

FEATURES

The features of LCD are as follows

- Controller: ILI9320
- Display mode: 2.4" QVGA TFT-LCD
- Interface input data: 8-bit or 16-bit parallel selected by IM0 pin
- Viewing direction: 6:00 O'clock
- Operating temperature: $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- Storage temperature: $-30^{\circ}\text{C} \sim 80^{\circ}\text{C}$
- LCD module size (mm): 42.72(w) x 60.26(h) without TP
- LCD active area (mm): 36.72(w) x 48.96(h)
- Number of dots: 240 (RGB) x 320 dots
- Pixel pitch (mm): 0.153(h) x 0.153(v)
- Backlight type: 4-parallel white LED

INTERFACE PIN FUNCTION

No.	Symbol	Function
1	DB0	Data Bus
2	DB1	
3	DB2	
4	DB3	
5	GND	Ground
6	VDD	Power supply
7	/CS	Chip select (active low)
8	RS	Display data/command selection pin
9	/WR	Write enable (active low)
10	/RD	Read enable (active low)
11	IM0	Select the mcu system interface mode HIGH – DB[15:8] for 8-bit interface LOW – DB[15:0] for 16-bit interface
12	XL	Touch panel output pins (not implemented)
13	YB	
14	XR	
15	YT	
16	LED-A	Backlight common anode
17	LED-K1	Backlight cathode
18	LED-K2	
19	LED-K3	
20	LED-K4	
21	NC	No connect
22	DB4	Data Bus
23	DB8	
24	DB9	
25	DB10	
26	DB11	
27	DB12	
28	DB13	
29	DB14	
30	DB15	
31	/RESET	Reset pin (active low)
32	VDD	Power supply
33	VDD	Power supply
34	GND	Ground
35	DB5	Data Bus
36	DB6	
37	DB7	

ELECTRICAL CHARACTERISTICS

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
Supply Voltage range	VDD	-0.3 to +4.6	V
LCD Supply Voltage range	VDD - VEE	18.5	V

DC CHARACTERISTICS

(VDD = 2.40 ~ 3.30V, IOVDD = 1.65 ~ 3.30V)

Item	Symbol	Min.	Typ.	Max.	Unit
Input high voltage	V _{IH}	0.8*IOVDD	-	IOVDD	V
Input low voltage	V _{IL}	-0.3	-	0.2*IOVDD	V
Output high voltage (DB0-DB15)	V _{OH1}	0.8*IOVDD	-	-	V
Output low voltage (DB0-DB15)	V _{OL1}	-	-	0.2*IOVDD	V
I/O leakage current	I _{LI}	-0.1	-	0.1	μA

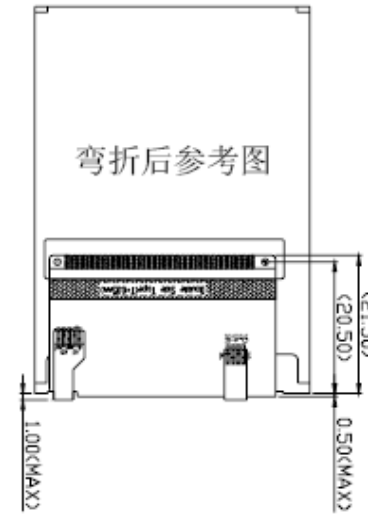
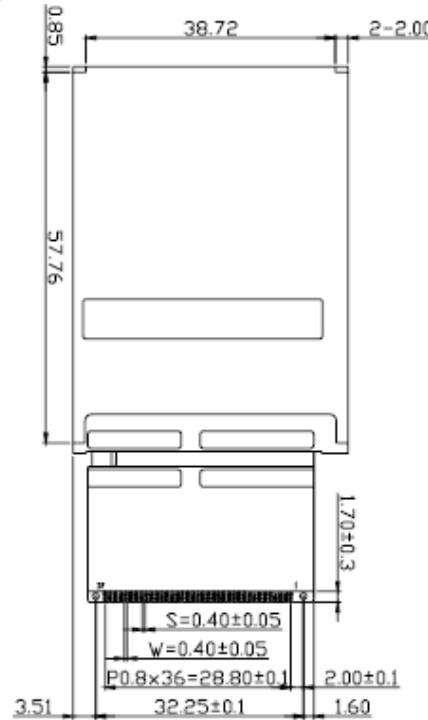
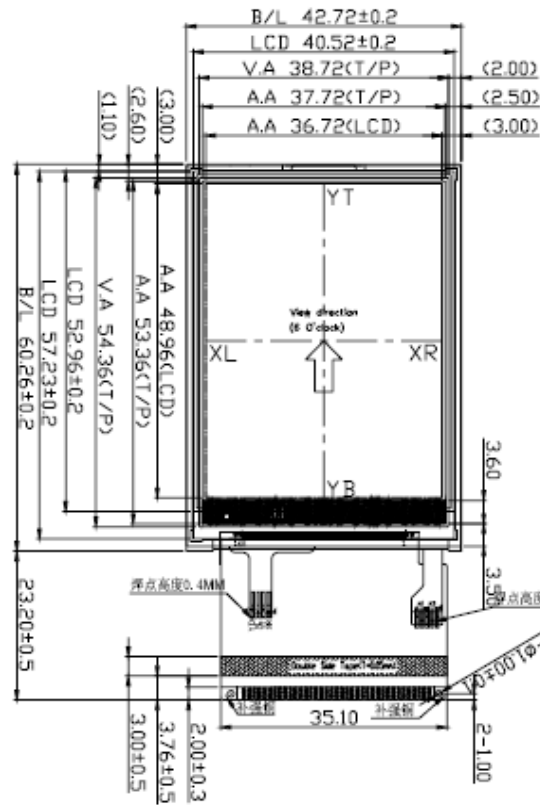
Remarks: Refer to ILI9320 data sheet for AC Characteristics

BACKLIGHT UNIT

Item	Symbol	Min.	Typ.	Max.	Unit
Input voltage	V _{BL}	3.0	3.2	3.4	V
Current	I _{BL}	-	15	-	mA/chip
Brightness	-	-	3500	-	cd/m ²
Luminous Intensity Ratio	-	-	-	20	%

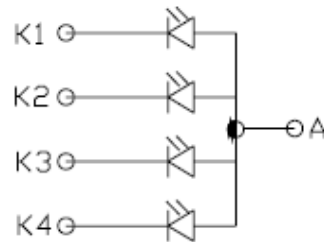
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Module Name: TY240 240320 Rev 1.0



NOTES:

1. DRIVE IC:ILI9320
2. TYPE:2.4"TFT
3. DISPLAY MODE:T/M
4. VIEWING DIRECTION:6 O'CLOCK
5. OPERATING TEMP:-20°C~70°C
STORAGE TEMP:-30°C~80°C



- Remarks: nc = no connect
- Touch panel not implemented in this model

PIN	SYMBOL
1	DB0
2	DB1
3	DB2
4	DB3
5	GND
6	VDD
7	/CS
8	RS
9	/WR
10	/RD
11	IM0
12	XL (nc*)
13	YB (nc*)
14	XR (nc*)
15	YT (nc*)
16	LED-A
17	LED-K1
18	LED-K2
19	LED-K3
20	LED-K4
21	nc
22	DB4
23	DB8
24	DB9
25	DB10
26	DB11
27	DB12
28	DB13
29	DB14
30	DB15
31	/RESET
32	VDD
33	VDD
34	GND
35	DB5
36	DB6
37	DB7

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