

Application

This specification is applied to the 10.1 inch WXGA supported TFT-LCD module and can display true 16.7M colors (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 10.1" TFT-LCD panel, a driver circuit.

Features

- WXGA (1280×800 pixels) resolution.
- LVDS Receiver 24 bit Interface
- Dot inversion mode with stripe type.

General Specifications

Item	Specifications	Unit
Screen Size	10.1 (Diagonal)	inch
Display Format	1280RGB(H)×800(V)	dot
Active Area	216.96(H)×135.6(V)	mm
Pixel Size	0.0565(H)×0.1695(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	IPS Type Transmissive Mode Normally Black	-
Surface Treatment	Hard coating	-
Viewing Direction	Full view angle	-
Outline Dimension	229.46(W)×149.1(H)×4.8(D)	mm
Weight	(292.74)	g
RoHS Compliance	Evervision certifies this product to be in compliance with European Union Directive 2015/863/EU on the restriction of certain hazardous substances in electrical and electronic equipment.	-

▲ Absolute Maximum Ratings

Absolute Ratings of Environment

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Storage Temperature	T _{ST}	-30	+80	°C	(1)(2)
Operating Ambient Temperature	T _{OP}	-20	+70	°C	(1)(2)

Note1: Background color changes slightly depending on ambient temperature.

This phenomenon is reversible.

Note2: Please refer to item of RELIABILITY.

▲ Electrical Absolute Ratings

TFT-LCD Module

Note1

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Digital Power Supply Voltage	VDD	-0.3	3.9	V	-
Analog Power Supply Voltage	AVDD	-0.3	14	V	-
Gate High Voltage	V _{GH}	-0.3	42	V	-
Gate Low Voltage	V _{GL}	-19	0.3	V	-
Gate High To Gate Low Voltage	V _{GH} - V _{GL}	12	40	V	-

Backlight Unit

Note1

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
LED Reverse Voltage	VR	-	5	V	Each LED
LED Forward Current	IF	-	70	mA	Each LED

Note 1: The absolute maximum rating values of this product are not allowed to be exceeded at any times. 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 Characteristics

TFT-LCD Module

Note1

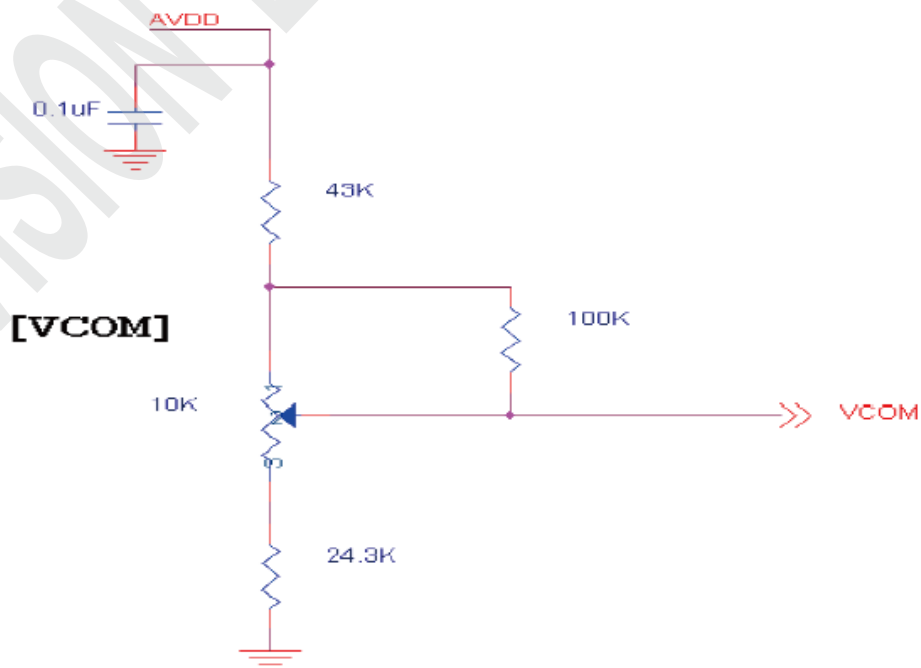
(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Digital Power Supply Voltage	VDD	2.3	2.5	2.7	V	(2)
Analog Power Supply Voltage	AVDD	8.0	8.2	8.4	V	-
Gate High Voltage	V _{GH}	21.7	22	22.3	V	-
Gate Low Voltage	V _{GL}	-7.3	-7	-6.7	V	-
Input signal voltage	VCOM	2.7	3.0	3.3	V	(4)
Current for Driver	IGH	-	705	1000	uA	V _{GH} =22V
	IGL	-	705	1000	uA	V _{GL} = -7V
	IVDD	-	95	120	mA	VDD =2.5V
	I _{AVDD}	-	45	70	mA	AVDD =8.2V
Input logic high voltage	V _{IH}	0.8VDD	-	3.6	V	(3)
Input logic low voltage	V _{IL}	0	-	0.2VDD	V	

Note 1: Be sure to apply VDD and V_{GL} to the LCD first, and then apply V_{GH}.

Note 2: VDD setting should match the signals output voltage (refer to Note 3) of customer's system board.

Note 4: Typical VCOM is only a reference value, it must be optimized according to each LCM. Be sure to use VR.



Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Voltage for LED backlight	V _L	16.8	(19.5)	21	V	(1)
Current for LED backlight	I _L	200	240	280	mA	-
LED Life Time(25°C)	-	20000	-	-	hr	(2)

Note 1: The LED Supply Voltage is defined by the number of LED at Ta=25°C and IL =200mA.

Note 2: The "LED life time" is defined as the module brightness decrease to 50% original brightness at Ta=25°C and IL =200mA. The LED life time could be decreased if operating IL is larger than 200mA.

Input / Output Terminals Pin Assignment

TFT-LCD Module

A 40pin connector is used for the module electronics interface. The recommended model is F62240-H1210A manufactured by Vigorconn.

Pin No.	Symbol	I/O	Function	Remark
1	VCOM	P	Common Voltage	
2	VDD	P	Power Supply	
3	VDD	P	Power Supply	
4	NC	---	No connection	
5	NC	---	No connection	
6	NC	---	No connection	
7	GND	P	Ground	
8	Rxin0-	I	-LVDS Differential Data Input	R0-R5, G0
9	Rxin0+	I	+LVDS Differential Data Input	
10	GND	P	Ground	
11	Rxin1-	I	-LVDS Differential Data Input	G1-G5, B0,B1
12	Rxin1+	I	+LVDS Differential Data Input	
13	GND	P	Ground	
14	Rxin2-	I	-LVDS Differential Data Input	B2-B5,HS,VS, DE
15	Rxin2+	I	+LVDS Differential Data Input	
16	GND	P	Ground	
17	RxCLK-	I	-LVDS Differential Clock Input	LVDS CLK
18	RxCLK+	I	+LVDS Differential Clock Input	
19	GND	P	Ground	
20	Rxin3-	I	-LVDS Differential Data Input	R6, R7, G6, G7, B6, B7
21	Rxin3+	I	+LVDS Differential Data Input	
22	GND	P	Ground	
23	NC	---	No connection	
24	NC	---	No connection	
25	GND	P	Ground	
26	NC	---	No connection	

27	LED_PWM	O	CABC controller signal output for backlight	Note2
28	NC	---	No connection	
29	AVDD	P	Power for Analog Circuit	
30	GND	P	Ground	
31	LED-	P	LED Cathode	
32	LED-	P	LED Cathode	
33	NC	---	No connection	
34	NC	---	No connection	
35	VGL	P	Gate OFF Voltage	
36	NC	---	No connection	
37	CABC_EN	I	CABC Enable Input	Note1
38	VGH	P	Gate ON Voltage	
39	LED+	P	LED Anode	
40	LED+	P	LED Anode	

I: input, O: output, P: Power

Note1: The setting of CABC function are as follows.

Pin	Enable	Disable
CABC_EN	High Voltage	Low Voltage or open

Note2: LED_PWM is used to adjust backlight brightness.

