

Application

This specification is applied to the 7 inch WVGA supported TFT-LCD module, and can display true 16.7M colors with dithering (8 bit/ color). The module is designed for OA, Car TV application and other electronic products which require flat panel display of digital signal interface. This module is composed of a 7" TFT-LCD panel, a driver circuit and backlight unit.

Features

- WVGA (800×480 pixels) resolution
- Digital 24 bit parallel RGB
- Transparent Heater

General Specifications

Item	Specifications	Unit
Screen Size	7 (Diagonal)	inch
Display Format	800RGB(H)×480(V)	dot
Active Area	152.4(H)×91.44(V)	mm
Pixel Pitch	0.1905(H)×0.1905(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	IPS / Transmissive Mode / Normally Black	-
Surface Treatment	Clear(7H)	-
Viewing Direction	Full view angle	-
Outline Dimension	166.6(W)×109.4(H)×6.5(D)	mm
Weight	(206)	g
RoHS Compliance	RoHS Compliance	-

▼ Absolute Maximum Ratings

Absolute Ratings of Environment

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Storage Temperature	T _{ST}	-40	+90	°C	(1)(2)(3)(4)
Operating Ambient Temperature	T _{OP}	-40	+85	°C	(1)(2)(3)(4)

Note (1) (a) 90 %RH Max. (T_a ≤ 40 °C).

(b) Wet-bulb temperature should be 39 °C Max. (T_a > 40 °C).

(c) No condensation.

Note (2) T_a = Ambient Temperature, T_p = Panel Surface Temperature.

Note (3) This rating applies to all parts of the module and should not be exceeded.

Note (4) If the product were used out of the operation and storage range, it will have quality issue

Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed.

▼ Electrical Absolute Ratings

TFT-LCD Module

(T_a=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Digital Power Supply Voltage	V _{DD}	-0.5	5.0	V	-

Note The absolute maximum rating values of this product are not allowed to be exceeded at any times.

Backlight Unit

(T_a=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Current of Backlight Unit	I _B	-	720	mA	-
Reverse Voltage	V _R	-	15	V	-

Electrical Characteristics

TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	V _{DD}	3.0	3.3	3.6	V	-
Power Supply Current	I _{DD}	-	158	221.2	mA	(1)
Input High Threshold Voltage	V _{IH}	0.7V _{DD}	-	V _{DD}	V	-
Input Low Threshold Voltage	V _{IL}	0	-	0.3V _{DD}	V	-

Note (1) The specified power consumption is under the conditions at VCC=12 V or 24V, F_v=60Hz, whereas a power dissipation check pattern below is displayed.

White Pattern / 255 Gray



Active Area

Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Current of Backlight Unit	I _B	-	360	-	mA	-
Voltage of Backlight Unit	V _B	-	(9.6)	-	V	I _B =360mA,(2)
LED Life Time(25°C)	-	65000	-	-	hr	(1),(3)

Note (1) : LED life time is defined as under 25±2°C , when the average brightness decrease to 50% of original brightness

Note (2) : The BLU is driven by constant current, the voltage value is for reference only.

Note (3) : Use JuFei LED(Global patent)

Transparent Heater

Item	Value			Unit	Note
	Min.	Typ.	Max.		
Terminal Resistance	-	12	15	Ω	-
Input Voltage	-	12	-	V	(1)
Power Consumption	-	(11.6)	-	W	(1)
Surface average temperature	-	±10 °C	-	°C	

Note 1: Heater must be used at ambient temperature below 0°C

Input / Output Terminals Pin Assignment

TFT-LCD Module

Connector: IMSA-12001S-60Y903 manufactured by IRISO

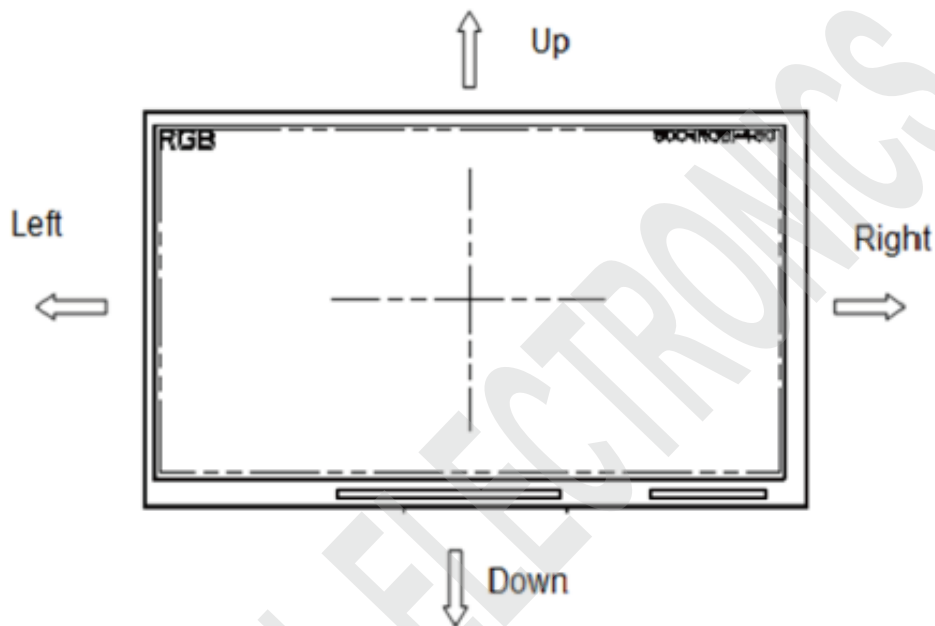
Pin No.	Symbol	I/O	Description
1	GND	P	Ground
2	NC	I	No Connect
3	VDD	P	+3.3 V Power supply
4	R0	I	RED data(LSB)
5	R1	I	RED data
6	R2	I	RED data
7	R3	I	RED data
8	R4	I	RED data
9	R5	I	RED data
10	R6	I	RED data
11	R7	I	RED data(MSB)
12	G0	I	GREEN data(LSB)
13	G1	I	GREEN data
14	G2	I	GREEN data
15	G3	I	GREEN data
16	G4	I	GREEN data
17	G5	I	GREEN data
18	G6	I	GREEN data
19	G7	I	GREEN data(MSB)
20	B0	I	BLUE data(LSB)
21	B1	I	BLUE data
22	B2	I	BLUE data
23	B3	I	BLUE data
24	B4	I	BLUE data
25	B5	I	BLUE data
26	B6	I	BLUE data
27	B7	I	BLUE data(MSB)
28	DCLK	I	Dot Clock
29	DE	I	Data Enable
30	VDD	P	+3.3 V Power supply

Pin No.	Symbol	I/O	Description
31	VDD	P	+3.3 V Power supply
32	NC	I	No Connect
33	RESET	I	Global reset pin (Default high), active low.
34	STBYB	I	Standby mode setting pin (Default high), active low.
35	SHLR	I	Horizontal scan direction (Default high), Note (1)
36	VDD	P	+3.3 V Power supply
37	UPDN	I	Vertical scan direction (Default high), Note (1)
38	GND	P	Ground
39	GND	P	Ground
40	NC	I	No Connect
41	NC	I	No Connect
42	NC	I	No Connect
43	NC	I	No Connect
44	NC	I	No Connect
45	NC	I	No Connect
46	NC	I	No Connect
47	NC	I	No Connect
48	NC	I	No Connect
49	NC	I	No Connect
50	NC	I	No Connect
51	GND	P	Ground
52	NC	I	No Connect
53	GND	P	Ground
54	VDD	P	+3.3 V Power supply
55	NC	I	No Connect
56	NC	I	No Connect
57	VDD	P	+3.3 V Power supply
58	NC	I	No Connect
59	GND	P	Ground
60	NC	I	No Connect

Note (1)

SHLR	UPDN	Data shifting
VDD	VDD	Left→Right , UP→Down(default)
VDD	GND	Left→Right , Down→UP
GND	VDD	Right→Left , UP→Down
GND	GND	Right→Left , Down→UP

Refer to the figure as below:



Backlight Unit

Connector: JST BHSR-02VS-1(N)

Pin No.	Symbol	I/O	Description	Wire Color
1	VLEDA	I	Backlight LED Anode.	Red
2	VLEDC	I	Backlight LED Cathode.	Black

Heater Unit

Connector: JST BHSR-02VS-1(N)

Pin No.	I/O	Description
1	I	Heater Power Input Terminal
2	I	Heater Power Input Terminal

Outline Drawing

