



AND10C401S-HB-KIT

10.4" SVGA Color TFT LCD Module

Features

- High luminance
- Single CCFL backlight
- Low reflection
- Clear 256K colors (K=1024)
- Thin and lightweight design
- 3.3Volt LVDS Operation
- SVGA (800 x 600 pixels color display)
- Fast response time
- Applications: Display Terminals, Scientific Instruments, Medical Instruments, Test and Measurement Instruments, Process Control/Factory Automation Equipment, Office Automation Equipment

Mechanical Specifications

Item	Specification	Unit
Outline Dimensions	243(H) x 185.4 (V) x 11.0 max (D)	mm
Number of Pixels	800 (H) x 600 (V)	pixels
Active Area	211.2 (H) x 158.4 (V)	mm
Pixel Pitch	0.264 (H) x 0.264 (V)	mm
Weight (approx.)	312	gram
Backlight	CCFL, Side-light type	—

Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit
Supply Voltage	V_{DD}	-0.3	4.0	V
	V_{FL}	0	2000	Vrms
FL Driving Frequency	f_{FL}	0	100	kHz
Input Signal Voltage	V_{IN}	-0.3	$V_{DD} + 0.3$	V
Operating Temperature	T_{op}	0	50	°C
Storage Temperature	T_{stg}	-20	60	°C
Humidity (Max. Wet bulb temp = 29°C)	—	10	90	%RH

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 Specifications ($T_a = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage ($I_{FL}=6\text{mA}$)	V_{DD}	3.0	3.3	3.6	V
	V_{FL}	500	550	600	Vrms
FL Start Voltage ($T_a = 0^\circ\text{C}$)	—	1200	—	—	Vrms
High Level Input Voltage	V_{IH}	3.5	—	V_{DD}	V
Low Level Input Voltage	V_{IL}	0	—	1.5	V
LVDS Differential Input High Threshold	—	—	—	100	mV
LVDS Differential Input Low Threshold	—	100	—	—	mV
Current Consumption	I_{DD}	—	370	—	mA
	I_{FL}	2.0	3.0	6.0	mA
Power Consumption (*1)	P	—	2.9	4.5	W

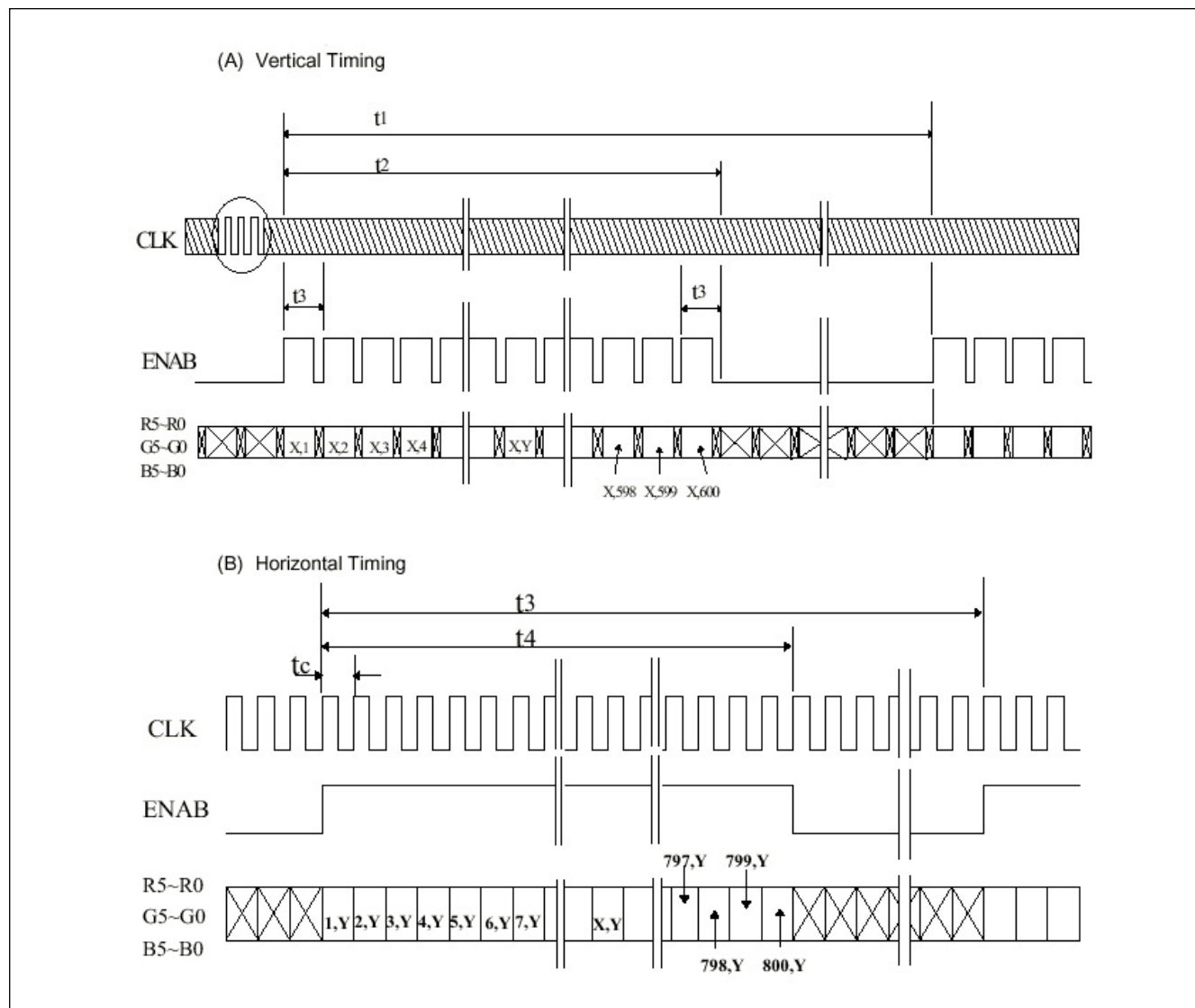
*1: Before the efficiency loss of CCFL inverter

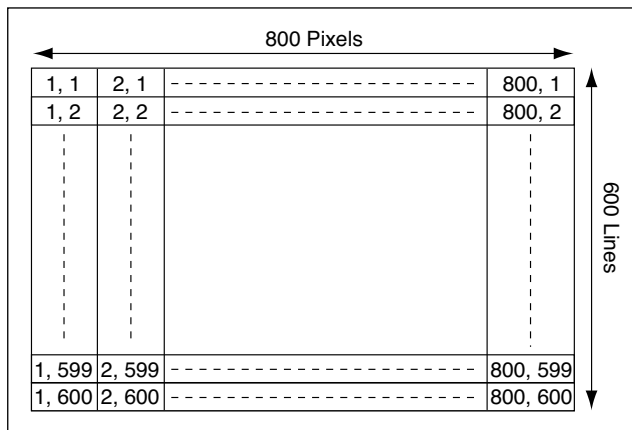
Optical Specifications ($T_a = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit
Contrast	CR	100	180	—	—
Response	t_{on}	—	15	50	ms
	t_{off}	—	25	50	ms
Luminance ($I_{FL} = 3\text{mA}$)	L	30	80	—	cd/m ²
Luminance ($I_{FL} = 6\text{mA}$)	L	—	350	—	cd/m ²

Timing Specifications

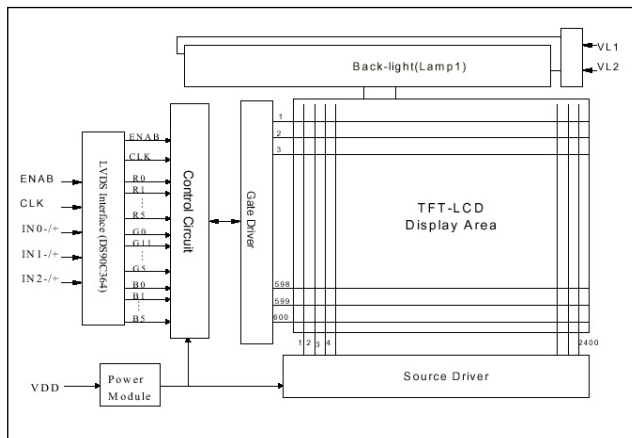
Item	Symbol	Min	Typ	Max	Unit
Frame Period	t1	604 x t3 –	628 x t3 16.58	628 x t3 17.86	– ms
Vertical Display Term	t2	600 x t3	600 x t3	600 x t3	t2 = N · t3
One Line Scanning Time	t3	844 x t5 (26.3)	1024 x t5 26.4	1056 x t5	– μs
Horizontal Display Period	t4	800 x t5	800 x t5	800 x t5	–
Clock Period	t5	24.0	25.0	–	ns
Clock “L” Time	t6	9.0	–	–	ns
Clock “H” Time	t7	9.0	–	–	ns
Set Up Time	t8	4.0	–	–	ns
Hold Time	t9	5.0	–	–	ns

Timing Chart


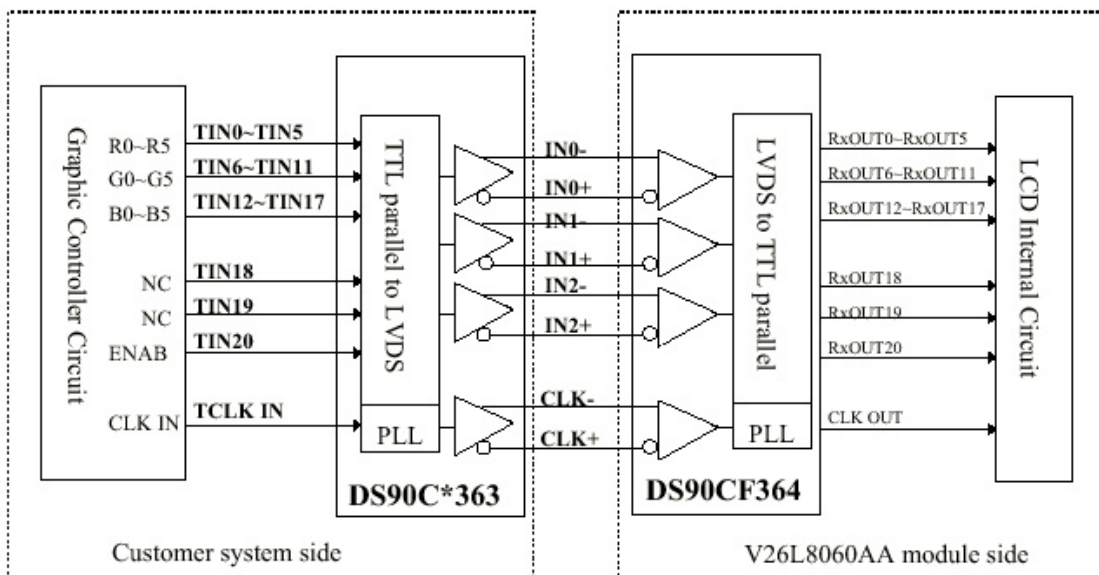


Recommended Inverter: TBD

Block Diagram



LVDS Interface Block Diagram



Connector Pin Assignment for Interface CN1 Input Signal (1) Molex - 55177-1491

Terminal No.	Symbol	Function
1	VDD	Power Supply: =3.3V
2	VDD	Power Supply: =3.3V
3	GND	Ground
4	GND	Ground
5	IN0-	Pixel data Transmission pair 0 (negative -)
6	IN0+	Pixel data Transmission pair 0 (positive +)
7	IN1-	Pixel data Transmission pair 1 (negative -)
8	IN1+	Pixel data Transmission pair 1 (positive +)
9	IN2-	Pixel data Transmission pair 2 (negative -)
10	IN2+	Pixel data Transmission pair 2 (positive +)
11	CLK-	Sampling Clock (negative -)
12	CLK+	Sampling Clock (positive +)
13	GND	Ground
14	GND	Ground

CN2 CCFL Power Source (BHR-02VS-1/Japan Solderless Terminal Mfg Co., Ltd.)

Terminal No.	Symbol	Function
1	VL	CCFL Power Supply (High Voltage)
2	GL	CCFL Power Supply (GND Side)

Note (1): NC terminal is open. (Don't use.)

Note (2): 256 colors are displayed by the combinations of 18 data bits.

