

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
Supply Voltage	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.

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

Electrical Specifications (Ta = 25°C)

Item	Symbol	Min	Тур	Max	Unit
Supply Voltage	V_{DD}	3.0	3.3	3.6	V
(I _{FL} =6mA)	V _{FL}	500	550	600	Vrms
FL Start Voltage (Ta = 0°C)	_	1200	1	-	Vrms
High Level Input Voltage	V _{IH}	3.5	1	V _{DD}	٧
Low Level Input Voltage	V _{IL}	0	_	1.5	V
LVDS Differential Input High Threshold	_	ı	1	100	mV
LVDS Differential Input Low Threshold	_	100	1	_	mV
	I _{DD}	ı	370	-	mA
Current Consumption	I _{FL}	2.0	3.0	6.0	mArm s
Power Consumption (*1)	Р	_	2.9	4.5	W

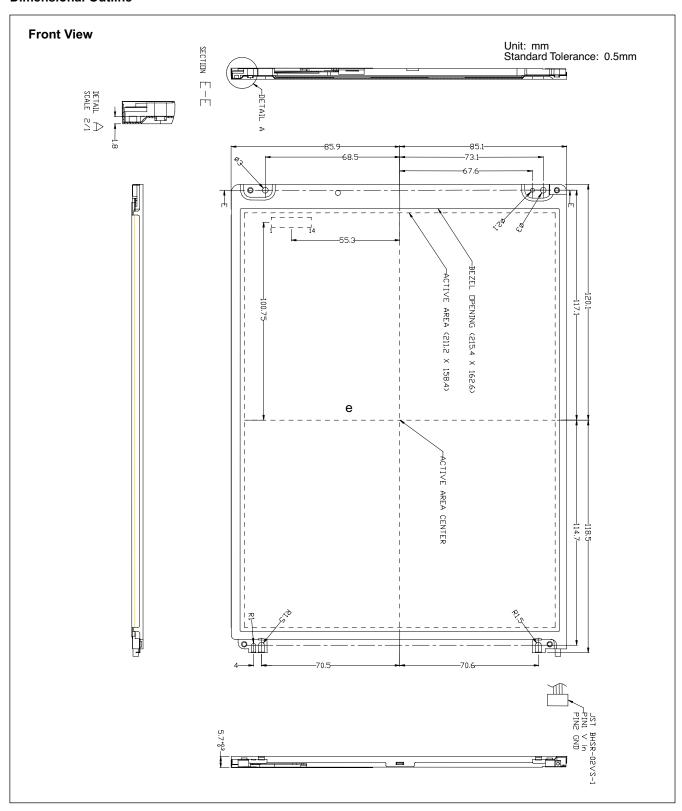
^{*1:} Before the efficiency loss of CCFL inverter

Optical Specifications (Ta = 25°C)

Item	Symbol	Min	Тур	Max	Unit
Contrast	CR	100	180	_	_
Response	t _{on}	_	15	50	ms
nesponse	t _{off}	_	25	50	ms
Luminance (I _{FL} = 3mA)	L	30	80	_	cd/m ²
Luminance (I _{FL} = 6mA)	L	_	350	_	cd/m ²



Dimensional Outline

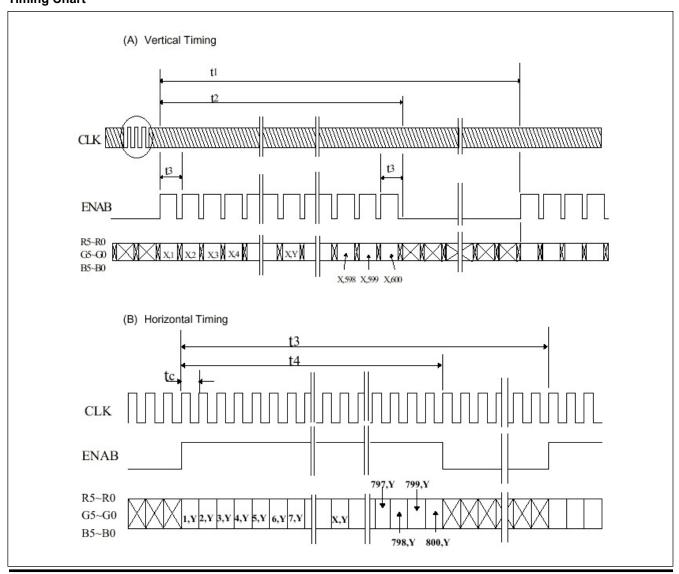




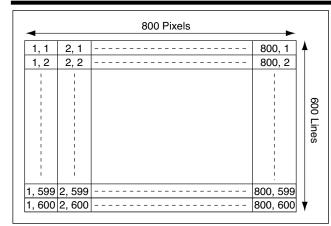
Timing Specifications

Item	Symbol	Min	Тур	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

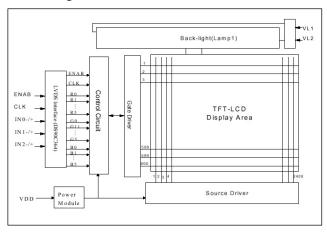






Recommended Inverter: TBD

Block Diagram



Connector Pin Assignment for Interface CN1 Input Signal (1)

Molex - 55177-1491

	ninal o.	Symbol	Function
1		VDD	Power Supply: =3.3V
	2	VDD	Power Supply: =3.3V
3		GND	Ground
	4	GND	Ground
5		INO-	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

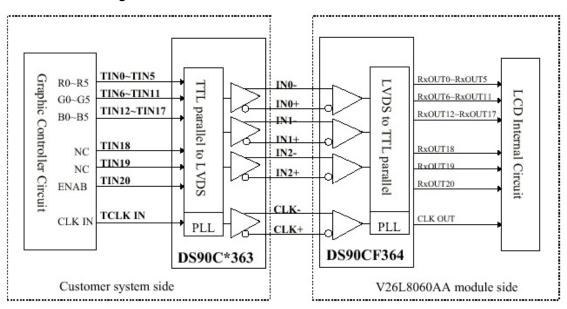
CN2 CCFL Power Source (BHR-02VS-1/Japan Solderless Terminal Mfg Co., Ltd.)

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

LVDS Interface Block Diagram





	Display	R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B 5	В4	В3	B2	B1	В0	Gray S	
	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	Н	Н	Н	Н	Н	Н	_	
	Green	L	L	L	L	L	L	Н	Н	Н	Н	Н	Н	L	L	L	L	L	L	_	
Basic	Lt. Blue	L	L	L	L	L	L	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	_	
Color	Red	Н	Н	Н	Н	Н	Н	L	L	L	L	L	L	L	L	L	L	L	L	_	
	Purple	Н	Н	Н	Н	Н	Н	L	L	L	L	L	L	Н	Н	Н	Н	Н	Н	_	
	Yellow	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н	L	L	L	L	L	L	_	
	White	Н	Н	Н	Н	Н	Н	Н	Н_	Н	Н	Н	Н	Н	Н	Н	Н	Н		_	
	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	Н	L	L	L	L	L	L	L	L	L	L	L	L		L1
Gray	▲	L	L	L	L	Н	L	L	L	L	L	L	L	L	L	L	L	L	L		L2
Scale											:									L3~l	_60
of Red	😾										:						:				
1100	'	Н	Н	Н	Н	L	Н	L	L	L	L	L	L	L	L	L	L	L	L		L61
	Light	Н	Н	Н	Н	Н	L	L	L	L	L	L	L	L	L	L	L	L	L		L62
	Red	Н	Н	Н	Н	Н	Н	L	L	L	L	L	L	L	L	L	L	L	L	Red	L63
	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	Н	L	L	L	L	L	L		L1
Gray	▲	L	L	L	L	L	L	L	L	L	L	Н	L	L	L	L	L	L	L		L2
Scale											:			:						L3~L60	
of Green	🔻										:						:				
Green	🔻	L	L	L	L L	L	L	Н	Н	Н	: H	L	Н	L	L	L	: L	L	L		L61
	▼ Light	L L	L L	-	•	L L	L L	H H	H H		•	L H	H L	L L	L L		•	L L	L L		
	Light Green			L	L					Н	Н					L	L			Green	L61
	Green Black	L	L	L L	L L	L	L	Н	Н	H H	Н Н	Н	L	L	L	L L	L L	L	L	Green	L61 L62
	Green	L L	L L	L L	L L L	L L	L L	Н	H H L	H H L L	H H H L	H H L	L H	L L	L L	L L L	L L L	L L L	L L	Green	L61 L62 L63 L0
Green	Green Black	L L	L L	L L L	L L L	L L L	L L	H H L	H H L	H H H	H H H	H H L	L H L	L L	L L	L L L	L L L	L L L	L L L	Green	L61 L62 L63
Green Gray Scale	Green Black	L L L	L L L	L L L	L L L	L L L	L L L	H H L	H H L	H H L L	H H H L	H H L	H L L	L L L	L L L	L L L	L L L L	L L L	L L H		L61 L62 L63 L0 L1 L2
Gray Scale of	Green Black	L L L	L L L	L L L L	L L L	L L L	L L L	H H L	H H L	H H L L	H H H L	H H L	H L L	L L L	L L L	L L L	L L L L	L L L	L L H	Green	L61 L62 L63 L0 L1 L2
Green Gray Scale	Green Black	L L L	L L L	L L L L	L L L L	L L L	L L L	H H L	H H L	H H L L	H H H L	H H L	H L L	L L L	L L L	L L L	L L L L	L L L	L L H		L61 L62 L63 L0 L1 L2
Gray Scale of	Green Black	L L L	L L L	L L L L		L L L	L L L	H H L L	H H L L	H H L L	H H L L	H H L L	L H L L	L L L	L L L	L L L		L L L	L L H L		L61 L62 L63 L0 L1 L2
Gray Scale of	Green Black Dark	L L L	L L L L	L L L L		L L L	L L L	H L L	H L L	H H L L	H H H L L	H H L L	L H L L	L L L H H	L L L	L L L L		L L L H	L L H L		L61 L62 L63 L0 L1 L2 L60
Gray Scale of	Green Black Dark Light	L L L	L L L			L L L L	L L L L	H L L	H L L L L L L	H H L L	H H H L L	H H L L	L H L L	L L L	L L L H	L L L L		L L L H	L L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0
Gray Scale of Blue	Green Black Dark Light Blue		L L L L				L L L L	H H L L	H H L L	H H L L L	H H H L L	H H L L L L L L	L H L L L	L L L H H	L L L H H	L L L L H H		L L H H L H	L L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63
Gray Scale of Blue	Green Black Dark Light Blue Black		L L L L			L L L L	L L L L	H H L L L L L L	H L L L L L L	H H L L L L	H H H L L	H H L L	L L L L	L L L L	L L L L	L L L L H H		L L H	L L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0
Gray Scale of Blue	Green Black Dark Light Blue Black						L L L L L L L	H H L L L L L L L	H H L L L L L L L	H H L L L L L L L L	H H H L L L L L L L L L L L L L L L L L	H H L L L L L L	L H L L	L L L L H H	L L L L H H H	L L L L L H H H L		L L H H L H	L L H L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0 L1 L62 L63 L0 L1 L2
Gray Scale of Blue Gray Scale of White	Green Black Dark Light Blue Black						L L L L L L L	H H L L L L L L L	H H L L L L L L L	H H L L L L L L L L	H H H L L ::	H H L L L L L L	L H L L	L L L L H H	L L L L H H H	L L L L L H H H L		L L H H L H	L L H L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0 L1 L62 L63 L0 L1 L2
Gray Scale of Blue	Green Black Dark Light Blue Black						L L L L L L L	H H L L L L L L L	H H L L L L L L L	H H L L L L L L L L	H H H L L L L L L L L L L L L L L L L L	H H L L L L L L	L H L L	L L L L H H	L L L L H H H	L L L L L H H H L		L L H H L H	L L H L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0 L1 L62 L63 L0 L1 L2
Gray Scale of Blue Gray Scale of White &	Green Black Dark Light Blue Black					L L L L L L L	L L L L L L L	H H L L L L L L L L L L L L L L L L L L	H L L L L L L L	H H L L L L L L L L L L L L L L L L L L	H H H L L ::	H H L L L L H	L L L L L L L	L L L L H H L	L L L L L L L L L L L L L L L L L L L L	L L L L L H H L L		L L H H L H	L L H L H L H L	L3~l	L61 L62 L63 L0 L1 L2 L60 L61 L62 L63 L0 L1 L62 L63 L0 L1 L2