

VGG128020-0TSLWB



Application

This specification is applied to the 12.1 inch WXGA supported TFT-LCD module and can display true 262K/16.2M colors (6/8 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 12.1" TFT-LCD panel, a driver circuit built in LED Driver.

Features

- WXGA (1280×800 pixels) resolution.
- 6 bit & 8 bit LVDS Interface
- LED driver circuit is built in this module to provide PWM Dimmer function
- Projected Capacitive Touch
 - USB Interface
 - Multi Touch (Five points)
 - 4096 x 4096 resolution

General Specifications

Item	Specifications	Unit
Screen Size	12.1 (Diagonal)	inch
Display Format	1280RGB(H)×800(V)	dot
Active Area	261.12(H)×163.2(V)	mm
Pixel Pitch	0.204(H)×0.204(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	278(W)×184(H)×12.7(D)	mm

Absolute Maximum Ratings

Absolute Ratings of Environment

Item	Symbol	Value		Unit
		Min.	Max.	
Storage Temperature	T _{ST}	-20	+70	°C
Operating Temperature	T _{OP}	-20	+70	°C

Electrical Absolute Ratings

TFT-LCD Module

(Ta=25±2°C, V_{SS}=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	VDD	-0.3	4.0	V	-

LED Driver Absolute Maximum Ratings

(Ta=25±2°C)

Item	Value			Unit
	Min.	Min.	Max.	
LED Converter Input Voltage	10.8	12.0	13.2	V _{DC}
LED Converter Input Current	-	0.55	-	A _{DC}

Electrical Characteristics

TFT-LCD Module

Parameter		Symbol	Value			Unit	Note
			Min.	Typ	Max.		
Power Supply Voltage		VCC	3.0	3.3	3.6	V	-
Permissive Ripple Voltage		V _{RP}	-	50	-	mV	-
Rush Current		I _{RUSH}	1.5			A	-
Initial Stage Current		I _{IS}	-	-	1.0	A	-
Power Supply Current	White	ICC	-	530	742	mA	-
	Black	ICC	-	350	490	mA	-
LVDS Differential Input High Threshold		V _{TH(LVDS)}	+100	-	-	mV	V _{CM} =1.2V
LVDS Differential Input Low Threshold		V _{TL(LVDS)}	-	-	-100	mV	V _{CM} =1.2V
LVDS Common Mode Voltage		V _{CM}	1.125	-	1.375	V	-
LVDS Differential Input Voltage		VID	100	-	600	mV	-
Terminating Resistor		R _T	-	100	-	Ohm	-

Note (1) The assembly should be always operated within above ranges.

Projected Capacitive Touch

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	V_{TP}	4.8	5.0	5.2	V	-
Power Supply Current	I_{TP}	-	33.2	46.5	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	-	166.0	232.5	mW	@5.0V
Report Rate	R_R	-	60	-	Hz	-

Note (1) This test condition is touched with 5 points.

Input / Output Terminals Pin Assignment

TFT-LCD Module

Pin No.	Symbol	Description
1	Vi	LED power
2	Vi	LED power
3	Vi	LED power
4	Vi	LED power
5	ENLED	Enable pin
6	Dimming	Backlight Adjust
7	NC	No Connection or Ground
8	NC	No Connection or Ground
9	VCC	Power supply
10	VCC	Power supply
11	GND	Ground
12	GND	Ground
13	RX0-	Negative transmission data of pixel 0
14	RX0+	Positive transmission data of pixel 0
15	GND	Ground
16	RX1-	Negative transmission data of pixel 1
17	RX1+	Positive transmission data of pixel 1
18	GND	Ground
19	RX2-	Negative transmission data of pixel 2
20	RX2+	Positive transmission data of pixel 2
21	GND	Ground
22	RXCLK-	Negative of clock
23	RXCLK+	Positive of clock
24	GND	Ground
25	RX3-	Negative transmission data of pixel 3
26	RX3+	Positive transmission data of pixel 3
27	GND	Ground
28	SEL6/8	LVDS 6/8 bit select function control, Low → 6 bit Input Mode High → 8bit Input Mode
29	GND	Ground
30	NC	No Connection or Ground

Projected Capacitive Touch

Connector: CI0105M1HR0-NH

Pin No.	Symbol	I/O	Description
1	V _{TP}	I	+5.0V power supply.
2	D-	I/O	USB D-
3	D+	I/O	USB D+
4	GND	I	System ground.
5	GND	I	System ground.

Outline Drawing

