

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, and backlight unit and used as the input devices for general electric appliances via both finger and Capacitive stylus pen.

Features

- WXGA (1280×800 pixels) resolution.
- LVDS Receiver 24 bit Interface
- Dot inversion mode with stripe type.
- LED driver circuit is built in this module to provide PWM Dimmer function.
- Projected Capacitive Touch
 - USB Interface
 - Multi Touch (Ten points)
 - 2048 x 2048 resolution

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 Pitch	0.1695(H)×0.1695(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	AAS Type / Transmissive Mode / Normally Black	-
Surface Treatment	Clear(7H)	-
Viewing Direction	Full view angle	-
Outline Dimension	229.46(W)×149.1(H)×7.66(D)	mm
Weight	(325)	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

(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	-
LVDS Driver Output Voltage	-	-0.3	V _{CC} + 0.3	V	-

LED Driver Absolute Maximum Ratings

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
LED Driver Supply Voltage	VLED	-0.3	17	V	(1)
LED Driver PWM	PWM	-0.3	6	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.		
Power Supply Voltage	V _{CC}	3.0	3.3	3.6	V	-
Power Supply Current	I _{CC}	-	270	378	mA	(1)
Differential Input High Threshold Voltage	V _{TH}	-	-	100	mV	-
Differential Input Low Threshold Voltage	V _{TL}	-100	-	-	mV	-
Power Consumption	P _L	-	891	1247	mW	(1)
VSYNC Frequency	F _V	-	60	-	Hz	-
DCLK Frequency	DCLK	-	71.1	-	MHz	-

Note (1) The specified power consumption is under the conditions at V_{CC}=3.3V, F_V=60Hz, whereas a power dissipation check pattern below is displayed.

White Pattern / 255 Gray



Active Area

Electrical Characteristics

LED Driver Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Voltage of LED Driver Unit	V _{LED}	11.5	12.0	12.5	V	-
Current of LED Driver Unit	I _{LED}	-	260	364	mA	V _{LED} =12V、B/L=260mA
Voltage of LED Driver Unit	V _{LED}	4.5	5.0	5.5	V	-
Current of LED Driver Unit	I _{LED}	-	630	882	mA	V _{LED} =5V、B/L=260mA
PWM signal Low voltage	VPWML	0	-	0.4	V	-
PWM signal High voltage	VPWMH	1.4	-	5	V	-
PWM frequency	fPWM	100	-	1000	Hz	-
LED Life Time(25°C)	-	50000	60000	-	hr	(1)

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

Projected Capacitive Touch

(Ta=25±2°C)

Item	Symbol	Value			Unit	No e
		Min.	Typ.	Max.		
Power Supply Voltage	VDD	4.8	5.0	5.2	V	-
Power Supply Current	IDD	-	33.8	47.4	mA	(1)
Output High Threshold Voltage	V _{OH}	2.8	-	-	V	-
Output Low Threshold Voltage	V _{OL}	-	-	0.8	V	-
Differential Input Sensitivity (D+)-(D-)	V _{DI}	0.2	-	-	V	-
Differential Input Common Mode Range	V _{CM}	0.8	-	2.5	V	-
Power Consumption	P _L	-	169.0	237.0	mW	@5.0V
Report Rate	R _R	-	60	-	Hz	-
Interface		USB				-
Function		Multi Touch				-

Note (1) This test condition is touched with 10 points.

Input / Output Terminals Pin Assignment

TFT-LCD Module

Pin No.	Symbol	I/O	Description
1	V _{CC}	I	+3.3V power supply
2	V _{CC}	I	+3.3V power supply
3	GND	I	Ground
4	GND	I	Ground
5	RIN3+	I	LVDS Signal (+) Channel 3
6	RIN3-	I	LVDS Signal (-) Channel 3
7	GND	I	Ground
8	RCLK+	I	LVDS Clock Signal (+)
9	RCLK-	I	LVDS Clock Signal (-)
10	GND	I	Ground
11	RIN2+	I	LVDS Signal (+) Channel 2
12	RIN2-	I	LVDS Signal (-) Channel 2
13	GND	I	Ground
14	RIN1+	I	LVDS Signal (+) Channel 1
15	RIN1-	I	LVDS Signal (-) Channel 1
16	GND	I	Ground
17	RIN0+	I	LVDS Signal (+) Channel 0
18	RIN0-	I	LVDS Signal (-) Channel 0
19	GND	I	Ground
20	GND	I	Ground
21	NC	I	Not Connection
22	NC	I	Not Connection
23	NC	I	Not Connection

24	NC	I	Not Connection
25	BLEN	I	Note 1
26	NC	I	Not Connection
27	VLED	I	LED driver power supply
28	VLED	I	LED driver power supply
29	GND	I	Ground
30	GND	I	Ground

Note 1: On/Off Control Input and Dimming Command Input.

A voltage greater than 0.7V will turn on the chip.

When the BLEN pin voltage rises from 0.7V to 1.4V, The LED current will change from 0% to 100% of the maximum LED current.

To use PWM dimming, apply a 100Hz to 1kHz square wave signal with amplitude greater than 1.4V to this pin.

Projected Capacitive Touch

Connector: CVILUX CF25101D0R0-05 or Equivalent

Pin No.	Symbol	I/O	Description
1	GND	I	System ground.
2	VDD	I	+5.0V power supply.
3	NC	-	Not Connection
4	NC	-	Not Connection
5	NC	-	Not Connection
6	NC	-	Not Connection
7	NC	-	Not Connection
8	D-	I/O	USB D-
9	D+	I/O	USB D+
10	GND	I	System ground.

Outline Drawing

