Screen Driver

USB cable

RS232 cable

6. Setting the TFT LCD module.

6.1 *Key operation*, the keypad includes <Source>, < ON/OFF>, < Menu>, < Down>, <Up>
The description of each key:
< Source>: Press the <Source> key to switch the input signal between Video and VGA.
< 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 confirm key 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 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.

6.2 OSD menu introduction (On Screen Display)
Press the <Source> key to switch the input signal between Video and VGA.

6.2.1 While the Source is Video Signal, press the <Menu> button, pop the top main menu.
Main OSD menu contains the following submenu as below: BRIGHT, CONTRAST, COLOR, TINT, SHARPNESS, 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. The default value is 50, adjusting range is 0~100.

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. The default value is 50, adjusting range is 0~100.

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. The default value is 50, adjusting range is 0~100..

TINT: When you press the **<Menu>** button move the cursor to the TINT bar on the OSD menu, you can press **<Down>** button or **<Up>** button to adjust the color temp value of image, changing color to Calm colors or Warm Colors, and this function is only available for NTSC system. The default value is 50, adjusting range is 0~100..

SHARPNESS: When you press the **<Menu>** button move the cursor to the SHARPNESS bar on the OSD menu, you can press **<Down>** button or **<Up>** button to adjust the sharpness value of image. The default value is 32, adjusting range is 0~63..

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.

6.2.2 While the Source is VGA Signal, press the <Menu> button, pop the top main menu.
Main OSD menu contains the following submenu as below: BRIGHT, CONTRAST, EXIT, HPOSITION, VPOSITION, CLOCK, R, G, B, AUTO.

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. The default value is 50, adjusting range is 0~100.

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. The default value is 50, adjusting range is 0~100.

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

HPOSITION: When you press the **<Menu>** button move the cursor to the HPOSITION bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust the Horizontal image position on the LCD screen. The default value is 50, adjusting range is 0~100.

VPOSITION: When you press the **<Menu>** button move the cursor to the VPOSITION bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust the Vertical image position on the LCD screen. The default value is 50, adjusting range is 0~100.

CLOCK: When you press the **<Menu>** button move the cursor to the CLOCK bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust the Horizontal image width (size) on the LCD screen. The default value is 50, adjusting range is 0~100.

R: When you press the **<Menu>** button move the cursor to the R bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust Red basic colors ratio to get a suitable image color effect.

G: When you press the **<Menu>** button move the cursor to the G bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust Green basic colors ratio to get a suitable image color effect.

B: When you press the **<Menu>** button move the cursor to the B bar on the OSD menu, you can press **<Down>** or **<Up>** button to adjust Blue basic colors ratio to get a suitable image color effect.

AUTO: When you press the **<Menu>** button move the cursor to the AUTO bar on the OSD menu, you can press **<Down>** or **<Up>** button to make a optimum adjustments, automatically optimize phase, clock, image and position.

7. Connection Diagram
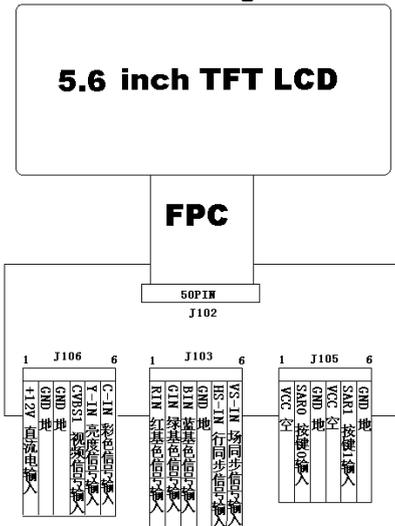
A/D board: DN-D567AT Ver:1.00
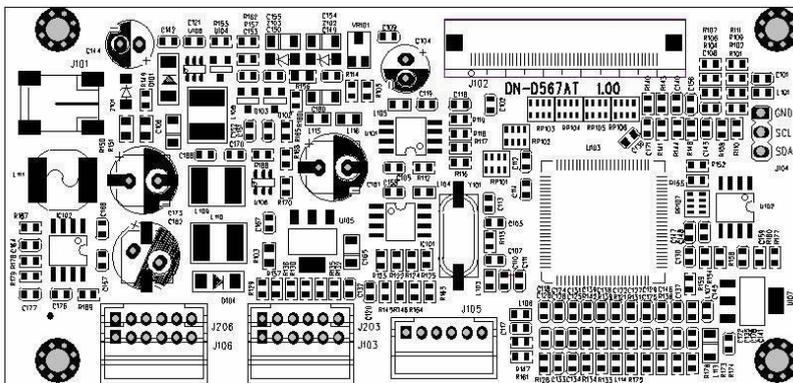
8. The interface definition of the A/D board

8.1 J106 interface definition:

PIN No.	Symbol	I/O	Description
1	+12V	I	DC power supply input
2	GND	-	Ground
3	GND	-	Ground
4	Video	I	Video signal input
5	Y-IN	I	Brightness signal input
6	C-IN	I	Color signal input

8.2 J103 interface definition:

PIN No.	Symbol	I/O	Description
1	R-IN	I	VGA Red input
2	G-IN	I	VGA Green input
3	B-IN	I	VGA Blue input

4	GND	-	Ground
5	HS-IN	I	VGA Horizontal signal input
6	VS-IN	I	VGA Vertical signal input

8.3 J105 interface definition:

PIN No.	Symbol	I/O	Description
1	VCC	-	No Connection
2	SAR0	I	Keypad 0 input
3	GND	-	Ground
4	VCC	-	No Connection
5	SAR1	I	Keypad 1 input
6	GND	-	Ground

8.4 Keypad diagram:
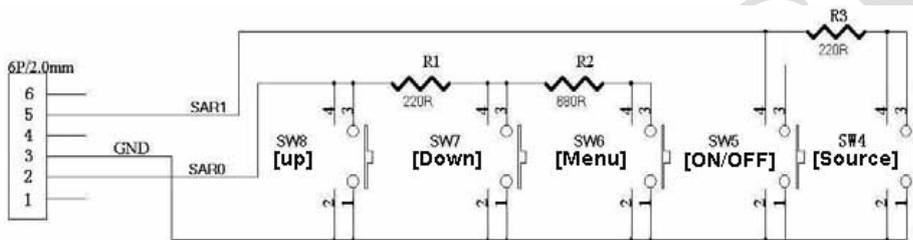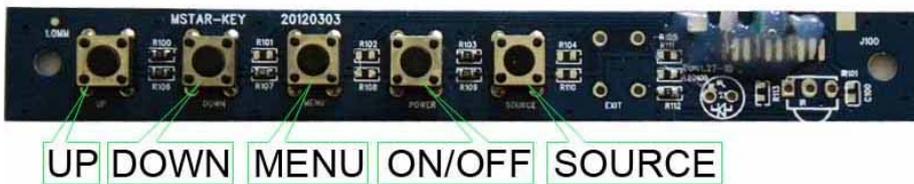
9. Support Display Resolution Mode:

VGA
640 x 480 -- 60 Hz
640 x 480 -- 72 Hz
640 x 480 -- 75 Hz

SVGA
800 x 600 -- 56 Hz
800 x 600 -- 60 Hz
800 x 600 -- 72 Hz
800 x 600 -- 75 Hz

XGA
1024 x 768 -- 60 Hz

※ Recommend customer to use VGA (640x480) resolution.

10. TFT LCD Panel Mechanical Drawing

Bar Code Area

HOUSING: BHSR-02VS-1 'JST'
TERMINAL: SPH-002T-P0.5 'JST'
OR EQUIVALENT
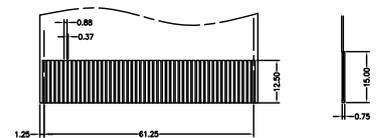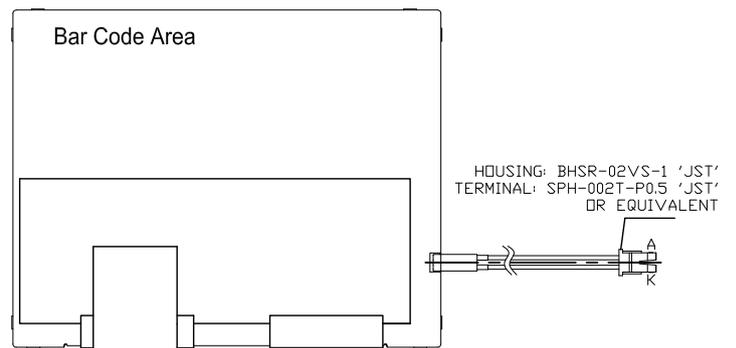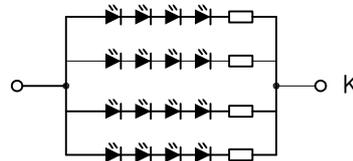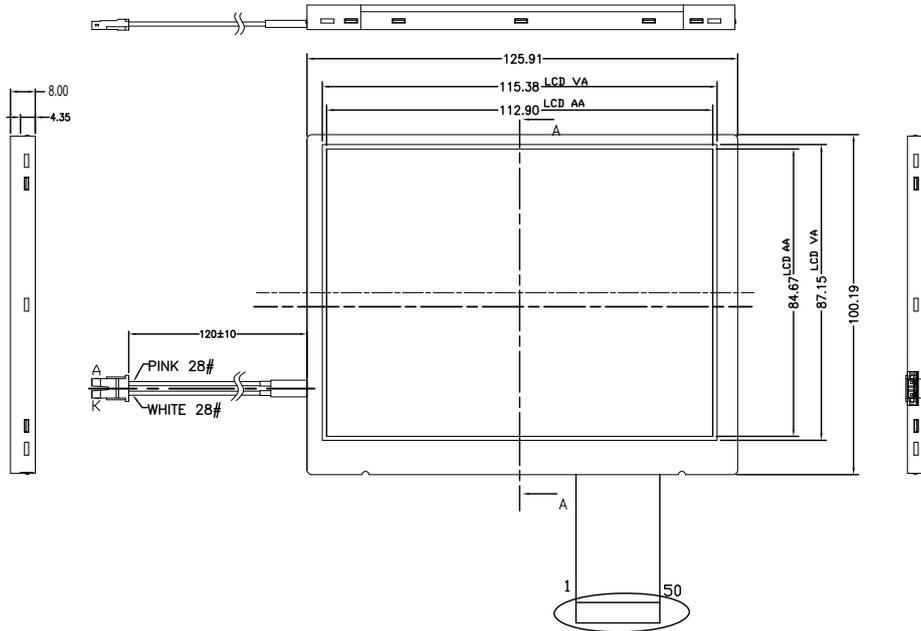
Electrical-Optical Characteristics(Ta=25° C):

	Item	Symbol	min.	typ.	max.	Unit	Condition
Main screen	Luminance	Lv	800	1600	1800	cd/m²	
	Uniformity	Avg	75	80	98	%	
	Colour Coordinate	X	0.265	0.320	0.350		
		Y	0.260	0.330	0.370		If= 400 mA
Sub screen	Luminance	Lv				cd/m²	
	Uniformity	Avg				%	
	Colour Coordinate	X					
		Y					
Forward Voltage		Vf	8	14	16	V	
•Operating Temperature:−20~+70° C • Storage Temperature:−30~+80° C							

11. A/D Board Mechanical Drawing
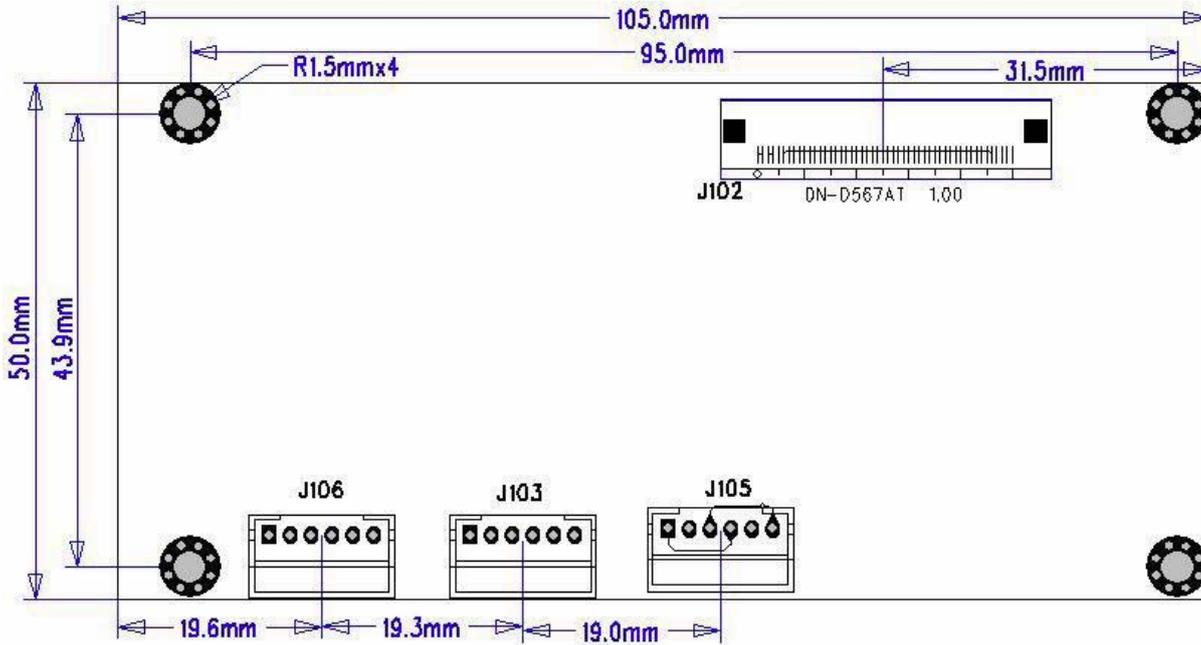
Note :

· The maximum thickness of the A/D board is 7.8mm.

· Any of the holes shown above can be used for mounting the PCB, they are 3.0mm in diameter.

12. Touch Screen Mechanical Drawing (Option)
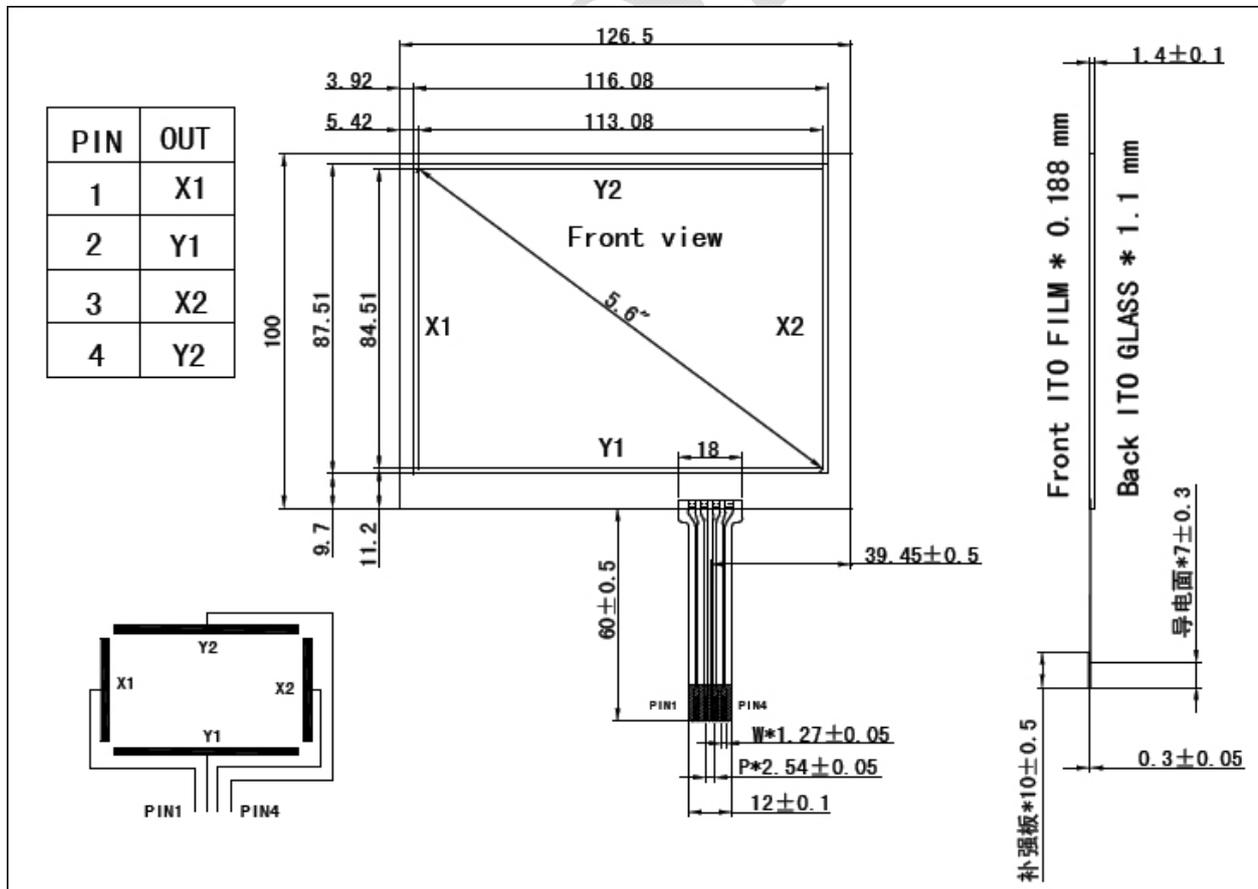
PIN	OUT
1	X1
2	Y1
3	X2
4	Y2

13. Touch screen driver board Mechanical Drawing (Option)

For USB interface
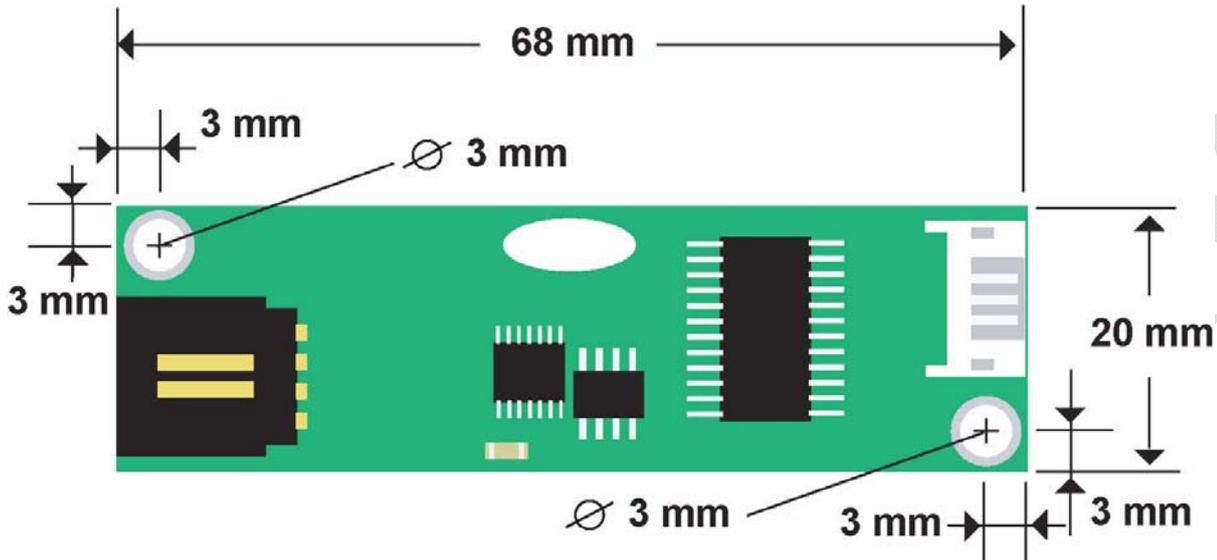
For RS232 interface
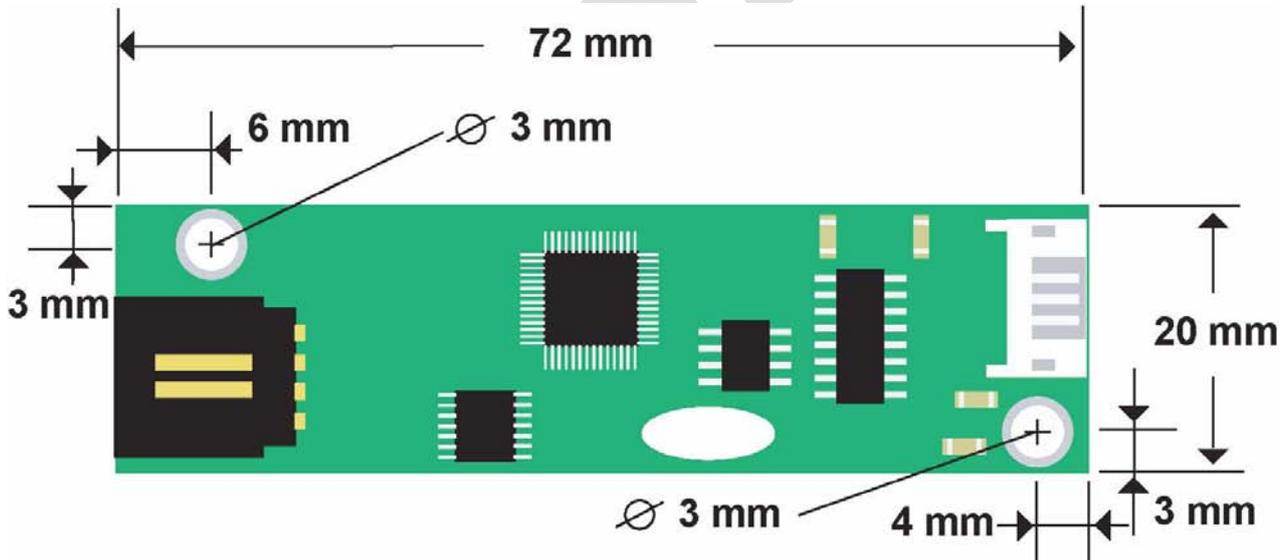
14. Product Label

Label Dimension : 48.0X12.0mm

XXXXXX / XXXXXX

— **Production Date (Y/M/D)**   — **Delivery Date (Y/M/D)**

15. 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 +/- 3V/, 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.

16. Trouble Shooting

If experiencing trouble with the module, or it fails to operate correctly, please refer to the following instructions before returning to us for repairs.

Condition	Check Point
1. The picture does not appear	Check to see that all the I/O and power cables is firmly seated in the socket. Check if the brightness control is at the appropriate position, not at the minimum.
2. The screen is not synchronized	Check if the I/O signal cable is firmly seated in the socket. Check if the output level matches the input level. Make sure the signal timings of the computer system are within the specification of the module.
3. The position of the screen is not in the center	Adjust the H-position, and V-position, or perform the auto adjustment.
4. The screen is too bright (too dark).	Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).
5. The Screen is shaking or waving	Press the Auto adjustment control to adjust. Moving all objects which emit a magnetic field such as motor or transformer, away from the module. Check if the specific voltage is applied. Check if the signal timing of the computer system is within the specification of module.

If you are unable to correct the fault by using this chart, stop using your module and contact us.