

Application

This specification is applied to the 5 inch WVGA 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 5" TFT-LCD panel, a driver circuit and backlight unit.

Features

- WQVGA (480×272 pixels) resolution.
- 24 bit parallel RGB.

General Specifications

Item	Specifications	Unit
Screen Size	5 (5:3 diagonal)	inch
Display Format	800RGB(H)×480(V)	dot
Active Area	108(H)×64.8(V)	mm
Pixel Pitch	0.135(H)×0.135(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	IPS Type Transmissive Mode Normally Black	-
Surface Treatment	Anti-Glare	-
Viewing Direction	Full view angle	-
Outline Dimension	118.5(W)×77.55(H)×3.4(D)	mm
Weight	(53)	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	+85	°C	(1)(2)
Operating Ambient Temperature	T _{OP}	-30	+85	°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

(Ta=25±2°C, GND=V_{SS}=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Digital Power Supply Voltage	V _{CC}	-0.3	4.0	V	-

Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Current of Backlight Unit	I _B	-	60	mA	(1)
Voltage of Backlight Unit	V _B	-	35	V	(1)

Note (1) Permanent damage to the device may occur if maximum values are exceeded or reverse voltage is loaded.

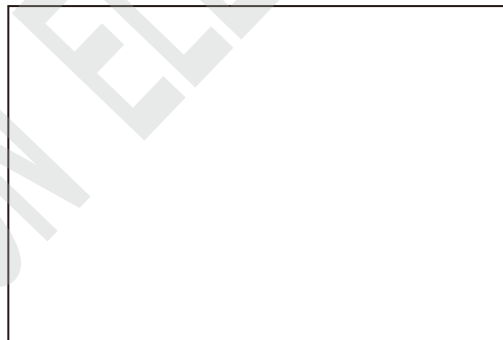
Electrical Characteristics TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Digital Power Supply Voltage	Vcc	3.0	3.3	3.6	V	-
Digital Current	IVcc	-	75	105	mA	(1)
Input High Threshold Voltage	VIH	0.7xVcc	-	Vcc	V	-
Input Low Threshold Voltage	VIL	GND	-	0.3xVcc	V	-
Pixel Clock	DCLK	-	25	-	MHz	-

Note (1) The specified power consumption is under the conditions at Vcc = 3.3V, FV=60Hz, DCLK=25 MHz, whereas a power dissipation check Pattern below is displayed.

White Pattern / 255 Gray



Active Area

Backlight Unit

($T_a=25\pm 2^{\circ}\text{C}$)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Current of Backlight Unit	I_B	-	40	-	mA	-
Voltage of Backlight Unit	V_B	-	(21.7)	-	V	$I_B=40\text{mA},(2)$
Power Consumption	P_{BL}	-	(0.868)	-	W	$I_B=40\text{mA}$
LED Life Time(25°C)	-	50000	60000	-	hr	(1)

Note (1) : LED life time is defined as under $25\pm 2^{\circ}\text{C}$, 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.

Input / Output Terminals Pin Assignment

TFT-LCD

Pin No.	Symbol	I/O	Description
1	VLED-	I	LED Cathode
2	VLED+	I	LED Anode
3	GND	I	Ground
4	V _{CC}	I	Power supply
5	R0	I	RED data (LSB)
6	R1	I	RED data
7	R2	I	RED data
8	R3	I	RED data
9	R4	I	RED data
10	R5	I	RED data
11	R6	I	RED data
12	R7	I	RED data(MSB)
13	G0	I	GREEN data(LSB)
14	G1	I	GREEN data
15	G2	I	GREEN data
16	G3	I	GREEN data
17	G4	I	GREEN data
18	G5	I	GREEN data
19	G6	I	GREEN data
20	G7	I	GREEN data(MSB)
21	B0	I	Blue data(LSB)
22	B1	I	Blue data
23	B2	I	Blue data
24	B3	I	Blue data
25	B4	I	Blue data
26	B5	I	Blue data
27	B6	I	Blue data
28	B7	I	Blue data(MSB)
29	GND	I	Ground
30	DCLK	I	Dot Clock See Note 1

Pin No.	Symbol	I/O	Description
31	DISP	I	DISP sets the display mode. DISP=" 1", Normal display mode DISP=" 0", Standby mode
32	HSYNC	I	Horizontal sync signal applied to the RGB interface, default is negative polarity. See Note 1
33	VSYNC	I	Vertical sync signal applied to the RGB interface, default is negative polarity. See Note 1
34	DE	I	Input data enable control. See Note 1
35	NC	I	No Connect
36	GND	I	Ground
37	NC	I	No Connect
38	NC	I	No Connect
39	NC	I	No Connect
40	NC	I	No Connect

Note 1:

RGB Mode Selection Table	DCLK	HSYNC	VSYNC	DE
SYNC - DE Mode	Input	Input	Input	Input
SYNC Mode	Input	Input	Input	GND
DE Mode	Input	GND	GND	Input

Note: "Input" means these signals are driven by host side

Outline Drawing

