Specification

Product Model: JD40TDPR

Driver Board's Version：VER:1.02

LCD Screen's Model：JD035T54D06A1-32CKT(56)

USER			MANUFACTURER		
QA	Project	QA	Project	QA	Project

Catalogue

Version

Date	Version	Content
2011-08-19	RD001	The First Version
2011-10-14	VER:1.00	The Second Version
2011-10-26	VER:1.01	The Third Version（ Modify the circuit）
2014-04-01	VER:1.02	The forth version(Modify the RTC circuit and battery holder assembly and increase the external interface of TF card)

1、Profile：

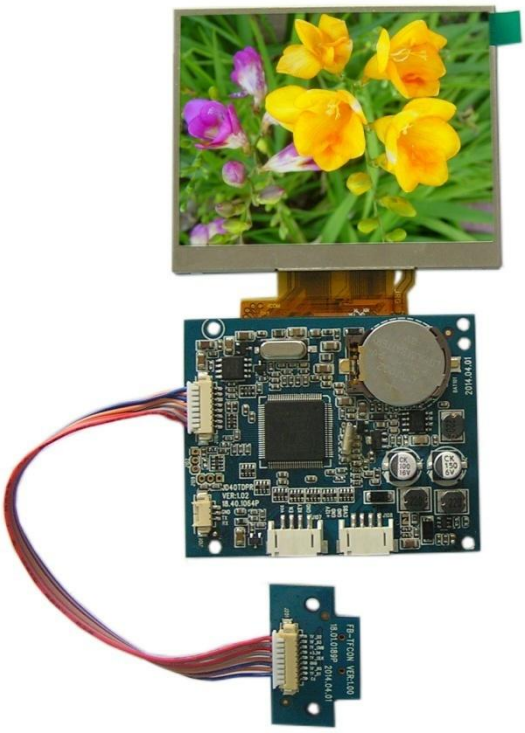
JD40TDPR VER: 1.02?-JD035T54D06A1-32CKT(56) color storage drive module. It consists of JD40TDPR VER:1.02 memory driver board and (JD035T54D06A1-32CKT(56)) screen. Input CVBS (PAL) signal, it has photo, video, storage, support for the deletion of all pictures, can set the time and date of the display, at the same time on the image effect adjustment, power-down memory, OSD time superposition function, display effect, clock control And so on through the button adjustment or RS232 communication serial port to send commands, OSD menu display. It is mainly used for visual doorbells, building intercoms, videophones and other display electronic devices.

2. Main Parameter

No.	Item	Description	Note
1	Screen Size	3.5inch	
2	Contrast Ratio	4:3	
3	Backlight	LED	
4	Brightness	290 cd/m^2	Note1
5	Resolution	320(RGB)×240	
6	Viewing Angle（U/D/R/L）	（40/60/60/60）	
7	Outline Dimension	76.9(W) ×63.9(H)×3.2（D）mm	
8	Active Area	70.08(W) ×52.56 (H)mm	
9	Drive Board Size	68.0(W)×55.2(H) ×9.0（D）mm	
10	Working Voltage （Power supply ripple is less than 0.3vp-p）	min：DC9V；standard：DC12V；max：DC18V；	
11	Working Current（DC= 12V）	DC120mA±20mA	
12	Power Consumption	1.44W（TYP）	
13	Start time	≤2.0s	
14	Operating Temperature	-10℃~60℃	
15	Storage Temperature	-20℃~70℃	
16	Relative Humidity	5~95％RH	

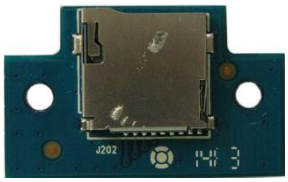
Note1: Brightness is tested by BM-7 testing machine.

3、Product picture:

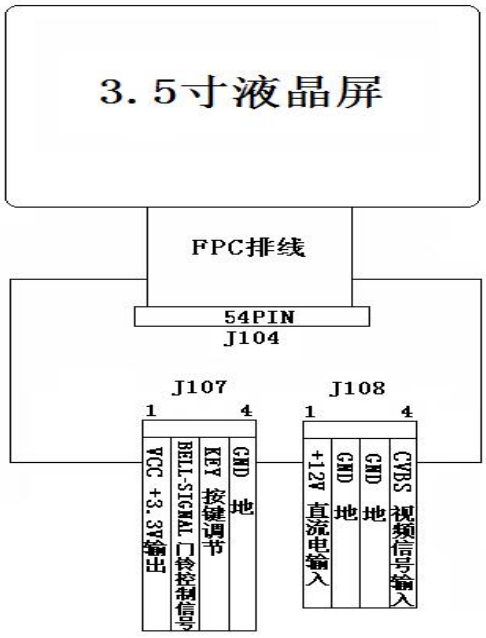


Front:

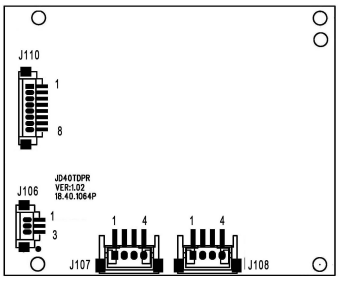
Back



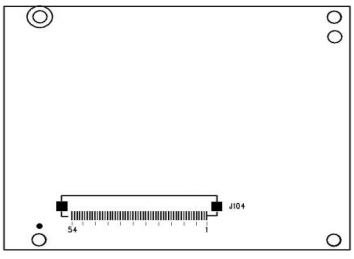
4、Wiring Diagram:

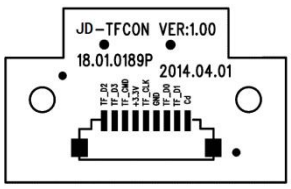


Front



Back





5、Connector definition of driver board:

5.1 、J108 connector definition：（54PIN0.5mm）

NO	Symbol	I/O/P	Description	Remark
1	LED-Cathode	p	LED-Cathode	
2	LED-Cathode	p	LED-Cathode	
3	LED-Anode	p	LED-Anode	
4	LED-Anode	p	LED-Anode	
5	NC	-	No Connect	
6	NC	-	No Connect	
7	NC	-	No Connect	
8	RESET	O	RESET	
9	SPENA	O	Serial port data enable signal	
10	SPCK	O	SPI Serial Clock	
11	SPDA	I/O	SPI Serial Data Input/output	
12	B0	O	Red data	
13	B1	O	Red data	
14	B2	O	Red data	
15	B3	O	Red data	
16	B4	O	Red data	
17	B5	O	Red data	
18	B6	O	Red data	
19	B7	O	Red data	
20	G0	O	Green data	
21	G1	O	Green data	
22	G2	O	Green data	
23	G3	O	Green data	
24	G4	O	Green data	
25	G5	O	Green data	
26	G6	O	Green data	
27	G7	O	Green data	
28	R0	O	Blue data	
29	R1	O	Blue data	
30	R2	O	Blue data	
31	R3	O	Blue data	
32	R4	O	Blue data	
33	R5	O	Blue data	
34	R6	O	Blue data	
35	R7	O	Blue data	
36	HSYNC	O	Horizontal Synchronous Signal	
37	VSYNC	O	Vertical Synchronous Signal	
38	CLK	O	Data Clock	

39	NC	-	No Connect	
40	NC	-	No Connect	
41	VDD	P	power supply（3.3V）	
42	VDD	P	power supply（3.3V）	
43	NC	-	No Connect	
44	NC	-	No Connect	
45	NC	-	No Connect	
46	NC	-	No Connect	
47	NC	-	No Connect	
48	NC/XR	-	No Connect	
49	NC/YD	-	No Connect	
50	NC/XL	-	No Connect	
51	NC/YU	-	No Connect	
52	DEN	O	Data enabling signal	
53	GND	P	Ground	
54	GND	P	Ground	

I/O: I: input, O: output, P: power

5.2、108 connector definition：（4PIN 2.0mm）

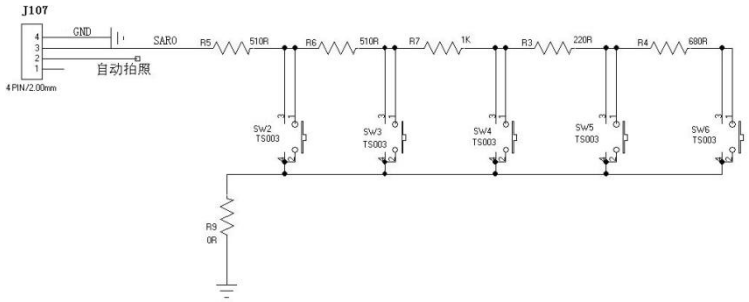
NO	Symbol	I/O/P	Description	Remarks
1	+12VIN	I	DC Power supply input	9~18V
2	GND	P	GND	
3	GND	P	GND	
4	CVBS	I	Video signal input	0.6V-1.3V_{P-P}

5.3、J107 connector definition：（4PIN 2.0mm）

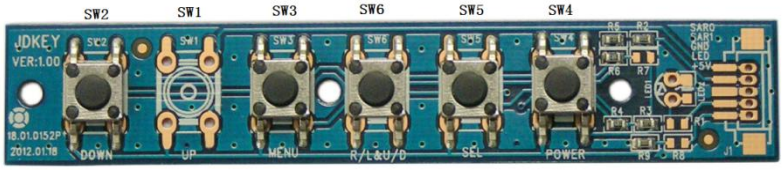
NO	Symbol	I/O/P	Description	Remarks
1	VCC	O	+3.3V output	
2	EN	I	Auto-photo	the module will auto take photo when high voltage
3	KEY	I	Key data input	
4	GND	P	GND	

5.3.1、**Keyboard Wiring Diagram**

：



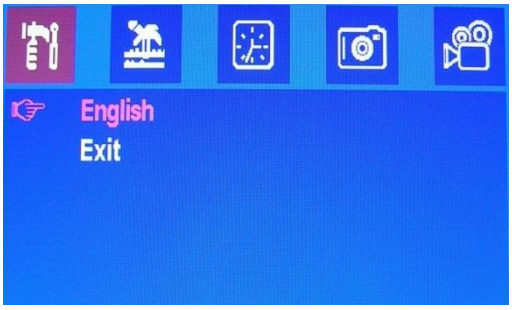
5.3.2、The keyboard ordering as follows:



5.3.3、Under normal mode, press SW2 entry this menu（below picture）

Press SW6 and SW3 to left and right choice,

Press SW4 and SW5 to Up and down choice.



Keyboard function

SW3: Record video Press SW3 entry video record, the format is AVI，the max recording time is 15s for this version. The video is saved by TF card,2G TF card can save 137 section, video, it will be covered by new video section automatically when TF card is full. The max video section calculated method is: (capacity of TF- 512MB)/10MB. Press SW2 exit video.

SW6: Take picture Press SW6 to entry picture record. The picture format is JPG，the picture can be saved in Flash and TF card. Max picture qty is 58pcs for 4M flash. The pictures will be saved in TF card automatically for

every 4 pictures, max quantity for pictures is 515pcs for 2G or 4G or 8G TF card even 32G.

SW5: Video replay Press SW5 to entry video replay. When displaying, press SW5 to display last video, Press SW4 to play next video. Press SW3 Fast forward, press SW6 to Pause/Play. Press SW2 exit replay. LCD module will display video section number and date and time when replay.

SW4 Browse picture Press SW4 entry picture browse. When browsing, press SW5 to display last picture, press SW4 to display next picture. Press SW6 to delete existing picture. Press SW2 to exit browse. LCD module will display picture number/ total pictures and date and time.

Note：After assembled TF new card, it will indicate that whether need to reset or not, it needs press yes, it will be reset TF card.

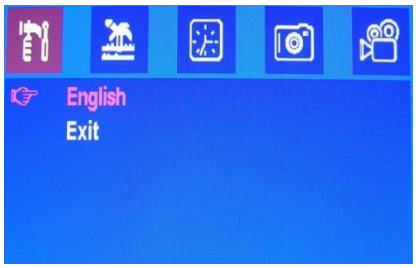
Note：When enter the OSD menu mode, no-operation after 10s, it will auto sign out to passing-mode, It supports power-off memory storage function.

Entering the video after 10 second, it will be signed out(timing),increase external photo function(SAN Active Low electricity)

5.3.4、Language menu(Picture 1)

5.3.4.1、Two language：Chinese and English

5.3.4.2、Chinese/English: Press SW2 for Chinese and English change.



5.3.4.3、Exit：Choose Exit, Press SW2 to exit menu.

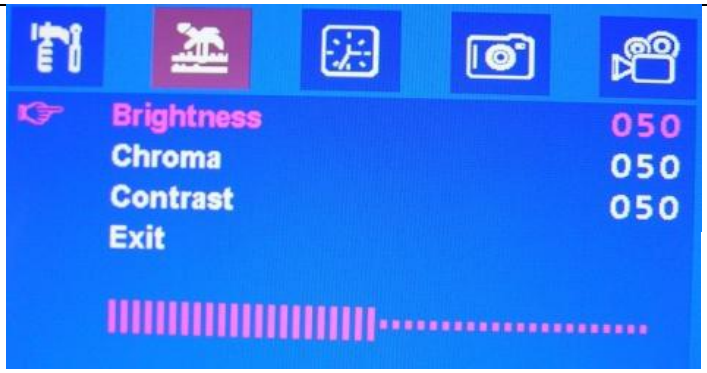
5.3.5、Parameter for picture adjust（Picture 2）

5.3.5.1、Entry this menu to adjust brightness and color and contrast, every adjust range is from 0 to 100，Default is 50, when you setting, you should press SW4 or SW5 to confirm, then you can adjust.

5.3.5.2、Press SW3 and SW6 to “+” or “-”.

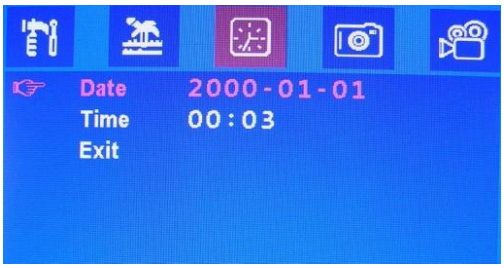
5.3.5.3、Press SW4 and SW5 to choose.

5.3.5.4、Press “EXIT” to exit menu.



Picture2

5.3.6、Date and time setting（Picture 3）



Picture3

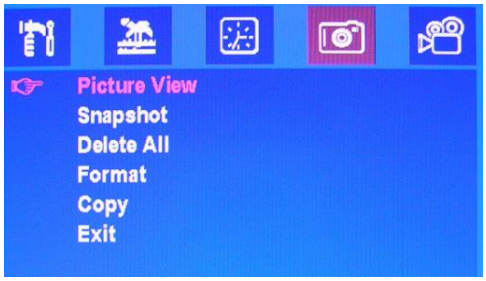
Press SW4 or SW5 to confirm，then start to adjust.

5.3.6.1、First is Date: example Year-Month-Date（eg:2014-01-16）, Press SW3 and SW6to choose each of them. SW4 is up and SW5 is down. Press SW2 switch to next item after SW2.

5.3.6.2、Second item is time: format is Hour and minute. Press SW3 and SW6 to choose each of them. SW4 is up and SW5 is down. Press SW2 switch to next item after SW2.

5.3.6.3、Third is exit: press SW2 when choose “exit”.

5.3.7、Take picture menu(Picture4)



Picture4

Press SW4 or SW5 to confirm to adjust after entry this menu.

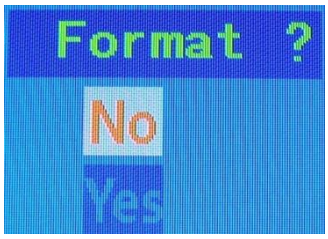
5.3.7.1、Replay： Press SW2 entry picture browse. SW4 display next photo, SW5 display last photo. SW6 to delete existing photo,SW2 to exit.

5.3.7.2、Take picture:Press SW2 for taking picture, format is JPG, Photos will be saved in flash chip and SD card at the same time.

4M flash chip can save 58pcs photos, if over than 58pcs photos in flash, the photo will be repeated covering. Every 4 times of taking pictures in flash, the new photos will auto backup in TF card,2G or above 2G TF card(max 32G) can store 515pcs photos, after over than 515pcs photos, the new photos will not be repeated covering, no saving new photos. The user can reset or delete some photos for saving other new photos.

5.3.7.3、Delete : Press SW2 to delete all of photos.

5.3.7.4、Format SD: press SW2 entry format，Press SW4 and SW5 to choose. Press SW2 to confirm if need format or not. (Picture 5),all of datasheet will be deleted after format.（as bellow picture5）

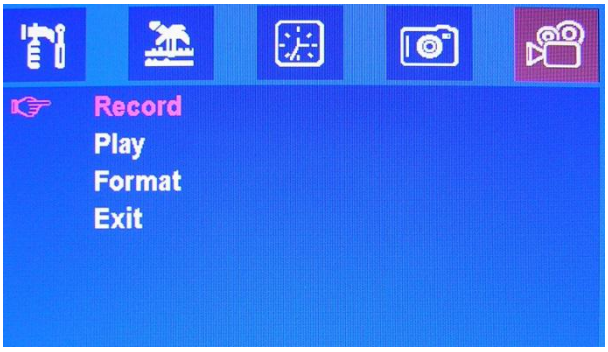


Picture 5

5.3.7.5、Backup: Press SW2 to copy all the photos to TF card，the photos can be opened on computer.

5.3.7.6、When entry “Exit menu”，press SW2 to exit.

5.3.8、Record video (Picture6)



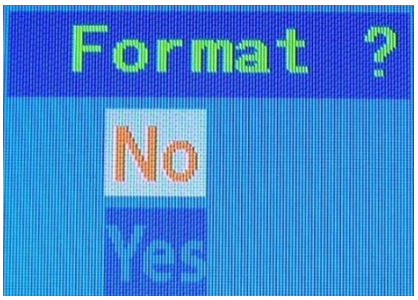
Picture6

When entry menu, press SW4 or SW5 to continue to choose.

5.3.8.1、Video menu：Press SW2 that recording video, format is AVI, it will save in TF card, and can open in PC. It can record 14s more or least in single video at present. After 14s, it will be auto save then exit. When recording, press SW2 that exit taking video. It can record 137segments for 2G, it will be repeated when full 137 segments. The methods of largest store video segments is (TF’s capacity - 512MB)/10MB

5.3.8.2、Play: Press SW2 to play videos. It will be loop playback without any other operation. Press SW4 to play next video, press SW5 to play last video, Press SW3 to fast forward, to Press SW6 to Pause/Play. Press SW2 to exit.

5.3.8.3、Resetting/Formatting options: Press SW2 which can enter resetting up page, pressSW4/SW5 is UP/DOWN options, Press SW2 to confirm whether reset or not, if press yes, so all datasheet will be lost.



Picture7

When choose “exit” option, press SW2 to exit current page.

5.4 Driver board J110 connector definition（8PIN1.25 mm）

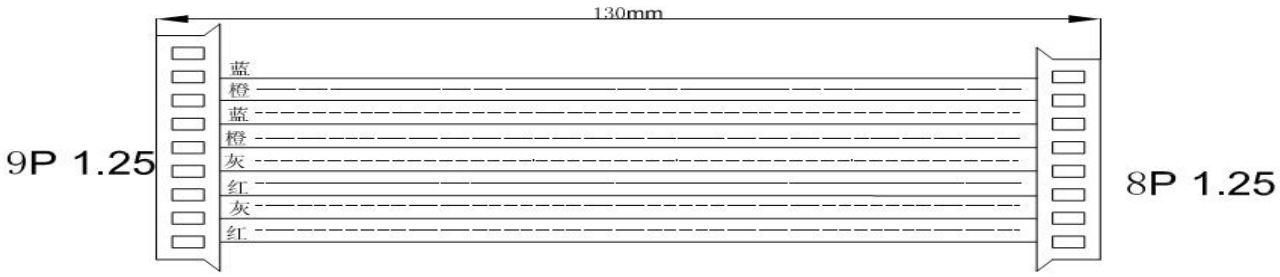
JD-TFCON connector definition（9PIN 1.25 mm）

Driver board J110		JD-TFCONSmaller platesJ201	
Serial No	PIN Definition	Serial No	PIN Definition
1	SD-D1	1	TF-D2
2	SD-D0	2	TF-D3
3	GND	3	TF-CMD
4	SD-CLK	4	+3.3V
6	SD-CMP	6	GND
7	SD-D3	7	TF-D0
8	SD-D2	8	TF-D1
		9	Cd(empty)

Note:： TF card should be used to above class6 rate of reading and writing, more higher rating, the recording more better. Video more smoothly, frame will be less, the recording time fixed 15s,it can customized to 10s/20s/30s as per demands.

5.4.1、Wiring：22.XC.FB0002P one pin :9P 1.25/the other pin: 8P 1.25 130mm length with connectors, Double spell line.

ROHS。

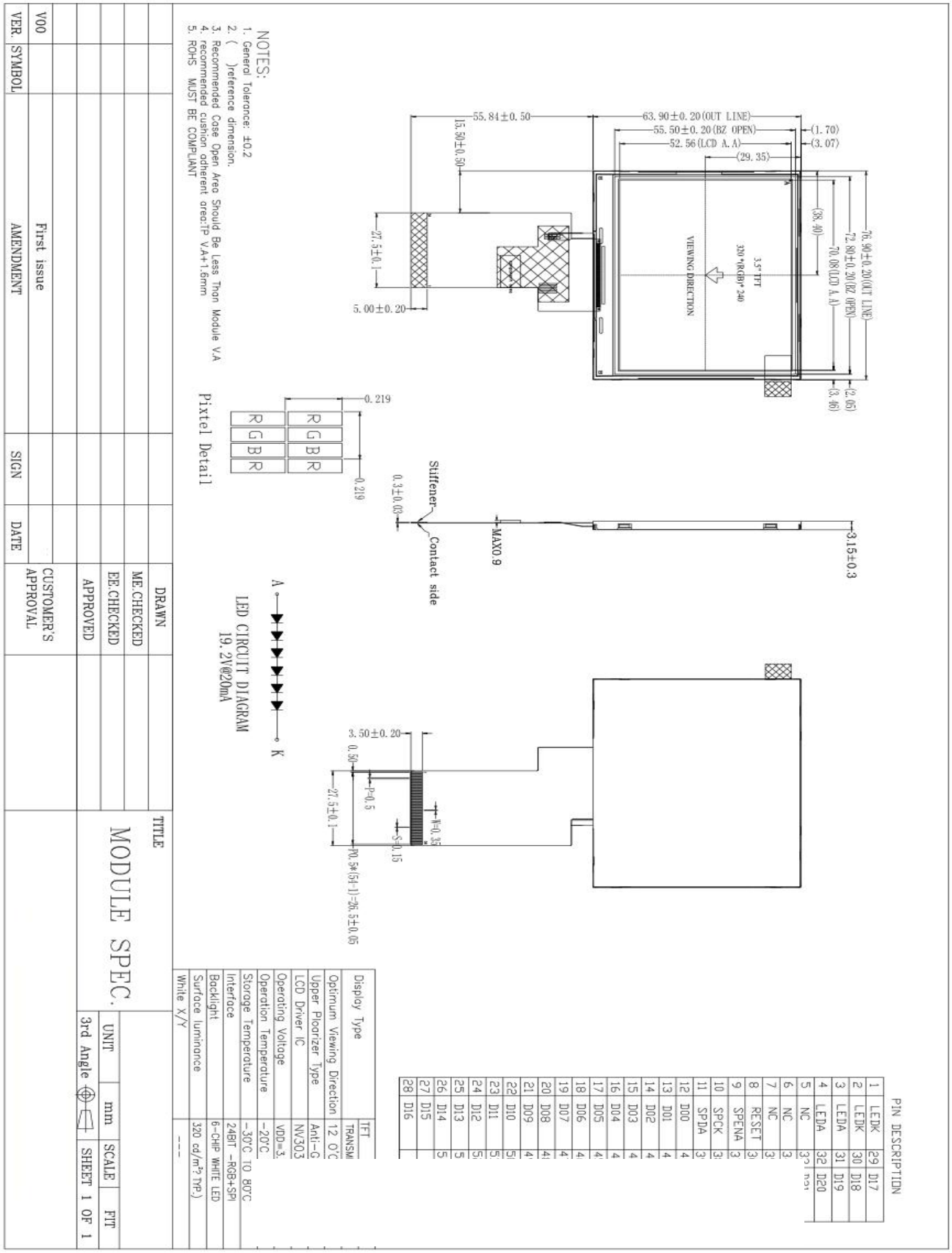


5.5、J106 connector definition：（3PIN1.25mm）

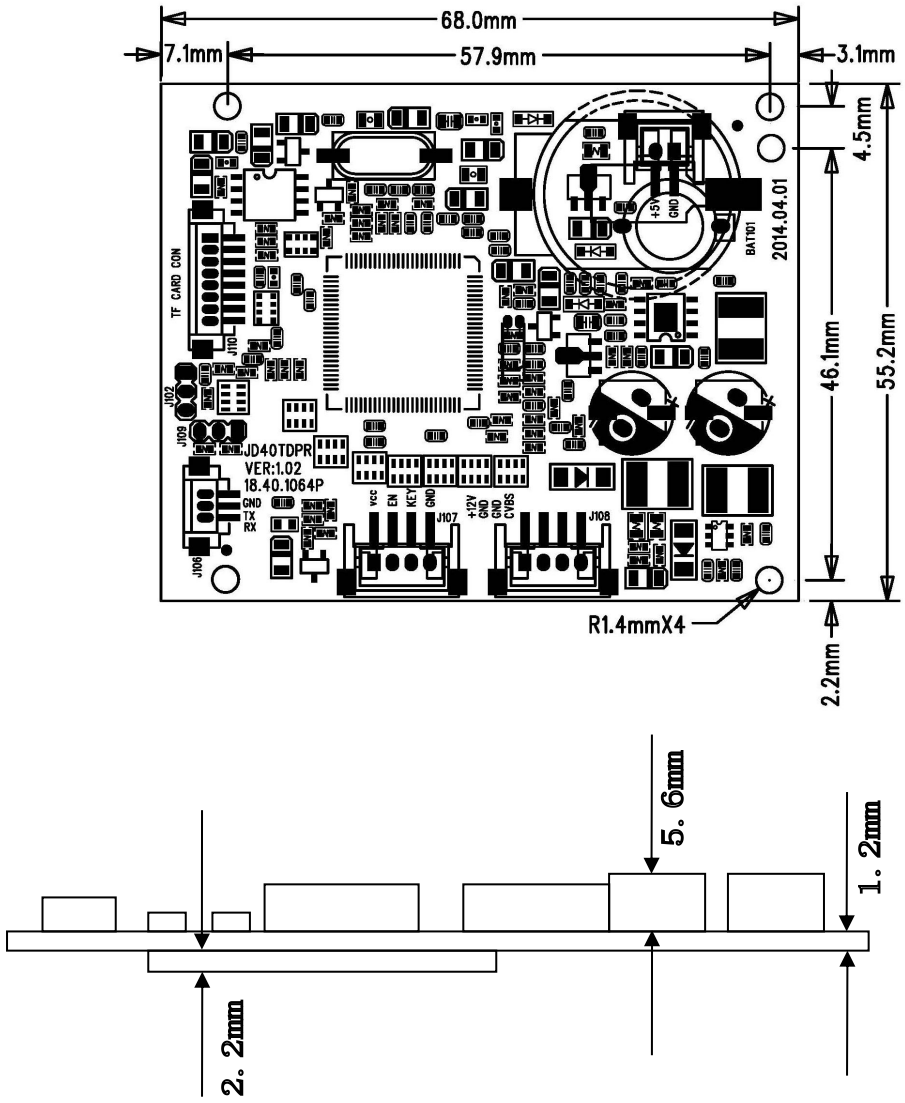
Serial No	PIN Definition	I/O/P	PIN Definition	Remarks
1	GND	P	GND	
2	TX	I	RS232 DATA Sending	
3	RX	I	RS232 DATA receiving	

6、Structure drawing:

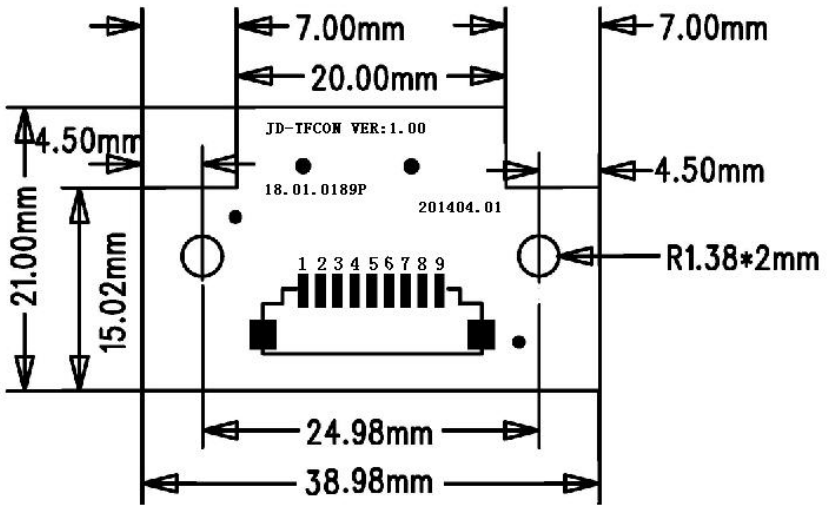
6.1、TFT LCD Panel:

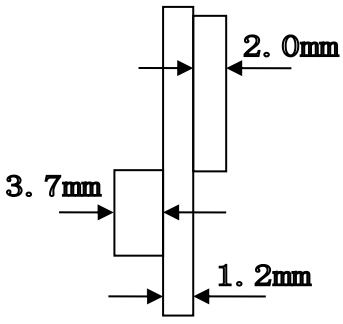

NOTES:
1. General Tolerance: ±0.2
2. ( )reference dimension.
3. Recommended Case Open Area Should Be Less Than Module V.A
4. recommended cushion adherent area:TP V.A+1.6mm
5. ROHS MUST BE COMPLIANT
VER. SYMBOL AMENDMENT SIGN DATE
V00 First issue
DRAWN
ME.CHECKED
EE.CHECKED
APPROVED
CUSTOMER'S APPROVAL
TITLE
MODULE SPEC.
UNIT mm SCALE FIT
3rd Angle
SHEET 1 OF 1
55.84±0.50
63.90±0.20(OUT LINE)
55.50±0.20(BZ OPEN)
52.56(LCD A.A)
(1.70)
(3.07)
(29.35)
15.50±0.50
27.5±0.1
5.00±0.20
(38.40)
76.90±0.20(OUT LINE)
72.80±0.20(BZ OPEN)
70.08(LCD A.A)
(2.65)
(3.46)
VIEWING DIRECTION
3.5" TFT
320*(RGB)*240
Pixtel Detail
0.219
0.219
R G B
Stiffener
0.3±0.03
Contact side
MAX0.9
3.15±0.3
LED CIRCUIT DIAGRAM
19.2V@20mA
A
K
3.50±0.20
0.50
P=0.5
h=0.35
S=0.15
27.5±0.1
(0.5*(5+1)=26.5±0.05
PIN DESCRIPTION
1 LEDK 29 D17
2 LEDK 30 D18
3 LEDA 31 D19
4 LEDA 32 D20
5 NC 33 NC
6 NC 3
7 NC 3
8 RESET 3
9 SPENA 3
10 SPCK 3
11 SPDA 3
12 D00 4
13 D01 4
14 D02 4
15 D03 4
16 D04 4
17 D05 4
18 D06 4
19 D07 4
20 D08 4
21 D09 4
22 D10 5
23 D11 5
24 D12 5
25 D13 5
26 D14 5
27 D15
28 D16
Display Type TFT TRANSMI
Optimum Viewing Direction 12 O'C
Upper Ploarizer Type Anti-G
LCD Driver IC NV3O3
Operating Voltage VDD=3.
Operation Temperature -20°C
Storage Temperature -30°C TO 80°C
Interface 24BIT -RGB+SPI
Backlight 6-CHIP WHITE LED
Surface luminance 320 cd/m²(TYP.)
White X/Y ---

6.2、PCB size： 68.0(W)×55.2(H) ×9.0(D)mm



6.3、JD-TFCON size：38.98(W)×21.0(H) mm×6.9(D) mm





7、Product labeling:

JD035T54D06A1-32CKT(56)

8、Packing、Transport and storage.

1、Packing:

TBD

2、Transport and store

Don't hit and rain when transportation； Don't storage with chemic goods and wet goods together.

9、JD40TDPRPrecaution

1、TFT have used by special instrument to adjust precision and aging、test before leave factory, no need adjust again.

2、Please correctly connect power、video signal before you adjust, should be on/off power and video signal to check the image's effect.

3、Due to this product is electronic product, please notice prevent static.

4、3.5" TFT-LCD Panel is a glasswork, place carefully, broken for fear.

5、Don't touch pushbutton's pin feet when you adjust potentiometers, due to Person have resistance, you will effect pushbutton's function when touch it.

10、3.5"TFT- LCD PANEL Inspection Standard:

Aim: Make the panel standards to material purchasing, process inspecting and customer checking.

Range：3.5″TFT LCD product

Content

10.1、Determinant standard and method:

10.1.1、The method and determinant of inspecting the nick of panel of LCD：

10.1.1.1、Inspect vertically (or at 45°angle from left/right) under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick, it determines “OK”, otherwise “NG”.

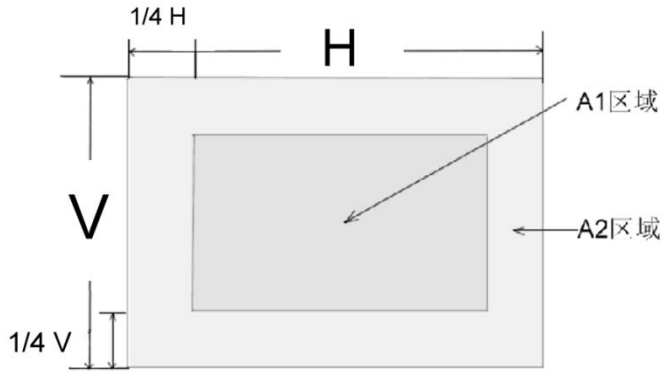
10.1.2、The method and determinative for black & white & color spots for the Panel of LCD:

10.1.2.1、Inspecting method

10.1.2.1.1、Black spots：under the situation of “turn on the light”，set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

10.1.2.1.2、White & Color spots: under situation of “turn on the light”, set the Mask of black spot inspection on the white spot (or color spot) then observe them by eyes if it can hide.

10.1.2.2、Division of LCD Panel



Remarks：Area of A1: The center of the available area for the picture

Area of A2: The edge of the available area for the picture

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10.1.3、Determinant Choice:

Spot Diameter（mm）		Allowed Area	
		A1	**A2**
Black spot	d≤0.15	不计	不计
	0.15<d≤0.3	4	4
	0.3<d≤0.5	2	3
	0.5<d<0.8	0	2
White and color spot	d≤0.15	irrespective	irrespective
	0.15<d≤0.3	3	3
	0.3<d≤0.5	1	2
	0.5<d<0.8	0	1

Remark: 1. Size: Average Diameter=（Max. Diameter + Min. Diameter）/2

2. Using information above as a standard in order to judge while th e spots are dense.

3. Black & White spot： To judge the obvious spots through th change

of voltage by comparison.

4. Total quantity of Black & white & color spot: A1+A2 ≤ 4.