



## AND-TFT-7LP

### 7" TFT LCD

### aSi LCD Color Module

The AND-TFT-7LP is a compact full color TFT LCD module, that is suitable for portable products, industrial products, hand-held products, security products, instrument displays and office electronics.

### Features

- 18 bits LVDS interface
- a-Si Technology Type
- Ultra Compact
- Image Reversion: Up/Down and Left/Right
- LED Backlight Circuit Operation Voltage: +5V
- Support Touch Screen Function (Option)
- RoHS compliant

### Mechanical Characteristics

Item	Standard Value	Unit
Screen size	7 inch (diagonal)	inch
Display Format	800 x (R, G, B) x 480	dot
Active Area	152.4 (H) x 91.44 (V)	mm
Pixel Pitch	0.1905 ((H) x 0.1905 (V)	mm
Pixel Configuration	Stripe	—
Surface Treatment	Anti-Glare	—
Display Mode	Normally White, Transmissive	—
Weight	370 ± 20	grams

### Absolute Maximum Ratings: Driving TFT LCD Panel GND = 0V, Ta = 25°C

Item	Symbol	Absolute Maximum Rating		Unit	Remarks
		Min.	Max.		
Input Voltage	Vcc	+3	+3.6	V	
LED Driver Input Voltage	VLED	+4.5	+5.8	V	
Digital Input Signal	TTL	Vcc -0.5	Vcc +0.5	V	
Operating Temperature		-20	+70	°C	
Storage Temperature		-30	+80	°C	
Operating Temperature with TSP		-20	+70	°C	
Storage Temperature with TSP		-20	+80	°C	

Product specifications contained herein may be changed without prior notice.  
It is therefore advisable to contact Purdy Electronics before proceeding with the design of equipment incorporating this product.

**Electrical Characteristics - Recommended Operating Conditions (Ta = 25°C)**

Item	Symbol	Specifications			Unit	Remark
		Min.	Typ.	Max.		
Input Voltage	Vcc	+3.1	+3.3	+3.5	V	
Total Current	Icc	–	210	–	mA	@ +3.3V
LED Driver Input Voltage	VLED	+4.8	+5	+5.5	V	
LED Driver Current	ILED	–	420	–	mW	@ +15V
LED Driver Power Consumption		–	2.1	–	W	@ +5V
Digital Input Signal	TTL	Vcc-0.3	Vcc	Vcc +0.3	V	
Dimmer Adjust	Dimmer	0 (Dark)	–	+3.3 (Bright)	V	Positive, Floating: 1/2 Vcc
Enable Backlight	Enable	0	–	+3.3	V	1: Enable, 0: Disable

Note: Please input Vcc if the function of the backlight unit needs to be worked normally. Please do not input VLED only.

**Optical Specifications (Ta = 25 °C)**

Item		Symbol	Remarks	Min.	Specifications Typ.	Max.	Units
Viewing Angle	Horizontal	Left	CR ≥ 10	60	70	–	deg
		Right		60	70	–	
	Vertical	Top		40	50	–	
		Bottom		60	70	–	
Contrast Ratio <u>Luminance when LCD is white</u> Luminance when LCD i black		CR	At Optimized Viewing Angle	400	500	–	–
Response Time	Rise	Tr	θ = 0°	—	10	20	ms
	Fall	Tf	θ = 0°	—	15	30	ms
Brightness		LUM		200	250	–	cd/m²
Uniformity (%)		U		70	75	–	%
White Chhromaticity		x	θ = 0°	0.26	0.31	0.36	–
		y	θ = 0°	0.28	0.33	0.38	–
LED Life Time			25°	20,000	—	—	Hr

[illegible]

**Pin Description - J501A: LVDS I/O Terminals (Pitch 1.25 mm, 20 Pin, Side Entry Type)**

Pin No.	Symbol	I/O	Description
1	VCC	I	Power Supply (3.3 V)
2	VCC	I	Power Supply (3.3V)
3	GND	P	Ground
4	GND	P	Ground
5	RX0-	I	Differential Data Input, CH0 (Negative)
6	RX0+	I	Differential Data Input, CH0 (Positive)
7	GND	P	Ground
8	RX1-	I	Differential Data Input, CH1 (Negative)
9	RX1+	I	Differential Data Input, CH1 (Positive)
10	GND	P	Ground
11	RX2-	I	Differential Data Input, CH2 (Negative)
12	RX2+	I	Differential Data Input, CH2 (Positive)
13	GND	P	Ground
14	CLK-	I	Differential Clock Input (Negative)
15	CLK+	I	Differential Clock Input (Positive)
16	GND	P	Ground
17	L/R	I	Horizontal Display Mode Select Signal
18	U/D	I	Vertical Display Mode Select Signal
19	GND	P	Ground
20	GND	P	Ground

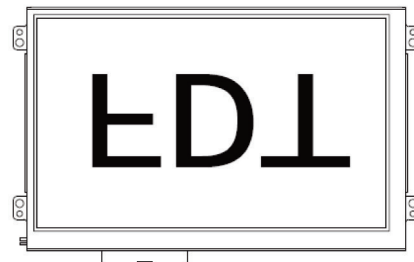
L/R=High , U/D=High



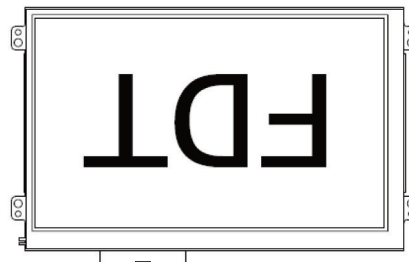
L/R=Low , U/D=High



L/R=High , U/D=Low



L/R=Low , U/D=Low



**Pin Description - J502: Pin Assignment of Inverter (Pitch 1.25mm, 6 Pin, Side Entry Type)****Connector Part No.: 53261-0619 (MOLEX) or MS24016R (STM); Matching Connector Part No: 51021-0600 (MOLEX) or P24016 (STM)**

Pin No.	Symbol	I/O	Description
1	VLED	–	Power Voltage for LED Backlight Circuit (+5V)
2	VLED	–	Power Voltage for LED Backlight Circuit (+5V)
3	DIMMER	O	Backlight Brightness Adjust
4	ENABLE	O	Enable for LED Backlight
5	GND	–	Power Ground
6	GND	–	Power Ground

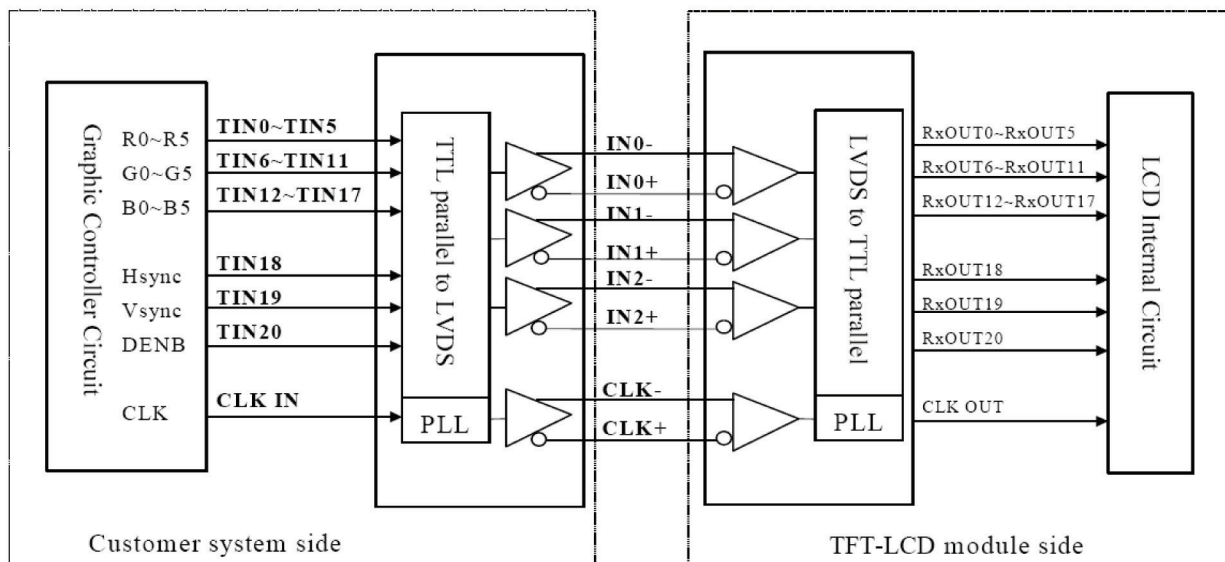
**Pin Description - J401C: Pin Assignment of Touch USB (USBA-Female 2.0 mm, Side Entry Type) (Option)**

Pin No.	Symbol	I/O	Description
1	DGND	–	Digital Ground
2	D+	–	DATA (+)
3	D-	–	DATA (-)
4	VBUS	–	USB VCC

**Pin Description - J401D: Pin Assignment of Touch RS232 (D-SUB 9 MALE) (Option)**

Pin No.	Symbol	I/O	Description
1	NC	–	No Connection
2	RXD	–	Receive Data
3	TXD	–	Transmit Data
4	NC	–	No Connection
5	GND	–	Ground
6	NC	–	No Connection
7	NC	–	No Connection
8	NC	–	No Connection
9	NC	–	No Connection

## LVDS Interface Block Diagram



## Block Diagram

