

VGG644821-0TSLWA



Application

This specification is applied to the 3.5 inch VGA supported TFT-LCD module, and can display 16.7M colors. This module is composed of a 3.5" TFT-LCD panel, a driver circuit and backlight unit.

Features

- VGA (640×480 pixels) resolution.
- MIPI Interface: 2 Data Lanes.

General Specifications

Item	Specifications	Unit
Screen Size	3.5 (Diagonal)	inch
Display Format	640RGB(H)×480(V)	dot
Active Area	70.08(H)×52.56(V)	mm
Pixel Pitch	0.1095(H)×0.1095(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	76.84(W)×63.84(H)×3.27(D)	mm

Absolute Maximum Ratings

Absolute Ratings of Environment

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

Electrical Absolute Ratings

TFT-LCD Module

(Ta=25±2°C, GND=V_{SS}=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	VDD	-0.3	3.6	V	-
Supply Voltage for I/O	VDDIO	-0.3	3.3	V	-

Electrical Characteristics

TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit
		Min.	Typ.	Max.	
Supply Voltage for (DC/DC)	VDD	2.5	3.3	3.6	V
Supply Voltage for I/O	VDDIO	1.65	1.8	2.0	V
Supply Current for (DC/DC)	IVDD	-	23	32.2	mA
Supply Current for I/O	IDDIO	-	13	18.2	mA
Input High Threshold Voltage	VIH	0.7xVDDIO	-	VDDIO	V
Input Low Threshold Voltage	VIL	0	-	0.3xVDDIO	V

Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Voltage	VL	16.8	-	19.2	V	IL =40mA (2)
LED Current	IL	-	40	-	mA	-
LED Life Time(25°C)	-	-	30000	-	hr	(1)

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.

Input / Output Terminals Pin Assignment

TFT-LCD Module

Pin No.	Symbol	I/O	Description
1	GND	I	Power Ground
2	VDD	I	Power supply for analog circuits
3	GND	I	Power Ground
4	RESET	I	Reset signal input terminal. Active at 'L'.
5	TE	I	Tearing effect output pin is used to synchronize MCU frame writing,
6	PWM	O	LCD backlight control PWM output pin.
7	GND	I	Power Ground
8	GND	I	Power Ground
9	GND	I	Power Ground
10	VDDIO	I	Logic I/O power supply
11	GND	I	Power Ground
12	D1P	I	High speed interface data differential signal input/output pins
13	D1N	I	High speed interface data differential signal input/output pins
14	GND	I	Power Ground
15	CLKP	I	High speed interface clock differential signal input pins
16	CLKN	I	High speed interface clock differential signal input pins
17	GND	I	Power Ground
18	D0P	I	High speed interface data differential signal input/output pins
19	D0N	I	High speed interface data differential signal input/output pins
20	GND	I	Power Ground
21	LEDK	I	Backlight LED Ground
22	LEDA	I	Backlight LED Power

Pin No.	Symbol	I/O	Description
31	R3	I	Red data
32	R4	I	Red data
33	R5	I	Red data
34	R6	I	Red data
35	R7	I	Red data(MSB)
36	HSYNC	I	Horizontal Sync Input
37	VSNC	I	Vertical Sync Input
38	DOTCLK	I	Pixel clock input pin.
39	NC	I	No connection
40	NC	I	No connection
41	VDDIO	I	Logic I/O power supply 1.65~3.6V
42	VDD	I	Power supply for analog circuits 2.5~3.6V
43	NC	I	No connection
44	NC	I	No connection
45	NC	I	No connection
46	NC	I	No connection
47	NC	I	No connection
48	NC	I	No connection
49	NC	I	No connection
50	NC	I	No connection
51	NC	I	No connection
52	DE	I	Data Enable Input
53	DGND	I	Ground
54	AVSS	I	Ground

Outline Drawing

