



ANDpSi089C362S-4HB

8.90" WSVGA Color p-Si TFT LCD Module

The ANDpSi089C362S-4HB is 1024 x 600 Color TFT display that utilizes new poly-silicon (p-Si) technology to provide a brighter, thinner and lighter display with high-resolution. The p-Si TFT technology allows the row and column LCD drivers to be fabricated directly on the LCD glass. This eliminates the need for discrete TAB drivers and also reduces the thickness, weight and overall size of the display. The 8.90" WSVGA resolution expands applications in mini-notebook PC's.

Features

• RoHS Compliant

- High Luminance
- Dual CCFL, Sidelight type
- Replaceable structure of lamp units
- LVDS interface system
- Slim (5.2mmMAX)
- WSVGA (1024 x 600 pixels color display)
- Applications: 8.9" wide display size for Industrial/Medical applications

Mechanical Characteristics

Item	Specification	Unit
Dimensional Outline (Typ.)	219.5 (W) x 134.5 (H) x 8.4 max(D)	mm
Number of Pixels	1024(W) x 600(H)	pixels
Active Area	195.07 (W) x 113.40 (H)	mm
Pixel Pitch	0.1905 (W) x 0.1890 (H)	mm
Weight (approx.)	180	gram
Backlight	Dual CCFL, Sidelight type	-

Absolute Maximum Ratings

Item	Min.	Max.	Unit	
Supply Voltage	V_{DD}	-0.3	+4.0	V
	V_{FL}	-	2.0	kV(rms)
FL Driving Frequency	f_{FL}	-	100	kHz
Input Signal Voltage	V_{IN}	-0.3	$V_{DD} + 0.3$	%(RH)
Operating Temperature		0	50	°C
Storage Temperature		-20	60	°C
Storage Humidity		10	90	%(RH)

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage $I_{FL}=3.0\text{mA(rms)}$	(V_{DD})	3.0	3.3	3.6	V
	(V_{FL})	520	570	620	V(rms)
FL Start Voltage (Ta = 0°C)	-	1300	-	-	V(rms)
Differential Input Voltage	(V_{ID})	100	-	600	mV
Common Mode Input Voltage	(V_{CM})	1.0	-	2.4 - $V_{ID}/2$	V
Current Consumption	*1(I_{DD})	-	180	250	mA
	*2(I_{FL})	2.0	3.0	4.2	mA(rms)
*1 *2 Power Consumption $I_{FL}=7.5\text{mA(rms)}$	-	-	7.68	-	W

*1) 8 color bars pattern

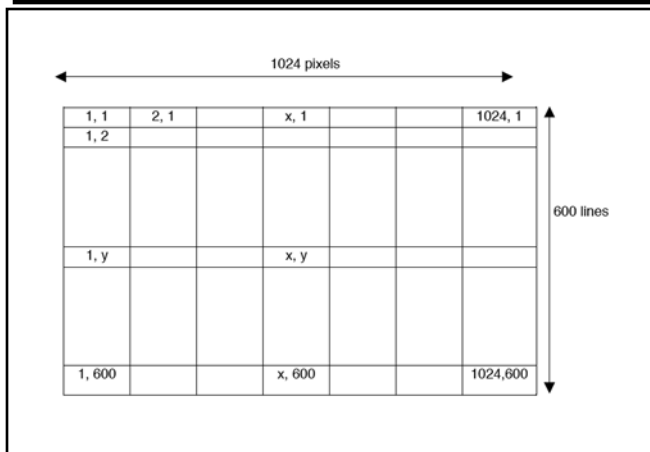
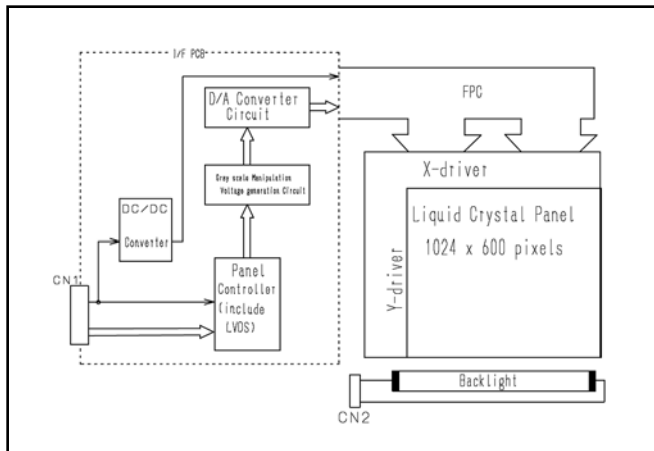
*2) Excepting the efficiency FL inverter

Optical Characteristics (Ta = 25°C)

Item	Min.	Typ.	Max.	Unit	
Contrast Ratio (CR)	100	-	-	-	
Response Time	(t_{ON})	-	-	50	ms
	(t_{OFF})	-	-	50	ms
Luminance (L) $I_{FL}=3.0\text{mA(rms)}$	-	800*	-	cd/m ²	
Viewing Angle	L/R	-	40/40	-	0°
	U/D	-	20/30	-	0°

* Luminance measured with UDT instrument 371 optical power meter

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.


Block Diagram

Connector Pin Assignment for Interface
CN1 Input Signal
Connector: DF19L-14P-1H / Hirose
Matching Connector: DF19G-14S-1C / Hirose

Terminal No.	Symbol	Function
1	V _{DD}	Power Supply Voltage; +3.3V
2	V _{DD}	Power Supply Voltage; +3.3V
3	GND	GND
4	GND	GND
5	RxIN0-	Negative LVDS differential clock input (R0-R5, G0)
6	RxIN0+	Positive LVDS differential clock input (R0-R5, G0)
7	RxIN1-	Negative LVDS differential clock input (G1-G5, B0-B1)
8	RxIN1+	Positive LVDS differential clock input (G1-G5, B0-B1)
9	RxIN2-	Negative LVDS differential clock input (B2-B5, HS, VS, DE)
10	RxIN2+	Positive LVDS differential clock input (B2-B5, HS, VS, DE)
11	CLK-	Clock Signal (-)
12	CLK+	Clock Signal (+)
13	GND	GND
14	GND	GND

Note: Please connect GND pin to ground. Don't use it as no-connect nor connection with high impedance.

CN2,CN3 CCFL Power Source
Connector: BHSR-02VS-1 / Japan Solderless Terminal Mfg. Co., Ltd.
Matching Connector: SM02B-BHSS-1 / Japan Solderless Terminal Mfg. Co., Ltd.

Terminal No.	Symbol	Function
1	V _{FLH}	CCFL Power Supply (High Voltage)
2	V _{FLL}	CCFL Power Supply (Low Voltage)

256k (k+1024) Colors Combination Table

	Display	R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0	Gray Scale Level
Basic Color	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-
	Blue	L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	H	-
	Green	L	L	L	L	L	L	H	H	H	H	H	H	L	L	L	L	L	L	-
	Lt. Blue	L	L	L	L	L	L	H	H	H	H	H	H	H	H	H	H	H	H	-
	Red	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	-
	Purple	H	H	H	H	H	H	L	L	L	L	L	L	H	H	H	H	H	H	-
	Yellow	H	H	H	H	H	H	H	H	H	H	H	H	L	L	L	L	L	L	-
	White	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-
Gray Scale of Red	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
	Dark	L	L	L	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L1
		L	L	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L2
	↕	:						:						:						L3~L60
		:						:						:						
	Light	H	H	H	H	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L61
		H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L62
	Red	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	Red L63
Gray Scale of Green	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
	Dark	L	L	L	L	L	L	L	L	L	L	L	H	L	L	L	L	L	L	L1
		L	L	L	L	L	L	L	L	L	L	H	L	L	L	L	L	L	L	L2
	↕	:						:						:						L3~L60
		:						:						:						
	Light	L	L	L	L	L	L	H	H	H	H	L	H	L	L	L	L	L	L	L61
		L	L	L	L	L	L	H	H	H	H	H	L	L	L	L	L	L	L	L62
	Green	L	L	L	L	L	L	H	H	H	H	H	H	L	L	L	L	L	L	Green L63
Gray Scale of Blue	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
	Dark	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H	L1
		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H	L	L2
	↕	:						:						:						L3~L60
		:						:						:						
	Light	L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	L	H	L61
		L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	L	L62
	Blue	L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	H	Blue L63
Gray Scale of White & Black	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
	Dark	L	L	L	L	L	H	L	L	L	L	L	H	L	L	L	L	L	H	L1
		L	L	L	L	H	L	L	L	L	L	H	L	L	L	L	L	H	L	L2
	↕	:						:						:						L3~L60
		:						:						:						
	Light	H	H	H	H	L	H	H	H	H	H	L	H	H	H	H	H	L	H	L61
		H	H	H	H	H	L	H	H	H	H	H	L	H	H	H	H	H	L	L62
	White	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	White L63