AND-TFT-43LP-KIT

4.3" TFT LCD
aSi LCD Color Module

The AND-TFT-43LP 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. *Application Precautions: Do not use the products herein for the following equipment which demands extremely high performance in terms of functionality, reliability or accuracy including: aerospace equipment, communication equipment for trunk lines, control equipment for the nuclear power industry, medical equipment related to life support.*

Features

- a-Si Technology Type
- Ultra Compact
- NTSC/PAL/SECAM Video Auto Switch
- Single Operation Voltage +12V
- CVBS / Analog RGB (PC Mode) Signal Input
- All Functions can be controlled UART
- Support Touch Screen Function (Option)
- Digital TFT LCD
- **RoHS complliant**

Mechanical Characteristics

Item	Standard Value	Unit
Screen size	4.3 inch (diagonal)	inch
Display Format	480 x (R, G, B) x 272	dot
Active Area	95.04 (H) x 53.856 (V)	mm
Pixel Pitch	0.198 ((H) x 0.198 (V)	mm
Pixel Configuration	Stripe	–
Outline DImension	105.5 (H) x 67.2 (V) x 2.9 (D)	mm
Surface Treatment	Anti-Glare, Hard Coating (3H)	–
Weight	TBD	grams

Absolute Maximum Ratings: Driving TFT LCD Panel GND = 0V, Ta = 25ºC

Item	Symbol	Absolute Maximum Rating		Unit	Remarks
		Min.	Max.		
Input Voltage	Vin	9	15	V	
Video Input Signal	Video In	0.5	2.0	Vp-p	@ 75Ω
Analog RGB Input Signal	Analog RGB In	0.5	2.0	Vp-p	@ 75Ω
Digital Input Signal	TTL	+0.3	+3.6	V	
Operating Temperature		-20	+70	ºC	
Storage Temperature		-20	+70	ºC	

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.

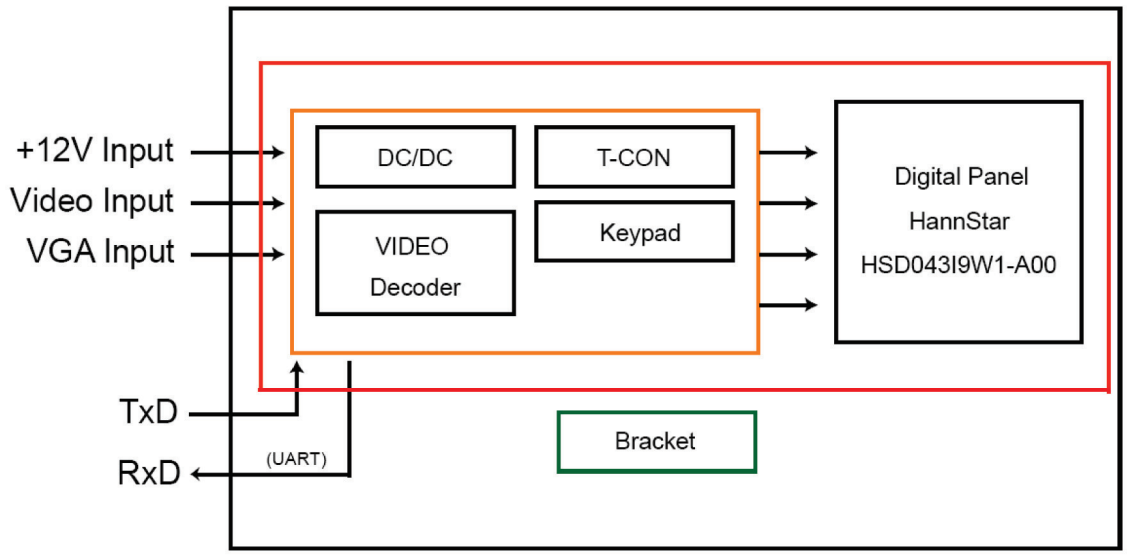
Electrical Characteristics - Recommended Operating Conditions (Ta = 25ºC)

Item	Symbol	I/O	Specifications			Unit	Remark
			Min.	Typ.	Max.		
Input Voltage	Vin	I	+10	+12	+14	V	
Total Current	Iin	I	–	–	–	mA	
Power Consumption	=	I	–	–	–	W	@ +12V
Output Voltage	VDD	O	+3.2	+3.3	+3.4	V	I=10mA
Video Input Signal	Video in	I	–	1.0	–	Vp-p	@ 75 Ω
Analog RGB Input Signal	Analog RGB in	RGB	–	0.7	–	Vp-p	@ 75 Ω

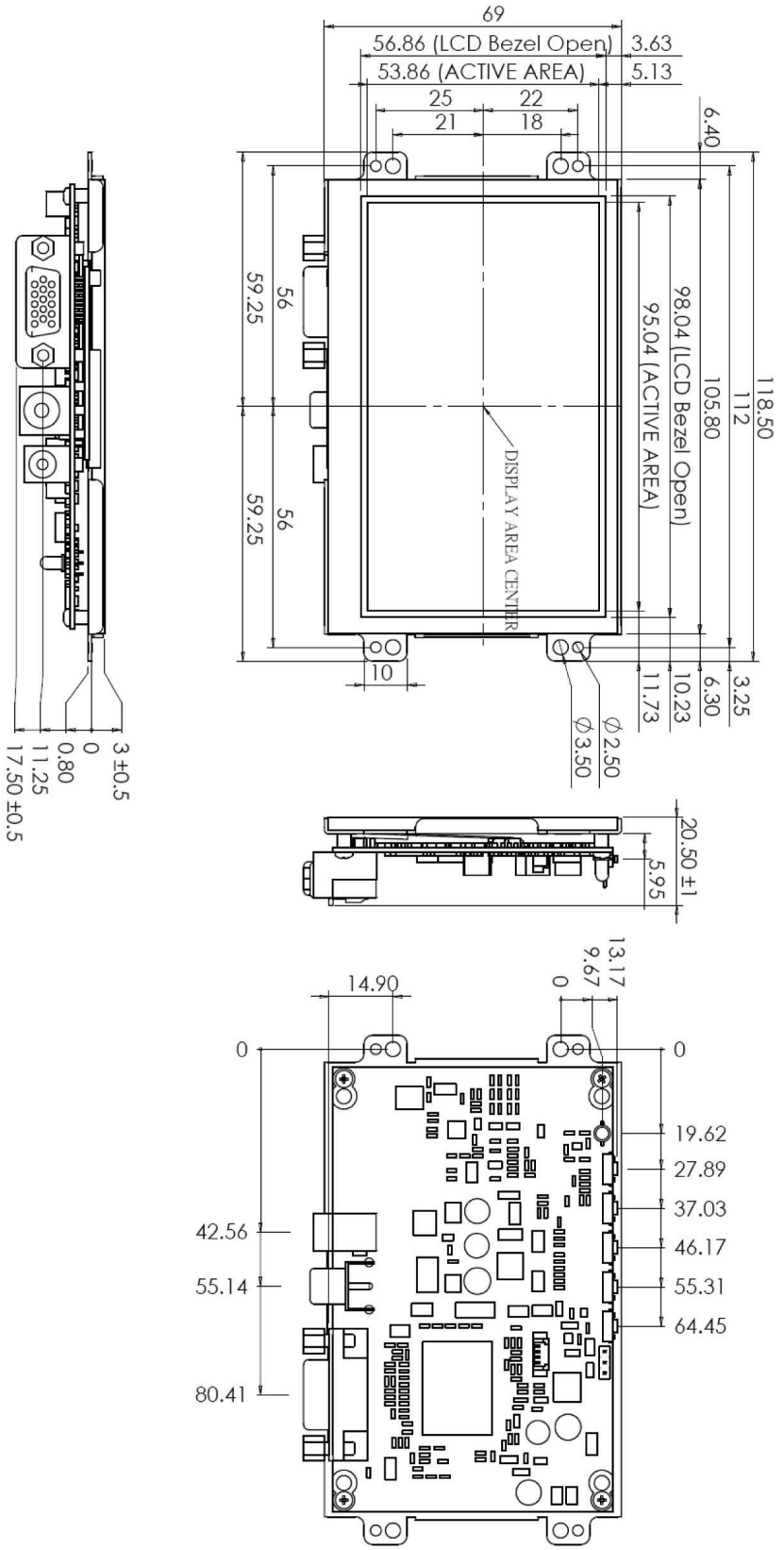
Optical Specifications (Ta = 25 ºC)

Item		Symbol	Remarks	Min.	Specifications Typ.	Max.	Units
Viewing Angle	Horizontal	Left	CR ≥ 10	65	75	–	deg
		Right		65	75	–	
	Vertical	Top		50	60	–	
		Bottom		60	70	–	
Contrast Ratio Luminance when LCD is white Luminance when LCD i black		CR	θ = 0º	480	600	–	–
Response Time	Rise	Tr	θ = 0º	—	3	6	ms
	Fall	Tf	θ = 0º	—	7	14	ms
Brightness		LUM		450	500	–	cd/m^2
Uniformity (%)		U		70	75	–	%
White Chhromaticity		x	θ = 0º	0.26	0.31	0.36	–
		y	θ = 0º	0.28	0.33	0.38	–
LED Life Time			+25º	20,000	—	—	Hr

Block Diagram



Dimensional Outline:



Pin Description - J301: LCD Panel I/O Terminals (FPC 40 Pin Pitch 0.5 mm UP Contact Type)

Pin No.	Symbol	I/O	Description
1	VLED+	P	Power for LED Backlight (Anode)
2	VLED+	P	Power for LED Backlight (Anode)
3	GND	P	Power Ground
4	VDD	P	Power Voltage
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	P	Power Ground
30	CLK	I	Pixel Clock
31	DISP	I	Display On/Off
32	HSYNC	I	Horizontal Sync Signal
33	VSYNC	I	Vertical Sync Signal
34	DE	I	Data Enable
35	NC	–	No Connection
36	GND	P	Power Ground
37	X1	I/O	Right Electrode - Differential Analog
38	Y1	I/O	Bottom Electrode - Differential Analog
39	X2	I/O	Left Electrode - Differential Analog
40	Y2	I/O	Top Electrode - Differential Analog

Pin Description - J101B: Pin Assignment of Analog RGB Input (D-Sub 15 Pin)

Pin No.	Symbol	I/O	Description
1	RI+	I	Analog Red Signal
2	GI+	I	Analog Green Signal
3	BI+	I	Analog Blue Signal
4	NC	–	No Connection
5	GND	–	Ground
6	AGND	–	Analog Ground
7	AGND	–	Analog Ground
8	AGND	–	Analog Ground
9	VGA5V	–	VGA +5V Input
10	VGA-DET	I	VGA Detect
11	NC	–	No Connection
12	NC	–	No Connection
13	HS_IN	I	TTL Horizontal Sync
14	VS_IN	I	TTL Vertical Sync
15	NC	–	No Connection

Pin Description - J104: Pin Assignment of UART (Pitch 1.25 mm 4 Pin, Top Entry Type)

Pin No.	Symbol	I/O	Description
1	TX	O	UART Transmission Data
2	RX	I	UART Receive Data
3	GND	–	Ground
4	+3.3VA	O	+3.3V Output Volttage

Pin Description - DC JACK: Pin Assignment of Power Input (Inside Diameter 2.1 ϕ Outside Diameter 5.5 ϕ Side Entry Type)

Pin No.	Symbol	I/O	Description
1	VIN	I	+12V Input Voltage
2	GND	–	Power Ground

Pin Description - RCA: Pin Assignment of Video INput (RCA JACK Yellow, Side Entry Type)

Pin No.	Symbol	I/O	Description
1	Video	I	Video Input
2	AGND	–	Analog Ground